

01/21/00

Salt Lake Tribune

State of the State

By Lisa Church

GRAND--The Glen Canyon Action Network, a recently formed organization that advocates the draining of Lake Powell, says it will open an office in a restored Moab ice-cream plant and parlor in the spring. The group says the controversial proposal to drain the lake where the Colorado River backs up behind Glen Canyon Dam in southern Utah would restore the river to its natural flow, preserving the river's watershed.

The Action Network is affiliated with environmental groups in several Western states, and a group in France, which are dedicated to the preservation of the world's rivers. The construction of Glen Canyon Dam in the 1950s and early 1960s, eventually inundated picturesque Glen Canyon.

To get acquainted with Moab residents, Action members are holding an ice-cream social free of charge on Monday at the Moab Arts and Recreation Center, 111 East 100 North at 7 p.m. The group plans to move into a restored creamery to be named Restoration Creamery at 21 N. Main in March. Members will make ice cream named after Colorado River features -- like Marble Canyon Fudge -- to help raise money for their efforts.

01/22/00

Arizona Daily Sun

New group plans drain-the-lake rally

By TODD GLASENAPP, Sun Correspondent

PAGE -- A new organization based in Moab, Utah, is planning a March rally near Glen Canyon Dam to stir up public sentiment for draining Lake Powell.

The three-week-old Glen Canyon Action Network will bring a few heavyweights in the river-restoration community to the March 14 event, said organizer Owen Lammers. Lammers, a 37-year-old Berkeley graduate and former director of the California-based International Rivers Network, has a commitment from 87-year-old David Brower, the father of the movement to drain Lake Powell.

Brower, the Sierra Club's executive director from 1952-69, wants to restore a free-flowing Colorado River through Glen Canyon near Page. Reaction to Lammers' announcement from defenders of the dam and lake was swift and predictable.

"The GCAN objectives to 'protect and restore' the Colorado River by removing such manmade improvements as Glen Canyon Dam and others is merely their way of making headlines in the near term," said Larry Tarp, president of Page-based Friends of Lake Powell.

The government is doing a good job of managing the Colorado, Tarp said. The dam provides flood control, water storage, electrical generation, environmental improvements and recreation.

Draining the lake could produce "an out-of-control flow of sand-laden water in some parts of the year" and "a trickle at the bottom of a dust-filled canyon for the rest of the time," Tarp said Thursday night.

When it formed on New Year's Day, Glen Canyon Action Network became the latest of several groups to organize on the side of Brower, the Sierra Club's first paid executive director.

Brower didn't like the idea of damming Glen Canyon when it was authorized more than 40 years ago.

He renewed his objections a few years ago, and the Sierra Club's board of directors voted in 1996 to recommend draining the 186-mile-long reservoir. Salt Lake City- and Flagstaff-based Glen Canyon Institute organized before the Sierra vote and has since taken the lake-drain lead.

Lammers came to Moab at the end of December to organize the Action Network along with Ken Sleight, an early Colorado River boatman and an old friend of late author Edward Abbey.

In "The Monkey Wrench Gang," Abbey described a fictional plot to blow up Glen Canyon Dam. Moab, an old haunt of Abbey's, is 268 miles northeast of Page. Moab straddles the Colorado in southeast Utah.

Lammers is billing the event at the Carl Hayden Visitor Center a "Restoration Celebration and Rendezvous." He said it will coincide with the Third Annual International Day of Action Against Dams and for Rivers Water and Life.

"Our purpose at Glen Canyon will be to help usher in the 'Century of River Restoration,'" he said by electronic mail Thursday. "People will be coming from throughout the West and across the country on their way to Glen Canyon."

Also expected are Berkeley's Robert Hass, former poet laureate and co-founder of River of Words, a national poetry and art project advocating river restoration.

Also committed to the rally is Katie Lee, an author, singer and former river-runner.

Lammers is working with the Bureau of Reclamation's regional office in Salt Lake City to obtain necessary federal permits. Spokesman Barry Wirth said the event would be the first of its kind in his 13-plus years at BOR.

Participants might make "a little bit of a march" across the bridge to the visitor center near the dam, Lammers said. Speakers and music also are planned.

"This is not some Earth First! initiative," he said in a telephone interview. "I come from a very sophisticated blend of activism. We're not out there just to make a show."

Lammers turned International Rivers Network from an all-volunteer organization into what he says is recognized as the world's leading river advocacy organization during 12 years there.

He said he helped organize and lead campaigns across the globe to halt construction of dams and helped lead efforts to reform the lending practices of financial institutions that fund "inappropriate infrastructure projects, such as dams."

Glen Canyon Dam was built by the federal government in the late 1950s and early 1960s to harness part of the Colorado for the arid Southwest. But its utility is ending, Lammers said.

"The Bureau of Reclamation and other agencies did an excellent job to develop our rivers, but we have learned a lot since then," he said. "We know we can live with less water, we can use less energy, and we know the power of nature to regenerate itself." Lammers' approach differs from that of other activists, who want to persuade Congress to order an environmental impact study of draining the lake.

"This is not a top-down approach, coming from Washington," he said, "but a bottom-up approach from the people ... it's a people's movement."

He's setting up an office in Moab in an old ice cream parlor and plans to establish field offices in Flagstaff and other locations. Lammers is also planning a "Hot Fudge Monday Feed and River Revival Night" to welcome his organization to Moab next Monday.

"The opposition to that dam has had its roots in this town for 40 years," Sleight said in a news release. "It's no surprise that folks in Moab are getting on with the task of leading the nation to get that reservoir drained."

Four-year-old Glen Canyon Institute has not joined the rally as a principal, though several of its board members helped establish the Action Network, Lammers said.

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01/29/00

Moab Times Independent

Group Opens Ice Cream Shop with Mission to Drain Lake Powell

Where just an ice cream parlor once stood, the headquarters for a nationwide effort to protect and restore the Colorado River is now evolving. The shop, located at 21 N. Main St., will soon house the headquarters for the Glen Canyon Action Network -- a grassroots group dedicated to the integrity of the Colorado River watershed.

Over the past two months, a group of Moabites have teamed-up with river restoration groups in Utah, Arizona, California, New Mexico and even France, to launch the organization. And Jan. 24, the group will hold its inaugural event at the Moab Arts and Recreation Center.

GCAN's immediate priority is building broad-based national and international support for the draining of Lake Powell.

"The restoration of Glen Canyon, more than any other initiative, encompasses all the issues that must be addressed if we are to sustainably manage this river for generations to come," said John Weisheit, GCAN's president.

"The opposition to that dam has had its roots in this town for 40 years; it's no surprise that folks in Moab are getting on with the task of leading the nation to get that reservoir drained," said Ken Sleight, one of GCAN founders.

Sleight and others will be hosting GCAN's inaugural event on Monday evening, January 24 at the MARC. There, Sleight will be discussing the history of opposition to the Glen Canyon Dam, and the role Moab residents have played in keeping the idea of a restored Glen Canyon alive since the reservoir began filling in 1963.

Susette Weisheit, GCAN campaign committee chair, will introduce GCAN's immediate plans, especially the rally to take place at Glen Canyon Dam March 14.

"Tens of thousands of people will be out in support of rivers all over the world on this third annual International Day of Action against dams. We here in Moab want to be right alongside them," Weisheit predicted.

Also in attendance will be Owen Lammers, who for the past 12 years led the development of International Rivers Network, now the world's leading river advocacy organization. Lammers, who recently relocated to Moab has since joined GCAN and will discuss the rapidly growing international movement to remove dams, and the leadership many activists around the world see coming from a restored Glen Canyon.

Admission is free and refreshments will be available.

"But don't forget the ice cream," says Weisheit. "Three days after our rally at Glen Canyon, GCAN will open Restoration Creamery, where every scoop of ice cream sold will help another gallon of water soon drain out of that reservoir."

02/08/00

Politics Only Hurdle to Draining Lake Powell, New Analysis Reveals

The Stanford Environmental Law Journal recently published an 88-page analysis of the Sierra Club's 1996 proposal to restore Glen Canyon on the Colorado River by draining Lake Powell reservoir.

The extensively researched analysis titled, "Undamming Glen Canyon: Lunacy, Rationality, or Prophecy" was written by Scott Miller, an attorney with the Office of the Solicitor, U.S. Department of the Interior. The analysis is his own, however, and in no way represents any official government position on the future of Glen Canyon Dam.

Mr. Miller examined: existing laws pertaining to the management of the Colorado River; technical and economic issues pertaining to anticipated impacts on water storage and energy supply; and the variety of impacts associated with changes in the recreational uses within Glen Canyon. Some key findings are excerpted below.

LAW OF THE RIVER: If we take a close look at the [Sierra Club] proposal, we may find that there is flexibility still hidden in the rigid Law of the River. We may also find crucial benefits to making the Law of the River itself more flexible.

WATER: Practically speaking, the effects of draining Lake Powell on water availability are surprisingly minimal, though not altogether absent. Politically, speaking, however, effects on water use are the most difficult problem facing the Sierra Club's proposal.

POWER: Although Glen Canyon's raw generating capacity of 1,300 MW is impressive, it is not irreplaceable. ... Furthermore, there is currently significant surplus of power in the Colorado Plateau region, so there would be a significant amount of time to find alternative sources of raw power. By the time additional sources of power are needed the life-span of Glen Canyon Dam's powerplant may be considerably reduced; in a few hundred years, accumulated sediments will completely eliminate power production from Glen Canyon Dam.

RECREATION: Perhaps the most fundamental question concerning recreation, however, is how much recreation do we really want on Lake Powell and in the Grand Canyon? ... The two-and-a-half million visitors to Lake Powell leave an extraordinary

amount of trash on the beaches and on the lake. Along Lake Powell's 2,000 miles of coastline there are only forty-six restrooms. Fouled by human waste, beaches along the lake are periodically closed. Visitors consume about five million gallons of gas on their Lake Powell vacations each year. Perhaps present recreation should be limited in any case. Doing so might also limit any costs of draining Lake Powell."

ENVIRONMENT: In sum, environmental costs and benefits associated with draining Lake Powell are presently unclear. Here, perhaps more than any other issue, our current knowledge is severely insufficient to accurately evaluate the consequences. At the same time, the [Colorado] Plateau's native fishes, the Sea of Cortez's vaquita and totoaba, and the delta itself may not wait for decades of study.

CONCLUSIONS : This preliminary analysis of water, power, recreation, and the environment reveals that some of the common assumptions about the importance of Glen Canyon Dam and Lake Powell may not be accurate. Even so, analysis has its limitations. There are values involved that simply cannot be balanced with dollars or any other economic valuations. ... Just look to the Florida Everglades, where the federal and state governments have already spent \$3.5 billion and plan to dedicate nearly \$8 billion more to habitat restoration, or the Columbia River where \$3 billion already has been spent trying [to] save and restore the salmon and steelhead.

"Although preliminary, Miller's analysis represents the best compilation of facts to date concerning the proposal to drain Lake Powell. The barriers to a restored Glen Canyon are not so much technical or economic, as political. It was politics that inundated Glen Canyon, and it will be a people's movement that will bring about its restoration," said Owen Lammers, Executive Director of the Glen Canyon Action Network, the Colorado River advocacy group based in Moab, Utah.

"This analysis helps to further awaken the public to the potential of reviving the declining ecosystems in the Grand Canyon," said Lisa Force, of the Tucson-based Center for Biological Diversity, the nation's leading advocate on behalf of endangered species. "The more people who become aware that the Grand Canyon is itself endangered by Glen Canyon Dam, the sooner the dam's decommissioning will become a reality." This issue of the Stanford Environmental Law Journal also published a foreword by Dr. Richard Ingebretsen, President of the Glen Canyon Institute, based in Flagstaff, Arizona.

Copies of the analysis are available from GCAN at (435) 259-1063, or through the fulfillment office of the Stanford Environmental Law Journal (650) 725-0183. To obtain contact information for the author, Scott Miller, contact GCAN.

02/15/00

Draining exercise: Lake Powell study challenges common assumptions

By GARY GHIOTO, Sun Staff Reporter

Arizona Daily Sun

A report published this month in the prestigious Stanford Environmental Law Journal challenges commonly held notions about the significance of Glen Canyon Dam and Lake Powell for recreation, water storage and electric power production.

Acting on his own initiative, Interior Department attorney Scott Miller examined the Glen Canyon Institute's proposal, endorsed by the Sierra Club Board of Directors in 1996, to restore Glen Canyon on the Colorado River by draining the Lake Powell reservoir and decommissioning its mighty dam.

Miller found that the technical, economic and legal hurdles to drain the reservoir are not insurmountable, but the politics may be.

The Sierra Club plan -- ridiculed by Utah and Arizona federal lawmakers as "absolutely ridiculous" -- would restore the river to free-flowing condition by diverting water through two tunnels inside the massive structure.

In time, the gigantic reservoir would disappear, the defunct hydropower dam would stand as a concrete relic to the Bureau of Reclamation's macro engineering and Glen Canyon would emerge from a 40-year-old watery grave.

In a bow to the controversy to drain the lake, Miller calls his analysis: "Undamming Glen Canyon: Lunacy, Rationality or Prophecy?" Not surprisingly, the report has been praised by environmental groups such as the Tucson-based Center for Biological Diversity, a national advocate of endangered species.

"This analysis helps to further awaken the public to the potential of reviving the declining ecosystems in the Grand Canyon. The more people who become aware that the Grand Canyon is itself endangered by Glen Canyon Dam, the sooner the dam's decommissioning will become a reality," said Center spokesman Lisa Force.

But defenders of the dam, such as Larry Tarp of Page-based Friends of Lake Powell, say draining the lake would be an environmental and economic disaster.

The loss of pollution-free electric power from the dam, a multimillion-dollar recreation industry and a first-class trout fishery that generates \$2 million annually are among the dubious byproducts of draining the reservoir, he said.

Tarp also notes that the reservoir provides a reliable source of water for 22 million people and 3.5 million acres of agricultural land in Arizona, Nevada, California and Mexico.

Draining Lake Powell would mark the return of a river with "an out-of-control flow of sand-laden water in some parts of the year" and "a trickle at the bottom of a dust-filled canyon for the rest of the time."

Page real estate officials estimate that draining the lake would reduce the town's population from 9,000 to 3,000 and produce enormous drops in property values and tourist visits.

Miller's report comes as the newly formed Glen Canyon Action Network, a Colorado River advocacy group based in Utah, prepares to launch a national campaign to restore the river.

"Although preliminary, Miller's analysis represents the best compilation of facts to date concerning the proposal to drain Lake Powell. The barriers to a restored Glen Canyon are not so much technical or economic, as political," said Owen Lammers, executive director of Glen Canyon Action Network.

"It was politics that inundated Glen Canyon, and it will be a people's movement that will bring about its restoration," Lammers added.

"A Restoration Celebration and Rendezvous" sponsored by the Glen Canyon Action Network, will begin March 14 at noon at the dam's Carl Hayden Visitor Center. Invited speakers include prominent environmentalists, such as David Brower of Earth Island Institute, legendary Colorado River boatman Ken Sleight and Green Party presidential contender Ralph Nader.

On March 13, the restoration of Glen Canyon will be the focus of a discussion from noon to 5 p.m. at NAU's University Union Field House. At 7 p.m., a "Colorado River Revival Concert and Rally" will be held at NAU's Cline Library Auditorium.

Opponents plan to stage a competing rally in Page on March 14. The Glen Canyon Institute, a 500-member nonprofit group with offices in Flagstaff and Salt Lake City, is currently conducting a wide range of studies justifying the restoration of the canyon. The studies include gauging the impact on the economy caused by draining the reservoir and environmental effects on the Colorado River basin themes also explored in Miller's analysis.

MILLER'S THESIS

Though an employee of the government, Miller's analysis is his alone and does not represent "any official government position" on the issue of draining Lake Powell. Indeed, efforts to fund any study regarding the issue have been routinely plucked out of the Interior Department's appropriations bill by western lawmakers such as U.S. Sen. Orrin Hatch, a Utah Republican. Hatch has also sponsored legislation to block attempts to decommission the dam.

Miller noted that evaluating the Sierra Club's proposal has been stymied by a lack of hard data and that critics have relied on that lack of knowledge to outline a host of gloomy scenarios. Miller examined existing laws pertaining to the management of the Colorado River, the impact on water storage, energy supply, recreation and the environment, citing voluminous government, private and academic sources.

He found that while it is "technically" feasible to decommission that dam, the political will to do so may be in short supply due to potent opposition from water and power utilities, the recreation industry and local stakeholders such as the Navajo Nation and the residents of Page.

The major difficulty revolves around decades of water supply contracts, federal policy and legal rulings that have created a "Law of the River" that makes removal of the reservoir difficult. But Miller writes: "If we take a close look at the proposal, we may find that there is flexibility still hidden in the rigid Law of the River. We may also find crucial benefits to making the Law of the River in itself more flexible."

Adding to the problems for the Sierra Club plan is a schism between "recreationists and environmentalists" over the issue.

"Recreation, both above and below the dam, would change dramatically, exchanging houseboaters for hikers, and trout fishermen for wilderness rafters," said Miller.

WATER ISSUES

Letting the Colorado River run free has "panicked" water users and administrators for "thirsty" southern California water utilities that see the reservoir as drought insurance, said Miller's analysis.

Miller said, however, Lake Powell's value as a storage facility is "probably negligible" because the Colorado River Basin would still retain significant storage with a free-flowing river. He also notes that evaporation from the reservoir is a significant factor: "The evaporative losses from a single Labor Day weekend could satisfy 17,000 homes for an entire year."

Sedimentation from the Colorado's muddy flow also diminishes the reservoir's worth too, he said.

The loss from draining the lake would amount to 1 million acre-feet of water per year. Evaporation estimates range from 550,000 to 1 million acre-feet per year, said Miller. But draining the lake would have consequences. Sediment from Lake Powell would flow to Lake Mead downstream, shortening the life span of the lake. There would also be a chance of flood damage downstream. But Miller noted that the Sierra Club's proposal is to retain the dam so it could be used as an emergency flood control device.

The draining of Lake Powell would end its potential use as a "diversion point" for the Navajo Nation.

The tribe wants to divert 50,000 acre-feet annually from the lake "to satisfy some of its reserved water rights to the Colorado River" Miller said.

LESS POWER

The Glen Canyon Dam produces 5,000 gigawatts of electricity a year, enough to supply 214,000 California users.

"This electricity, and the revenues it generates, would be lost," said Miller.

But Miller said the lost power from the dam could be "easily replaced" because there is a surplus of power in the Colorado Plateau region. The dam's capacity is "far exceeded" by the Navajo Generating Station in Page which actually produces "almost twice as much power". The value of Glen Canyon Dam's hydropower comes from its use by electric utilities to provide instantaneous power at peak times by simply spilling water through its generators. But its ability to produce instant power is hampered today by new operations rules that seeks to reduce the "havoc" downstream caused by the highly variable flows, said Miller.

In effect, Glen Canyon's capacity and load-filling capability have been reduced, and power revenues are estimated to have decreased by \$30 million annually. The need for raw power to satisfy fluctuating demands for power can be satisfied by building a gas or oil-fired plant fitted with the latest technology to reduce air pollution, Miller said.

The costs of losing the dam's power and building other sources would have to be borne by consumers, and air pollution would result, concludes Miller.

RECREATION LOSSES

Lake Powell attracts 2 million overnight visitors per year who contribute more than \$400 million to the local economy. The area's five houseboat marinas, guides and local businesses depend on the crush of annual visitors.

The regulated flows from Glen Canyon have benefited downstream river-rafting companies relying on dependable and manageable flows. Meanwhile, the cool, clear

waters released from the dam have "created one of the finest trout fisheries in the Southwest" that generates about \$2 million annually.

Miller acknowledges that the current value of "Glen and Grand Canyon recreation is immense." But the loss of houseboat and ski boat vacationers, plus trout fishing enthusiasts, can be offset, Miller said.

The revival of river trips through Glen Canyon would generate "tens of millions of dollars" and the restoration of Glen Canyon would "likely draw more recreationists to the area than it could possible accommodate."

Miller acknowledges criticism that draining the reservoir will leave muddy sediment and trash as well as an enormous bathtub ring caused by the tons of leaching sediment from rock formations.

But citing studies from Glen Canyon Institute, he said the sediments can be flushed away and the bathtub ring effect removed with five to 10 years through natural processes.

ENVIRONMENTAL IMPACT

Miller noted that in the late 1950s, when the dam was being proposed, no environmental impact studies were conducted or required. Since then, the impact of surging, silt-free water flows on the Colorado River basin and its Sea of Cortez delta have revealed a plethora of depressing data.

Disappearing sand bars and beaches have endangered fish, birds and mammals along the river corridor to Mexico, Miller writes. Severe declines in the river's eight native fish species have been linked to the construction of the Glen and Hoover dams, introduction of exotic fish species and "the destruction of habitat and the alteration of the Colorado's water quality, quantity and temperature."

Far downstream in Mexico, the reduce flows of the river have been linked to the decimation of Sea of Cortez fish species such as the vaquita and totoaba that depend on brackish estuary habitat. Restoring river flows in Maine, Vermont and California by tearing down dams have yielded impressive results.

"Habitat, and fish populations with it, have dramatically and rapidly improved following removal of the dams," he writes.

Meanwhile, the recreation industry on Lake Powell leaves an annual legacy of shameful pollution and hydro-carbon excesses, he added. "The two-and-a-half million visitors to Lake Powell leave and extraordinary amount of trash on the beaches and on the lake. Along Lake Powell's 2,000 miles of coastline there are only 46 restrooms. Fouled by human waste, beaches along the lake are periodically closed. Visitors consume about five million gallons of gas on their Lake Powell vacations each year ...," Miller reported.

On a positive note, Miller said that the existence of Lake Powell's massive reservoir and dam blunted the push for more dam development and water storage projects elsewhere in the West and contributed to the restoration and preservation of the Platte River and Mono Lake and Owens Valley.

But because there has been a lack of studies to evaluate the environmental benefits and negatives, it's hard to draw iron-clad conclusions, he said.

"In sum, the environmental costs and benefits associated with draining Lake Powell are presently unclear. Here, perhaps more than any other issue, our current knowledge is severely insufficient to accurately evaluate the consequences. At the same time ... the (Colorado) Plateau's native fishes and the Sea of Cortez's vaquita and totoaba, and the delta itself may not wait for decades of study." Miller concludes his analysis with an open invitation to the public and decision-makers to fully explore the Sierra Club proposal that has "sparked the imagination of many Americans."

"Draining Lake Powell may or may not be in our best interests or even in the best interests of our grandchildren. But we should have the integrity and sensibility to reexamine decisions that we have made in the past ... We owe it to ourselves, future generations, and the lands of the Colorado River to finally evaluate the costs and benefits objectively."

Reporter Gary Ghioto can be reached at gghioto@azdailysun.com or 556-2251.

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02/15/00

Activists to rally at Glen Canyon Celebration to focus on draining Lake Powell

By BRIAN HANSEN, Staff Writer

Colorado Daily

Just drain it.

That will be the rallying cry heard along the banks of the once-wild Colorado River next month, as representatives of more than 50 groups will gather at the massive Glen Canyon

Dam to call for the draining of Lake Powell. The March 14 event, dubbed the "Colorado River Restoration Celebration and Rendezvous," will include appearances by noted environmental activists, artists and legendary river-runners, said Owen Lammers, executive director of the Moab, Utah-based Glen Canyon Action Network.

"We're going to reinforce to the public that we are entering a new era of river management, which is focused on restoration and sustainable management of the entire Colorado River Basin," Lammers said.

The event, which will be held at Lake Powell's official visitor center, will likely culminate with the signing of a declaration calling for the decommissioning of the Glen Canyon Dam and the implementation of a full-scale recovery plan for the area "innundated" by the waters of the 186-mile-long reservoir, Lammers said.

A Sierra Club-backed proposal to drain Lake Powell was rejected by a Congressional subcommittee in 1997. But the notion of decommissioning the Glen Canyon Dam has never really gone away, and according to Lammers, a new report by the U.S. Interior Department shows that the technical, economic and legal hurdles to draining Lake Powell would not be insurmountable.

"One of the issues that (the report) reinforces is that there's plenty of electricity within the region to provide substitute generating capacity to compensate for the potential losses that would accompany the decommissioning of the dam," Lammers said. "This is completely independent of potential conservation measures that could also be implemented within the basin."

The report notes that the dam's capability to produce power will eventually be eliminated anyway, as sediments carried along in the Colorado River fill up the relatively stagnant reservoir.

Given that scientific certainty, there's no reason not to take action now, Lammers said. "The Glen Canyon Dam is going to have to be decommissioned within the next 100 to 150 years anyway, because (Lake Powell) will be sufficiently full of sediment that (the power plant) will no longer be able to be operated," Lammers said. "Recognizing that, what value are we going to derive from Glen Canyon over the next period of time?" Lammers noted that in addition to the inevitable demise of the dam's power-generating abilities, the other principal service provided by the reservoir -- recreation -- will also soon have to be curtailed.

"There will have to be limits imposed anyway because of overuse and pollution," Lammers said. "These issues are going to have to be addressed anyway, even when the sediment ultimately makes it impossible to have a reservoir."

The March 14 event at the Glen Canyon Dam will feature noted environmentalist David Brower, former poet laureate Robert Hass, and folk singer Katie Lee. For more information, see the Glen Canyon Action Network's Web site at www.drainit.org.

02/22/00

Draining Lake Powell A Foregone Conclusion, Study Says

By Robinson Shaw

Environmental Network News

Glen Canyon Dam, which blocks the Colorado River two miles northwest of Page, Arizona, was constructed from 1957 to 1964. An 88-page analysis of the Sierra Club's 1996 proposal to restore Glen Canyon recommends that the federal government consider draining Lake Powell.

The study, published in the Stanford Environmental Law Journal, does not draw any conclusions but makes a case for further exploration of the Sierra Club's push to restore Glen Canyon to its natural state.

"The report is a good summary of a lot of the information out there," said Owen Lammers, director of the Glen Canyon Action Network. "It documents that draining the lake isn't just something of pure fantasy but something that can be done, something that ultimately has to be done."

The report, "Undamming Glen Canyon: Lunacy, Rationality, or Prophecy," is the independent work of Scott Miller, an attorney with the U.S. Department of the Interior. Miller's analysis does not represent the department's position on Glen Canyon or Lake Powell.

Glen Canyon Dam was initiated through the Colorado River Storage Project and authorized by a slim congressional majority vote on March 1, 1956. Construction began a year later without any environmental analysis. The dam submerged the unique geologic rock formations of Glen Canyon and created Lake Powell to the north.

Lake Powell, named after American geologist and ethnologist John Wesley Powell, was created when Glen Canyon Dam was built on the Colorado River. In his study, Miller examined laws governing Colorado River management; technical and economic issues pertaining to water storage and energy supply; and the impact of recreational activities within the Glen Canyon area.

All parties agree that draining Lake Powell is feasible, according to the report. At issue are the costs and benefits associated with decommissioning the dam.

"Decommissioning Glen Canyon dam would significantly impact regulation of Colorado River water and would affect water availability throughout the Colorado River Basin," the report states. "It would completely eliminate the substantial power that is produced at the dam and distributed across the Southwest. Recreation, both above and below the

dam, would change dramatically, exchanging houseboaters for hikers and trout fishermen for wilderness rafters. Just as dramatic and probably farther reaching would be the changes in the environment, including changes of stagnant water to natural flows, stable mud to volatile toxic sediment and desert flats to delta estuaries.

Water

"One of the biggest hurdles is getting water users to recognize that they can indeed survive without an insurance policy, which is the lake behind Glen Canyon dam," said Lammers.

Water use and administration are topics of heated debate, according to the report. The sandstone banks of Lake Powell absorb an estimated one million acre feet of water each year. While most of the water in the Colorado River is utilized, about one million acre feet of water are absorbed each year by the sandstone banks of Lake Powell. Another 550,000 acre feet simply evaporate into the dry desert air.

Water allocation and flood protection are sources of contention between upper-basin states (Colorado, New Mexico, Utah and Wyoming) and lower-basin states (Arizona, California and Nevada).

Power

"Although Glen Canyon's raw generating capacity ... is impressive, it is not irreplaceable," the report notes. The dam produces about 3 percent of the electricity in the region. The lost power could be replaced by gas or oil-fired power plants, but both are sources of air pollution.

"There is currently significant surplus of power in the Colorado Plateau region, so there would be a significant amount of time to find alternative sources of raw power. By the time additional sources of power are needed, the life span of Glen Canyon Dam's power plant may be considerably reduced; in a few hundred years, accumulated sediments will completely eliminate power production from Glen Canyon Dam," the report notes. Before Glen Canyon Dam was built, the Colorado River on a typical June day carried through the Grand Canyon enough sediment to fill the Rose Bowl to the rim, according to the report.

"It's not a matter of if and when (the lake is drained and the dam decommissioned). It's a matter of if people choose to intervene in the natural process that's going to happen anyway," said Lammers. "That's the case with all dams — eventually they all have to be decommissioned, especially when you're dealing with significant amounts of sediment."

Recreation

Lake Powell annually attracts two million visitors who contribute more than \$400 million to the local economy and consume about five million gallons of gas on holidays. Loss of revenue from recreation is another source of debate.

Before Glen Canyon Dam was built, visitors to the area could explore the canyon on foot and commune with spectacular geologic formations.

Environment

Glen Canyon Dam has significantly altered the ecology above and below it. The Colorado River was once a warm river with variable flow. Today it runs clear, cold and steady. Five of the river's eight native fish species are extinct or endangered because of cold temperatures and loss of native habitat.

"It is possible that nothing short of draining Lake Powell will save the endangered fish, birds and mammals of the Colorado River, its delta and the Sea of Cortez," the report notes.

"(Glen Canyon Dam) certainly wouldn't have been built now and it certainly wouldn't have been built 20 years ago," said Lammers. "We now have a lot more information on the social, environmental and economic impact associated with river development and the technical constraints which are causing us to rethink how we manage rivers."

Copies of Miller's report are available through Living Rivers at (435)259-1063 or the Stanford Environmental Law Journal at (650) 725-0183. Copyright 2000, Environmental News Network All Rights Reserved

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03/09/00

Activists to Rally to Restore Glen Canyon

Restoration Celebration and Rendezvous Ushers in the Century of River Restoration
Contact: Owen Lammers (520) 890-0055 (cell) (435) 719-6504 (cell)

Carl Hayden Visitor Center, Glen Canyon Dam, near Page, Arizona 12:00 Noon - 2:00 PM, Tuesday, March 14, 2000.

[Click here](#) to download the booklet for the Teach-In and Rally

On March 14, 2000, people from across the country will join more than 50 organizations and businesses at Glen Canyon Dam to celebrate a new era in river management, the "Century of River Restoration." Led by long-time Colorado River advocate and environmental leader David Brower, the event will include a signing ceremony of the "Glen Canyon Declaration," calling for the restoration of the Colorado River and Glen Canyon.

Over the past century, the Colorado River has undergone extensive transformation. The construction of dams throughout the basin has resulted in diversion of the entire river's flow, such that the river no longer reaches its estuary at the Gulf of California. Populations of native fish in the world renowned Grand and Glen Canyons have been decimated.

"We're thrilled by the outpouring of support we're seeing from all across the country for restoring Glen Canyon," said Owen Lammers, Executive Director of Glen Canyon Action Network, the Colorado River advocacy group based in Moab, Utah. "We are on our way to Glen Canyon, building a movement to restore the world's most beautiful canyons and a world-class river."

"The people are coming to celebrate all that this river has brought," said Sage Douglas Remington, Executive Director of the Native Environmental Justice Advocacy Fund. "The Indian people of the Colorado Plateau have long had an important relationship with the waters of the Colorado River. We join together today and commit to employing the same spirit, vision and ingenuity which developed and subsequently damaged this watershed, to heal its wounds, restore its integrity, and ensure its ability to sustain the people and ecosystems that depend on it."

Similar events will be taking place at dams and along rivers around the world on this, the Third Annual International Day of Action Against Dams, and for Rivers, Water and Life. "There is a rapidly growing global movement for 'Living Rivers'," said Juliette Majot, Executive Director of the California-based International Rivers Network. "We're excited to be part of the leadership for restoration. The Colorado, long a symbol of the development of rivers, is now becoming a symbol of society's growing commitment to heal them."

This is a significant step for Glen Canyon, the Colorado River and rivers throughout the world. A people's movement is now forming to embark on a restoration journey unparalleled in the history of river management. Starting with Glen Canyon and working up and down the watershed this effort will promote water, energy, agriculture and restoration policies that will ensure the long-term health and integrity of the Colorado River.

The ceremony will commence with an invocation by Thomas Morris, President of the Dine [Navajo] Medicine Men's Association, followed by a blessing by Reverend Yusen Yamato, a Zen Buddhist Monk representing Global Peace Walk 2000. In addition to Mr. Brower, Ms. Majot, Mr. Remington, and Mr. Lammers, other speakers include: Dr. Robert Hass, Poet Laureate of the United States 1995-97; Anna Frazier, representing the Navajo environmental organization Dine CARE; Katie Lee, folksinger and longtime advocate for Glen Canyon who will be visiting the dam for the first time; Ken Sleight, outfitter and Colorado River advocate; Lisa Ramirez, dam removal advocate with Friends of the Earth; and Lisa Force, dam removal advocate with the Center for Biological Diversity.

On Monday, March 13, Colorado River advocates will be gathering for a Teach-In on Glen Canyon issues in the Kaibab Room at Northern Arizona University's Student Union

Fieldhouse, from 12:00 Noon - 5:00 PM. An evening concert and Glen Canyon slide presentation featuring folksingers Ms. Lee, Peg Millett, and Bill Oliver will be held at NAU's Cline Library Assembly Hall from 7:00 until 9:00 PM.

[Click here](#) to download the booklet for the Teach-In and Rally

03/14/00

The Arizona Republic

Glen Canyon Dam: Keep it or raze it?

By Judd Slivka

Marjorie Doland became part of Page in 1957, six years before Glen Canyon Dam. The town was a temporary building holding five stores, plus five rows of workers' barracks with frontier plumbing.

Doland spent the early years straining her tap water through stockings and waiting for the weekly grocery truck.

She remembers - not fondly - Page before the dam created Lake Powell.

"There was nothing here," she said. "Not a blade of grass. Not a tree. Just . . . sand."

Now there's Page, a town of 10,000 people. But now there also are those who want the dam torn out to help restore the Colorado River to a more natural state.

Both sides will be out at the dam at midday today proclaiming their points of view. As unlikely as undamming may sound, the issue is moving closer to critical mass - and reflects a broad clash between what the West once was, what now is and visions of what some people want it to be.

Town officials note that Page survives because of the lake. It gets its power, its water and the majority of its revenue from the lake.

But environmentalists note that the Colorado has been severely affected by the dam, and that water releases have changed vital parts of the river's ecosystem.

A recent law journal article, written by a federal official in his personal capacity, called for federal consideration of decommissioning the 38-year-old dam. Two groups - one of which is rallying today - exist for the sole purpose of restoring Glen Canyon to its natural state.

This is not a popular idea in Page.

So a rival group, Friends of Lake Powell, will rally on the other side of the dam. And Page merchants have been asked to close for an hour today, to simulate the ghost town dam boosters say Page will become if Lake Powell is drained away.

Glen Canyon Dam remains former Sierra Club President David Brower's greatest regret. Given a choice of building a dam there or in Dinosaur National Monument, Brower recommended Glen Canyon, site unseen - and says he's still haunted by the decision.

In his twilight years, the late Sen. Barry Goldwater professed that if there were one vote he could do over, it would have been his vote to dam Glen Canyon.

Noland, a former City Council member and mayor, isn't sure she'll attend today's rallies.

"I can see both sides of it," she said, "and I just don't know. I'm thinking about going, but I'm not sure."

To which one?

"Oh - Friends of Lake Powell, of course."

That would be anathema to David Orr's ears. Orr, a longtime proponent of restoring the Colorado, is field director of the Utah-based Glen Canyon Action Network, a group recently founded to work for the decommissioning of Glen Canyon Dam.

In addition to today's noon rally, the group has planned a teach-in today and assembly tonight at Northern Arizona University.

"We want the Bureau of Reclamation to become known as the Bureau of Restoration," Orr said. "We would like to see the premier dam-building agency in the federal government to become the premier river-restoration agency."

Orr added: "What is being done here is being watched by environmental groups around the country and around the world."

Which does not thrill Mayor Robert Bowling who, along with the City Council and the Chamber of Commerce, has promoted Friends of Lake Powell.

"Although tourism is the major economic force, power, water and light manufacturing are also factors," Bowling said.

"The bottom line is, without water all things in addition to tourism go."

Reach the reporter at Judd.Slivka@ArizonaRepublic.com or (602) 444-8097.

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03/14/00

Glen Canyon Declaration Signed. [Click here](#) to read the declaration.

Today people from across the country joined more than 50 organizations and businesses to celebrate and inaugurate "The Century of River Restoration" at Carl Hayden Visitors Center at Glen Canyon Dam, Arizona. Led by longtime Colorado River advocate and environmental leader David Brower, the event was highlighted by a signing ceremony of the "Glen Canyon Declaration," calling for restoration of the Colorado River and Glen Canyon.

David Brower, who has led the fight to save Glen Canyon for 40 years, addressed the festive crowd with his concerns about dam safety, water evaporation, seepage, and sustainable economics. He described Glen Canyon as a rich and beautiful landscape that should have become a national park as early as the Franklin D. Roosevelt administration.

Brower was joined by Thomas Morris, president of the Diné Medicine Men's Association, whose organization unanimously voted to drain "Lake" Powell on Saturday, March 11th, and who gave the invocation at the river rendezvous and celebration. Morris said, "'Lake' Powell Reservoir has submerged our sacred sites and destroyed our ability to communicate with sacred gods. These sites must be restored for our children and grandchildren."

Yvon Chouinard, owner of Patagonia, Inc., the world's leading manufacturer of quality outdoor clothing, stated in a letter read at the celebration, "The construction of Glen Canyon Dam more than any other dam in the United States represented the most blatant disrespect for the planet's sacred landscape -- all for a facility that we know was not needed."

Significant parts of the declaration--presented by John Weisheit of the Moab-based Glen Canyon Action Network, primary sponsor of the celebration, and Phil Williams of International Rivers Network--include:

- The Bureau of Reclamation should begin the process of developing and then implementing a decommissioning plan for Glen Canyon Dam.
- The Bureau of Reclamation should establish a federal laboratory to serve as the nation's primary research facility for river and riverine habitat restoration, and give strong consideration to locating this facility in the town of Page, Arizona.
- All new management plans affecting the Colorado River watershed should undergo rigorous analysis of basinwide impacts.
- No new dams within the Colorado River watershed should be constructed, nor should existing dams be reconstructed in the event of their failure.
- Operating licenses should be required for all federal dams, as has long been the case with all non-federal dams. Federal dams must be subject to periodic relicensing reviews to ensure compliance with all environmental laws and safety standards.

- The Bureau of Reclamation should provide funding to support scientific research on the biological and habitat requirements of the endangered native fish of the Colorado River.
- The National Park Service should implement a program to quantify, monitor, and evaluate the presence of a wide range of pollutants including toxic and radioactive metals, petroleum compounds, bacteria, and other contaminants in Lake Powell Reservoir.

"We're thrilled by the outpouring of support we're seeing from all across the country for restoring Glen Canyon," said John Weisheit, President of Glen Canyon Action Network. "We are on our way to Glen Canyon, a movement of people seeking to restore the world's most beautiful canyons and a world-class river."

The celebration was one of 65 actions taking place in twenty other countries today on this, the Third Annual International Day of Action Against Dams, and For Rivers, Water and Life. "There is a rapidly growing global movement for 'Living Rivers,'" said Juliette Majot, Executive Director of the California-based International Rivers Network. "We're excited to be part of the leadership for restoration. The Colorado, long a symbol of the development of rivers, is now becoming a symbol of society's growing commitment to heal them."

Among the organizations and businesses endorsing the declaration are: Alaska Action Center, American Lands Alliance, Arizona Green Party, Blue Mountains Biodiversity Project, Blue Water Network, Californians For Utah Wilderness, Center for Biological Diversity, Coast Range Association, Colorado Plateau River Guides, Columbia Gorge Audubon Society, Committee for Idaho's High Desert, Diné Medicine Men's Association, Earth First! Journal, Earth Island Institute, Environmental Law Society (Univ. of AZ), Environmental Resource Center (Evergreen Coll.), Escalante Wilderness Project, European Rivers Network, Eyak Preservation Council, Flagstaff Activist Network, Forest Conservation Council, Four Corners School of Outdoor Education, Free The Planet! (N.A.U.), Friends of the Earth, Friends of the Eel River, Friends of the River, Grassroots Environmental Effectiveness Network, Great Basin Mine Watch, Great Old Broads for Wilderness, GreenAction, Green Party Of Utah, Hells Canyon Preservation Council, International Rivers Network, John Muir Project, Living Arts Center For Ecology, National Forest Protection Alliance, Native Environmental Justice Advocacy Fund, Oregon Wildlife Federation, Oregonians for Utah Wilderness, Round River Conservation Studies, Sea Shepherd Conservation Society, Sky Island Watch, Solar Energy International, Southern Appalachian Biodiversity Project, Terra Firma (Univ. of UT), Utah Environmental Congress, Virginians for Wilderness, Western Land Exchange Project, Wetlands Action Network, Wild Angels, Canyon Voyages & Adventure Company, Back of Beyond Books, Moab Man Construction, Knave of Hearts Bakery, Fry Canyon Lodge, Tag-A-Long Expeditions, The Rio Colorado Restaurant, Wildland Scapes, and North American River Expeditions/O.A.R.S.

[Click here](#) to read the declaration.

03/15/00

Rally Pits Advocates for Draining Lake Powell Against Those Who Support Glen Canyon Dam

BY MARK HAVNES for The Salt Lake Tribune

GLEN CANYON DAM, Ariz. -- Posters on the east side of Glen Canyon Dam proclaimed "Save Lake Powell," while placards on the west side pleaded "Drain It."

Those two views clashed Tuesday as hundreds gathered for dueling rallies staged near the Arizona dam just south of Utah's border.

Commissioned in 1963, Glen Canyon Dam formed Lake Powell and brought northern Arizona and southern Utah an economic boom driven by waves of recreationists, more than 2 million a year.

Friends of Lake Powell is proud of the dam and fighting to save it. The group points out the lake is the lifeline of nearby Page, Ariz., pumping \$100 million a year into the city's economy.

The Glen Canyon Action Network takes the opposite view. It argues that restoring the Colorado River to its natural flow would be more beneficial to downstream users because less water would be lost to evaporation and the porous sandstone that molds the lake.

Lake Powell backer Denny Judd said when he first heard talk of draining the reservoir he laughed, but not anymore as the movement to return Glen Canyon to its rugged form picks up steam.

The Kanab native attended the Friends of Lake Powell rally with a contingent from Kanab, 70 miles west of the dam in southern Utah. All sported bright red T-shirts broadcasting their support of the lake.

Judd, a shop owner and rancher, said he and other residents have learned from past experience with government officials and environmentalists not to discount any proposal that could threaten their way of life.

"We've seen the writing on the wall from the past, and are going to let folks know the majority don't want getting rid of the lake to happen," Judd said.

He is not alone.

Val Gleave, Friends chairman, said the notion of draining the lake seemed so preposterous at first that no one took it seriously. But as the idea gained momentum, business owners in Page along with the Chamber of Commerce formed Friends of Lake Powell to push their cause.

"One of our board members, who is a scientist, attends regular meetings on water usage, and he says other scientists are receiving a lot of peer pressure to consider a study of draining the lake," she says.

Gleave, whose group planned Tuesday's rally in response to the Glen Canyon Action Network's protest, also is concerned about the growing movement to drain other reservoirs with smaller dams.

"When the governor of Oregon favors taking two dams down for the salmon, that kind of trend concerns us," Gleave said.

In addition to hydroelectric power, storage capacity for a mushrooming Southwest and abundant recreation opportunities, Lake Powell supplies water for the nearby Navajo Generating Station. The Navajo Reservation hugs the southern shore.

About 700 people attended the Friends rally, with many businesspeople closing their stores for an hour in an attempt to dramatize how Page -- a resort city of 10,000 -- would become a "ghost town" without the lake.

On the dam's west side, the rally pushing to pull the plug on Lake Powell drew about 250.

They heard Steve Hannon -- a water attorney from Loveland, Colo., environmental author and member of the Moab-based Glen Canyon Action Network -- sum up the debate in three words: "politics, money and power, and not the wattage kind."

Hannon believes the issue will be resolved by pressure from Southern California water users, who will grow tired of losing 100 million gallons a year to seepage and evaporation.

Besides, Hannon argued, draining the lake actually would boost Page's economy. He said tourists from around the world would be drawn to the largest restoration project ever. And a new Glen Canyon would produce numerous natural beaches for camping and a Colorado River so tame that the most cowardly river runner could raft it.

"You could go down it on your rubber ducky," Hannon said.

Activists say the dam could be lowered gradually. Once the Colorado is flowing through the canyon, Hannon says an instant garden would spring up because of the accumulated silt.

David Orr, the Glen Canyon Action Network's director of field studies, said conventional ways of generating power are becoming obsolete and should be replaced with more sustainable and controllable sources, including solar energy.

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03/17/00

"Drain Lake Powell" Ice Cream Shop Opens

Contact: Owen Lammers (435) 259-1063

Today on the eve of the Moab Half-Marathon, Mayor Karla Hancock of Moab, Utah, will cut the ribbon to open Restoration Creamery--a non-profit ice cream shop dedicated to the restoration of the Colorado River and its watershed.

Located in the heart of downtown Moab, Restoration Creamery will educate each customer on the potential for, and benefits of, restoring the Colorado River watershed. With more than a million tourists from across the country and around the world traveling through Moab annually, the Creamery's restoration message is expected to travel far and wide in a very short period of time.

"This is activism-driven business," says Owen Lammers, a founder of the Creamery and of the recently-formed Glen Canyon Action Network (GCAN). "It's time for activists to bring thier message from the backroom offices right onto Main Street, to interact with and educate the public every day, while raising money at the same time."

Lammers and other GCAN supporters from Moab just returned from their first major event, the Restoration Celebration and Rendezvous, held in Flagstaff, Arizona, and at Glen Canyon Dam, March 13-14. Activists, musicians, writers, indigenous leaders and river enthusiasts from as far away as Maine and Alaska were on hand to usher in the "Century of River Restoration." The events culminated in a signing ceremony of the Glen Canyon Declaration at Glen Canyon Dam. Nearly 200 people followed environmental leader David Brower, and Navajo Medicine Men's Association President Thomas Morris in signing their names to a declaration calling for decommissioning Glen Canyon Dam.

Ice cream lovers visiting Restoration Creamery may add their names to the declaration, while enjoying such delicious Glen Canyon favorites as: Music Temple Almond Fudge, Fern Canyon Mint Chocolate Chip, and Abbey's Rockey Road.

During its Grand Opening Weekend, Restoration Creamery will be sharing 25cents from every cone sold with Rim to Rim Restoration, a Moab-based non-profit organization building community partnerships for restoration projects, and with KZMU, Moab's community radio station, the first media source to give voice to GCAN's activities.

03/19/00

Forty years after Glen Canyon Dam was built, some want it taken down

By Mike Ritchey
The Denver Post

GLEN CANYON DAM, Ariz. - It's not just the Colorado River that they want to set free.

It's our thinking about how we interact with what's around us, with the environment.

That idea was powerful enough to draw some 250 people last Monday and Tuesday to the campus of Northern Arizona University in Flagstaff, and at the dam, two hours north, in Page.

During their sessions, participants from several Western states listened to stories, anecdotal and technical, and sang songs of protest and celebration.

Many support a proposal to drain Lake Powell by opening ducts at the bottom of Glen Canyon Dam and allowing the trapped Colorado River to run.

Yet they also seemed to agree that, though they would very much like to see Glen Canyon restored to its earlier grandeur, the point of their movement was aimed elsewhere.

"This movement is an effort to bring about a transformation in the way we think about our relationship to the land," said Owen Lammers, executive director of Glen Canyon Action Network, one of the environmental groups sponsoring the drive to not only turn the Colorado loose but to set free every river everywhere.

"Deep ecology is the study of how humans relate to the land and just what the sustainability of the land is. It is time for man to begin thinking like a river." As Lammers described it, no one should expect to one day see Glen Canyon the way it used to be, especially not anytime soon.

Other speakers elaborated. Bluff, Utah, geologist and river guide Gene Stevenson said that in the 40 years of the dam's existence, piles of silt - perhaps 100 feet or more - have settled on the canyon floor and in the side canyons and on the rocks, "and while we don't know how much, what we can be sure of is that we're talking decades, even centuries, before the canyon and the river will be fully brought back to life." In 1996, federal officials did try to undo some of the damage when one March morning Interior Secretary Bruce Babbitt opened up four floodgates at the dam and unleashed a torrent that washed down silt and rebuilt some beaches.

Babbitt declared it "a new beginning for the Colorado River, a new beginning for the Grand Canyon ecosystem and a new beginning in dam management." But to those who got together here last week, that was just a drop in the bucket. They want the dam put out of business.

It seems to the layman too huge a project to be seriously considered.

Yet, there is precedent for so many believing in the movement's eventual success.

One speaker recalled that Barry Goldwater, the late U.S. Republican senator from Arizona who was a moving force in the building of the dam, eventually changed his mind.

Before he died, Goldwater said that out of the thousands of votes he had cast in the United States Senate, the one he regretted, the one he would change if granted celestial opportunity, was the one in support of building Glen Canyon Dam.

In Goldwater's absence, however, another senator, Orrin Hatch, Republican of Utah, whose recent presidential primary campaign was unsuccessful, knows his conservative constituents would miss their water if he were to let their Lake Powell run dry, and has introduced legislation to prevent efforts by environmentalists to decommission the dam.

Dam-building is a nonpartisan issue. Liberals, conservatives, those in-between - most are all for it. A dam can support development or agriculture. The Glen Canyon plant generates more than 1.3 million kilowatts of electricity. When all eight of its generators are revved, more than 15 million gallons of water a minute will pass through it. The power - as much as 345,000 volts once it goes through transformers - goes to various markets.

And dam-building means jobs. For a legislator to be against building dams, well, he might as well turn down a second military base in his district. The lake too, provides employment for stores, marinas, motels and other businesses, from beer to bait.

The job of those who would drain the reservoir, second in size only to Lake Meade, downstream from Glen Canyon at Hoover Dam, is to alter public opinion, then to bring that opinion to play in the halls of Congress.

"I was ecstatic when the Sierra Club three, four years ago came out in favor of restoring Glen Canyon," said Ken Sleight, an old river runner from Moab, who owns and Sabotage not seen as option DAM from Page 29A operates Pack Creek Ranch just outside that bustling slick rock town. "Then, when Dr. Richard Ingebretsen, the professor over at the University of Utah, and the Glen Canyon Institute all came out in favor of this at the same time, well, it was what I've been waiting for all these years." Sleight, a friendly, generous, and very tough man, made his comments at a teach-in last Monday at the NAU campus. That event was organized by the NAU chapter of Free the Planet, an environmental outfit favored by young people around the world. Student leader Jason Silke, with his pierced ears and nose, was there with Sleight and Kent Frost, men in their 60s and 70s. They in turn mingled with singer, writer and activist Katie Lee, who is every bit of 79, and finally with David Brower, 88, the godfather of the environmental movement. Optimism welcome Silke and his colleagues had put a substantial program together in just two weeks. The infusion of youth's optimism was a welcome addition to the information-laden afternoon. The young people appeared to harbor no doubts that the Will of the People can and will prevail.

But will it, really? Will their will carry the day? And is their will indeed the will of the majority? And when the health of our rivers and of the planet itself is concerned, should the preferences of the majority matter? Or should it even be put to a vote? No matter your leanings on the issue, the sincerity of the participants bordered on the inspirational.

A video, "The Cracking of Glen Canyon Dam," made in 1981 and starring the late Edward Abbey, whose spirit hovered over the twoday celebration, was shown on Monday. In it, Abbey encouraged a small group who gathered back then to drape a black cloth "crack" over the side of the dam, to first exhaust the political approach, and, he said, "if that doesn't work, then sabotage." No one on Monday or Tuesday advocated sabotage. In fact, a major selling point for draining the reservoir is the claim that the dam cannot hold. It was, said several speakers, built in a bad place - on weak sandstone; a sponge that is and has long been leaking. And in June of 1983, a big water year but not one of the biggest, the dam almost was lost - 29 million acrefeet of water blasting down the Colorado River toward Hoover Dam and Lake (Reservoir) Meade; two years of full flow, running free, wild and with no good intention.

So, sabotage is only a word and a thought that is beneath thinking. Although it might be mentioned that in this, the 25th anniversary of Abbey's death, a commemorative edition of his "The Monkey Wrench Gang," which did embrace sabotage, is set for a June publication. It's already back-ordered.

Can Glen Canyon Dam be decommissioned, Lake Powell drained?

No one at the gatherings appeared to harbor any unreal dreams of when the reservoir would be emptied. Not on Monday at NAU, not on Tuesday, the International Rivers Day of Action, at Glen Canyon, when a declaration was adopted swearing to fight for lifetimes to restore the canyon - and further to make sure no other dams are built. Sierra Club early supporter David Brower, standing tall but clearly weak, tired from a long trip from his home in Berkeley, Calif., near-sea level, to over 7,000 feet, acknowledged that the Sierra Club, of which he was then director, supported the plan in the late 1950s as Congress was considering the construction of Glen Canyon Dam.

"I even wanted to build it 50 feet higher," Brower said.

But he had never seen Glen Canyon. Few had.

The Sierra Club compromised, sacrificing the Glen to save Echo Park, in Dinosaur National Monument where the Bureau of Reclamation, the agency in charge of building and maintaining dams, wanted to build another one.

"When I saw the Glen, I realized our mistake," Brower said. "I began working, and we had the votes in Congress to kill it. But I neglected to bring along my (Sierra Club) board, and without the club's backing, Congress let it go ahead." Brower saw the place and, like Barry Goldwater, changed his mind. He has spent the last 40 years (the dam was built in 1963), trying to correct what he sees as an enormous mistake.

Brower noted that he will not live to see the Glen restored, but Ken Sleight, his old friend and a warrior who has fought right alongside, said Tuesday that he considers the drive to restore Glen Canyon "an ongoing battle, one we're in until we die."

E-mail Mike about this column: mritchey@denverpost.com

<http://www.denverpost.com/news/ranger0319.htm>

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03/20/00

Drain Lake Powell?

By Amie Rose

St. George, Color Country Spectrum

GLEN CANYON DAM -- Two groups of people gathered on opposite sides of Glen Canyon Dam Tuesday.

The crystal blue waters separated a gathering organized by the Glen Canyon Action Network from another gathering organized by the Friends of Lake Powell. And although both groups gathered to talk about the lake, one group wants to drain it while the other group wants to save it.

Friends of Lake Powell gathered on the east side of the lake, across the dam from the Carl Hayden Visitor Center, where the Glen Canyon Action Network gathered.

Although most people at the event stand firmly on one side of the issue, at least two Page residents wanted to hear both sides.

Katrina Reid said neither side swayed her and her husband one way or the other, although she said she was interested in the difference between the two gatherings. She said the Glen Canyon Action Network's event was intellectual while the Friends of Lake Powell event was emotional.

"It's interesting to see what both sides are," Reid said.

Her husband, Kyle, added that they're trying to create some harmony between the two sides.

Law enforcement, though, worked hard to keep the two sides apart.

Joe Richards, Coconino County sheriff, said his office, the Arizona Department of Public Safety, the National Park Service, Page Police Department and the Bureau of Land Management have been working for more than a month to ensure a peaceful day for everyone.

He said between 70 and 80 officers worked as security along the dam and at both events.

"A strong law enforcement presence helped prevent problems," Richards said.

Officers aborted easy access from one event to the other by making each event accessible from only one direction. Neither group was allowed to protest at the other group's gathering.

When a bus, carrying members of the Global Peace Now, turned to go to the Friends of Lake Powell event, it was given a police escort out.

Mike Clough said he went to the Friends of Lake Powell gathering not only to save the lake, but his job. Clough works on houseboats at the lake.

"If I didn't come here I might not have a job," Clough said. "It's very important we keep the lake."

Several businesses in Page closed their doors from 11 a.m. to 12 p.m. to demonstrate what Page would look like without Lake Powell.

Scott and Virginia Ashton, of Fredonia, Ariz., said they also went to support Lake Powell.

"Hopefully we'll make sure that the lake says here," Scott Ashton said.

Clare Ramsay, a Garfield County commissioner, said he and fellow commissioner Louise Liston travelled to Page to support the dam, which provides electricity to their county.

"We're here to show our love for the lake," Liston said.

Ramsay added they also wanted to protest the idea of draining the lake.

"We wanted to let them know there is opposition to what those lunatics are trying to do," he said. "There's not a lot of people who're going to sit idly by."

People for the U.S.A. also joined with Friends of Lake Powell in the celebration.

Shauna Johnson, president of the Utah People for the U.S.A. chapter, said they had about 150 members go to the gathering.

She said the group supports Lake Powell because of the electricity the dam provides, the water storage, recreational use and economic benefit to the people in the area.

Johnson said she lived in Southern Utah before Lake Powell.

"When I was in high school, I kayaked in Glen Canyon," she said. "It wasn't accessible and Lake Powell is accessible. It's valuable to far more people than Glen Canyon was."

David Brower, the first executive of the Sierra Club, disagrees with Johnson. He said the Glen Canyon Dam was the greatest disaster of his life.

"The water hides the most beautiful scenery on earth," he said. Brower said he is partly responsible for the dam. He said if he'd kept the Sierra Club fully informed on the dam project, it wouldn't have been built.

"We had enough votes in the House of Representatives to stop it," he said.

Brower has spent years working to gain momentum in the movement to drain the lake.

"I'm glad I lived long enough to be here," he said.

Brower said the lake will have to be drained eventually, and the sooner it happens the safer everyone will be. He added that people don't realize the danger the dam poses.

"It could be a major disaster," he said. "In 1983 it almost collapsed. They were extremely lucky."

And, Brower said, the canyon can be restored at a fraction of the cost of not restoring it.

"We can revive it as a beautiful park," he said. "We can let the world know what it no longer needs to miss."

John Weisheit, president of the Glen Canyon Action Network, said the dam isn't worth the power and water storage it provides.

"(It) damaged the river and ecosystem," he said. "It was supposed to be a national park and we flooded it."

Weisheit said in the 1930s President Franklin D. Roosevelt decided four times not to make Glen Canyon a national monument because of political pressure.

"Rivers are forever and power plants and dams have a life span," Weisheit said.

He said the dam will eventually have to be decommissioned because it's filling with sediment and sand. The dirt will eventually compromise the safety of the dam because there won't be enough room for water. When it was built, he added, engineers said it would have a life span of 200 years.

Weisheit said people who do have a stake in the lake support draining it. He said people from the area, as well as people from neighboring states attended the event.

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03/22/00

Beyond Crying for the Colorado Dam Shame

By James Ridgeway

Village Voice

The Colorado River is America's greatest natural treasure and a symbol of what the environmental movement ought to be fighting for. It begins in the high Rockies and drops 14,000 feet in a wild 1700-mile torrent to the Pacific Ocean. There is simply nothing else like it. To have been on this river is to have experienced a hallowed moment.

In 1956, horrendous judgment by the government led to the building of the Glen Canyon dam at the Colorado's upper end. The dam created a 300-foot-deep artificial reservoir called Lake Powell, covering the ancient riverbed lands of the Anasazi Indians and their descendants in the Navajo and Ute tribes. The water inundated canyons and tributary streams leading into the main river. So today, instead of the beautiful Glen Canyon, all you see are flotillas of stinking motorboats.

The dam and reservoir have led to the deterioration of the whole river. The reservoir--the second largest in the United States--and the downstream remnants of the Colorado are becoming a toxic sewer, transforming the river and its tributaries into a hazardous waste dump.

Since the dam went up, environmentalists have ranted against it. Edward Abbey dreamed of the day someone would blow it up. Wallace Stegner, the great western historian, fought it. Environmentalist David Brower at first fought the dam, then gave in as part of a deal to save other natural monuments. Now in his eighties and fighting cancer, he has returned to lead a last effort to dismantle it. Last December, a group of environmentalists, calling themselves the Glen Canyon Action Network (www.drainit.org), set up headquarters in Moab, Utah.

Their aim is to force the government to decommission the dam, drain Lake Powell, and restore the Colorado River. The group includes river rafters, small business owners, traditional Navajos, and a descendant of Brigham Young. In an era in which the federal government is having second thoughts about big dams--seriously discussing decommissioning three on the Snake River--Brower and his compatriots feel the time is right for a change in policy. For inspiration, there is Barry Goldwater. Shortly before he died, the right-wing Arizona senator was asked which vote he most regretted. "I wish I could take back the vote to put up the Glen Canyon dam," he replied, "and let that river run free."

David Brower's Last Chance: Taking Out Glen Canyon Dam

By Jeffrey St. Clair

The service station at Dangling Rope, one of the most remote in the United States, sells more gas than any other outlet in Utah. Oddly, the business is more than 50 miles from the nearest road, in one of the least populated landscapes of the lower-48 states.

Dangling Rope is a floating gas station, a marina drifting on the eerie, placid waters of Lake Powell. Three hundred feet below are the ruins of Glen Canyon, a natural Atlantis drowned in a man-made flood. The floating gas station, anchored in this surreal spot to refuel the flotillas of houseboats that prowl the reservoir, is a perfect symbol for the grim fate of one of the planet's natural wonders.

The reservoir, the second-largest in the United States, and the downstream remnants of the Colorado River are becoming inexorably toxified. Every four years the pollution discharged into the water from the thousands of motorboats and jet skis that ply the lake's stagnant waters is equal to the amount of crude oil spilled by the Exxon Valdez.

To top it off, more untreated human waste is dumped into the reservoir than any other body of water in the United States. Lake Powell is well on its way to becoming a hazardous waste site. It didn't have to be like this.

Perhaps more than any other single issue, Glen Canyon has haunted the conscience of the American environmental movement. At the center of the story is renowned environmentalist David Brower, whose trip down the canyon with Floyd Dominy, then head of the dam-building Bureau of Reclamation, was immortalized in John McPhee's book, *Encounters with the Archdruid*. It was Brower, the most creative and radical green of his generation, who signed off on the building of Glen Canyon dam in 1956, as part of a fateful deal to keep the Bureau of Reclamation from building the Echo Park dam on the Green River inside Dinosaur National Monument in northern Utah. That decision has weighed heavily on him ever since.

Now 87 years old and battling cancer, Brower has returned to the Four Corners region to inaugurate a new campaign aimed at decommissioning the dam, draining Lake Powell and restoring Glen Canyon. Brower's last charge represents a direct confrontation against one of the engines that has driven the development and destruction of canyonland country. He also sees it as a chance for a kind of personal redemption. "It's time to correct one of the most egregious errors of the last century," he says.

The Colorado River has been dubbed the American Nile. Both, of course, are desert rivers, coursing for much of their length through some of the world's most sun-scorched terrain. And each gave rise to great ancient civilizations, the empires of Egypt and the mysterious Anasazi, whose cliff-hugging communal dwellings still embroider the canyonland country. But beyond that it's not a particularly precise metaphor. For one

thing, the Nile is three times the size of the Colorado. For another, the Nile is a leisurely river, descending only about 6,000 feet in its 4,200-mile journey to the Mediterranean. The Colorado, born in the alpine snowpack of the Rocky Mountains, freefalls 14,000 feet in a headlong 1,500-mile rush to the Sea of Cortez. It is the compact power of the Colorado that sets it apart - the dramatic way it has slashed through the massive blocks of sandstone on the Colorado plateau, carving out the most bizarre and spectacular landscape on earth. It was a forbidding terrain that intimidated even the conquistadors, who stopped their pillaging forays at the first sight of its vast, seemingly impenetrable chasms.

The first whites to see Glen Canyon were almost certainly in the expedition of Major John Wesley Powell, the crusty one-armed Civil War veteran who floated down the Colorado in wooden dories in 1869. Powell's journal of that trip offers some of the finest nature writing of the 19th century and his detailed description of the canyon and the river remains one of the most precise and compelling. But Powell was no transcendentalist aesthete, no gritty Thoreau of the plateau. His mission wasn't merely to describe this uncharted territory, but to graph it out and discover a way to reclaim the parched land, making it suitable for habitation on a grand scale. The solution, arrived at over the next four decades, was to replumb the entire river system with a network of dams, ditches, canals, diversions, reservoirs and pipelines.

Powell went on to push for the creation of the Bureau of Reclamation in 1902. But the era of dam building had to wait for the competing parties to settle their differences over who would get what from the projects. The Colorado and its tributaries slice their way through seven states, and each one demanded a share of the action. Then there were the Indian tribes, Navajo and Ute, Apache and Havasupai, Hopi and Shoshone, whose rights to the water were undeniable if almost never recognized. The resolution of these claims and counterclaims to the waters of the Colorado resulted in a thick, convoluted and constantly evolving docket of regulations, contracts, court rulings and legislation, known collectively as the "Law of the River." Distilled, the Law of the River comes down to this: first in time, first in right. It's called the doctrine of prior appropriation and was an invitation to a feeding frenzy.

The big issue for the states was how the water would be divvied up. After years of squabbling, they came up with the Colorado River Compact of 1922, which divided the states into two groups, the Upper Basin (Wyoming, Colorado, Utah and New Mexico) and the Lower Basin (California, Arizona and Nevada). Each basin received rights to half of the Colorado's annual flow. The states in each group were left with the tricky choice of how to divide the water between themselves. By the time they were done, not even a freshet of the river would reach the sea. It has been sucked dry.

The first big dam to go up on the Colorado was Hoover in 1936, designed to funnel water to ever-expanding Los Angeles and the fields and ranches of the Imperial Valley. At the time, Hoover dam was the biggest structure ever built. Behind it, Lake Mead, the world's largest reservoir, held back two year's worth of the Colorado's annual flow. Speaking at the dedication ceremony, President Franklin Delano Roosevelt extolled the

project, touting it as the first move toward "altering the geography of the region." FDR's words were prophetic. The raising of that dam sanctified a certain mindset toward the arid lands, what the western historian Donald Worster has called "a world view of permanent subordination." Nature submerged is nature subordinated. Or as Dominy put it: "The Colorado unregulated isn't worth a damn."

The Hoover dam project also inaugurated another grand tradition of Western water schemes: corporate profiting from government pork. The Bureau of Reclamation didn't actually build dams: It planned them, lobbied for them, fudged numbers to make them seem more efficient and fended off attacks against them from Congress and conservationists. Dam building is big business and those billions of dollars were predestined to end up in the coffers of corporations. The lucrative contracts for Hoover dam alone transformed three relatively obscure firms (Kaiser, Bechtel and Morrison-Knudsen) into corporate Goliaths that have stomped around the globe causing ecological mayhem and human misery ever since.

Hoover was California's deal. Then the Upper Basin wanted its shot: Their scheme was grandiose, including dams at Flaming Gorge, Echo Park and Glen Canyon. But then in 1952 along came Brower, the newly hired executive director of the Sierra Club. Brower was outraged by the Bureau of Reclamation's plan to erect a dam at Echo Park inside the stunning canyons of Dinosaur National Monument. The proposal brought back bad memories from an earlier era, when John Muir, the Sierra Club's patron saint, fought a futile battle against the flooding of the beautiful Hetch-Hetchy valley in Yosemite National Park in 1913. After that travesty, the Club made a pact: no more dams inside national parks or monuments.

Brower was a master organizer, generating one of the first great national campaigns in the history of the environmental movement. But from the beginning, Brower's focus was riveted on keeping a dam out of Dinosaur National Monument. At all costs, he feared resetting the precedent of Hetch-Hetchy. So Brower proposed a compromise. In exchange for keeping a dam out of Dinosaur, the Sierra Club wouldn't oppose a dam at Glen Canyon. Indeed, Brower even supported a scheme to raise the height of Glen Canyon dam to accommodate more water storage.

As the dam began to be raised, Brower and photographer Eliot Porter took one last float down the river. They documented their trip in a stunning book, *The Place No One Knew*. It was a powerful, elegiac testimony to what had been lost, fully capturing the haunted beauty of the canyon. But the book's title was somewhat self-serving and deceptive. It is vital to understand that Glen Canyon was not a wilderness, per se. The Navajo and Ute tribes, and before them the Anasazi, had been living there for centuries. Many others knew and loved Glen Canyon, intimately and passionately, among them folksinger Katie Lee, river guide Ken Sleight, author Edward Abbey, historian Gregory Crampton and the thousands of people who had floated down the Colorado and San Juan rivers.

Another person who knew what would be lost with Glen Canyon dam was the writer Wallace Stegner, a close friend of Brower's who had floated through Glen Canyon twice.

Indeed, before the deal was finalized, Stegner told Brower that it was a mistake to trade Glen Canyon for Dinosaur National Monument. "Between us, Dave," Stegner said, "Dinosaur doesn't hold a candle to it."

Brower himself soon came to learn that Stegner was right. Looking back on it, he called the deal his "greatest mistake, greatest sin."

For two years the concrete poured nonstop into the towering pilings of the Glen Canyon dam, and the town of Page sprung up out of nothing nearby. It's now a city of more than 8,000 people. The floodgates on Glen Canyon dam closed on March 23, 1963. From the observation deck outside Page, a quarter-mile downstream from the dam, the 710-foot tall structure appears as a sleek blonde colossus sunk into the blood-red Navajo sandstone.

Admirers of Glen Canyon dam have compared the structure to the pyramids at Giza. It won't last nearly that long. One reason is that the reservoir is fast filling up with silt. The Colorado River deposits 65 million tons of sediment at its base every year. The mud is stacking up at the foot of the dam at the rate of between two and three feet a year. In a little more than 150 years, the silt will have reached the 425-foot level, where it will clog the penstocks that suck water into the power generating turbines. But the dam may breach well before then, as it almost did in 1983. That year heavy snows and a rapid snowmelt left the Colorado so flush with water that the dam nearly overtopped, becoming a 710-foot waterfall. At the same time, its spillways failed and the dam came close to a catastrophic breach. The flows of the river that year were high, but far from what the Colorado has reached in the past and will reach again sometime in the future. That hasn't been the only problem with the dam. For one thing, it leaks. The Navajo sandstone formation, the soft red rock that gives the canyon its Mars-like hues, is extremely porous; it sucks up water like a sponge. In fact, the entire base of the dam is waterlogged, shedding sheets of saturated sandstone. Internal memos from engineers at the Bureau of Reclamation suspected this would happen, but the reports were buried. At the same time, more than a million-acre feet of Lake Powell's water is lost to evaporation in the searing heat - that's enough water to meet the yearly needs of 34,000 homes.

But water was never the main issue at Glen Canyon. The big money at the dam comes from power generation. The huge turbines in the bowels of the dam generate 1,300 megawatts of power a year, enough power for 350,000 homes (though about 60 percent of it goes on the western power grid to industrial customers). But maddeningly, much of it is used to power engines that pump water from the reservoir on its way to Las Vegas, Phoenix and Flagstaff. In all, it provides less than 3 percent of the electricity for the region.

There was one final insult. Back in 1956, Brower had fought for and won protection for a side canyon harboring Rainbow Bridge, the glorious natural arch that is also one of the most revered sacred sites for the native peoples of the Southwest. But it soon became clear that the Bureau of Reclamation had ignored the deal and that the waters of Lake

Powell would creep up to the very base of Rainbow Bridge. An outraged Brower brought a lawsuit in federal court, but lost. The political nightmare unleashed by the Faustian bargain to save Dinosaur National Monument just kept getting worse.

In one way or another, Brower has spent the past 40 years trying to atone. Glen Canyon has become a testament to the perils of political deal-making when it comes to the environment. Brower repeatedly warns young environmentalists: "Never trade a place you know for one you don't."

The closing of the floodgates at Glen Canyon helped spark a new kind of militant environmental movement that rejects political deal-making and compromises. This new movement had a voice: Edward Abbey. Abbey didn't hold back; he raged against that dam and all it stood for, writing in 1968 that it must come down, one way or another. He envisioned the following scenario for the reservoir's dedication in *Desert Solitaire*:

Perhaps some unknown hero with a rucksack full of dynamite strapped to his back will descend into the bowels of the dam. There he will hide his high explosives where they'll do the most good, attach blasting caps to the official dam wiring system in such a way that when the time comes for the grand opening ceremony, when the President and the Secretary of the Interior and the governors of the Four-Corner states are all in full regalia assembled, the button which the President pushes will ignite the loveliest explosion ever seen by man, reducing the great dam to a heap of rubble in the path of the river. The splendid new rapids we will name Floyd E. Dominy Falls, in honor of the chief of the Reclamation Bureau.

In 1981, *Earth First!*, the group inspired by Abbey's musings about monkey-wrenching, marked its arrival on the scene by dropping 300-foot-long plastic strip down the face of the dam, simulating a giant crack.

But Glen Canyon dam doesn't have to end with a boom. It can go out with a whimper and a wild whoosh of water. And that's just what Brower has set his sights on doing. In December 1999, he and a group of some of the finest environmental activists in the country set up shop right in the belly of the beast: in an old ice-cream parlor in Moab, Utah. They call themselves the Glen Canyon Action Network (<http://www.drainit.org>), and their goal is straightforward: build an international movement to force the government to decommission the dam, drain Lake Powell and restore the Colorado River.

The group includes river rafters, small business owners and traditional Navajo. It is headed by Owen Lammers, former chief organizer at the International Rivers Network, where for more than a decade he fought dams around the globe, most notably China's gargantuan Three Gorges project. The developing world is experiencing a spasm of dam-building, which is annihilating rich ecosystems and indigenous cultures. Lammers says that the best way to reverse this ugly trend is to target one of the most famous dams in the world and put it out of business. "That's Glen Canyon, and it's a good thing its located in the United States, because we need to show other nations that we are

serious about cleaning up our own messes," he says. "When Glen Canyon comes down, others will fall like dominos."

Is it possible to drain the lake? Yes. Even Dominy, Brower's old nemesis, says so - though, typically, he disagrees on exactly how it could be done. Under most scenarios, the dam itself would remain standing, the Colorado pouring through its floodgates, an absurdist relic of a lamentable era.

"The barriers to a restored Glen Canyon are not so much technical or economic as political," Lammers says. "It was politics that inundated Glen Canyon. And it will take a peoples' movement to bring about its restoration." The political barriers are familiar ones, though perhaps not as conniving and powerful as the old days. The Western congressional delegation has already reacted with predictable hostility, pushing through a legislative rider that bars the Department of Interior from ever examining the feasibility of decommissioning the dam. At the same time, the federal government is now looking at pulling the plug on four dams on the Lower Snake River along the Idaho-Oregon border to aid dwindling runs of salmon. Those dams provide nearly three times more hydropower than Glen Canyon.

Things change, and even the most craven politician can come to his senses when faced with angry constituents. For others it can be a simple matter of conscience. A few months before he died, Barry Goldwater, the right-wing senator from Arizona, was asked which vote he most regretted in his long career of infamy. "I wish I could take back the vote to put up Glen Canyon dam," Goldwater said. "And let that river run free."

Brower hopes to see that day soon. "The decommissioning of that dam will give the restoration era its big break and bring a lot of joy to the 1,600 miles of Glen Canyon and its side canyons that are magnificent gestures of the earth - to use Ansel Adams' phrase - unmatched on earth or anywhere else," he says. "They are waiting eagerly to be born again. I know, I asked them all."

Jeffrey St. Clair is a contributing editor of In These Times.

05/08/00

Rally Seeks Support to Pull Plug on Lake Powell

By Lisa Church Special to the Tribune

MOAB -- Looking down into Lake Powell in southern Utah causes a strange sense of vertigo. The redrock rims visible below the water's surface are a beautiful, yet eerie, reminder that the houseboats and motorboats crowding the lake throughout the summer are floating above a canyon with sheer rock walls plunging hundreds of feet down into what was once the bed of the Colorado River.

Glen Canyon, the scenic sandstone chasm that was flooded to create Lake Powell, was the subject of a daylong workshop -- sponsored by the Colorado Plateau River Guides and the Glen Canyon Action Network, a group devoted to draining the lake -- in Moab on Sunday. About 80 people attended the event, which brought together several generations of river runners and environmental activists who presented lectures, slide shows, songs and film footage documenting the area before and after Glen Canyon Dam was built in the early 1960s. Since 1964, water backed up behind the dam has flooded more than 200 miles of canyon systems.

For some, it was an emotional journey back in time.

"What's under that reservoir was so incredibly beautiful. It was a crime and inhuman to do what they did to it," said folk singer Katie Lee, also an avid river runner who saw Glen Canyon for the first time in the 1950s. Prior to 1964, when the canyon was filled with water, Lee made almost 20 trips through the area, exploring, and she says naming, many of the endless side canyon spurs that made up the Glen Canyon network. At the time, the Arizona native was living in Hollywood, acting and singing in television and movies. By most measures, her career was on the fast track, but Lee says her experiences on the river, especially traveling through Glen Canyon, set her on a different path.

"It saved my life," Lee said. "It showed me the direction my talents would allow. I would have been a lousy famous person because I don't like people that much. But the river taught me I was going to be just fine with a small audience and my folk music. I'd have been struggling in Hollywood all that time if I hadn't sat down by the river and listened."

River Songs: The message she heard launched Lee on a career of writing, folk music and activism largely aimed at river restoration. She first expressed her love of the Colorado with her recording "Folk Songs of the Colorado River" in 1963. Those songs, written by Lee, and several new ones, have been recently recorded on compact disc in a collection entitled "Colorado River Songs." Lee has also written books on the subject, and frequently appears as a speaker and performer at events to "raise awareness" about how dams and other human activities can destroy natural waterways.

On Sunday, Lee, now 80 years old, showed slides of Glen Canyon before and after the dam, and talked about the cultural history lost when the canyon was flooded to create Lake Powell reservoir.

"A dam is like a blood clot in a human being's artery," Lee said in an interview before the event. "The rivers are the lifeblood of our planet and we've got to let them run. I'm hoping that if people see this beautiful place that was destroyed, they'll see the importance of draining the lake and restoring the river to its natural state."

Proponents of the proposal to drain the lake say the 710-foot high dam, which generates about 1,300 megawatts of hydroelectricity annually, will have to be decommissioned eventually, as erosion and silt put excess pressure on the structure, which proponents say was built on an unsafe foundation of sandstone that will give way over time. The proposal calls for opening the ducts at the bottom of Glen Canyon Dam

and allowing the Colorado River to once again run free. The dam itself would stand in place, a testament, they say, to human folly.

Owen Lammers, director of the Moab-based Glen Canyon Action Network, says draining the lake is the first sensible step in repairing the damage done to the riverways of the region.

Opponents to the plan say draining Lake Powell would destroy local economies in towns such as Page, Ariz., which depend on the reservoir for tourist income. But proponents argue that the tourist economy will survive -- a reservoir-based economy will simply be replaced by an economy devoted to river running.

"It's not about what is more beautiful, an artificial lake to recreate on or a restored river canyon, but that the entire health of the Colorado is in jeopardy because of that dam, particularly the Grand Canyon ecosystem," Lammers said. "The dam is going to have to be decommissioned anyway. The sooner we get started, the sooner we get started on reviving the entire Colorado River."

Vocal Supporter: Over the years, environmental activist David Brower, has been one of the most vocal supporters for draining the lake. Brower, who served 17 years as executive director of the Sierra Club, and remains a member of the board, supported the Glen Canyon Dam in the 1950s as an alternative to a then-proposed dam in the Grand Canyon. But he has spent the last two decades fighting to put the dam out of business.

Brower cites recent studies done by the Glen Canyon Institute, an Arizona-based group that advocates draining Lake Powell, which show that the dam is actually causing the massive loss of water each year through evaporation. That loss -- close to 1 million acre feet annually -- equals six percent of the Colorado River's average annual flow, and is nearly three times the amount of water granted to the state of Nevada through the federally-authorized Colorado River Compact of 1922.

But Brower says one of the best reasons for draining the lake now is to prevent a catastrophe in the future. "We should drain it while we can drain it under control," Brower said in an interview. "If the Glen Canyon dam broke -- and it almost did in 1983 -- most studies show that Lake Mead would go too. You'd have the equivalent of four years of Colorado River water going through in about two weeks. The result would be devastating."

05/19/00

Feed Magazine

DAM SHAME

For forty years, Arizona's Glen Canyon dam has siphoned the raging Colorado river and laid waste to surrounding territory. Today, it has become the centerpiece of the modern environmental movement. James Ridgeway and Jeffrey St. Clair report.

...Edward Abbey is dead, his books remaining as the inspiration for generations of grassroots environmentalists and a sort of American Western anarchism. The places Abbey loves aren't on any maps. There aren't any people around. They share there wilderness with the mountain lions and the wolves. His characters are loners, outlaws of computerized mass culture. When asked for identification, Abbey's Jack Burns says: "Don't have none. Don't need none. I already know who I am."

We whistled over Waterpocket Fold and across the Escalante canyons and around the Kaiporowits Plateau and there in front of us was Lake Powell and that Glen Canyon dam. Over yonder was the town of Page. We slowed down some and circled around for a minute. I could see Nehi was studying that big plug of cement where the Colorado River used to be. He gives me a hard look. "Garn," he says, "who did that?" "Not me, Mr. Nehi, no sir." He keeps on staring at me. "Honest. Wasn't me. I don't know who done it." He tightens the hammer lock another notch. "I think it was them Government people," I says. He kept on giving me that hard eye. "Them goddamn Government men," I explain. "The Colorado River is a sacred river," he says softly. "Yes, sir," I says. "Weren't none sacreder." Then he roared at me: "And we don't want anybody mucking around with it!" "No, sir." "Is that understood?" "Yes." He stares down at the dam and that long green reservoir behind it. "World's biggest silt trap," he grumbles. "World's biggest evaporation tank. And some day, before it all fills up with mud, it will be the world's biggest sewage lagoon. Let's get out of here." "What do you want us to do about that, Mr. Nehi?" "We will take care of that," he says, cool as a Christian with aces wired.

--Edward Abbey

EVER SINCE EDWARD ABBEY wrote this passage in *The Journey Home*, travelers approaching the Glen Canyon Dam bridge uncomfortably shift in their seats, tighten their belts, half expecting something terrible to happen. As they drive across, they peer down at the great dam and the green artificial lagoon with its armada of motorboats, or stinkpots, backed up waiting for gas, and then plunge on into the little town of Page, known to Abbey followers as "the shithead capital of Arizona."

Today the town of Moab, Abbey's old stomping ground, is the staging camp for a new effort to rip down the Glen Canyon Dam and, beyond that, for taking down a dozen other dams across America and blocking the construction of other big dam structures in other parts of the world. Moab is the headquarters of a movement called the Glen Canyon Action Network, which launched the beginnings of a long-term lobbying campaign aimed at persuading the government to take down Glen Canyon Dam. On March 15, 2000, the network released a declaration endorsed by dozens of green organizations and companies -- an elaborate entreaty for the Bureau of Recreation to

decommission the Glen Dam. This movement, which brings together what's left of the old Abbey gang along with David Brower, the environmental visionary who, more than anyone else, is at the heart of the new drive to save Glen Canyon.

For most of the last century, big dams like the one at Lake Powell were synonymous with progress in taming the frontier. On the Colorado, they meant a sure and cheap supply of water for cities as far away as Phoenix and Los Angeles. They provided recreation for hundreds of thousands of people, electricity that could be shot into the Western grid. Their very existence spelled wealth to the desert states where they were built. But they also brought trouble: Covering up ancient Native American civilization, creating undreamt of pollution in the middle of the desert, uprooting the river-valley population, killing off fish populations, and sounding the death knell for entire ecosystems.

The dam and the gigantic reservoir stretching out behind it for more than a hundred miles -- once referred to by Bureau of Reclamation head Floyd Dominy as a "marvel of mankind" -- have the makings of the world's largest toxic waste dump. Pollution from boats and jet skis equals the amount of oil dumped into Alaskan waters by the Exxon Valdez every ten years. To make matters worse, there is more untreated human shit and urine in Lake Powell than any other body of water in the United States.

SHOOTING OUT OF the Rocky Mountains' alpine snowpack, the Colorado River free-falls fourteen thousand feet in a headlong seventeen-hundred-mile rush to the Sea of Cortez, slashing through the massive sandstone blocks of the Colorado plateau to carve out the most bizarre and spectacular landscape on earth. The first whites (the native people had been living there for ten thousand years) to see Glen Canyon were part of the expedition of Major John Wesley Powell, the crusty one-armed Civil War veteran who floated down the Colorado in a wooden dory in 1869. His detailed description of the canyon and the river is among the most precise and compelling nature writing of the nineteenth century, and was a major influence on both Brower and Abbey. Years later, Abbey would remember his own passage through Glen Canyon as "a voyage like no other in my life, a continuous dream of marvels, wonders, splendors, that has haunted me ever since."

Powell's main purpose was utilitarian -- to map the vast uncharted territories west of the hundredth meridian. His dream was to transform the deserts of the West into agricultural oases where ranching and farming could prosper. Powell's exploration of the western canyons was the beginning of a long-term process aimed at turning the desert into a garden. His mapping provided the basis for a labyrinth of dams, reservoirs, ditches, canals, diversions, and pipelines. In the end, state and federal governments spent \$21.8 billion to siphon off every last drop of Colorado water for urban development and agriculture.

After his return to Washington, Powell pushed for the creation of the Bureau of Reclamation in 1902, the agency created as part of the government's newfound commitment to science. It would become the engine of the Colorado's destruction. But before the Bureau could begin, the competing parties had to settle their differences over

who would get what from divvying up the river. The Colorado and its tributaries slice their way through seven states, and each one demanded a share of the action. Then there were the Indian tribes -- Navajo and Ute, Apache and Havasupai, Hopi and Shoshone, in whose rights to the water are undeniable if almost never realized.

The resolution of these claims and counterclaims to the waters of the Colorado resulted in a thick, convoluted, and constantly evolving docket of regulations, contracts, court rulings, and legislation, known collectively as the "Law of the River." The law comes down to this: first in time, first in right. In other words, the first one to lay claim to water rights gets them. It's called the doctrine of prior appropriation, and it was an invitation to a feeding frenzy. There would be nothing left over. And, in fact, after the dams went up, not even a freshet of the Colorado River would reach the Sea of Cortez. The whole river has been siphoned off.

The first big dam to go up on the Colorado was Hoover in 1935, designed to funnel water to ever-expanding Los Angeles and the fields and ranches of the Imperial Valley. The Glen Canyon Dam came into being because the upper-basin states of Colorado, Wyoming, Utah, and New Mexico wanted to insure the portion of the Colorado River allotted to them under the compact wouldn't be siphoned off by others, and, since the government had misjudged the total annual rainfall, the best way to do that would be to create a reservoir. Environmentalists opposed the dam, but eventually gave in, hoping that in agreeing to a dam at Glen Canyon they could avert others going up in northern Utah. Brower played a key role in these deals, culminating, in 1962, in construction of the dam, which stands 710 feet tall, averages 560 feet deep, and floods Glen Canyon for 180 miles upstream, transforming into Lake Powell, the second-largest man-made reservoir in the Western Hemisphere.

THE DAM NEVER SEEMS to have accomplished what it set out to do. "Some very good clear-thinking people have concluded that Glen Canyon Dam was built in a wrong and dangerous place," says Brower. Today, eighty-seven and battling cancer, Brower has returned to the Colorado to lead a movement aimed at dismantling the Glen Canyon dam. "The law of diminishing returns was right, that it wastes water we cannot afford to lose, pollutes the river in ways we failed to consider, is extremely vulnerable to engineering and economic disaster, is not needed, and indeed defeats the purpose for which it was intended. Moreover, it has lost the world one of its most beautiful places, and can be restored at a fraction of the cost of not restoring it."

The dam was supposed to generate cheap electricity to power the West. Right now, the Glen Canyon Dam generates thirteen hundred megawatts of electricity, enough power for about thirty-five thousand homes, but there is currently a power surplus on the Colorado plateau with more units going into production than can be used. It was meant to store water. But the river itself, running free, can hold amounts equal to the twenty-seven million acre-feet that now sit in the reservoir behind the dam, and, if allowed to run free, the river would add one and a half million acre-feet now lost to evaporation and seeping into the Navajo sandstone that undergirds the reservoir.

Recreation, which was not the primary purpose in building the dam, is considered a major benefit, as the lake attracts two and a half million people annually. But at what cost? The sewage and petroleum pollution in Lake Powell trickles down into the Grand Canyon itself. Half the native fish population in the Grand Canyon has been destroyed, and declines continue as a result of the cooler water and lack of sediment brought on by the dam. The riparian habitat in the Grand Canyon has also changed dramatically, with invasive species taking over the native ecosystem.

The construction of a dam and its reservoir is also the story of the dislocation of people and history. "We were promised everything," says Thomas Morris, head of the Navajo's Medicine Men Association. "We were promised water, power, and money. It never came. We were promised that the dam wouldn't flood our sacred land at Rainbow Bridge. It did." Rainbow Bridge, the planet's largest natural bridge, was ostensibly protected by the bill that authorized construction of Glen Canyon Dam. But the Bureau of Reclamation violated the agreement, and the waters lapped to the very edge of the sandstone arch. The flooding of the Indian sites is viewed as an act of cultural genocide by traditionalists such as Morris. "All of Glen Canyon is a holy place," says Morris. "Many Dineh people may not know how to read English, but they know how to read the symbols on the walls of the canyon. They tell a story, a prayer, a healing ceremony. Now those stories are lost."

Page, Arizona, is a dusty eyesore of a city, splattered on the rim of Glen Canyon. The land that Page sits on was once part of the sprawling Navajo Reservation, the Big Rez. And before that, the canyonland country was the redoubt of the mysterious Anasazi, who lived in magnificent cliff-hugging palaces and left petroglyphs and pottery scattered across the region before they disappeared in the fifteenth century. When Glen Canyon Dam went up, thousands of Anasazi sites were flooded.

IN THE UNITED STATES ALONE, there are nearly 75,000 dams. That translates to the construction of one dam every day since the signing of the Declaration of Independence. Those dams inundate 600,000 miles of river. Only a precious handful of rivers have escaped having some kind of a dam impede their flow. Worldwide, there are an estimated 850,000 small dams, forty thousand of them on what are considered to be large rivers. The rationale for many of these needs to be rethought. In China, the mammoth Three Gorges project, which will construct the world's largest dam on the Yangtze River, will require the removal of more than two million people and will flood cities the size of Portland, Oregon. Another potential fiasco, the dam project underway in Bolivia's new Medidi National Park, threatens to drown out one of the most dense and diverse ecosystems in the world.

The movement to remove big dams and restore rivers is picking up steam. It has a supporter in Secretary of Interior Bruce Babbitt, who led a "sledgehammer" tour in 1998 to several dams that he wanted to see brought down. "Usually my trips to rivers involve a canoe and paddle, or fly-fishing rod and reel," Babbitt said in a 1998 speech. "More recently, I arrive with sledgehammer in hand to celebrate the destruction of dams."

Babbitt is one of a few hundred people who have floated the Colorado through Glen Canyon. "I hiked and boated and camped beside the Colorado River before Glen Canyon dam was built in the 1960s," Babbitt said. "In those years, it was a wild, unpredictable, brown sediment-laden stream flooding into the early summer, then settling down in the winter. The gates of Glen Canyon were closed in 1963. Today, you see an ice-cold, Jell-O-green river, manipulated up and down, rising and falling on a daily scale, flushed with the regularity and predictability of a giant toilet." But Babbitt's rhetoric often outstrips his action. His has been a cautious, tentative tenure at Interior. Several smaller, decrepit dams have come down during the Clinton administration, and Babbitt has singled out a few other noncontroversial dams for decommissioning. Among the targets are two dams on the Elwah River inside of Olympic National Park, which annihilated one of the world's most productive salmon fisheries, abridging an 1855 treaty with the S'Klallam tribe that gave them salmon fishing rights "in perpetuity." The dams have long outlived their function, and an agreement was reached in 1992 to bring them down. But Congress has yet to fund their breaching.

On Glen Canyon, and the other big, contentious dams, Babbitt has stood mute, even as his own biologists have put their careers on the line in an effort to save rare fish species driven to near extinction by big dams. The real economic stakes are up in the Northwest, where four dams along the Idaho/Oregon border on the Snake River have been targeted for removal as salmon-killers by environmentalists and federal biologists. These four dams were built by the U.S. Army Corps of Engineers between 1962 and 1975. Each is about 100 feet high and generates 1,230 megawatts of cheap hydropower, much of which is sucked up at below-market rates by the aluminum factories and pulp mills that line the Snake and Columbia Rivers. When the dams went up, salmon and steelhead (a sea-going trout) stocks crashed, declining by more than ninety percent. The alternative is fairly clear cut: either remove the dams or lose the fish. "It is painfully obvious that twenty years of technological fixes have not overcome the problems caused by the four lower Snake River dams," said Dr. Richard Behnke, a professor of fisheries at Colorado State University. "Either we change course now and restore the lower Snake to a semblance of a river, or we will likely lose forever a unique and precious genetic resource that can't be replaced."

But the subject of removing these dams is politically radioactive. George W. Bush wasted little time getting his position out. On his first swing through the Northwest in the summer of 1999, he pledged to get the dams in operation if elected. Gore has shied away from the subject, failing to back up both the EPA and the Fish and Wildlife Service, which have called for the removal of the dams. In fact, the White House has now said a decision on the fate of the dams will be delayed until after the election.

So far, only two prominent elected officials have called for the dams to come down, Oregon governor John Kitzhaber and New Mexico congressman Tom Udall, the son of Stewart Udall, former Secretary of the Interior. Udall wrote a strongly worded letter to President Clinton urging him to take action on the Snake River dams. "What is needed now is decisive action rather than further study," Udall wrote Clinton in a March 2, 2000, letter. "Our lack of action today will allow the salmon to move closer to extinction. While removing the dams is only one piece of a larger solution, it is the first step to effectively

restoring the salmon in the lower Snake River. It is an action that makes sense for the ecosystem, the economy and the nations and tribes with whom we have treaty obligations." However, Udall has remained quiet on Glen Canyon, the dam in his own backyard.

WHAT BROWER AND THE OTHERS gathered at Moab hope to do is to begin a long educational campaign aimed at convincing the public that taking the dam down is better than leaving it up. The process of tearing it down would be gradual, with the underwater Atlantis slowly reemerging. It seems likely that their steady conviction, along with mountains of supporting evidence, will get the job done over time, but you can't help but long for more sudden action -- something like what happened in 1983, when Glen Canyon Dam nearly overtopped and experienced a near catastrophic failure of its spillway tunnels.

While officials in Washington declared their confidence in the structure, a twinge of excitement raced through Abbey's river-rat community. The loners, a few outlaw park rangers, the Forest Service sentinels atop their fire stations, the former Vietnam pilots ferrying tourists through the canyons in small planes, Indochina medics working the rafts, the young girl guides -- the whole Monkey Wrench gang -- paused to recall the words of the prophet Nehi, and they began to look around themselves with renewed interest in the tiny side canyons off the Colorado into which they might scurry were the Glen to let go. There was a moment of silent exultation that those bastards in Washington just might get theirs.

An engineer atop the dam told a visiting reporter that if the water went another foot higher, he'd "run like hell." Off in the distance of the great desert, the coyotes howled and the turkey vultures circled. Down below, at the huge Hoover Dam there was a shudder among the second-string bureaucrats all dressed up in their neat little duds. If the Glen went, what would happen when that wall of water hit Hoover? "We came close to losing the dam in June 1983," Brower recalled tactfully. "A big water year, but by no means the biggest. Major damage was incurred when the dam exceeded its capacity. It will exceed its capacity more often, and waste more water, as the reservoir fills with sediment. The Bureau of Rec was initially concerned about the dam site, but built Glen Canyon there anyway. If Glen fails when full, Hoover will fail, too. If so, four years full flow of the Colorado River will head for the Sea of Cortez in a few hours. The only good news is that Tucson would no longer have to worry about the poor quality of its Colorado River water. And this could happen by accident, as it almost did in 1983. Or, as every thinking person must be aware, by intent."

Abbey's best known book, *The Monkey Wrench Gang*, which plots the destruction of the Glen Canyon Dam by a group of environmental saboteurs, begins with a line from the poet Richard Shelton: "But oh my desert/ yours is the only death I cannot bear." For the river rat, those words are a call to arms. As Thoreau put it: "Now. Or never." Abbey himself had a more straightforward proposal: "Some unknown hero with a rucksack full of dynamite will descend into the bowels of the dam; there he will hide his high explosives where they'll do the most good, attach blasting caps to the lot and with

angelic ingenuity... ignite the loveliest explosion ever seen by man, reducing the great dam to a heap of rubble in the path of the river."

James Ridgeway and Jeffrey St.Clair are the authors of A Pocket Guide To Environmental Bad Guys and the editors of ecobadguys.com. Ridgeway is a longtime columnist for The Village Voice and author of 16 books. He lives in Washington, D.C. Jeffrey St.Clair's articles have appeared in numerous publications and he is co-editor of CounterPunch. He lives in Oregon City, Oregon.

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07/05/00

Important Opportunity To Promote Green River Restoration

Contacts: Owen Lammers or David Orr: (435) 259-1063

The US Bureau of Reclamation is seeking public comment on the operation of Flaming Gorge Dam (on Utah's Green River). A series of public meetings in mid-July provides important opportunities for citizens to participate in protecting and restoring our endangered native fish.

HERE'S WHAT YOU CAN DO:

1. ATTEND one or more of the public meetings
2. SPEAK OUT for river restoration
3. SUBMIT WRITTEN COMMENTS by September 5

ATTEND:

Meetings will be held from 6-9 PM in the following locations: - Salt Lake City, UT (7/11, Wyndham Hotel--215 W. S. Temple) - Rock Springs, WY (7/12, Holiday Inn--1675 Sunset Dr, I-80 Exit 102) - Grand Junction, CO (7/13, AdamsMark Hotel--743 Horizon Dr, I-70 Exit 31) - Vernal, UT (7/18, Western Park Conv Ctr--300E 200S) - Fort Duchesne, UT (7/19, Ute Tribal Headquarters--988S 7500E)

SPEAK OUT:

Join the call for a comprehensive environmental impact statement (EIS) on the Colorado River watershed, including studies on decommissioning--breaching or removing--dams which harm endangered species. Background information is provided below.

SUBMIT WRITTEN COMMENTS TO:

Mr. Kerry Schwartz Environmental Protection Specialist Bureau of Reclamation 302 East 1860 South Provo, UT 84606-7317 Telephone (801) 379-1167 Fax (801) 379-1159 Email: Kschwartz@uc.usbr.gov

This is a rare and important opportunity for citizens to provide input on the operation of a major federal dam. Please write to the Bureau with your comments, especially if you are unable to attend any of the public meetings.

The Endangered Species Act requires the Bureau to change the operations of Flaming Gorge Dam to reduce the harm caused to endangered fish. Dams, including Flaming Gorge Dam, damage or eliminate the habitat conditions these fish require. Conservationists are asking the Bureau to study a dam decommissioning alternative, and to look not just at Flaming Gorge but at the entire Colorado River watershed to address the recovery needs for the endangered species.

Some key points you may wish to include in your letter are listed below, along with some background material. If you have questions, please contact:

Glen Canyon Action Network PO Box 466 Moab, UT 84532 Phone: 435-259-1063 Fax: 435-259-7612 Email: info@drainit.org

Please check back over the next two weeks for additional information which you can incorporate into your comments.

JOIN OTHER CITIZENS AND GROUPS IN ASKING FOR:

* Conducting a programmatic EIS for endangered fish recovery throughout the Colorado River watershed, including the Green River and San Juan River basins; * Preparing a basinwide endangered fish recovery plan that considers alternatives to dams; * Evaluating one or more decommissioning alternatives in the EIS for Flaming Gorge and other dams including Navajo Dam on the San Juan River and Glen Canyon on the Colorado River; * Removing non-native fish which prey on endangered fish; * Limiting withdrawals of water from the river basin to ensure adequate streamflows for fish recovery throughout the basin; and * Protecting and restoring the Green River downstream of the dam, especially through historic Dinosaur National Monument.

BACKGROUND:

The government is preparing an Environmental Impact Statement (EIS) to address Flaming Gorge Dam's impact on endangered species of native fish.

Four species of fish native to the Colorado River watershed (including the Green River) are protected by the federal Endangered Species Act. The humpback chub, Colorado pikeminnow, bonytail chub, and razorback sucker have lost much of their habitat and are now on the brink of extinction primarily as a result of the construction of dams and reservoirs throughout the Colorado River watershed.

Another factor in the decline of these species is the introduction of non-native "game" fish (including trout, catfish, and striped bass) which are known to prey on endangered fish. For years, the government has promoted sport fisheries at the expense of native fish. In the Green River, the government has fostered a trout fishery below Flaming Gorge Dam to the detriment of native fish.

A third factor known to harm native fish is the diversion of water from the river. This problem is especially acute in the lower Colorado River, where the entire river's flow is diverted, primarily for inefficient agricultural irrigation. Diversion is an issue in the Green River, where the Central Utah Project withdraws water for agriculture and industrial use in faraway western Utah.

The Green River flows through Dinosaur National Monument below Flaming Gorge Dam. Dam operations issues, including water outflow temperatures, sediment transport, and dam safety concerns, must be addressed to ensure protection of this unique and historic unit of America's national park system.

Flaming Gorge Dam and other dams on the Colorado River, Green River, and San Juan River, contribute to the decline and extirpation of native fish by causing loss of habitat in the areas inundated by the reservoirs, and by changes in downstream conditions including temperature, changes in turbidity, and other factors. Despite the government's knowledge of these facts, there has not been any consideration given to decommissioning dams as a rational approach to recovering the native fish. Instead, the government has chosen to look at each river segment and each isolated fish population separately as if the dams were permanent, immovable fixtures. By focusing on pieces of the system (e.g., a single dam) rather than the entire Colorado River basin, important issues and solutions are easily overlooked.

The current round of public meetings will identify issues important in addressing the recovery of endangered species for the EIS. To be scientifically credible and legally defensible, the EIS must address a range of alternatives that utilize the best available scientific information to achieve recovery.

A copy of the Federal Register notice and other published documents relating to this EIS may be found on the Bureau's website at: www.uc.usbr.gov. US Fish & Wildlife Service operates a website with information on the endangered species recovery plan at: www.r6.fws.gov/coloradriver/.

Thank you for your interest in restoring the Colorado River. We look forward to seeing you at the public meetings!

07/09/00

Study May Open the Floodgates Of Debate on Flaming Gorge Dam

BY BRENT ISRAELSEN for Salt Lake Tribune

By now it is no secret that some activists want to drain Lake Powell.

Expect a similar call this week for Flaming Gorge Reservoir.

Beginning Tuesday, Flaming Gorge Dam will be the focus of renewed public debate as the U.S. Bureau of Reclamation seeks public comment on dam operations.

The bureau is preparing an environmental impact statement (EIS) to detail the effects of operating the dam in a way to benefit the razorback sucker, the Colorado pikeminnow, the humpback chub and the bonytail chub -- the four endangered fish of the Upper Colorado River Basin.

A handful of environmental groups will suggest a more dramatic alternative: Drain the reservoir and allow the Green River to flow freely again.

"It's well known that the endangered fish . . . are endangered in part by construction of dams and reservoirs. It seems a logical thing to consider decommissioning the dam," said David Orr, spokesman for the Glen Canyon Action Network. The Moab-based network's main goal is to drain Lake Powell, the reservoir behind Glen Canyon Dam at the Arizona-Utah border.

But just as the bureau is not considering draining Lake Powell, neither will it consider draining Flaming Gorge, said Kerry Schwartz, who is leading the Flaming Gorge EIS team.

"Decommissioning of [Flaming Gorge] dam is not within the scope of this project," said Schwartz.

The EIS project is to analyze only the environmental and social impacts of operating the dam to achieve flows recommended by the Recovery Implementation Program for Endangered Fish in the Upper Colorado River Basin. The program is an effort by Utah, Colorado and Wyoming to boost fish numbers and improve fish habitat, with the ultimate goal of removing the fishes from the federal endangered species list.

The recommendations call for the dam to modify its releases so the flows in the river below the dam would more closely mimic the natural hydrologic conditions of the river, thus assisting the fish in their reproduction and growth.

Shwartz pointed out the EIS's purpose is not to explore ways to maximize all the river's natural resources.

Orr said that approach is shortsighted and symptomatic of the "piecemeal" way the government is managing the greater Colorado River Basin, where hundreds of dams and diversions have significantly altered ecosystems.

"We would like the Bureau of Reclamation to become the Bureau of Restoration," Orr said. "Put the engineers to work on a crash course to fix the problems that have been caused by a half century of water development in the basin."

In the case of Flaming Gorge Dam, it is a small miracle the bureau is doing even a narrowly focused EIS.

Jack Schmidt, a Utah State University researcher who has made a career of studying the impacts of Flaming Gorge Dam on downstream ecosystems, said there were some officials in the bureau who did not believe an EIS was necessary for the new flow

recommendations. Others feared an EIS would risk "opening up a Pandora's box they wished they would never had opened," Schmidt said.

"But the reality is it is a Pandora's box. It's an incredibly complex and serious issue," he said. "Now that it is open, they are not going to get it closed."

It is complex because of the numerous and competing interests on the river. While the dam has hurt native fish, it has created a world-class trout fishery in the 15-mile stretch of river below the dam. Though the dam's unnatural flows have altered the natural environment of Dinosaur National Monument, its flood-control capabilities have benefited farmers further downstream. And the dam's electrical generating output cannot be ignored either.

Still, Schmidt believes that if an environmental impact study were ever conducted throughout the Colorado River Basin, the justification for keeping Flaming Gorge Dam, which has affected the river's ecosystems as far south as the town of Green River, would be "weak."

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07/11/00

Scoping Comments on EIS for Flaming Gorge Dam

Mr. Kerry Schwartz
Environmental Protection Specialist
US Bureau of Reclamation
302 East 1860 South
Provo, UT 84606-7317
[Link to Biological Opinion of Flaming Gorge Dam](#)

RE: Scoping Comments on EIS for Flaming Gorge Dam

Dear Mr. Schwartz:

We appreciate this opportunity to submit the following scoping comments on the proposed Environmental Impact Statement (EIS) for Flaming Gorge Dam. Our organizations collectively represent thousands of individuals from across the United States with an interest in the future of the endangered native fish species and ecological communities of the Colorado River basin, including the Green River.

We wish to thank the Bureau of Reclamation (Bureau) for recognizing the seriousness of the plight of the four endangered native fish of the Colorado River basin: the Colorado pikeminnow (*Ptychocheilus lucius*), Razorback sucker (*Xyrauchen texanus*), Bonytail (*Gila elegans*), and Humpback chub (*Gila cypha*).

There is wide agreement within the scientific community that dams in the Colorado River basin, including Flaming Gorge Dam on the Green River, contribute significantly to

the degradation of riverine habitat necessary for the survival and flourishing of these species. As builder and operator of many of these structures, the Bureau has a special responsibility to address issues related to the decline and potential extinction of these four federally-listed species.

We understand that the Bureau is undertaking this EIS in response to proposed flow criteria established by the Upper Colorado River Endangered Fish Recovery Program (UCREFRP) pursuant to consultation with the US Fish & Wildlife Service under Section 7 of the Endangered Species Act (ESA). The Bureau is required to consider in an EIS, under the National Environmental Policy Act (NEPA), a range of alternatives that reasonably and practically fulfill the purpose and need of the proposed government action.

In our comments below we address some of the considerations necessary for a comprehensive EIS, including:

- Issues pertaining to the current operation of Flaming Gorge Dam and Reservoir;
- Critical areas of analysis, including the need to incorporate decommissioning as a potential alternative; and
- Issues demonstrating the need for the Bureau to undertake a programmatic EIS for endangered species recovery for its activities throughout the Colorado River watershed.

I. FLAMING GORGE DAM OPERATIONAL ISSUES

A. Endangered Fish

The operation of Flaming Gorge Dam has been known for many years to cause harm to native fish. The introduction of a successful fishery for non-native trout in the dam's tailwaters is testament to the conditions existing downstream of the dam that make the river inhospitable for native species which require warmer water for successful spawning and survival. The reservoir traps vital sediments behind the dam, thereby preventing replenishment of the silt, sand and other material, which are gradually eroded and transported downstream. The dam, which has no fish passage structure, forms a reservoir which is used and managed for a recreational sport fishery for several non-native species known to prey on endangered natives. Conditions are marginal at best for endangered fish survival in the reservoir and downstream environments created by Flaming Gorge Dam.

B. Water Supply

Flaming Gorge Dam is operated as a water storage facility, part of the Colorado River Storage Project which includes Glen Canyon Dam on the Colorado River in Arizona, Navajo Dam on the San Juan River in New Mexico, the Aspinall Unit Dams on the Gunnison River in Colorado, and others. The Upper Colorado River Endangered Fish Recovery Program goals, as stated, include providing for "future water development" (emphasis added). Presently Flaming Gorge Dam provides little if any water for consumptive use; it is designed and operated primarily as a storage dam to regulate

flows for downstream users. This regulatory function is not critical to the functioning of the region's water supply system. Evaporation can be significant, especially in warmer months, resulting in less water available for downstream uses. Furthermore, water conservation, not development, must become the Bureau's strategy for meeting future supply needs. Overall, we find Flaming Gorge Dam's role for water supply purposes not sufficiently significant relative to the facility's impacts on endangered species and the alternatives available to fulfill its water supply uses.

C. Hydroelectric Power Generation

Flaming Gorge Dam was designed to produce hydroelectricity incidental to the primary function of water storage and flow regulation. The maximum output of 150 megawatts is a small portion of the region's overall generating capacity. Moreover, given that the maximum output of Glen Canyon Dam was recently cut by approximately 500 megawatts—in effect eliminating more than three times the capacity of Flaming Gorge, its loss would be relatively insignificant and could be made up through implementation of energy conservation techniques and demand management.

D. Recreation and Flood Control Issues

The dam provides a locally important recreation industry centered primarily on sportfishing and motorboating. As noted in I.A. above and II.B. below, the introduction of non-native species to support sportfishing has impacted native endangered species. Motorboats, especially personal watercraft, contribute to water quality problems that also need to be taken into account.

The dam is not authorized to serve a flood control function, but can be operated in that capacity. However, the risk of significant damage from downstream flooding is minimal, and with implementation of floodplain management techniques, what little risk exists could be further reduced.

E. Flaming Gorge Dam and the Colorado River Basin

As noted in I.B. above, Flaming Gorge Dam is a unit of the Colorado River Storage Project. In addition to the CRSP dams in the upper basin, an extensive system of dams exists in the lower basin, including Hoover Dam on the Nevada-Arizona border, and several smaller yet important water supply dams on the river between California and Arizona. The river exits the United States (and indeed, the riverbed itself!) south of Yuma, Arizona, where the once-vibrant Colorado River delta ecosystem has been decimated, converted into an alkali flat polluted by agricultural pesticide and fertilizer runoff.

Water delivery contracts for the Upper Basin are structured pursuant to the Upper Colorado River Basin Compact. The compact has never been subjected to NEPA analysis.

Contracts for the lower basin are subject to allocation by the Secretary of the Interior, pursuant to the terms of the Colorado River Compact (passed into law as the Boulder Canyon Project Act in 1928), which led to implementation of basinwide water planning

and allocation ever since. Thus the operations of Flaming Gorge Dam are integrally connected to the operations of the CRSP, the Upper Basin Compact, and the Colorado River Compact/Boulder Canyon Project Act. Therefore its impacts are also tied to this larger system, and as described in item III. below, must be appropriately addressed.

II. CRITICAL AREAS OF ANALYSIS TO BE ADDRESSED IN THE EIS

A. Effects of Dam Operation on Dinosaur National Monument

The Bureau must consider the effects of Flaming Gorge Dam operations on Dinosaur National Monument downstream of the dam. The National Park Service is required by the National Park Service Organic Act to protect the Monument's natural features, ecological communities, streams, and native species, and to leave them unimpaired for future generations.

Flaming Gorge Dam has caused many documented negative effects on the Green River ecosystem downstream of the dam and in the Monument. For example, the dam's cold water releases have for years impaired the native fish stocks in Dinosaur. In addition, the absence of floods and sediment has negatively affected stream morphology characteristics important for native fishes.

Alternatives presented in the EIS must ensure compliance with National Park Service laws and regulations that provide for protecting the Green River ecosystem and its native fish. The Bureau should analyze each alternative in light of expected effects on Dinosaur's natural features and aquatic communities, especially on listed endangered species, sensitive species, and species of special concern. The EIS should explain in detail the impacts of the dam's past and present operations on Dinosaur, and show how future operations will impact park resources and natural regimes of sediment transport and distribution, depositional patterns, streamflow, temperature, riparian ecosystems, native plant communities, and native fish populations within the Monument. Finally, the EIS should explain in detail how Flaming Gorge Dam operations will be managed so as to ensure compliance with the nonimpairment provision of the Organic Act.

B. Removal of Non-Native Fish Which Prey on Endangered Fish

For years the state and federal governments have operated Flaming Gorge Dam and Reservoir and other dams in the Colorado River basin to promote and enhance sportfisheries and related recreation activities. In the reservoirs and downstream in the tailwaters, government policies have increased the numbers and habitat conditions suitable for non-native species such as trout which are known to prey in significant numbers on endangered native species. The Bureau must address the detrimental effects on endangered fish species, sensitive species, and species of special concern, caused by non-native species, and provide alternatives in the EIS that eliminates such predation, both in the reservoir and in the tailwaters.

C. Endangered Species Recovery Needs at the Species Level

The extensive system of dams and diversions throughout the Colorado River basin fragments and artificially isolates endangered fish populations. Historically, regulators

have responded to declining populations of these species by attempting to formulate management criteria that fail to question the fundamental circumstances contributing to the endangerment in the first place. The US Fish & Wildlife Service and the Bureau have chosen to address endangered fish recovery by first declaring isolated populations to be distinct, then proposing recovery plans which fail to address the factors causing the isolation in the first place.

Some or all of the endangered Colorado River fish species are known to be migratory. In addition, evidence exists that the interruption of fish migration by construction of dams in the basin has had a detrimental effect on fish recovery. Within the EIS, the Bureau must evaluate the potential effects, including genetic health and reproductive success, on recovery of fish, including listed endangered species, sensitive species, and species of special concern, that are no longer isolated between dams.

D. Water Quality and Recreational Impacts

In recent years, a rapid rise in recreational use of motorized watercraft including personal watercraft (PWC) has resulted in increases of petroleum effluent in reservoirs and streams. In particular, the proliferation of two-cycle PWCs has resulted in dramatic increases of oil and gasoline discharges into water bodies such as Flaming Gorge Reservoir. The EIS must quantify current and future trends in petroleum discharges from recreational watercraft, and address the potential impacts of these compounds (including MTBE) on native endangered fish species. The EIS should analyze one or more alternatives that consider the effects of declining water quality on listed endangered species, sensitive species, and species of special concern. Finally, the EIS should consider alternatives which implement greater restrictions or outright prohibitions on PWCs, other two-cycle motorized watercraft, and other polluting machinery.

E. Dam Decommissioning Alternative

The Bureau should incorporate into its EIS alternatives which evaluate the potential for decommissioning (e.g., breaching, removing, or disabling) Flaming Gorge Dam and allowing the Green River to flow freely once again. Decommissioning is the most ecologically effective and economically efficient alternative for addressing the purpose and need of the EIS, namely recovering endangered native fish species. Some negative impacts of dams cannot be adequately mitigated, e.g. loss of sediment deposition downstream of the dam, and reduction of frequency and intensity of flood events. And as attempts to do so become more costly, complicated and ineffective, agencies such as the Federal Energy Regulatory Commission and the Army Corps of Engineers are now turning to decommissioning as a preferred alternative for habitat restoration and species recovery. The Bureau should also consider decommissioning alternatives amongst its recovery options.

The Bureau is obliged to consider a decommissioning alternative even if the implementation of such an alternative would be beyond the scope of the agency's discretion, so long as it is reasonable and practical.

36 CFR 219.12(f)(5). Reasonable alternatives which may require a change in existing law or policy to implement shall be formulated if necessary to address a major public issue, management concern, or resource opportunity identified during the planning process.

40 CFR 1502.14(a-c). Alternatives including the proposed action. This section is the heart of the environmental impact statement. ... In this section agencies shall:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency. ...

The Council on Environmental Quality (CEQ) addresses this question in the following excerpt from its "Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 23 March 1981":

Question 2a. Alternatives Outside the Capability of Applicant or Jurisdiction of Agency. If an EIS is prepared in connection with an application for a permit or other federal approval, must the EIS rigorously analyze and discuss alternatives that are outside the capability of the applicant or can it be limited to reasonable alternatives that can be carried out by the applicant?

Answer. Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.

Question 2b. Must the EIS analyze alternatives outside the jurisdiction or capability of the agency or beyond what Congress has authorized?

Answer. An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered. Section 1506.2(d). Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies. Section 1500.1(a).

Given the increasing attention other federal and state agencies are not only paying to the examination of decommissioning alternatives, but selecting them as the preferred alternative, such an alternative in the case of Flaming Gorge does meet the definition of "reasonable" and "practical" under NEPA.

III. PERFORM A PROGRAMMATIC EIS ON COLORADO RIVER BASIN DAM OPERATIONS AND WATER MANAGEMENT

Problems facing Colorado River endangered fish on the Green River and elsewhere in the basin are not likely to be solved solely by addressing impacts associated with Flaming Gorge Dam. Federal policy has too often chosen to view isolated, remnant populations of endangered fish as if they were and always will be isolated, ignoring the purpose and goals of the ESA--to restore viable, healthy populations throughout the species' range. The problems that lead to fish endangerment are not easily resolved at the micro (individual dam) level and must also be addressed from a watershed perspective.

The Bureau is currently engaged in a number of projects, studies, and current and potential litigation that collectively have and will continue to have a significant cumulative impact on these endangered species, including:

1. Lower Colorado River Multiple Species Conservation Plan (LCRMSCP) for endangered fish and wildlife;
2. Adaptive Management Program for Glen Canyon Dam operations pursuant to the Grand Canyon Protection Act;
3. Upper Colorado River Endangered Fish Recovery Program for endangered fish;
4. Draft EIS for the Animas-La Plata project (San Juan River basin) in southwestern Colorado;
5. Draft EIS for Navajo Dam (San Juan River) operations;
6. Draft EIS for new Central Arizona Project water allocations;
7. Draft EIS/EIR for Salton Sea restoration in California;
8. Draft Programmatic EIS for the Rio Grande River (potential withdrawals of San Juan River water via San Juan-Chama Diversion project);
9. Draft EIS for Colorado River Interim "Surplus Criteria" for additional withdrawals;
10. Offstream storage of Colorado River water especially in the lower basin;
11. Continued and expanding depletions by transmountain diversions to the Front Range in Colorado from the headwaters of the Colorado River;
12. Current consultation on reoperation of the Aspinall Unit on the Gunnison River in Colorado that will lead to DEIS;
13. At least three proposals for new pipelines which would withdraw water from Navajo Reservoir and Lake Powell Reservoir;
14. Proposed settlement of Little Colorado River basin water rights in Arizona and New Mexico;

15. Price-Stubb Diversion Dam relicensing in Colorado;
16. Virgin River Resource Management & Recovery Program;
17. Current litigation against the Bureau for failing to address endangered species needs in the Colorado River delta and Gulf of California; and
18. Potential litigation by Indian tribes, seeking additional water rights or quantification of existing rights.

Council on Environmental Quality regulations require the Bureau to address those ongoing agency actions that relate to the proposed action. Since there are numerous NEPA actions underway within the Colorado River watershed which affect water use and allocation and endangered species management, the Bureau must therefore discuss and consider in the context of the Flaming Gorge Dam EIS these other actions. 40 CFR 1501.7(a)(5). Furthermore, even if the impacts of each of these actions are to be analyzed separately, they still must be tiered to a larger programmatic EIS. 40 CFR 1508.28, 1502.20.

It is unclear whether the Bureau can adequately address long-term needs of the fish throughout the basin in the context of these individual projects. It is also unclear how the Bureau will ensure that the cumulative impacts of all these efforts will work together to guarantee, and not impede, recovery.

In addition, there is a transbasin issue linking the Colorado River basin with the Rio Grande River basin. The San Juan-Chama project diverts water from the San Juan River (Colorado River basin) into the Chama River (Rio Grande River basin). Current proposals being voiced in New Mexico call for potential future increases in diversions of San Juan River water to supply Rio Grande municipal and agricultural water users as far away as Albuquerque and the middle Rio Grande irrigation project.

The Upper Colorado River Basin Compact has had a profound effect on the management, use, and allocation of water in the upper basin, including the Green River. The compact controls all river operations, facility operations, and contracts. In the context of this EIS, the Bureau must look at alternative ways to implement the compact in order to minimize effects on aquatic ecosystems, including endangered native fish species, sensitive species, and species of special concern, and to ensure compliance with water quality regulations under the Clean Water Act. Given the constraints of the compact, the Bureau must also consider modifications or changes to the compact that would contribute to the recovery of the affected endangered species, other sensitive species and species of concern, and achieve the purpose and need of the proposed action. As discussed in II.E. above, the Bureau is not constrained by existing laws or contracts in formulating and evaluating alternatives.

Given the extensive amount of federal activity within the Colorado River watershed, much of which directly addresses and/or affects endangered species, a comprehensive programmatic EIS covering the entire basin is not only warranted but also sorely needed. This approach is not unprecedented. The Bureau recently began scoping for a

programmatic EIS on Upper Rio Grande River operations to address impacts of water diversions on endangered species. A programmatic EIS for the Colorado River basin would provide for the multitude of issues affecting endangered species to be addressed in a comprehensive fashion, and would complement the effort now under way in the Rio Grande basin. And as outlined in II.E above, such an EIS must evaluate dam decommissioning as an alternative.

The Bureau's operations of its dam and water diversion systems on the Colorado River have had massive and far-reaching environmental impacts, yet have never been the subject of an EIS. Were such an EIS to exist, it would inform the Bureau, other federal agencies, states, tribes, and the public on all aspects of the Bureau's operations and its "off-river" impacts from the continuing urbanization in the basin states that is able to occur only because of the continued supply of water, or at least the expectation of a continued supply of water, from the Colorado River.

While the construction of the dam system predated the passage of NEPA, the operations and management of the river have changed dramatically since Flaming Gorge and other dams were built—substantial activity which can no longer be considered "grandfathered in" under NEPA. Such actions include the transfer of water from Imperial Irrigation District (IID) to San Diego, the development of off-stream banking, major increases in water consumption, additional water diversions, and the uses of the water diversions and supplies. These changes have altered the character and impact of river management to the extent that now any Bureau activities must trigger a NEPA process. "[When] an ongoing project undergoes changes which themselves amount to "major federal actions, the operating agency must prepare an EIS." *Upper Snake River v. Hodel*, 921 F.2d 232, 235 (9th Cir. 1990); see *Andrus v. Sierra Club*, 442 US 347, 363 n.21 (1979).

As a result, the present NEPA analysis will need to be much more comprehensive in order to compensate for the lack of pre-existing NEPA analysis and baseline information. Note here that the environmental baseline of NEPA encompasses impacts to additional aspects of the human environment -- socioeconomic, environmental justice, recreation, cultural resources, wildlife and its habitat for non-sensitive species, air and water pollution -- not included in the ESA environmental baseline of impacts to endangered species and critical habitat. The action to be analyzed in the scoping notice, as well as the new actions mentioned above, would require changes in operations which have never been analyzed in the first place.

In conclusion, we find the Bureau's initiative to address endangered fish below Flaming Gorge Dam an important exercise. However, we fear that unless the Bureau approaches this undertaking in the full spirit contained within the ESA and NEPA, that such an effort will be unable to guarantee species recovery. We have outlined assessment methodologies above that we believe will avoid such an eventuality, and look forward to working with the Bureau and other relevant agencies to ensure their appropriate incorporation into the current EIS process for Flaming Gorge Dam.

Thank you for the opportunity to submit these comments and recommendations, and we look forward to your reply.

Sincerely, John S. Weisheit President Glen Canyon Action Network

On behalf of the following organizations:

Access for All: Los Angeles, CA

Advocates for Instream Flow: Spokane, WA

American Lands Alliance: Washington, DC

American Wildlands: Bozeman, MT

Bluewater Network: San Francisco, CA

Bridgerland Audubon Society: Logan, UT

Canyon Creations: Grand Junction, CO

Christians Caring for Creation: Los Angeles, CA

Center for Biological Diversity: Tucson, AZ

Clearwater Biodiversity Project: Moscow, ID

Colorado Plateau River Guides: Moab, UT

Colorado Rivers Alliance: Fort Collins, CO

Committee for Idaho's High Desert: Boise, ID

Defenders of Wildlife: Washington, DC

Earth Island Institute: San Francisco, CA

Endangered Species Coalition: Washington, DC

[representing over 400 organizations]

Escalante Wilderness Project: Escalante, UT

Flagstaff Activist Network: Flagstaff, AZ

Forest Conservation Council: Santa Fe, NM

Forest Guardians: Santa Fe, NM

Four Corners School of Outdoor Education:

Monticello, UT

Friends of Pinto Creek: Glendale, AZ

Friends of the Earth: Washington, DC

Friends of the River: Sacramento, CA

Friends of Yosemite Valley: Yosemite, CA

Grand Canyon Private Boaters Assn.: Flagstaff, AZ

Green Delaware: Port Penn, DE

Green Party of Tennessee: Nashville, TN

Green Party of Utah: Farmington, UT

Hetch Hetchy Action Network: Yosemite, CA

International Rivers Network: Berkeley, CA

John Muir Project: Pasadena, CA

Land & Water Fund of the Rockies:
Salt Lake City, UT Office

Native Forest Council: Eugene, OR

Predator Conservation Alliance: Bozeman, MT

Predator Education Fund: Salt Lake City, UT

Rim to Rim Restoration: Moab, UT

Seeds of Simplicity: Glendale, CA

Sheep Mountain Alliance: Telluride, CO

Spirit of the Sage Council: Pasadena, CA

Superior Wilderness Action Network: St. Paul, MN

Taxpayers for the Animas River: Durango, CO

Utah Environmental Congress: Salt Lake City, UT

Wasatch Mountain Club: Salt Lake City, UT

Wetlands Action Network: Malibu, CA

Wild Utah Forest Campaign: Salt Lake City, UT

Wild Utah Project: Salt Lake City, UT

Wild Wilderness: Bend, OR

Wildlife Damage Review: Tucson, AZ

Wise Use Movement: Seattle, WA

Wyoming Outdoors Council: Lander, WY

07/11/00

Coalition questions Colorado River dams and diversions

GLEN CANYON ACTION NETWORK MEDIA ADVISORY

FOR IMMEDIATE RELEASE Tuesday, July 11, 2000

CONTACTS: Owen Lammers or David Orr, GCAN (435)259-1063 (435)260-2591 (mobile)

Brian Dunkiel, Friends of the Earth (802)951-9094

Kara Gillon, Defenders of Wildlife (202)682-9400

David Hogan, Center for Biological Diversity (760)782-9244

Large coalition questions Colorado River dams and diversions:

Federal government asked to undertake comprehensive study of entire Colorado River watershed

SALT LAKE CITY -- Tonight at a public hearing to discuss the fate of 500-foot-high Flaming Gorge Dam located on the Green River in northeastern Utah, a coalition of 50 organizations will demand that the Bureau of Reclamation (the Bureau) vastly expand its piecemeal approach to environmental review for habitat restoration, and undertake a comprehensive study of all its activities in the Colorado River watershed.

The Bureau has been compelled to prepare an Environmental Impact Statement (EIS) on operations of Flaming Gorge Dam as a result of findings by the US Fish & Wildlife Service that the dam causes harm to endangered native fish species. The coalition will point out that since Flaming Gorge Dam is a component of a massive system that has impacted endangered species all the way to the Gulf of California, neither Flaming Gorge, nor the other dams in the system, can be looked at in isolation.

"The fish are becoming extinct because the Bureau has chopped the Colorado's habitat into tiny pieces," says John Weisheit, President of the Colorado River advocacy group Glen Canyon Action Network (GCAN) which will represent the coalition at tonight's meeting. "The only way to ensure their recovery is to put some of these pieces back together so the natural processes and habitats are restored."

"The endangered Humpback chub, Bonytail, Razorback sucker, and Colorado pikeminnow below Flaming Gorge Dam once populated the Green and Colorado Rivers from the top of the Colorado Plateau all the way to the estuary of the Colorado River Delta," adds Kara Gillon, an attorney with Defenders of Wildlife in Washington, DC. "We need the Bureau to show some leadership to bring this habitat back."

The coalition is also demanding that the Bureau evaluate the possibility of decommissioning Flaming Gorge Dam. Flaming Gorge Reservoir does not directly serve any major populations; its storage capacity is used primarily to regulate flows for other reservoirs downstream. Its 150 megawatts (MW) of hydroelectric power generation capacity are relatively insignificant when compared to the 500 MW recently eliminated by the Bureau from Glen Canyon Dam's operations in an effort to address endangered species problems in the Grand Canyon.

Although tonight's meeting is billed as a "scoping" meeting for the Bureau to obtain public input on issues that should be addressed in its study, the Bureau has recently stated that it refuses to evaluate decommissioning Flaming Gorge Dam.

"The Bureau is violating the spirit of the scoping process and the intent of the National Environmental Policy Act," says Brian Dunkiel, staff attorney with Friends of the Earth in Burlington, Vermont. "Dam decommissioning is being supported by the Army Corps of Engineers, the Federal Energy Regulatory Commission, and a number of state agencies as a means to recover endangered species. The Bureau has a legal obligation to consider this as a reasonable and scientifically defensible alternative for endangered fish recovery on the Green River and throughout the Colorado River basin."

Nor can the Bureau ignore calls for a comprehensive study. The agency is currently engaged in just such a process on the Rio Grande River in New Mexico. Moreover, while the Bureau is involved in 16 distinct projects and programs that address endangered species recovery in the Colorado River Basin, there is as yet no mechanism to demonstrate how these projects will work in cooperation or competition with one another.

"These efforts are all happening as if they are on different planets, yet they all affect species in the same watershed," says David Hogan, Desert Rivers Coordinator for the Center for Biological Diversity in Tucson, Arizona. "The Bureau must stop spinning its wheels with plans and studies that individually will not solve the problem, and get on with the task of implementing an effective basinwide species recovery plan." Such an approach was recommended in the 1997 report of the Western Water Policy Review Advisory Commission, established by Congress in 1992.

"A basinwide review will also help to further demonstrate that under federal law, Indian water rights are senior to all other uses, and must be addressed first, not last as the Bureau and other agencies seem to have forgotten," says Thomas Morris of Window Rock, Arizona, President of the Dineh Medicine Men's Association. "With these rights we will work to ensure the preservation and restoration of the river and Mother Earth, not continue to engineer its destruction as the Bureau of Reclamation has."

Other issues the coalition is calling on the Bureau to address include:

* The need to eliminate non-native predatory fish species that have been introduced into the watershed; * The need to eliminate water quality impacts associated with motorboat and personal watercraft use on Flaming Gorge Reservoir; and * The need to eliminate impacts of Flaming Gorge Dam's operation on park resources in Dinosaur National Monument, and ensure compliance with the National Park Service Organic Act.

Copies of the coalition's submission will be made available at tonight's hearing. A copy will also be posted on GCAN's web site (www.drainit.org) after 7:00pm MDT today.

Coalition Endorsements for Flaming Gorge Dam EIS Scoping Comments

July 11, 2000

Access for All: Los Angeles, CA Advocates for Instream Flow: Spokane, WA American Lands Alliance: Washington, DC American Wildlands: Bozeman, MT Bluewater Network: San Francisco, CA Bridgerland Audubon Society: Logan, UT Canyon Creations: Grand Junction, CO Christians Caring for Creation: Los Angeles, CA Center for Biological Diversity: Tucson, AZ Clearwater Biodiversity Project: Moscow, ID Colorado Plateau River Guides: Moab, UT Colorado Rivers Alliance: Fort Collins, CO Committee for Idaho's High Desert: Boise, ID Defenders of Wildlife: Washington, DC Earth Island Institute: San Francisco, CA Endangered Species Coalition: Washington, DC [representing over 400 organizations] Escalante Wilderness Project: Escalante, UT Flagstaff Activist Network: Flagstaff, AZ Forest Conservation Council: Santa Fe, NM Forest Guardians: Santa Fe, NM Four Corners School of Outdoor Education: Monticello, UT Friends of Pinto Creek: Glendale, A Friends of the Earth: Washington, DC Friends of the River: Sacramento, CA Friends of Yosemite Valley: Yosemite, CA Grand Canyon Private Boaters Assn.: Flagstaff, AZ Green Delaware: Port Penn, DE Green Party of Tennessee: Nashville, TN Green Party of Utah: Farmington, UT Hetch Hetchy Action Network: Yosemite, CA International Rivers Network: Berkeley, CA John Muir Project: Pasadena, CA Land & Water Fund of the Rockies: Salt Lake City, UT Office Native Forest Council: Eugene, OR Predator Conservation Alliance: Bozeman, MT Predator Education Fund: Salt Lake City, UT Rim to Rim Restoration: Moab, UT Seeds of Simplicity: Glendale, CA Sheep Mountain Alliance: Telluride, CO Spirit of the Sage Council: Pasadena, CA Superior Wilderness Action Network: St. Paul, MN Taxpayers for the Animas River: Durango, CO Utah Environmental Congress: Salt Lake City, UT Wasatch Mountain Club: Salt Lake City, UT Wetlands Action Network: Malibu, CA Wild Utah Forest Campaign: Salt Lake City, UT Wild Utah Project: Salt Lake City, UT Wild Wilderness: Bend, OR Wildlife Damage Review: Tucson, AZ Wise Use Movement: Seattle, WA Wyoming Outdoors Council: Lander, WY

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07/13/00

The fight to pull Lake Powell's plug

by Judd Slivka for Arizona Republic

There are people, many people, who love it. Who think the greatest thing that ever happened to way-north Coconino County was the creation of Lake Powell, average depth 568 feet.

And there are those who hate what the lake stands for, hate that it was formed when the federal government in 1963 stopped up the Colorado River with a giant concrete plug called Glen Canyon Dam. Those people want to see the lake drained, the dam breached and the Colorado restored to its former magnificence.

It has been a bitter fight over an improbable objective: How do you drain a body of water more than 180 miles long that supplies power, water and jobs to a region without much of any of those without creating a battle?

You don't.

Lately, the abstract, rather odd dispute over Glen Canyon Dam and Lake Powell behind it has gotten more serious because it involves two of the most important dams in the Colorado River Storage Project. Which means lots of water, lots of jobs, lots of money. In other words, the battle over the West's dams is beginning. And it looks to last a long time.

Members of the 50 groups that want to drain the lake, accompanied by a virtual Who's Who of the Western environmental movement, including the Sierra Club and the Glen Canyon Action Network, argued earlier this week at a Bureau of Reclamation hearing in Salt Lake City to also drain Flaming Gorge Reservoir, which was created by damming the Green River in Utah.

Their side has opened an ice cream store in Utah to raise funds. The pro-lake people, buoyed by donations from corporate backers such as SRP are waging an ad campaign with striking Valley billboards and other road signs and the solicitation of donations.

There have been vandalism, harsh words and allegations of illegal behavior, of signs being illegally put up and illegally pulled down, of local law enforcement being complicit. The environmental groups' concerns center on the river's changing ecosystem.

There are four endangered fish in the Upper Colorado River Basin that the dams have affected. The water below Glen Canyon is often too cold to support even trout, and flows from the dam have scoured away much of the Grand Canyon's natural streamside habitat.

But to the burghers of Page and other communities on the lake, this is a fight against out-of-town environmentalists, carpetbaggers who don't make their livings off everything the lake has brought to the otherwise-arid high desert.

"The whole idea of Page is it's here because of the lake," said Alice Robinson of the Page Chamber of Commerce, which shares a phone number with the group trying to keep the lake, Friends of Lake Powell. "If the lake should be drained, that would be the end for Page. "If you're going to try and turn it back to what it was before, well, all the habitat that was there is gone."

Which, in reverse, is exactly the lake-drainers' point. "This is a small battle in the bigger picture of trying to restore the Colorado River watershed," said Owen Lammers, director of the Glen Canyon Action Network, the loudest of the groups trying to drain the lake. "It's not about what is more beautiful but about the health of the river," he said. "It's not just about the survival of endangered species. It's about the survival of humans."

The Valley billboards feature pictorials of the lake's dark blue waters and the clear blue skies above them, the walls of what used to be Glen Canyon rising dramatically over it. "Don't let the Sierra Club drain Lake Powell." Then comes a toll-free number for people to voice their support. Some people obviously don't.

At least two billboards have been vandalized. The billboard on North 16th Street lasted about four days before "Free H2O" was spray-painted in cobalt across it, the same paint blotting out the "Don't let the Sierra Club" portion of the message, leaving just "drain Lake Powell." Another sign, on 19th Avenue, lasted about as long and got the same treatment. Both are clean now.

Another theater of guerrilla warfare: An e-mail has been circulating about the signs, a missive that originated from the Moab, Utah-based Glen Canyon Action Network. "Several billboards along major freeways have been rented in Phoenix," the e-mail reads. "Feel free to call the toll-free number 888.845.POWE(LL) posted on the billboards to let them know how quickly you want the reservoir drained. Call as often as you like - it's free!"

In March, both sides held rallies on the same day on opposite sides of the lake, which brought out more police officers than had been at the lake at one time since the threat of terrorism in conjunction with the Oklahoma City bombing in 1995. "It wasn't until they came up to the dam to sing and dance about it that the companies (in Page) started taking them seriously," said Phoenix-area political consultant Jim Roush, a longtime lake lover who helped mount the ad campaign. "That's when we started getting corporate donations."

Donations are a bit tougher to come by for the lake-drainers. They've opened up an ice cream store in Moab, the Restoration Creamery, which contributes 66 cents for every \$1 sold toward restoration efforts. It earns money selling ice cream flavors with names that allude to Glen Canyon: Music Temple Almond Fudge, Fern Canyon Mint Chocolate Chip and Abbey's Rocky Road. The most popular flavor? Brower's Bear Claw, named for a former Sierra Club director who didn't fight to save Glen Canyon.

David Brower later called it the biggest mistake of his life.

07/14/00

BLM takes requests to drain Flaming Gorge reservoir

By RACHEL SAUER for Grand Junction Sentinel

Note: The Paper's reference to BLM is inaccurate. It should be the Bureau of Reclamation.

Calls to decommission the Flaming Gorge Dam and drain the reservoir or to leave things how they are will become part of the U.S. Bureau of Reclamation's environmental impact statement currently being prepared on the operation of Flaming Gorge Dam.

At a public scoping meeting Thursday night, one of five being held in the next week by the U.S. Bureau of Land Management, a representative of the Glen Canyon Action Network asked the Bureau of Land Management representatives present to consider decommissioning the dam as an alternative for Flaming Gorge.

David Orr, director of field programs for the network, said the groups represented in the network have concerns about whether the environmental impact statement is unnecessarily constrained and avoids the purpose of the National Environmental Policy Act.

"We want to initiate a (Colorado) Basin-wide study if we're going to recover species of endangered fish," he said. "What we see is the government trying to piecemeal this together."

The purpose of the environmental impact statement is to determine the effects of current and future operations of the dam on the downstream environment, particularly the existing populations and designated critical habitat of four Colorado River endangered fish: the razorback sucker, Colorado pikeminnow, humpback chub and bonytail found in the Green and Colorado river basins.

According to the BLM, the environmental impact statement will describe the effects of operating Flaming Gorge Dam to achieve the flows recommended by the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin of the Endangered Species Act. Part of the data-gathering process is seeking public input on the fate of Flaming Gorge.

"I think it's important that we recognize the wisdom of nature," said Tonya Domurath of Grand Junction. "It's arrogant to believe we know more than the Creator when he put the river there."

Henry Rider, a 30-year Grand Junction resident, said during the meeting that he opposes proposals to decommission the dam.

"I think it's wrong," he said. "People need to go up there to enjoy life, they need to have that reservoir."

Orr said the Glen Canyon Action Network is concerned that the BLM has already decided not to address full recovery of the endangered species and is limiting access to documents and data on the recovery process.

The next public scoping meeting for the environmental impact statement will be from 6 to 9 p.m. Tuesday at the Western Park Convention Center in Vernal, Utah.

07/18/00

Babbitt won't drain lake on his watch

BY TODD GLASENAPP for Arizona Daily Sun

Don't expect Interior Secretary Bruce Babbitt to take his sledgehammer to Glen Canyon Dam in his last six months in office.

Despite hinting two years ago that he might support draining Lake Powell to restore natural flow in the Colorado River through the Grand Canyon, Babbitt told the mayors of three nearby communities last weekend that he's opposed to draining the lake, a 186-mile-long reservoir backed by the dam, an Interior spokesman confirmed Monday.

More than a dozen dams have been decommissioned since Babbitt took over leadership of Interior in January 1993.

He has likened their removal to taking a sledgehammer to them in the name of restoring river systems. The U.S. has about 75,000 dams in all.

Babbitt, in the area for a Saturday hike of a proposed national monument at Paria Plateau west of Page, opened a Friday meeting with some reassurance for the mayors of Page, Fredonia and Kanab, Utah.

"He said, 'I just want to let you know that it's not going to happen,'" said Mayor Karen Alvey of Kanab, a small town about 70 miles west of the lake.

To that, Page Mayor Bob Bowling said, "It's worth coming to this meeting just to hear that," Alvey said. Bowling is out of town this week and was unavailable for comment.

Interior spokesman John Wright confirmed that Babbitt is opposed to draining Powell. Wright said Babbitt wouldn't elaborate further.

Before Friday, Babbitt hadn't publicly stated a clear opinion on a proposal to drain the nation's second-largest artificial lake. Two environmental groups want Congress to decommission the 37-year-old dam near Page in order to restore Glen Canyon.

Babbitt has lamented ecosystem changes in the Grand Canyon that were brought about by the dam. In an October 1999 magazine article, the Flagstaff High graduate wrote, "In the depths of the Grand Canyon the waters rose and fell on a daily cycle, in response to the heating and air conditioning demands in Phoenix and Los Angeles."

Yet he is falling short of an early goal to take out a big dam during his tenure, says David Orr, of lake-drain advocate Glen Canyon Action Network based in Moab, Utah.

It's possible Babbitt is being careful to avoid offending Arizona's politicians and developers, Orr said, adding, "After he's finished at Interior, he'll be looking for something to do.

"We think the Interior Department is of two minds on this issue," Orr said Monday. "There is evidence that many people think decommissioning the dam makes a lot of sense. Obviously, Secretary Babbitt will be in office less than a year. He's punting, obviously, to the next administration."

Lake defenders had a much different take.

"Secretary Babbitt's comments are welcomed and perhaps will restore some sanity to this environmental agenda," said Paul Ostapuk, a spokesman for Page-based Friends of Lake Powell.

Kanab Mayor Alvey said too much is at stake to lose the lake and dam. At risk are the water, power, recreation and economic needs of millions.

Page officials have estimated the lake provides for 2,355 jobs for the city's three largest employers, with an annual payroll of \$42 million.

Momentum for draining the lake picked up four years ago with a vote by the Sierra Club's Board of Trustees. The Flagstaff-based Glen Canyon Institute organized in 1996, and Glen Canyon Action Network followed suit six months ago.

Glen Canyon Institute executive director Brian T. Gibbons declined comment Monday. Gibbons said he'd need to know more about the context of Babbitt's remarks before commenting.

Ostapuk was critical of the drain-the-lake advocates and accused them of "ice cream environmentalism." Glen Canyon Action Network sells ice cream from its "Restoration Creamery" in Moab.

"The Glen Canyon Action Network/Glen Canyon Institute notion to drain Lake Powell is not mainstream and has actually alienated many thinking individuals," Ostapuk said. "This is the chance you take when you engage in 'ice cream environmentalism.'"

In an August 1998 speech to the Ecological Society of America, Babbitt hinted at the possibility of draining Powell in the distant future.

"I think back to my beloved Colorado River, which I hiked and rafted and saw change before my very eyes," he said. "Once one of the mightiest rivers in America, it no longer makes it to the sea. That is a shame.

"As our generation passes, the toughest decisions rest firmly in your hands," closed Babbitt, then 60.

He also told the group that he preferred that dams be removed by community consensus.

"The truth is I have not brought my sledgehammer to a single dam that was not approved for removal by consensus of the inhabitants of the watershed," he said.

He said big-dam removal is tricky because it involves complex issues like water storage and electrical generation. That's why he said he liked the idea of controlled flooding to help restore ecosystems. Glen Canyon received a controlled flood four years ago.

07/25/00

Flaming Gorge Dam Debate Threatens More Than Fish

BY BRETT PRETTYMAN for Salt Lake Tribune

Catch and release angling has turned Utah's Green River below Flaming Gorge Reservoir into a world renowned fly-fishing destination. If some groups get their way, anglers will have to put back the biggest catch of all: 29 miles of blue-ribbon tailwater trout fishing and a 90-mile reservoir with its trophy-sized lake trout.

But like all the fish they have pulled from the Green and the Gorge, many anglers are willing to give up the fisheries if it means endangered species will be saved. They do question if that would be the case.

The U.S. Bureau of Reclamation recently held public meetings and now will analyze the response as it prepares an Environmental Impact Statement (EIS) on the operation of Flaming Gorge Dam in northeastern Utah. Although the EIS does not list decommissioning the dam as an alternative, several groups -- led by the Glen Canyon Action Network -- argue that removing the dam may be the best way to save the four endangered fish species on the Green below Flaming Gorge. The group threatens litigation if the Bureau doesn't explore the possibility of decommissioning the dam.

"I fully support the preservation of a species," said Steve Schmidt, owner of the Western Rivers Flyfishers shop in Salt Lake City. "If they can prove beyond a doubt that they can save a species by taking down a dam, then I am behind it."

The angling community is concerned about the possibility of losing two premier fisheries, but feels any change would take a long time for it to happen, if ever.

"They haven't done enough studies," said Paul Dremann, vice president of conservation for the Utah council of Trout Unlimited. "We are a long way from decommissioning or even beginning to support it. They need a study of the entire watershed of the Upper Colorado River system, not just Flaming Gorge Dam. There is no basis for decommissioning right now, except the ideology by a certain group of people that all dams should be removed."

Trout Unlimited was one of the main forces behind the successful effort to eliminate Edwards Dam on the Kennebec River in Maine last summer. Owen Lammers, a spokesperson for the Glen Canyon Action Network, agrees with Dremann about the need for a comprehensive study of the entire watershed, but says Flaming Gorge Dam is no longer needed for the purposes it was built for -- water storage and producing electricity -- and that all dams will come down eventually.

"The Endangered Species Act requires recovery," Lammers said. "They have not demonstrated the species can be recovered with the dam still there. The Bureau has to consider all the alternatives. This is not unprecedented to ask for." The Network is also asking the Bureau to review the need to eliminate non-native predatory fish in the watershed. If the dam is drained, the non-native fish could disappear because the dam helps maintain the colder temperatures needed for trout species.

After a five-year study on the razorback sucker, Colorado pikeminnow, humpback chub and bonytail, the Bureau is recommending river flows that will assist in the recovery of the endangered fish be controlled by the dam. There are five proposed scenarios for flows, set up to match the natural water cycle of the river. Although concerned the experimental flows tested on the river might hamper fishing, anglers now say it helped trout populations.

"As I understand it, the flows will not be any jeopardy to the trout," said Steve Brayton, the Division of Wildlife's project leader over Flaming Gorge and the Green River below the dam. "There isn't much of a difference from what we have already faced."

Brayton said the development of the EIS has "opened up the dialogue" between all the organizations concerned with flows from the dam and said the angler's voice is being heard more now than ever.

"People have the right to speak their mind; to let the Bureau know what resources they are interested in protecting," Brayton said. "Some people feel the best thing for the endangered species is to remove the dam. They are certainly entitled to voice that opinion."

No one wants to say one species of fish is more valuable than another, but there are some numbers and facts the Bureau has pointed out in literature available at the public meetings:

- The Flaming Gorge National Recreation Area is the flagship of the national recreation areas in the U.S. Forest Service. It was the first national recreation area in the agency.

- The Flaming Gorge National Recreation Area attracts between 700,000 and 2 million visitors annually.

- Direct and indirect annual expenditures connected with river experiences and uses are estimated at \$25 million. The total is close to \$100 million for the entire national recreation area.

-- The 13 outfitter/guide businesses which use the Green River below the dam to the Colorado stateline report an annual revenue of more than \$1.3 million.

Those interested can send written comments to Kerry Schwartz, Bureau of Reclamation, Provo Area Office, 302 E. 1860 South, Provo, Utah 84606-7317. Comments can also be sent via e-mail to Kschwartz@uc.usbr.gov. Written comments must be received no later than Sept. 5.

"We have had some good comments and not one of them is more important than the other," Schwartz said. "We will analyze them all and determine whether they are pertinent to the EIS process."

Schwartz said once all the comments have been received by the Sept. 5 deadline, new issues will be identified and placed in a draft EIS. The draft will include alternatives and should be ready by July of next year.

Once the draft document is published, there will be another public hearing process. Comments from those meetings will be reviewed and a final EIS should be released in December, 2001.

07/27/00

Ralph Nader Denounces Administration's Extinction Plan For Rivers

CONTACT: Owen Lammers, 435-259-1063

MOAB, Utah -- Today environmental leaders, led by former Sierra Club Executive Director David Brower, joined Green Party Presidential candidate Ralph Nader in blasting Vice-President Al Gore and the Clinton Administration for their failure to forestall the extinction of endangered fish species in the Columbia River and Colorado River watersheds.

Despite overwhelming scientific agreement that breaching of four fish-killing dams on the Snake River in eastern Washington state is necessary to protect dying salmon species, Mr. Gore is on record supporting the Clinton Administration's recent decision to abandon the breaching proposal.

"Al Gore has shown that enforcing the Endangered Species Act and the National Environmental Policy Act is unimportant in a tight political race," said Mr. Nader. "Despite his reputation as being stiff, the Vice-President seems to have little backbone when it comes to protecting the environment."

Trout Unlimited recently called the Administration's position a "death sentence" for Snake River salmon.

Noted environmental leader David Brower echoed Mr. Nader's sentiments. "The Vice-President is ignoring the law; is extinction necessary to get Mr. Gore's attention?"

In the Southwest earlier this month, calls for decommissioning fish-killing dams were dismissed by the Administration. Federal dams in the Colorado River watershed are largely responsible for the endangerment of four fish species native to the river system vital to our prized national parks, including Grand Canyon.

A coalition of fifty-five organizations led by Glen Canyon Action Network (GCAN) of Moab, Utah, called for decommissioning studies to be done on Flaming Gorge Dam on the Green River and a comprehensive study of endangered fish recovery to be performed for the entire Colorado River basin. In clear violation of Council on Environmental Quality guidelines under the National Environmental Policy Act, the Administration announced it would not conduct a decommissioning study for Flaming Gorge. CEQ and NEPA regulations specify that the Administration must examine a range of alternatives in the NEPA process, not concentrate solely on a predetermined course of action which does not guarantee recovery--a requirement of the Endangered Species Act.

Recently the Administration declared its opposition to decommissioning Glen Canyon Dam on the Colorado River, failing once again to support recovery of endangered species and restoration of the river ecosystem through Grand Canyon National Park. Over the past four months, a GCAN-led coalition of sixty-five organizations has called for removing Glen Canyon Dam and restoring 250 miles of inundated river.

"Al Gore fiddles while the Earth burns," said Mr. Brower, Chairman of Earth Island Institute. "Scientists agree that many dams have to go if we're to save our rivers, but the Vice-President seems willing to sacrifice it all for commercial interests."

Many rivers in the United States are profoundly harmed by dams which block fish migration routes and destroy habitat. For years, dam removal has been known to be critical in protecting and restoring endangered fish populations.

"The Columbia and Colorado river systems are dying, and their resuscitation depends on dam decommissioning," said GCAN President John Weisheit. "Alternatives are available to address all the supposed benefits of these dams, but Clinton and Gore would rather watch these rivers perish than have the Vice President lose campaign contributions."

The Administration continues to discount the viability of and growing need for removing large dams as part of a sound river management policy for the twenty-first century.

* Power generated by dams is becoming less economical as the cost of environmental mitigation increases. Increasing energy conservation efforts using existing technologies can lead to significant reductions in electricity demand.

* The vast majority of water diverted from rivers is used for heavily subsidized and inefficient irrigated agriculture. More appropriate agricultural practices could eliminate the need for many of these dams and still meet municipal needs for generations to come.

* Existing road and rail transportation systems provide viable alternatives to dam-assisted river transportation and allow the costs of moving commodities to be incurred by shippers instead of being subsidized by taxpayers.

* Despite massive investments in structural approaches to flood control, rising economic flood losses have caused river management experts to plan for and work with floods instead of trying to defend against them.

Mr. Brower and Mr. Nader noted that Vice-President Gore "has set a new standard for hollow environmental rhetoric" and urged the Vice-President to act on his book, "Earth in the Balance," to safeguard biological diversity.

"Had Mr. Gore read his book as carefully as I have," said Mr. Brower, "he would realize the necessity of decommissioning the dam that could restore Glen Canyon, a world wonder equal to the Grand Canyon."

07/29/00

CREDA's credibility called into question

Glen Canyon Action Network

FOR IMMEDIATE RELEASE CONTACT: DAVID ORR (435) 259-1063

Power association misleads, inflames public opinion, environmental leaders say

MOAB, Utah -- Colorado River restoration advocates today blasted the Colorado River Energy Distributors Association (CREDA) for misleading its member electric utility companies and the communities throughout its service area about the effects of decommissioning dams in the Colorado River watershed.

According to recent reports in the Farmington, New Mexico, Daily Times, CREDA has asked the Farmington City Council to approve a resolution opposing draining Lake Powell and other unneeded reservoirs on the grounds that purchasers of hydroelectric power generated by these dams might pay higher prices for electricity.

"By oversimplifying the problem, CREDA is misleading its member companies and attempting to inflame public opinion," stated David Orr, Field Director of Glen Canyon Action Network (GCAN). "In this rapidly deregulating energy market, it is dishonest to make such predictions."

CREDA is a trade association representing buyers of hydropower from dams on the Colorado River and its tributaries. CREDA's member companies have for years enjoyed heavily subsidized electric power financed by federal taxpayers. Environmental costs have been largely ignored over the lifetime of these projects.

"Dinosaur utilities like CREDA may just go extinct unless they respond to changing conditions in energy markets," said Mr. Orr. "These executives need to understand that

it's no longer necessary for them to destroy rivers and pollute the air to generate electricity for their customers."

Dams in the Colorado River watershed drowned major river segments and caused significant harm to the river and to native fish and wildlife. Glen Canyon Dam in particular has caused enormous damage to Grand Canyon National Park. Passage of the Grand Canyon Protection Act in 1992 was a first step in mitigating the destructive effects of Glen Canyon Dam. Costs of the first phase alone were more than \$60 million. These costs, which have recently fallen on ratepayers, continue to mount. Glen Canyon Dam hydropower costs will continue rising in order to pay growing environmental mitigation bills.

Colorado River dams are known to cause thermal and chemical pollution of water and destroy critical habitat for fish and wildlife. Four species of native fish are endangered in part because of Glen Canyon Dam and other dams in the Colorado River watershed.

In recent months, more than sixty environmental and community groups have joined with GCAN in calling for decommissioning Colorado River dams--pointing to Glen Canyon in particular--as an integral and necessary element of a successful river restoration solution.

Dirty power not only kills rivers but pollutes our air, too.

The Four Corners Power Plant in nearby Shiprock, New Mexico, is one of the dirtiest power plants in the region, according to a recent report by the Public Interest Research Group. Coal burning power plants will also be decommissioned in coming years as Clean Air Act regulations force older plants to shut down. Because of high environmental costs, no new coal fired plants are likely to be constructed.

While residents of northwest New Mexico choke on mercury and other toxic pollutants from Four Corners, and the Colorado River and Grand Canyon ecosystems are destroyed by dams, CREDA goes on the defensive.

"Utilities should be leading the charge for cleaner power, not running away," continued Mr. Orr. "The potential for cheap solar power development in this region is tremendous, yet the industry clinging foolishly to past technologies."

New technologies are leading to development of high-efficiency appliances and affordable solar and wind power generating sources. Engineers are racing to perfect inexpensive fuel cells which promise to revolutionize the way that power is delivered to consumers.

Conservation is a critical component of a strategy to shift away from coal, nuclear, and hydropower, toward low-polluting renewable sources. As large dams are decommissioned, state of the art energy conservation practices, including demand management techniques, will reduce consumption of electricity while maintaining a high quality of life.

The dams on the Colorado River were built nearly forty years ago when utilities operated as monopolies and politicians promoted power development to stimulate economic growth and development of cities such as Phoenix and Las Vegas. The economy, culture, and environment have changed dramatically over the years.

"Even if the projected rate increases were to come to pass, they amount to about one to three dollars per month per household," said Mr. Orr. "Given the enormity of the ecological damage, shouldn't we be willing to pay this small price for restoring our rivers?"

"Rivers are the lifeblood of the Southwest," continued Mr. Orr. "Certainly the people of Farmington can make the distinction between dollars and sense."

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[Glen Canyon Action Network is a people's movement dedicated to the integrity of the Colorado River Watershed. Through grass-roots organizing, research, education and lobbying of federal and state river management agencies, GCAN promotes alternative approaches to energy generation and water utilization to create opportunities to decommission structural interventions into the Colorado River system and to restore its natural processes.]

11/22/00

Living Rivers Phoenix Office opens

FOR IMMEDIATE RELEASE

November 22, 2000

CONTACT: Lisa Force 480.990.7839 email Owen Lammers 435.259.1063

GROUP SEEKING TO RESTORE COLORADO RIVER OPENS PHOENIX OFFICE

Targets Central Arizona Project with Conservation Strategies

PHOENIX, Arizona - The Glen Canyon Action Network (GCAN), the environmental group working to restore Glen Canyon, today announced formation of an umbrella organization called Living Rivers, with the aim of promoting river restoration in the western United States. Lisa Force, an accomplished and successful advocate for river restoration in Arizona, will lead Living Rivers' new southwest regional office, opening today in Phoenix. Formerly a program director with the Center for Biological Diversity, Ms. Force was lead negotiator responsible for convincing Arizona Public Service Company to decommission its Childs and Irving hydroelectric power plants, including the removal of its dams. She was recently spokesperson for the successful "No on Proposition 102" campaign.

"The Colorado River desperately needs advocates now," says Ms. Force. "The riverine ecosystem of our magnificent Grand Canyon and the once biologically rich Colorado River Delta are dying, yet Arizonans are being asked to give more of their river every day." Tremendous environmental destruction is wrought by the Central Arizona Project (CAP). In 1993, Arizona politicians completed the CAP, a canal from the Colorado River capable of diverting nearly 20% of the Colorado's annual flow.

"We never needed the CAP, and we don't need it now," says Owen Lammers of Glen Canyon Action Network and the Executive Director of Living Rivers. "We can implement water conservation strategies that will assure sustainable water supplies for years to come while allowing the river to flow again. Now the CAP is promoting more development and water abuse to pay off its \$4 billion construction costs. It's time to put a lid on CAP."

The CAP legislation requires mitigation for the environmental destruction it causes. "Mitigation has never been implemented," says Ms. Force. "Living Rivers will be asking CAP to comply with the law. One way CAP could achieve partial mitigation would be to restore Glen Canyon and the Delta."

Other environmental groups praised the founding of the new organization. Sierra Club Director Michael Dorsey of Ann Arbor, Michigan, states, "Living Rivers is the new style of river advocacy that is desperately needed for the 21st century."

Living Rivers' mission is to give voice to the growing popular support for large-scale river restoration. The initial focus is the Colorado River, with efforts also building on the Rio Grande River watershed to the east. "Through education and conservation we can eliminate the need for straws from the Colorado, and impoundments like Glen Canyon Dam," says Owen Lammers, the Executive Director of Living Rivers. "We can meet our water needs and revive the river at the same time; it's a win-win."

Living Rivers' message will soon be arriving in the metropolitan areas in the seven-state Colorado River Basin that includes Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming.

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For more information, contact:

Owen Lammers, Executive Director Living Rivers P0 Box 466, Moab, UT 84532 Tel: 435.259.1063; Fax: 435.259.7612 owen@drainit.org, www.drainit.org

Lisa Force, Living Rivers Program Director PO Box 1589, Scottsdale, AZ 85252 Tel: 480.990.7839; Fax: 480.990.2662 lforce@livingrivers.net www.livingrivers.net

11/29/00

To National Park Service to Proposed Stop Lake Powell Marina

Mr. Kelsey Begaye
President Navajo Nation
Office of the President Window Rock, AZ 86515

Re: Antelope Point Marina project

Dear Mr. President,

I am writing out of concern for the effects on the Navajo Nation from the development of the proposed Antelope Point Marina project on the Lake Powell reservoir. The Diné Medicine Men's Association Incorporated (DMAI), represents the interests of traditional Diné people and the protection, preservation, perpetuation and restoration of cultural properties important to us. We are concerned about sacred and ceremonial sites and the health of our people. Solicitations for developing the Antelope Point project were recently sent to five prospective developers, yet we believe that there are serious issues which must be addressed by our nation before any further actions are taken pertaining to this project.

We applaud your efforts to pursue economic development opportunities for the Navajo people, and for attempting to secure some of the tourism revenues resulting from the bilįganį's use of what was once Navajo land at Lake Powell reservoir (Glen Canyon National Recreation Area, or GCNRA). We appreciate the efforts to make this project as beneficial as possible to our people's financial and political interests. The preferential hiring recommendations, the arts & cultural center, educational objectives, political position as well as income from the ground lease and percentage of gross revenues are important.

However, given the large size of the project and other concerns, we do not see this as sustainable economic development for our people. We believe the Nation's economic development strategy should emphasize taking over the existing concessions operations at Lake Powell reservoir, particularly at Wahweap Marina, rather than promoting additional development that increases pollution and ill health among our people, and causes damage to cultural and historic properties. We further suggest the Antelope point development be designated to be related to and designed to be a quiet zone, a place for solitude and healing (a traditionally based healing place for all people to enjoy). Such a move would be far more economical and financially rewarding for the Nation and the environment and the health of people.

Antelope Point is a complex project that will require the commitment of a huge amount of the Nation's resources, which may not, in the end, prove to be a good business investment. Let the Wahweap portion be the bilįganį's version economic progress, it is already successful. The Antelope Point will be for healing. We have a tremendous opportunity to implement a strategy that is part of a longer-term vision for sustainability

for our people, to enable them to live in harmony with the land and reverence for our culture and traditional properties and way of life.

To this end, we request that you suspend action on the Antelope Point project until the Navajo people can be made fully aware of the impacts. Alternative strategies for the Nation to benefit financially from the recreation and tourist industry on Lake Powell reservoir must be considered. Specifically, we request that you support the efforts of our association in calling on the National Park Service (NPS) and the Bureau of Indian Affairs (BIA) to conduct a full Environmental Impact Statement (EIS) for the project. We also request that the Navajo Nation fully disclose the proposed sale of alcoholic beverages and the disturbance of ceremonial and archeological sites that will be required for this project. It is spiritually and sacredly out of balance to promote healing on one hand and sell liquor in the other.

Background

Before Glen Canyon Dam was built, the land that is now flooded by Lake Powell reservoir along the Colorado River and San Juan River belonged to the Navajo Nation. Our people had direct ownership and control of these rivers right to the centerline. Some of the most beautiful and sacred canyons on Earth, including many narrow side canyons, were also important places where our people farmed, raised sheep and cattle, and practiced traditional cultural ways and ceremonies. Diné and other indigenous people who lived in or near and used these canyons were relocated to make way for the bilįganį's reservoir. Some of our most important sacred sites--including Rainbow Bridge--were also flooded by the reservoir.

These concerns have been expressed over many years. In the 1970s, medicine people from Navajo Mountain Chapter and Shonto Chapter sued unsuccessfully in federal court to stop the filling of Lake Powell reservoir because it would desecrate Rainbow Bridge. I often wonder how defeated they felt while they lost the land. The experts agreed that the reservoir harms our right to practice our traditional ways of life, but the court refused to stop the flooding.

The City of Page, Arizona, stands today on former Navajo Nation land that was traded to the U.S. government in 1958 to build the Glen Canyon Dam work camp. The town became privatized in the 1970s and has come increasingly under control of non-Navajo corporate interests ever since. Imagine our young entrepreneurs capitalizing on this and with our own effort. Today, the ARAMARK Corporation controls virtually all tourist access to Rainbow Bridge through guided tours from Wahweap Marina and other marinas on the reservoir. Hundreds, sometimes thousands, of visitors in a single day come to visit this sacred shrine not for the same reasons we would go there but for pleasure. The Navajo Nation gets none of the profits from this tourist trade, merely a few jobs and because of the lack of privacy to practice our ceremonies, the practice now subject to the destruction of our ways. We lost much when Glen Canyon Dam was built. The Navajo Nation has a continuing interest in seeing that tourism at Lake Powell reservoir and Rainbow Bridge in particular is appropriate and respectful. We must use this opportunity to do the right thing. The elders say that water is sacred and must be

treated with respect and the firma is our mother and must also be treated with respect. These values we must perpetuate for our people.

As you know, the Diné Medicinemen's Association Incorporated supports the restoration of our sacred sites in Glen Canyon. While this will not happen right away, we believe we must deliberately move in that direction and this is a beginning. In the near term, however, we need sustainable economic development that enhances and protects and promotes our cultural traditions. The Navajo Nation can begin managing the concessions around Lake Powell (Specifically Wahweap area) reservoir, and promoting a more human-powered, environmentally benign and culturally aware and appropriate tourism industry at the Antelope Point. This would be a welcome replacement to that which exists today, where motor boaters use our sacred sites as a playground with no environmental or cultural awareness.

Our Concerns about Possible Violations of Navajo Nation Law

We are concerned that the impacts resulting from the Antelope Point project will have significant effects on the social life of our people if it follows the course designed currently. We worry that increasing tourist development that is not respectful of our heritage and our traditional ways will only further erode the Diné (The People's) knowledge of and respect for our culture. Additionally, if we were to compete with the ARAMARK Corporation just across the lake it would be our financial miscalculation and loss. A new marina on Lake Powell reservoir will emphasize motorized recreation--a pastime for the bilįganį.

Sacred Sites

Navajo Nation laws make it a crime to harm or destroy sacred sites and places of historic and cultural significance. We want our government to enforce that law. The Antelope Point project would be constructed in an area that has cultural sites needing protection under this law. Lake Powell reservoir itself violates tribal law because it covered over many significant sacred and cultural sites beneath the waters. Rather than continue to desecrate and destroy, we ask for respect, restoration, protection, preservation and perpetuation of our sacred sites and ways. Our traditional and unwritten laws of the holy beings have prescribed this to be so.

Alcoholic Beverages

According to the U.S. government's 1986 document, "Antelope Point Final Development Concept Plan Environmental Assessment," the project's feasibility depends upon legalizing the sale of alcoholic beverages (page 7). This would require legalizing the transport and consumption of alcoholic beverages on Navajo land. This would have significant social impacts on the Navajo Nation where, as you know, alcohol is currently banned. An exemption to our law would be required, and we worry that the Navajo people have not been fully informed nor have they given their consent for these changes to be made. We would like an open debate on this question before any further commitments are made on the project. Alcohol has been our destruction as we all know and have seen all around us.

Many recreational users of Lake Powell reservoir have a reputation for heavy drinking and other inappropriate and disrespectful illicit activity. Earlier this year, the Associated Press listed the reservoir as the nation's second most dangerous recreation area for injuries and deaths. Most of these incidents involved alcohol. This kind of behavior may become common at Antelope Point. Do we want our children to grow up witnessing it on the reservation?

The marina operator would have to transport significant quantities of liquor onto the reservation just to supply the marina. But many private vehicle and boat owners will bring alcohol to the marina across reservation lands. We need to know how this will be policed, and how the nation will deal with expected increases in law enforcement incidents such as drunk driving and motor vehicle accidents on the narrow road that leads to the marina. An increase in alcohol-related injuries and possibly deaths may occur not only on land but also on the water, especially on heavy use weekends. Is this the price that must be paid for a few jobs?

The social impact of the Antelope Point Marina project would be great, yet it has not been adequately considered. Before any additional work is done on the project, we must obtain and evaluate this important information in detail, and allow for an opportunity to discuss and debate the issues across the Navajo Nation.

Environmental Degradation and Violations of Federal Law

In 1986, the U.S. government produced the "Antelope Point Development Concept Plan Environmental Assessment" (DCPEA), along with a Finding of No Significant Impact (FONSI). This document, the DCPEA/FONSI--is now fourteen years old, yet many changes have occurred in and around Lake Powell reservoir. We believe the document was legally insufficient at the time it was produced, and it is insufficient today.

The National Environmental Policy Act (NEPA) requires full study and evaluation of any project that involves the U.S. government that has a significant impact on the human environment. The impacts of Antelope Point have not been fully studied or revealed, therefore the law requires that a new study be done that supersedes the 1986 DCPEA. And since the impacts are significant, it will require that an EIS be done.

The marina would permit a significant increase in the number of boats and personal watercraft (PWC) on the reservoir during heavy recreational use periods. The exhaust emitted by these craft contributes to air and water pollution. PWCs in particular are known to spew oil and gasoline into the water, polluting not only the reservoir that is the drinking water supply for millions of people downstream, but also harming our sacred sites. This concern was not evaluated in the 1986 DCPEA, and the NPS has not studied or even monitored this pollution to date.

There is also a human waste problem. The NPS has had to close many beach areas on Lake Powell reservoir in the last decade because of human waste contamination. The filth comes from houseboaters and other recreational users. We do not want sacred waters to become cesspools. The Antelope Point will probably add to this problem by putting more boaters on the reservoir.

Another point of concern for us is the proposed marina's location near the Navajo Generating Station (NGS), a coal-burning electric power plant. The 1986 DCPEA does not consider the health effects on our people of living and working near this plant, which is shown by U.S. government records to be one of the largest air pollution sources in the country. Pollutants from the stacks fall back to Earth on our reservation, where our children breathe them in. Asthma and other respiratory diseases are already a big problem. How badly will the workers at the marina be exposed to the poisons in the air, and how many will become ill from it? These questions have to be addressed. We must move here with cultural information and with the purpose of affecting the policy of the polluting neighbor.

We request that you ensure our people have access to such analysis, and join us in calling on the National Park Service and Bureau of Indian Affairs to conduct a full Environmental Impact Statement on the Antelope Point project.

Sustainable Economic Development

The Antelope Point Marina project requires the existence of an artificial reservoir, the extensive use of polluting non-essential vehicles, at a location downwind of one of the most polluting power plants in the country. For this our people will receive a few jobs, some rental payments, increased illness, alcoholism and further degradation of our sacred lands. This is not sustainable economic development, and we regret the Navajo Nation's use of this term in the prospectus released October 27. If this were the last or only possibility to support our people, maybe it could be justifiable. But it's not. It merely reflects an ongoing pattern of the Navajo people accepting a few scraps to service development for wealthy white people, while the real problems affecting our own people become more entrenched. Currently the Navajo Nation receives hardly any revenue from the tourism trade. At Rainbow Bridge, for example, a big corporation, ARAMARK receives profits from hundreds, and sometimes thousands of tourists every day on boats owned by ARAMARK. ARAMARK is one of the companies that want to build and operate the Antelope Point Marina project. The Diné Medicine Men's Association Incorporated does not promote tourism to sacred sites, but we feel that so long as Lake Powell reservoir remains in place, Diné should be in control of managing the boatloads of tourists and other economic concerns and of those who visit Rainbow Bridge, the sacred waters and sites. This is a good opportunity to teach about our duty to protect the earth for which we have been recognized as a people.

The Lake Powell reservoir tourist business is very profitable to ARAMARK, but we must remember that much of the land that was flooded by Lake Powell reservoir was once our land, and the Colorado River and San Juan River our rivers. We have a responsibility to be good stewards of the rivers and the land, and work to protect and restore them. We cannot stand by and allow them to continue being harmed by pollution, or to be disrespected by those who are ignorant of our traditions and the sacred ways.

We have an opportunity to assert our culture and ourselves to demand that the NPS begin giving back to the Navajo people. We should be championing a Navajo-based

management plan for Glen Canyon, as opposed to one driven by the rich corporations. Glen Canyon is a sacred place, and should be treated as such. We the Navajo can do this, and we do not need additional development to succeed. Instead of receiving some small payments from something new, we should go back and take control of what's there now. The corporations are making money off what is our traditional land, especially Rainbow Bridge National Monument. There is no reason why the Navajo people should not take responsibility for this concession. In fact we should see it as our responsibility to our sacred gods to do so. The same may be said of Wahweap Marina, and other developments along the reservoir. We are the people who live and have cared for these lands. If profits are to be made, they should arise in a fashion consistent with our traditions, and stay in Navajo hands, not go to a corporation based in Philadelphia.

We can manage these concessions such that we are reducing the level of pollution, and increasing the level of cultural awareness, while generating far more income than what may come from the Antelope Point Marina project. We can do this without disposing of our ban of alcoholic beverages. And once Glen Canyon Dam is decommissioned, either because of sediment, an act of the gods, or the growing social demands that our sacred sites be uncovered, we will be ready to service all those new visitors wishing to experience with us nature's healing ways.

Implementing local control and a more sustainable economy for Glen Canyon can also be applied to our water and energy needs on the reservation. Our people get no power from the Navajo Generating Station, only pollution and some jobs. It may soon be required to close this down, as it is not in compliance with written environmental laws and of the unwritten sacred laws which govern us. The Navajo Nation could aggressively invest in solar and wind power to both service our people's needs and to sell to white people in Phoenix, Las Vegas and Los Angeles, many of whom are willing to pay very high prices for cleaner energy now. We could also use this energy to pump water from either our aquifer at Navajo Mountain or from the river. In summary, we should use our discussions surrounding the Antelope Point project as a turning point to help our economy become more in balance with nature and our traditional ways, not a further threat to both.

Conclusion

The Antelope Point Marina project must not be given further consideration until a much more detailed analysis of the impacts and the economic alternatives for the Navajo people have been completed. We expect that increased pollution from boats and PWCs will result from the project, as will social problems relating to the use and abuse of alcohol and dangerous drugs. Health problems resulting from exposure to air pollution from the nearby Navajo Generating Station will likely afflict Navajos and others employed at the marina. The analysis of these impacts in the 1986 NPS document does not meet the requirements under the National Environmental Policy Act. The Diné Medicine Men's Association respectfully requests that you inform the BIA, the NPS, and the prospective developers that the Navajo Nation will require a full EIS which examines in detail the social and environmental effects of the project, and an open debate of the

project's precedent-setting nature, before the government can agree to proceed with design and construction of the marina.

The Navajo Nation sometimes has a short memory when it comes to our land and our rivers. Why would we support construction of a big tourist development that will only pollute the land and water and air that we need for our survival, when we can work to reverse this and generate revenue for the nation at the same time. Is the Navajo Nation forgetting our Diné history? These canyons are the very places where a traditional Diné Leader, Hoskinninni, led his people to hide from the white man's army when Kit Carson's men took the rest of our nation's people away from the Dinétah on the Long Walk to the Bosque Redondo. We should be honoring these places which are sacred not only to our traditional ways of life but also to our people's more recent history. We should not be leading the effort to further desecrate them and commercialize them, nor should we be handing over the land to corporations. Our people deserve better.

Please do not hesitate to contact us if you have any questions.

Sincerely,

Thomas Morris, Jr. President

Cc: Speaker, Navajo Nation Tribal Council Chief Justice of the Navajo Nation Navajo Nation Youth Council Diné Care Diné at large Joe Alston, Superintendent, Glen Canyon NRA Bureau of Indian Affairs ARAMARK Delaware North Forever Resorts KOA Kampgrounds Swift Trucking dba GMT Antelope

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info@drainit.org

11/30/00

Native Americans question proposed new Lake Powell marina

Groups call for E.I.S. on project
CONTACT: David Orr, 435-259-1063

MOAB, Utah -- A coalition of eight Native American and environmental organizations today called on the National Park Service (NPS) to suspend contract and other work on development of the proposed Antelope Point Marina near Page, Arizona. In a letter to the NPS, the groups asked that an Environmental Impact Statement (EIS) be prepared before approving construction contracts for the project at Glen Canyon National Recreation Area (Lake Powell reservoir).

The Glen Canyon Action Network (GCAN) of Moab, Utah, and the Diné Medicine Men's Association of Window Rock, Arizona, are leading the effort, with support from environmental groups Diné CARE, Bluewater Network/Earth Island Institute, Colorado Plateau River Guides, Flagstaff Activist Network, Grand Canyon Private Boaters Association, Utah Environmental Congress, and Wild Wilderness.

The "Development Concept Plan & Environmental Assessment" for Antelope Point was completed in 1986, but did not acknowledge the project's significant impact on the environment. The inadequate and now-outdated plan does not satisfy legal requirements of the National Environmental Policy Act (NEPA).

"Federal law requires that all environmental impacts be evaluated in a timely manner, and a full range of alternatives be considered," said David Orr, Director of Field Programs for GCAN. "The National Park Service has not done its job."

According to published plans, up to 225 hotel rooms and 300 boat slips are to be constructed at Antelope Point, as are a gas station and fueling docks, 150-space RV campground, sewage plant, up to 100 units of commercial housing, food service, and other commercial operations. The NPS recently issued a prospectus to five developers seeking to build and operate the marina, which the NPS and the Navajo Nation would jointly oversee.

Native American leaders expressed concerns about the marina project.

In a separate letter to Navajo Nation President Kelsey Begaye, the Diné Medicine Men's Association questioned the tribe's plan to legalize the sale and consumption of alcoholic beverages at the proposed marina, despite the Navajo Nation's longstanding prohibition on alcohol.

According to the marina development plan, archeological and ceremonial sites would be harmed by construction and recreational activities.

"We are working to save our sacred sites and protect our cultural heritage," said Mr. Thomas Morris, Jr., of Window Rock, President of the Diné Medicine Men's Association. "The Navajo Nation should be supporting traditional ways and setting good examples for children, but here they want to sell liquor and promote jetskis."

The medicine men and other indigenous leaders also asked for consideration of economically viable alternatives to building a new marina. The groups are proposing that the NPS study, in the EIS, allowing the Navajo Nation to take over the concession contract for the existing Wahweap Marina, just five miles away from Antelope Point and located in a less environmentally sensitive area.

"Building more tourist resorts won't really help people build a sustainable economic future for themselves," said Ms. Anna Frazier, Executive Director of Diné CARE, a Diné (Navajo) environmental group. "We need to focus on providing basic necessities, like developing safe drinking water supplies and renewable energy sources for our rural communities, and educating our people on ways to conserve energy and water."

The groups also expressed concern about the water pollution that the Antelope Point Marina project would generate, especially from increased numbers of personal watercraft (PWCs) on Lake Powell reservoir. The inefficient two-cycle PWC engines emit large amounts of unburned oil and gasoline into waterbodies through their exhaust systems, potentially endangering drinking water quality for more than 20 million Colorado River water users downstream. Environmentalists are asking NPS to institute

a comprehensive water pollution monitoring program as part of the planning process for the new EIS.

The five corporations bidding to develop the Antelope Point project are: ARAMARK (current monopoly concessioner at Lake Powell reservoir), Delaware North (concessioner at Yosemite and Grand Canyon), Forever Resorts (concessioner at Lake Mead), KOA Kampgrounds, and Swift Trucking Company dba Antelope GMT.

11/30/00

Comments on proposed marina at Antelope Point

Ms. Kathryn Cook
Acting Superintendent, Glen Canyon National Recreation Area
National Park Service
P.O. Box 1507
Page, AZ 86040-1507

Re: **Request for EIS on Proposed Antelope Point Marina Project**

Dear Acting Superintendent Collins:

Glen Canyon Action Network (GCAN) is an environmental advocacy group based in Moab, Utah, dedicated to protecting and restoring the integrity of the Colorado River watershed. We are joined in this letter by the following organizations: Din? CARE, Bluewater Network of Earth Island Institute, Colorado Plateau River Guides, Flagstaff Activist Network, Grand Canyon Private Boaters Association, Utah Environmental Congress, and Wild Wilderness. We write to you concerning the proposed development of the Antelope Point Marina at Lake Powell reservoir/Glen Canyon National Recreation Area (GCNRA).

We understand that a prospectus was published and mailed to prospective developers of the project on Friday, October 27, 2000, by the GCNRA Concessions Office. However, we are concerned that this project is moving forward without sufficient environmental review as required by the National Environmental Policy Act (NEPA). We believe that the National Park Service (NPS) did not comply with NEPA requirements in preparing its 1986 "Development Concept Plan and Environmental Assessment" (DCP/EA). Significant impacts existed at the time that should have been analyzed in a full Environmental Impact Statement (EIS), not in an EA.

Much has changed since 1986, and some additional significant impacts have come to light in the interim. We disagree with NPS's February 19, 1997, determination that the project does not require additional NEPA analysis. We believe the law requires that an EIS must be prepared before further steps are taken toward developing the project. We therefore respectfully request the following:

1. that the prospectus be withdrawn pending resolution of these concerns;

2. that you determine that the "Finding of No Significant Impact" (FONSI) issued in 1986 and the letter written by NPS staff Mr. Ken McMullen on 2/19/97 to then-Superintendent Joseph Alston are not legally valid and do not reflect compliance with NEPA; and
3. that you prepare an EIS before proceeding with any further work on the Antelope Point Marina project.

We also specifically request that you consider as an alternative in the EIS the option of reassigning the existing concessions contract at Wahweap Marina and the associated Rainbow Bridge tour concession to the Navajo Nation, in lieu of constructing new recreational infrastructure at Antelope Point.

Please provide us with a list of all planned and/or completed mitigation measures for this project, including especially any measures relevant to the archeological resource concerns discussed in Item 1 of the 1986 FONSI.

We respectfully request that you provide us with a response to this letter by December 11, 2000. If you disagree with our analysis and decline to grant our requests, we will request a review of the project by the Park Service Director in Washington, DC.

We are happy to discuss this matter with you in more detail if you wish. We have prepared an analysis of our concerns in this letter. We are confident that our conclusion constitutes an appropriate interpretation of the applicability of NEPA to the circumstances of this case, and we hope that you will agree. Please do not hesitate to contact GCAN should you have any questions. We look forward to hearing from you.

BACKGROUND

The Antelope Point Marina project covers lands and waters managed by NPS and by the Navajo Nation. The project is currently moving forward with joint approval by NPS, the Navajo Nation, and the Bureau of Indian Affairs. NPS has assumed the role of lead agency.

The DCP/EA and FONSI were published in 1986. More than a decade passed before the agencies involved showed serious interest in pursuing the project. In 1997 a decision was made to reactivate the long-dormant proposal. On February 19 of that year, GCNRA environmental specialist Ken McMullen sent a three-page letter to the GCNRA Superintendent, recommending that the 1986 DCP/EA be accepted as "accurate and applicable" to the old plan under NEPA. Apparently there was concern within the agency about the adequacy of the 1986 DCP/EA. This letter sought to resolve those concerns by making the following points:

1. The current proposed action is essentially the same as the old plan;
2. a reasonable range of alternatives has already been analyzed;
3. the same information and circumstances exist today as in 1986;
4. the impacts discussed in the 1986 document are not significantly changed;

5. public involvement and participation in 1986 were appropriately covered and are still relevant; and
6. no additional consultation is required, except possible cultural resource consultation with the Navajo Nation.

Following issuance of this letter, several significant events occurred. In 1999, an access road, boat launch ramp, and parking lot were constructed at Antelope Point (identified as "Phase One" of the larger project). Meanwhile, NPS issued a solicitation for prospective developers to indicate their interest and qualifications for constructing and operating the project. Five developers were then selected to receive invitations to submit full proposals following issuance of a Request for Proposals (RFP) on October 27, 2000.

We disagree with the conclusions of the 1997 letter. We believe the same information and circumstances do not exist today as they did in 1986. The impacts have changed significantly since that time. Public involvement and participation were insufficient in 1986 and are not relevant to new information that has come to light in the interim. Therefore, additional consultation, study, and NEPA documentation are required.

The issues we will address include: Water Quality, Air Quality, Cultural Resources, Carrying Capacity, and Lack of Appropriate Consultation.

WATER QUALITY

Lake Powell stores Colorado River water behind Glen Canyon Dam, and that water eventually becomes a source of drinking water for millions of residents of California, Arizona, and Nevada. Water pollution in the Colorado River upstream is a source of great concern for municipalities. Millions of dollars are spent annually to remove pollutants and treat river water to comply with federal and state regulations. Thus, large development projects such as Antelope Point along Lake Powell's shoreline are a matter of potential concern for their potential to contaminate drinking water supplies.

The Antelope Point DCP/EA fails to evaluate the cumulative impacts of Antelope Point and other marinas on Lake Powell, in particular the potential for harm to water quality. Petroleum product spills and discharges from motorized watercraft, sewage overflows, runoff, human waste, and other sources of contaminants can have long-term negative effects that may defy standard emergency remediation measures.

Direct project impacts. The DCP/EA calls for boat slips to accommodate as many as to 300 boats (page 40). A boat launch ramp (which has since been constructed and was opened to the public in 1999) provides launching facilities for over 300 boats per day (page 89, Table 6, assuming all ramp traffic is outbound). Vessels utilizing the marina and launch ramp are mostly motorized and include houseboats, small boats, and personal watercraft (PWCs).

The DCP/EA (pp. 40-41) calls for constructing the following: a service station with six pumps and three tanks for fueling and repair; boat pump-out station; dock space for 60 small boat rentals, 60 houseboat rentals, and 2 tour boats; parking lots for a total of up

to 800 cars; campgrounds with space for 150 RVs; sewage system sized to service up to 225 lodge rooms, a restaurant, health club, cultural center, rental offices, retail shopping facilities, and up to 100 units of commercial residential housing.

Strong potential exists for significant direct water quality impacts from the development, including stormwater runoff from parking lots and other locations, fuel spills, and sewage system malfunctions. The DCP/EA notes the following on page 85:

"The development proposal would result in the installation of sewage treatment facilities, fuel storage tanks, and storage tanks for waste oils and fuels in a new area very close to Lake Powell. Leaks, seepage, storm-induced washout of containment structures, or careless operating practices could all result in contamination of lake waters. In addition, porous sandstone substrates at the site make ground water vulnerable to contamination from the same sources. To mitigate such potential impacts, the sewage treatment facility and hazardous materials storage must be located and designed to isolate possible effluents from surface and ground waters. Methods used would include substrate sealing, drainage control, and provision of surface containment structures."

Sewage system. The sewage system is described on pp. 54-55 as a "sealed evapotranspiration bed sewage disposal system," essentially an elaborate version of a septic system, with more than a mile of collection line. The sewage system would be constructed, with appropriate linings, near the water intake facility for Navajo Generation Station. The DCP/EA states on page 55, "alternative sewage treatment methods should be evaluated..." and offers a list of potential technologies that are variations on the septic tank model. However, despite the somewhat detailed description of the preferred system, the document leaves open to question what specific system would actually be constructed. Thus it is impossible to adequately evaluate the effectiveness of the proposed sewage system since the document clearly leaves the door open for an alternative system to be chosen at some later date.

Advances in technology over the last 14 years may have made possible a wider range of options to construct and operate an effective and reliable sewage system. A new environmental review is necessary to evaluate options that may be preferable to those presented on page 55.

Water Supply. The DCP/EA notes on page 53 that the water supply for the project will be two wells "drilled into Lake Powell bank storage." Given the highly porous nature of the surrounding soils and rock, there seems to be high potential for contamination of this supply. The document states on page 85, "Should unforeseen contamination [of the groundwater source] occur, the condition would be corrected or a new supply developed." The document fails to state what alternative sources are available and feasible for developing if serious groundwater contamination were to occur and the wells had to be closed.

Runoff. The potential for significant contamination from parking lot runoff and from other overland sources is great.

The DCP/EA states on page 84:

"Areas of shallow soil at the site have little capacity to absorb runoff. This factor, in combination with the addition of impervious parking lots and other hard surfaces, could lead to excessive erosional soil loss and consequent sediments in the marina unless drainage from all surfaces is carefully planned during the design phase."

The document discusses runoff in the form of soil erosion, but fails to address strategies to reduce or eliminate chemical-laden stormwater runoff from parking lots entering Lake Powell. The DCP/EA provides no data to evaluate the dimension of the risk posed to Lake Powell water quality by runoff from as many as 800 parking spaces across the project area.

The DCP/EA does not discuss specific measures that might be undertaken to minimize or eliminate the chances of sewage spills contaminating Lake Powell in the event of a pipeline rupture.

Onshore human waste impacts. The DCP/EA mentions human waste on shoreline campsite areas as a matter of concern. We note that since the document was written, numerous episodes of fecal contamination have occurred, especially in the early 1990s following significant changes in the reservoir's water level. Personal communications between GCNRA personnel and GCAN indicate that NPS believes that a significant percentage of the contamination events were caused by the inundation of fecal matter deposited by campers along the shoreline during periods of low water.

In the past year NPS has adopted measures requiring boaters to carry approved human waste containers. Floating dump stations have been provided at scattered points along the reservoir to encourage boater compliance with the new regulations. However few data yet exist to indicate the extent of compliance- particularly in the case of small boats which typically do not have installed toilet facilities. Furthermore, the widely fluctuating lake levels that occurred in the early 1990s have not occurred in recent years. No data yet exist to indicate whether the new regulations have had their desired effect in minimizing the amount of onshore human waste contamination. Only time and fluctuating lake levels will tell if visitors are in substantial compliance with the new regulations.

The DCP/EA fails to adequately evaluate the impacts of possible additional human waste contamination on Lake Powell's water quality from boaters launching at Antelope Point.

Personal watercraft and two-cycle motor impacts on water quality. Nearly all commercially available PWCs and many small boats use two-cycle motors. These motors have greater acceleration than the four-cycle engines found on larger boats and automobiles. Two-cycle engines use a combination of gasoline and motor oil for fuel. Operation of these engines is inefficient, however; a significant amount of fuel mixture passes through the pistons unburned and passes out the exhaust.

Water quality impacts of PWCs are a serious problem and one acknowledged by NPS and other federal and state agencies. The US Environmental Protection Agency (EPA) has stated that PWCs employing two-cycle motors routinely emit unburned fuel through their exhaust systems, in an amount equivalent to about 25% of the gasoline-and-oil mixture pumped into their tanks (documentation available from Bluewater Network). The PWC's exhaust system essentially injects an atomized spray of fuel into the jet of water that passes by the exhaust orifice. After passing through the jet, the contaminated water is thrown into the air, then falls back to the water's surface. Thus, for every four gallons of fuel consumed by a PWC, about a gallon ends up in the waterbody as exhaust. The total amount of unburned fuel dumped directly into Lake Powell by individual PWCs is staggering, yet goes virtually unnoticed by recreational users.

Earlier this year, NPS acknowledged the significant impacts of PWCs on park resources nationwide by issuing a new rule banning PWC use at many NPS units. GCNRA was granted an exemption from this immediate ban. NPS has acknowledged in personal communications with GCAN that a special PWC management plan for GCNRA will be prepared in the coming biennium to address growing resource protection and visitor safety impacts.

Regulators are beginning to take note. Recently the State of California initiated a ban on two-cycle PWCs at Lake Tahoe, out of concern for growing water quality problems traced directly to PWC contamination. Some local jurisdictions have banned PWCs from nearby waterbodies.

In September 2000, the US General Accounting Office issued a report titled, "Agencies Need to Assess the Impact of Personal Watercraft and Snowmobile Use," (GAO/RCED-00-243) documenting a widespread lack of information and monitoring by federal agencies, including NPS, of the impacts of this fast-growing sector of motorized recreation. Among the reports findings: (1) agencies have authority to assess the impacts of PWCs; (2) units report limited assessment of the impacts of PWCs; (3) agencies have not made collecting impact information a priority; and (4) existing information has identified adverse effects. The GAO recommends that federal agencies implement monitoring programs to generate information that can be used in developing appropriate management plans and minimizing the adverse impacts of PWCs.

The Department of Interior, in a letter to the GAO dated August 23, 2000, and signed by the Acting Assistant Secretary for Fish and Wildlife and Parks (Appendix IV), expresses general agreement with the GAO's recommendations (page 76). The letter also states that the NPS agrees with the report (page 77).

We find no mention in the Antelope Point DCP/EA of PWCs or of their impact. The marina is expected to attract large numbers of the craft. A new environmental review of the Antelope Point project must include a detailed analysis of PWCs' direct and cumulative water quality impacts. This analysis should evaluate anticipated increases in petroleum distillates and volatile organic compounds (VOCs) dispersed into Lake Powell by PWCs launched from Antelope Point.

Pollution from PWCs may already be significant at Lake Powell, even without the Antelope Point development. Currently no data exist which accurately reflect the extent of the problem. At this time, NPS' water quality monitoring program tracks only fecal coliform (indicators of human waste contamination), not petroleum products or VOCs. Before proceeding with the Antelope Point project, an adequate monitoring program must be put in place, and sufficient data collected and evaluated to provide meaningful information about the extent of existing pollutant levels and the potential for increases associated with Antelope Point development.

AIR QUALITY

Voluminous evidence exists to show that two-cycle engines are significant contributors to air quality problems. Not only do they emit large quantities of unburned fuel but they also emit significant amounts of combusted pollutants. Lake Powell is in the immediate vicinity of several Class One Air Quality regions (e.g. the Grand Canyon and Canyonlands National Parks).

In the years following publication of the DCP/EA, significant public debate and legal actions occurred, relating primarily to the effect of nearby Navajo Generating Station (NGS) on haze and visibility. NGS is a coal-fired power plant that produces up to 2200 Megawatts of electricity and is within direct line of sight of much of the project area.

The DCP/EA on pages 80-81 acknowledges that air pollution from offsite sources is already a problem at the site, but states that the development of Antelope Point would not "significantly affect air quality":

"Visibility is affected on some days through the presence of regional haze and/or a locally generated plume. Preliminary monitoring data indicate that the regional haze may originate from metropolitan areas and smelters of southern Arizona, and metropolitan areas of southern California. It is carried into the region through atmospheric long-range transport and reduces visibility. The local plume that affects visibility results primarily from nitrogen-oxides emissions of the Navajo Generating Station... None of the development alternatives would significantly affect air quality..."

"A local increase in gaseous emissions-carbon dioxide, hydrocarbons, and nitrogen oxides-is anticipated from the additional auto, truck, powerboat, and other internal combustion engine operations. Local air quality for gaseous pollutants including development of Antelope Point are well within the National Ambient Air Quality Standards (40 CFR, Part 50) presented in Table 5, (and the increases would be insignificant)."

"No emissions of ozone or sulfur dioxide would result from development."

The DCP/EA fails to provide any data that would indicate the specific estimated amount of air emissions anticipated directly or indirectly from development of Antelope Point. We therefore cannot determine the accuracy of the following unsupported claims that: (1) "local air quality for gaseous pollutants... are [sic] well within... [regulatory]

standards... and the increases would be insignificant," and (2) "no emissions of ozone or sulfur dioxide would result from development." Thus, more information is needed.

CULTURAL RESOURCES

Archeological resources. The DCP/EA indicates that significant archeological resources exist within the project area, and that some unavoidable damage to these resources would be required in order to construct the project as currently proposed. There is no explanation whether efforts were made to identify possible sites for development that avoided archeological resource sites altogether.

The FONSI itself states the following (page 143):

"1. This finding is contingent upon a successful mitigation of unavoidable impacts to the two identified archeological sites within the project area regardless of whether or not the sites are determined to be eligible for inclusion on the national Register of Historic Places. All construction activities related to these sites will not be permitted to commence until these sites have been properly mitigated."

The FONSI states that no significant impact would exist only if the two sites were successfully mitigated. However, it is not clear that any progress on mitigation has been made. In his 1997 letter, Mr. McMullen states on page 2:

"There is a need to complete mitigation of two cultural sites prior to any construction of facilities (Item 1 of FONSI). I have not been able to locate a report or information that indicates mitigation has been completed for Antelope Point."

The DCP/EA contains some detail which indicates (pp. 24-25) the significance and extent of Antelope Point's archeological resources:

"During the survey of the proposed 710-acre project area, 11 sites containing archeological artifacts, and 2 Navajo ceremonial sites that are still in use were recorded. ...

"Taken as a whole, the Antelope Point archeological sites seem to 'offer a possibility of filling in gaps in the chronology of the Glen Canyon area.

From the discussion it appears that Antelope Point has considerable archeological significance and thus deserves more detailed analysis in assessing the impacts of development at the site.

The document also states on page 92 the following:

"Two recorded sites would be directly, significantly affected by all three development alternatives. ... This site extends around much of the point along the shoreline and is unavoidable.

"The second directly affected archeological site is located within the marina development zone... This affected site is probably one of the most significant recorded

archeological sites on the point and is the only site believed to have potential for long-term occupation. ... [emphasis added] "

The DCP/EA does not make clear what mitigation might be considered sufficient to compensate for destroying such an important site. The document inadequately describes how NPS will assure compliance with Item 1 in the FONSI, i.e. successful mitigation of the two sites mentioned here.

Ceremonial sites. The traditional practices of medicine people are important elements of Navajo culture and heritage. The Dineh Medicine Men's Association, based in Window Rock, Arizona, has expressed its concern about proposed development activities on identified ceremonial sites as noted in the DCP/EA.

The document states on page 25 that a significant portion of the beaches in the project area are ceremonial sites:

"Another aspect of Antelope Point's cultural significance is its traditional and current continued use as a location for ceremonial rites. Accessibility, sandy beaches, and seclusion are the reasons Antelope Point is used for this purpose." However, some of the attributes that make this area attractive for ceremonial purposes (accessibility and beaches) also make it desirable for industrial recreational development. Construction of the marina and resulting increased visitor usage of the beach areas would render a significant amount of the ceremonial site unusable. The DCP/EA states the following (page 93):

"The development alternatives would preclude use of most of the Antelope Point beaches, which are within the Glen Canyon National Recreation Area, for traditional Navajo ceremonial rites. Much of the beach areas would actually be occupied by facilities, while most of the remainder would offer little or no opportunity for solitude once the development is in operation. However, at least one small, accessible embayment with a beach would remain, which could possibly be protected by fencing sufficient to offer solitude for ceremonial purposes. All three development alternatives are similar with respect to these impacts.

"The American Indian Religious Freedom Act requires consideration of impacts on traditional Navajo ceremonial sites. An alternative ceremonial site was identified and a plan developed to ensure seclusion from marina-related activities and intruders. These procedures were developed by the Navajo Nation and the National Park Service in consultation with LeChee Chapter and the Navajo Medicine Man Association...."

The DCP/EA does not explain whether attempts were made to locate alternative sites for the marina, but instead focuses on the proposed mitigation offered to the practitioners. It is not clear from the discussion whether the traditional practitioners with whom NPS consulted had agreed to the mitigation proposed (alternative ceremonial site) in the plan.

It is a matter of great concern to traditional practitioners when development projects intrude on these sites. In many instances, they believe that mitigation is simply not

possible. Traditionalists have long been concerned about visitation to areas used for ceremonial purposes.

Lake Powell flooded hundreds of miles of canyons that contained extensive archeological resources and ceremonial sites. Little effort was made to mitigate that significant harm. Now the government proposes destroying more sites to promote increased recreational usage at Antelope Point.

[The Dineh Medicine Men's Association of today is based in Window Rock, Arizona. It is not the "Navajo Medicine Man Association" that is mentioned in the DCP/EA.]

NPS must reinitiate consultation with traditionalists in order to determine whether damage to ceremonial sites can be adequately mitigated.

CARRYING CAPACITY

The development of a major marina will provide additional launching capacity for significant numbers of motorized watercraft users on Lake Powell. The DCP/EA discusses the concept of carrying capacity for the reservoir, which it defines on page 87-88 in the following way:

"The model was used to estimate levels of use where boat numbers would become constrained by either the natural environment or safety. These estimated use ceilings are the 'carrying capacity' of Lake Powell.

"Factors found to be most significant to carrying capacity at present include: the number of shoreline campsites; the distribution of boats into the Escalante Canyon and Rainbow Bridge areas; the distance of destination zones from launch sites and services (gas); boat safety; beach invasion by tamarisk and consequent loss of campsite; beach fouling by human waste; archeological site damage; and the types of boats launched ..."

Outdated information. The discussion of carrying capacity in the DCP/EA is largely confined to justifying the new marina's launch capacity as within the parameters established under a 1982 carrying capacity study. Subsequent to the completion of the DCP/EA, NPS completed another carrying capacity study (1987). We assume the data collected and analyzed in the 1987 study were not incorporated into the 1986 DCP/EA. In any event, the 1987 study is nearly as outdated as the 1986 DCP/EA.

Safety. The project site is along the old Colorado River channel, now a relatively narrow, winding arm of Lake Powell. Design considerations for the marina must take into account the narrow configuration of the channel to minimize chance of boating accidents.

In its discussion of anticipated carrying capacity impacts, the DCP/EA focused on boat launch rates as a means of quantifying effects on crowding. The document states on page 91:

"The principal effect of the Antelope Point development on Lake Powell would be to raise the capacity for downlake boat launches up to, but not exceeding, the lake's

estimated capacity to absorb such use under current management of the shoreline. Normally facility use at full capacity would only be expected during peak seasons. Nevertheless, these analyses indicate a need to consider additional management programs to alleviate boating impacts in concert with the phasing in of approved marina developments."

The DCP/EA acknowledges the potential for crowding problems at peak use times (despite the assertion that the project is within the reservoir's carrying capacity) and indicates that at some future date these concerns will probably have to be addressed. Thus we question whether the current plan is adequate to handle crowding problems.

Earlier this year, the Associated Press published an article describing Lake Powell as the second-most dangerous recreation area in the nation (after Lake Mead) in terms of deaths and injuries. Alcohol-related accidents are common and present a growing challenge to law enforcement on the nation's second-largest reservoir.

The explosive growth in popularity of PWCs over the last decade has made the craft a significant issue in safety impacts at Lake Powell. GCNRA officials have confirmed in personal communications to GCAN that PWCs account for a significant number of visitor complaints and safety concerns. PWCs are sometimes known as "thrillcraft" for their agility, fast acceleration and ability to make quick turns. They are all too frequently operated in a reckless manner in close proximity to other boaters, swimmers, or fixed objects.

The DCP/EA cannot be considered adequate until these new safety impacts are thoroughly evaluated and addressed.

LACK OF APPROPRIATE CONSULTATION

We note that the DCP/EA (pp. 138-139) indicates that no comments from any environmental advocacy organization were received in response to the Draft EA. Comments and responses listed in the DCP/EA generally did not address environmental impacts of the project. Two public workshops were held, one at the dam's visitor center near Page and the other at the Le Chee Chapter House near Page. Except for a list of individuals and organizations to which the Draft EA was mailed, it is not clear that NPS made a serious effort to solicit public comment from outside the immediate community of Page and Le Chee. It cannot therefore be concluded that NPS fulfilled NEPA requirements for appropriate public participation and consultation in 1986.

CONCLUSION

Based on the analysis above, we conclude that the DCP/EA is inadequate, outdated, and violative of NEPA. NPS should have prepared an EIS in 1986. The EA was inadequate then, only more so today. The amount of time that has elapsed since the document was written only underscores the need for updating and expanding upon the information originally presented.

The 1997 McMullen letter was insufficient to meet NEPA requirements. Before NPS makes any additional commitments of staff time and resources in pursuit of a

prospective developer for the project, we ask that the project instead be subjected to a rigorous review, and an EIS be prepared.

We also point out the need for expanding the current water quality monitoring program, particularly with respect to petrol.

12/01/00

Living Rivers Currents

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Living Rivers Currents 12/13/01

COWlorado River Water Users Association Special Edition

Each December the power brokers in Colorado River politics gather in Las Vegas under the banner of the Colorado River Water Users Association. LIVING RIVERS Currents is taking this opportunity to publicize the leading user of Colorado River water, alfalfa fields for cattle feed, and how this impedes Colorado River restoration.

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12/12/01

Environmental groups criticize plan to rescue endangered fish

DENVER (AP) - A plan hailed as historic to save four rare species of fish in the Colorado River Basin is running into opposition from two environmental groups.

The U.S. Fish and Wildlife Service is considering a plan to rescue the humpback chub, bonytail chub, razorback sucker and Colorado pikeminnow. The fish inhabit the Colorado River and its tributaries in Arizona, California, Colorado, Nevada, New Mexico and Utah.

Its plan was hailed by states, water users and Gov. Bill Owens.

But two groups, Utah-based Living Rivers and the Desert Fishes Council, say the goals are not ambitious enough to save the fish.

The proposals call for restoring fish populations, providing enough water at the right temperature, protecting their habitat, curtailing threats from nonnative fish and parasites, and keeping pollution out of the rivers.

"We're concerned that the agency, in its eagerness to please water and power interests in the seven Colorado River basin states, is rushing to set criteria that will cost

taxpayers millions more dollars while not helping recover the fish they're supposed to be saving," said David Orr of Living Rivers.

The group has outlined several criticisms. It said the plan places too much reliance on hatcheries to increase fish numbers; not enough habitat restoration; and not enough attention on removing invasive fish.

Dave Probst of the 300-member Desert Fishes Council said his group thinks the agency should require higher levels of fish before taking them off the endangered species list.

Robert Muth, director of the Colorado River endangered fish recovery program, said the concerns will be considered.

12/12/01

Flap Over Endangered Fish

Activists say proposal to save species in river doesn't go far enough

By Todd Hartman

Rocky Mountain News Staff Writer

A recently crafted plan hailed as a breakthrough in saving four rare species of Colorado River fish is running into fresh opposition from biologists and environmentalists in the Southwest.

The criticism comes as the U.S. Fish and Wildlife Service tries to put the finishing touches on "recovery goals" for four species of obscure fish that are the targets of a \$100 million rescue effort -- one of the costliest such programs in the West.

The recovery goals lay out how many fish are needed and what projects must be completed for the four species -- the humpback chub, Colorado pikeminnow, razorback sucker and bonytail -- to someday thrive in the Colorado River and its tributaries, including the Gunnison and Yampa rivers on the Western Slope.

States, water users, power providers and some environmentalists have generally praised the goals as a major step in preserving the fish. Gov. Bill Owens' administration was among those pushing hardest for the goals, arguing they're crucial if the fish are ever to be taken off the endangered species list.

Suddenly, though, the plan is under fire from two groups.

Living Rivers, a Utah environmental group devoted to restoring the Colorado River to more natural conditions, and a nationwide group of biologists called the Desert Fishes Council, now say the goals aren't ambitious enough to save the fish species that once ruled the river from Colorado's Western Slope through the Grand Canyon.

"We're concerned that the agency, in its eagerness to please water and power interests in the seven Colorado River basin states, is rushing to set criteria that will cost

taxpayers millions more dollars while not helping recover the fish they're supposed to be saving," Living Rivers' David Orr said Tuesday.

Orr's group outlined several criticisms, including too much reliance on hatcheries to increase fish numbers; not enough habitat restoration, such as removal of dams that block fish migration; not enough attention to removing non-native, invasive fish that out-compete the rare species; and not enough emphasis on fish populations below Lake Powell.

Dave Propst of the 300-member Desert Fishes Council said the group takes issue with several elements of the goals. Top among them: whether the agency's numerical population goals to mark when the fish can come off the endangered species list are set high enough.

Robert Muth, director of the Colorado River endangered fish recovery program, said the concerns of the groups will be taken into consideration, along with others, as the agency puts together a final version of the recovery goals in the coming months. But he took issue with some of the criticism, particularly from Living Rivers.

"My overall response is that they have not read the recovery goals very well," Muth said. "All these points are addressed very well in my mind."

He cited complaints about over-reliance on hatchery fish as an example. Two of the species -- the razorback sucker and bonytail -- are down to so few specimens in the wild that cranking up numbers using hatcheries is crucial to preserving the creatures.

"A lot of people said, 'We don't like (the goals),' " Muth said. "But they haven't really given guidance to how to change them and for what reasons."

A demand of both Living Rivers and the Desert Fishes Council is for an outside, independent "peer review" of the science included in the recovery goals.

But Muth countered that the goals have been available for public comment for months, and anyone is welcome to scrutinize them. Indeed, he said, many individual biologists -- including some associated with the Desert Fishes Council -- have submitted criticism of the science on their own.

"The stack (of comments) is growing every day," Muth said.

Contact Todd Hartman at (303) 892-5048 or hartmant@RockyMountainNews.com.

December 12, 2001 2001 © The E.W. Scripps Co.

12/12/01

Traditional Water Users Call for Reforming CO River Management

THURSDAY, DECEMBER 13, 2001 11:30 a.m. to 12:30 p.m. TERRAZZA LOUNGE, on the CASINO LEVEL at the base of the escalators leading to the conference area)

CAESARS PALACE HOTEL & CASINO LAS VEGAS, NEVADA (Formerly scheduled for SENATORS BOARDROOM)

CONTACT: Lisa Force, 602-321-1753 (cell) David Orr, 435-260-2590 (cell) Owen Lammers, 435-259-1063

WHILE COLORADO RIVER INDUSTRIAL WATER USERS MEET IN LAS VEGAS, TRADITIONAL USERS CALL FOR REFORMING COLORADO RIVER MANAGEMENT

For many years, the major stakeholders in Colorado River water use have gathered annually for a conference in Las Vegas. The group, however, has represented the interests of dam operators, large water districts, and corporate agri-business.

At this year's conference, scheduled for December 12-14 at Caesars Palace Hotel, the members of the Colorado River Water Users Association (CRWUA) will be joined by a contingent of formerly unrecognized stakeholders: representatives of Indian Nations, Mexican delta communities, and environmental and social justice groups concerned with Colorado River laws and practices.

These groups will hold a news conference Thursday, December 13, at 11:30 a.m. to introduce members of the news media to critical issues of water allocation and environmental protection that are not being addressed by the Water Users Association and the state and federal agencies that support them.

"Colorado River water users and agencies need to recognize the pressing water needs of indigenous people and communities in Mexico and the US," stated Lisa Force of LIVING RIVERS, who will be moderating the press conference. "Flows to the dried-up Colorado River delta need to be restored, and plans to construct additional reservoirs such as the Animas-La Plata project in Colorado should be abandoned."

Other speakers at the news conference will include advocates for protection of tribal water rights and cultural resources, preservation of delta communities, and restoration of endangered wildlife and fish populations.

"Ecosystem restoration is feasible in the Colorado River delta," stated Ms. Yamilett Carrillo-Guerrero, of ProNatura Sonora, a Mexican environmental protection group, and a native of the Colorado River delta region. "Local communities in the delta are open to alternative uses in their land, compatible with the restoration of the ecosystem. Mexican farmers realize the importance of instream flows and in their modest possibilities, they are ready to contribute with land and water to help restore the riparian forests and wetlands in the Colorado River delta. For them, a river with water means life and in no way do they consider water nurturing the Colorado River delta wetlands and the Upper Gulf of California as wasted water."

Joining Ms. Force and Ms. Carrillo-Guerrero will be Mr. Kevin Doyle, Director of Habitat Conservation Programs with the National Wildlife Federation, the nation's largest conservation and education organization. "While restoration of the delta to its former glory may sound like a pipedream to some," said Mr. Doyle, "incremental steps to

provide more water for this beleaguered ecosystem can have a dramatic impact on the region's biodeiversity. Despite the currently dessicated state, the delta is still a critical stopover for birds in the Pacific Flyway and the last fringe habitat on Earth for some endangered species. Already, we've seen the comeback of numerous wildlife species in the delta's Cienega de Santa Clara with just limited efforts to provide more water."

Mr. Chad Smith, representing the Ahamakav Cultural Society and Inter-Tribal Waters Organization, based in Mohave Valley, Arizona, will also speak at Thursday's news conference.

"The many water agreements, regulations, and projects that the Federal government and special interests have negotiated are actually a part of one phenomenon, the taking of water from the Colorado River ecosystems and from smaller, more rural users," stated Mr. Smith. "For example, the Fort Mojave Tribe opposes the three interrelated agreements: the Interim Surplus Criteria, the Quantification Settlement Agreement and the Cadiz Groundwater Storage Project... These are all for just one constituency: the large population along the coastal plain."

Also presenting will be Gilbert Sanchez, of Tribal Environmental Watch Alliance, an indigenous organization based in New Mexico. Mr. Sanchez is fighting to protect environmental and cultural resources and sacred sites from water development projects.

"The cultural heritage of Indian people is threatened by new water development projects like Animas-La Plata," stated Mr. Sanchez. "We have watched over the years as one dam after another has been built, pipelines and canals have been dug, while we see the graves of our ancestors dug up, artifacts taken, and sacred sites desecrated. All this damage, and for what? Much of this water is stored just to evaporate into the sky, and much of what is used is wasted. The resting places of the ancestors should not be sacrificed for more golf courses, backyard swimming pools and hayfields in the desert."

SPEAKER INFORMATION

LISA FORCE of LIVING RIVERS will moderate the Press Conference. As Program Director for LIVING RIVERS, Ms. Force, organizes environmental advocacy campaigns in the southwestern United States and Mexico. Ms. Force helped to assemble the "Coalition for Delta Restoration" with 133 groups representing 12 million people in the U.S. and Mexico – the largest coalition ever organized in defense of a North American river system. Before joining LIVING RIVERS, Ms. Force was a regional director for the Center for Biological Diversity, recognized as the most effective endangered species advocate in the Western United States. During her time there, she organized and led a successful campaign to decommission two hydroelectric power plants in central Arizona.

YAMILETT CARRILLO-GUERRERO, of ProNatura Sonora, a Mexican environmental protection group has spent the past four years working on wetland restoration and public advocacy of the Colorado River delta. Her current project is restoration of a wetland on privately-owned property on the Hardy River in the Mexican delta. Before

joining Pronatura, Ms. Carrillo-Guerrero worked for the prestigious Center for Conservation of Natural Resources (CECARENA-ITESM) in Guaymas, Sonora. Ms. Carrillo-Guerrero is also assisting Don Onesimo, the Cucapá Traditional Chief at El Mayor in the Mexican delta, in authoring a book of Cucapá legends that explain the relationship between the tribe's culture and survivorship and the changes in the Colorado River delta.

KEVIN DOYLE is the Director of Habitat Conservation Programs for the Western Field Office of the National Wildlife Federation (NWF) - the nation's largest conservation and education organization. His work focuses on the protection of biological diversity through smart growth and habitat conservation planning, watershed protection, and proper management of public lands. Prior to joining NWF, he worked on air and water quality initiatives in California, including the landmark CalFed process. He spent six years with The Nature Conservancy, in Rhode Island and Hawaii, where he worked on invasive species prevention and control. Kevin served three years in the Peace Corps working for a joint USAID/National Park Service conservation program in Burundi, Africa.

GILBERT SANCHEZ is Director of the Tribal Environmental Watch Alliance (TEWA), an indigenous environmental organization based in Santa Fe, New Mexico. Gilbert is a former tribal official with the San Ildefonso Pueblo, where he resides. Long active in a variety of environmental and social justice issues—including efforts to restore tribal lands taken from his pueblo for the Los Alamos National Laboratory, Gilbert and TEWA are working to protect the lands, air and waters of the ancestral homelands of his and other indigenous peoples of the Southwest.

CHAD SMITH is the Tribal Archeologist and Cultural Resource Manager for the Fort Mojave Indian Tribe. An archeologist since 1978, Mr. Smith has served as archeologist for the Department of Interior's Navajo Newlands, the Navajo Nation Historic Preservation Department, and the San Carlos Apache Tribe. Mr. Smith is of White Mountain Apache descent and has learned the traditional ways of the Tribes for whom he has worked, including their views on water and water use. Mr. Smith represents the Fort Mojave Tribe in the new multi-Tribe organization, InterTribal Waters Protection Network.

12/10/01

Comments on Recovery Goals for CO River Endangered Fish

Dr. Robert T. Muth, Director Upper Colorado River Endangered Fish Recovery Program
ES/Colorado River/MS 65115 U.S. Fish & Wildlife Service P.O. Box 25486 Denver
Federal Center Denver, CO 80225

Re: Comments on U.S. Fish & Wildlife Service (USFWS) Draft Recovery Goals for
endangered fish of the Colorado River basin (published September 10, 2001)

Dear Dr. Muth:

LIVING RIVERS submits the following comments in support of recovering four listed, endangered fish species native to the Colorado River: bonytail, Colorado pikeminnow, humpback chub, and razorback sucker.

We note that recent data from the Grand Canyon Monitoring & Research Center indicate a steeply declining population trend for humpback chub in Grand Canyon. This is a warning sign that current efforts in the lower basin (at least) are not protecting the fish, much less providing for their recovery.

The U.S. Fish & Wildlife Service (USFWS) has primary responsibility for ensuring the protection and recovery of these species. We call on the agency to reconsider its current strategies and devise effective, workable solutions that will assure survival and recovery of the humpback chub and the three other species that are currently absent from Grand Canyon.

Regarding the draft recovery goals, we request that the USFWS submit them to an independent, external scientific peer review panel before final publication. The panel should consider also all comments submitted in response to the draft document.

Because of the seriousness of the fishes' plight throughout the Colorado River basin, LIVING RIVERS requests the USFWS prepare a basinwide Environmental Impact Statement (EIS) to address recovery goals throughout the fishes' historic ranges. An effective and adequate recovery goals document must necessarily address a wide range of water management issues throughout the basin. Because the implementation of the recovery goals for the four listed fish--a federal action--necessarily entails significant impacts to water management, dam operations, and other environmental factors, the agency is required by law to prepare an EIS.

LIVING RIVERS opposes adoption of the recovery goals in their current form. We believe that, in general, the USFWS has emphasized too much the use of hatcheries and pond rearing to achieve numerical population increases, while ignoring the need to restore suitable habitat across the fishes' historic range. A true recovery plan must ensure that sufficient habitat is available to give species the greatest hope for survival over the long term.

1) LOWER BASIN CONCERNS: In the draft, USFWS emphasizes recovery of viable populations in the upper basin at the expense of lower basin populations, which have long been at much greater risk. The draft recovery goals appear to reflect an agency assumption that little can be done in the lower basin besides continuing the hatchery stocking program. USFWS must make recovery a priority in the lower basin as well as the upper basin, and must not permit downlisting/delisting of the fish so long as lower basin populations remain endangered. In addition, the USFWS must consider the Colorado River delta below Morelos Dam as potentially suitable habitat, and require that stream flows and viable populations be restored to that reach of the river in Mexico before recovery can be deemed to occur.

2) EMPHASIZE WILD FISH: The USFWS should give more attention to protecting and encouraging propagation of extant populations of wild fish, as opposed to hatchery-

raised fish. Over the long term, much more robust and genetically diverse populations are likely to result from wild fish. Recovery goals should require wild populations and aggregations to be viable and reproducing.

3) **STUDY DAM REMOVAL/DECOMMISSIONING:** In that light, LIVING RIVERS calls on the USFWS to address the need for removing dams throughout the Colorado River basin, as an obvious and beneficial way to restore potentially large areas of suitable habitat. Dam decommissioning can make available habitat that is currently inundated by reservoirs, as well as improve conditions in reaches downstream of dams. Dam removal will allow for re-establishing long-blocked fish migration routes, which may be beneficial for the Colorado pikeminnow, in particular.

In the Grand Canyon in particular, the benefits to the endangered fish of decommissioning Glen Canyon Dam must be considered as part of any long term recovery effort. Hundreds of stream miles above and below the dam could be made habitable once again with this single restoration strategy. Other dams in the basin should be studied for removal/decommissioning as well, including Navajo Dam on the San Juan, Flaming Gorge on the Green River, and one or more of the lower basin dams below Hoover (e.g., Laguna). USFWS cannot ignore the benefits of these undertakings.

4) **DOWNLISTING/DELISTING:** We fear that the emphasis on strict numerical targets, coupled with the reliance on hatcheries to produce maximum numbers of fish in the shortest period of time, reflects the intense political pressure on the agency to downlist and delist the fish at the earliest possible date. We urge USFWS to back away from the timetable-driven, "by-the-numbers" approach to recovery that is so evident in the draft goals document. Apparently healthy populations have been known to precipitously crash when diseases or environmental disasters occur. A habitat restoration-oriented model is much more likely to benefit species in the long term. Recovery goals should place as much emphasis on ensuring that a maximum amount of additional suitable habitat is made available, as on counting fish. Once downlisting or delisting has occurred, it is often much more difficult to protect populations from unforeseen disasters.

5) **STUDY BENEFITS OF REDUCING DIVERSIONS & DEPLETIONS:** The Upper Colorado River Endangered Fish Recovery Implementation Program has emphasized that endangered fish management strategies are designed to permit additional water storage and diversions in the future. LIVING RIVERS calls on USFWS to abandon this policy, as it biases the agency against considering potentially substantial recovery benefits. The USFWS should analyze in detail the expected benefits to the fish of reducing current diversions (and overall depletions), and provide a range of alternative scenarios for instituting cutbacks on water deliveries to aid fish recovery. Such criteria would be especially valuable in dry years when streamflows are dramatically reduced, and fish are often stressed.

6) **REMOVE NON-NATIVE COMPETITORS AND PREDATORS:** The USFWS should emphasize an aggressive program to remove introduced, non-native fish that compete with and prey on endangered fish. Much scientific work remains to be done to determine

effective strategies for doing this, yet very little is currently being done. Indeed, throughout much of the upper and lower basins, "game fish" are still encouraged and stocked by state fish management agencies. USFWS should make recovery dependent on limiting or eliminating non-natives, including trout and other game species, wherever appropriate to achieve recovery.

Thank you for the opportunity to submit these comments. We look forward to publication of the final recovery goals, and we urge you to address the substantive issues we have raised, and implement all of our suggested changes.

Thank you for your consideration,

David Orr Director of Field Programs LIVING RIVERS PO Box 466 Moab, UT 84532
435-259-1063 fax 259-7612

12/10/01

Grand Canyon native fish at risk of extinction

Grand Canyon native fish at risk of extinction
Federal recovery goals provide no help

MOAB, UTAH (Dec. 10) -- The environmental and social justice advocacy organization LIVING RIVERS sent a letter today to the U.S. Fish & Wildlife Service (USFWS), warning of plummeting humpback chub populations in the Grand Canyon, and called for major revisions in its draft recovery goals for the humpback and three other species of endangered Colorado River fish.

Data from the Grand Canyon Monitoring and Research Center (GCMRC) indicate a rapidly declining population trend for humpback chub in the Little Colorado River, the largest and only known successfully-reproducing population of their species. GCMRC researcher Lew Coggins recently announced that numbers of reproducing humpback chub are in a "steeply declining trend." Coggins' investigation found only about 500 individuals of reproducing age. He stressed that it is too soon to draw conclusions about whether the population may have dropped below the point where it can rebound.

Three other listed species, bonytail, Colorado pikeminnow and razorback sucker, have been extinct in the canyon for years.

"Despite spending millions of dollars over the years, the government has failed to protect and recover Grand Canyon's native fish," said David Orr, director of field programs for LIVING RIVERS. "Will the last of the endangered species have to disappear before changes are made?"

LIVING RIVERS' letter criticized the agency's draft recovery goals for the four fish species, and called on USFWS to subject its recovery goals to independent, external

scientific peer review. The goals were released for public comment on September 10 and ended today.

"Politics, not science, is driving the process," said Orr. "To ensure the survival and recovery of wild native fish, the agency must produce a scientifically sound plan. The proposal currently on the table doesn't come close."

The Desert Fishes Council, a prestigious scientific organization dedicated to preserving biological diversity in desert aquatic ecosystems, passed a resolution at its annual meeting last month in Alpine, Texas, opposing the draft recovery goals as currently written. The organization also called for outside peer review.

LIVING RIVERS' additional concerns include:

- * Failure to emphasize restoration of habitat, including removal of dams that block fish migration and spawning areas, and that release water too cold for fish to survive in.

- * Reliance on hatcheries and other artificial reproduction methods to increase fish numbers and downlist or delist species, even though fish may not survive to reproducing age.

- * Lack of attention to removing introduced, non-native fish that compete with and prey on endangered fish.

- * Failure to require recovery of the species throughout their ranges in both the upper and lower Colorado River basins.

"We're concerned that the agency, in its eagerness to please water and power interests in the seven Colorado River basin states, is rushing to set criteria that will cost taxpayers millions more dollars while not helping recover the fish they're supposed to be saving," said Orr.

#

LIVING RIVERS works to build a broad-based constituency for large-scale restoration of the Colorado River and neighboring watersheds. LIVING RIVERS has assembled a coalition of 133 U.S. and Mexican environmental and community groups, representing more than 12 million people, in support of Colorado River delta restoration.

On the Net:

LIVING RIVERS: <http://www.livingrivers2.org>

USFWS Draft Recovery Goals: <http://mountain-prairie.fws.gov/ea/infopackets/coloradoriver>

USFWS Upper Colorado River Endangered Fish Recovery Program: <http://www.r6.fws.gov/crrp/>

Grand Canyon Monitoring & Research Center: <https://www.gcmrc.gov>

Desert Fishes Council: http://www.utexas.edu/depts/tnhc/.www/fish/dfc/dfc_top.html

[NOTE: Websites for the USFWS and GCMRC are currently down, following a court order last week. No date has been announced for their restoral.]

12/10/01

Volume 1, Number 4

The Articles

- [Alfalfa Blues: In the Upper Basin](#)
- [Industrial Hay: Draining the Lower Colorado](#)
- [Hay Burn: Alfalfa and Public Health](#)
- [Animas River Rally: Durango Turns Out to Stop A-LP](#)
- [Trading Alfalfa for Delta Restoration](#)
- [Going, Going, Gone? Grand Canyon Native Fish](#)
- [Rally for the Grand Canyon](#)

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- [LRC V1, N4, December 2001](#)

12/05/01

Comments: Not So Immediate Options for the Delta

In May, 2001 a preliminary report was released by Michael Clinton Engineering prescribing "immediate" solutions for Colorado River Delta restoration. Living Rivers, The Center for Biological Diversity, the Cocopah Indian Tribe and Centro Regional de Estudios Ambientales y Socioeconomicos, A.C. found numerous deficiencies in the analysis conducted and solutions proposed, and prepared the comments below.

To download a pdf of the report in question **Immediate Options for Augmenting Water Flows to the Colorado River Delta in Mexico**
[click here.](#)

December 5, 2001

Michael Clinton
Michael Clinton Engineering
3004 Harbor Side Drive
Las Vegas, NV 89117
Dear Mr. Clinton:

Thank you for the briefing at the Colorado River Delta Symposium in Mexicali in September concerning your report "Immediate Options for Augmenting Water Flows to the Colorado River Delta in Mexico".

We very much commend you for beginning a process to explore options for getting additional water flows to the Colorado River delta in an immediate timeframe. We also appreciate your acknowledgement that immediate partial solutions are only valuable in the context of a longer-term, more holistic solution.

As discussed during the briefing, several factors are crucial to a more holistic approach, including acceptance by U.S. entities that additional water will have to flow across the border through the main channel; recognition that environmental issues are entwined with social issues; incorporation of the gulf and estuary ecosystem into proposed solutions; and an acknowledgment that a comprehensive solution must include lower water consumption on the US side. However, we recognize that the report is intended to address only short-term solutions and we will confine our comments to that objective.

We applaud the research effort undertaken to produce this report. We remain concerned however with the report's apparent over-emphasis on the likelihood that its recommendations will alleviate imminent threats to important delta wetlands. In fact, report recommendations will provide substantial environmental benefits through creation of new brackish wetlands. But the recommendations will not alleviate impending harm to the two most threatened delta wetlands, the Cienega de Santa Clara and riparian corridor, and may increase threats to these areas.

Overall, the report would benefit from a wider examination of possible water sources for priority delta wetlands. Recommendations should focus less on what report authors consider to be politically possible and more on all available sources, albeit with the understanding that these will obviously provide much less water than that necessary for a longer-term solution.

Background and Imminent Threats

Even short-term solutions should be directed at specific ecological problem areas within the delta. The report should indicate that the "Colorado River delta" is an often-used generic term referring to the following four particular priority wetland conservation areas:

- Cottonwood /willow riparian corridor between Moreles Dam and the Rio Hardy;
- Cienega de Santa Clara;
- Intertidal wetlands, including historic estuary at river's mouth;
- Various brackish wetlands

Each of these areas has very specific water needs and provides very specific ecosystem benefits. These need to be outlined in the report in order to avoid making blanket recommendations that may benefit some areas but cause harm to others.

Further, the report should incorporate recommendations from the Binational Declaration (see attached) distributed at the Mexicali Symposium, specifically:

- A framework for research to determine the amount, quality, and timing of water deliveries necessary to sustain and restore the Colorado River delta's ecosystems, including the riparian corridor below Morelos Dam, the Ciénega de Santa Clara, the River's estuary, and other brackish wetlands.
- Efforts to secure funding both for research needed to develop alternatives to protect and restore Colorado River delta's ecosystems, and for the implementation of those alternatives.

The Colorado River riparian corridor downstream of Morelos Dam, and the Cienega de Santa Clara are the two most threatened wetlands in the Colorado River delta region. The riparian corridor with its abundant cottonwood and willow vegetation faces several imminent threats, including fire from nearby garbage dumps, desiccation from reduced river flows, and increasing soil salinity. Additionally, the riparian corridor receives inadequate and inconsistent flood flows and therefore experiences little recruitment of new native woody vegetation necessary for sustained survival of the riparian corridors. These threats could greatly diminish or eliminate native cottonwood and willow riparian vegetation in the corridor in just a few years, depending on spills or floods from the U.S.

The Cienega de Santa Clara faces an imminent threat from the proposed operation of the Yuma Desalting Plant. In recent public meetings, the Bureau of Reclamation (BoR) has clearly stated its intent to recommend to Congress operation of the Plant, an action that could destroy the Cienega de Santa Clara. Yet the report states that "Operation of the [Yuma Desalting] Plant is not anticipated in the foreseeable future...therefore that contingency is not considered in this report." (p. 13)

The Cienega could be greatly reduced or lost in just a few short years with operation of the desalting plant and the resulting severe reduction in quantity and quality of Wellton-Mohawk drainage water delivered to the Cienega. This was demonstrated in 1993 when flow to the Cienega was interrupted for canal maintenance, causing the vegetated portion of the wetland to shrink from 11,200 acres to 2,750 acres in just a few months time.

Time Frame

The report suggests that the recommended measures be continued no longer than the term of the Interim Surplus Criteria, indicating that the intended time frame for the "immediate" options described in the report is 15 years. The term "immediate" is obviously open to broad interpretation, but report recommendations will not alleviate pending threats to the riparian corridor and the Cienega in a 15-year time period.

The authors' proposed 15-year time frame would provide ample time to identify and implement a long-term solution with much greater benefits than those contemplated in

the report. A long-term solution for delta wetland conservation, attainable in 15 years, might include conserving water in the U.S. and Mexico for delivery to delta wetlands through fallowing, increased agricultural efficiency, water recycling and other methods.

Further, the report states that "US water users want assurances that a more comprehensive Delta plan does not require additional water from the United States." (p.33). Successful implementation of report recommendations would not justify assurances to water users that no action will be taken to obtain additional water for a 15 year period.

Complexities with Water Sources

The benefit of 15,000 acre feet as applied to the delta riparian corridor is unknown, and may be very limited due to the amount of water necessary to maintain riparian vegetation and to reverse and maintain low soil salinity. The best available scientific data suggests that a minimum average annual flow of approximately 106,000 acre feet per year are necessary to retain the delta riparian corridor. Specifically, flows of 32,000 acre feet per year below Moreles Dam plus pulse flows of 260,000 acre feet, released at a rate of 3,500-7,000 cfs, at three to four year intervals are the minimum needed to sustain riparian corridor vegetation.

Further, the proposed 15,000 acre feet of fresh water from Mexico is unlikely to be obtained on a schedule necessary to prevent significant habitat loss in the riparian corridor. Report recommendations for obtaining fresh water from retired, marginal agricultural lands in Mexico are very complex.

Potentially Harmful Recommendations

The report refers to release of brackish waters into "the delta" generically. Again, even short-term solutions need to be directed at specific priority conservation areas within the delta as they have very different water quality, quantity and pulse regime needs. The report indicates that the Yuma area brackish water will be delivered to the "Colorado River wetlands" and that there exists a need for confirmation that the brackish water will be of sufficient quality to sustain the stands of riparian vegetation (cottonwoods and willows). Additionally, the report suggests that a 14-mile connector canal from the Bypass Drain to the Plan Ayala Drain would need to be constructed to deliver this water.

As discussed previously, brackish water will not benefit, and in fact is likely to greatly harm cottonwood and willow vegetation if applied to the riparian corridor. It is imperative that any reference to the use of brackish water for the riparian corridor be eliminated.

The report also suggests that occasionally, the entire flow of the Bypass Drain could alternate between the Colorado River wetlands and the Ciénaga de Santa Clara allowing the water now entering the Cienega to be delivered in surges. It is unclear what is meant by "Colorado River wetlands", however in referencing the Colorado River delta, the term includes cottonwood /willow riparian corridors, the Cienega de Santa Clara, intertidal wetlands, and various brackish wetlands.

Riparian corridor wetlands benefit from pulse flows while marshes likely do not. Therefore, the recommendations for periodic pulse flows between the Cienega and new brackish wetlands are unlikely to benefit these wetlands, and actually may harm the Cienega, as discussed above, by periodically diverting its source to other wetlands. Depending on how long flows were diverted to other brackish wetlands, the Cienega de Santa Clara could shrink again, most affecting populations of the endangered desert pupfish occupying very shallow areas around the periphery of the Cienega.

The recommendation to apply pulse flows to the Cienega appears to be the result of confusion by the authors over which wetlands would benefit from this type of management. The riparian corridor is the wetland that would benefit from pulse flows.

Important Legal Obstacles

The report neglects to address the fact that there is no guarantee that the proposed brackish water deliveries from Yuma will not themselves be subject to the same legal challenges from water users as were the water to be going through the main channel. This is a possibility especially if the replacement water is to come from Lake Mead.

Consumption Issues

Extremely inefficient water use on the U.S. side is well documented, especially for the agricultural sector. Any sustainable solution for the delta and gulf must address reducing water consumption in the U.S. The omission of any discussion of water utilization, and the role it can and must play in the future of the delta, ignores both the major challenge to, and significant potential for, restoration.

There are also recycling opportunities to be considered. Waters presently available through industrial discharge in both Mexico and the U.S. can be treated and used as secondary sources to be mixed with any initial U.S. contribution. Further, water used by power plants on both sides of the border could potentially be recycled. Of course, water quality criteria as well as flow rate and seasonal criteria must accompany any exchange of treated waters between the two nations. Mexicali-based industries have expressed a desire to consider this option.

Inequitable Burden on Mexico

Mexico faces even greater demands for Colorado River water than does the U.S., given the allocation to Mexico of only 1.5 million acre feet annually and the heavy dependence on Colorado River water for agricultural, fishing and municipal use by low-income communities with few alternatives. The recommendations of this report, which include 15,000 acre feet of fresh water from Mexico compared with only 38,000 acre feet of brackish water from the U.S. place an inequitable burden on Mexico. The report should outline scenarios in which the U.S. and Mexico are contributing water to the delta in amounts proportional to their allocation.

Social Needs are Overlooked

The needs of local communities including fishing associations and ejidos are entwined with environmental issues. The local delta residents are able to offer creative solutions as their livelihoods depend upon healthy delta habitats. The report overlooks such opportunities. For example, restoration of estuaries, one of the most vital environmental and social-needs resources of the delta region, is not mentioned.

Also, the poorest communities may suffer greatest harm under the report recommendations. The poorest lands often support the poorest communities. These are the Mexican agricultural lands targeted for retirement under the recommendations.

Local Groups Were Not Included

Although the report states that "...the involvement of local communities and NGOs is essential" (p.33), Mexican communities and environmental groups located in the delta were not included in its development, nor were representatives of the Cucapa Nation. Several local communities, Non Government Organizations, fishing cooperatives have expressed grave concerns about the recommendations in the report. They have stated that they are not at ease with the alternatives in the report being the only ones under consideration.

In conclusion, this report is valuable in helping to begin a discussion of specific actions that might lead toward restoring the delta. If this process is to continue, we urge the Sonoran Institute and Michael Clinton Engineering to communicate a more thorough understanding of the biological needs of the four priority wetland conservation areas. Recommendations for more water for the delta should be specific to the type of wetland targeted in order to be effective and to avoid harm. The Institute may wish also to undertake a more thorough study of creative alternatives for immediate sources of water, taking into consideration the points outlined above, before proceeding towards implementation of the report recommendations

Thank you again for sharing this report with us, and giving us the opportunity to offer our comments.

Sincerely,

David Hogan, Center for Biological Diversity

Carlos Yruretagoyena

Centro Regional de Estudios Ambientales y Socioeconomicos, A.C. (CREAS)
Regional Center for Environmental and Socioeconomic Studies

John Swenson

Director, Environmental Protection Office, The Cocopah Indian Tribe

Lisa Force, Living Rivers

cc. Sonoran Institute

12/04/01

Rally for Grand Canyon Restoration

Friday, January 18, 2002, 11:30 am

Arizona Center II

5th St and Van Buren

Downtown Phoenix

Join LIVING RIVERS and others as we send a message to federal and state agencies, and water and power interests that will be gathering in Phoenix, January 17-18, 2002. This group has been convening for the past five years, charged with developing strategies to heal the Colorado River through Grand Canyon. The ecosystem does not lie, this group is failing.

It's critical that the public let them know that the time for action is NOW!

- Stop killing the Grand Canyon.
- Save the riparian habitat.
- Recover endangered fish.
- Bring back the canyon's beaches.
- Restore the natural process, before it's too late.
- Save this world renowned national park.

New information reveals that yet another species is on the verge of extinction in Grand Canyon National Park, the humpback chub. The Fish and Wildlife Service has decided that their priority for these and other declining fish species is not necessarily to restore natural habitat conditions. The agency would rather attempt to dump hatchery-raised fish into rivers with the hope to maintain an artificial population. These fish won't be able to reproduce in the Canyon, and it is questionable if the hatchery fish will survive at all. This is not restoration, it's a mechanism for water and power interest to continue destroying our rivers, and in the process, circumvent the Endangered Species Act.

[Download PDF of 8.5x11 Rally Flyer](#)

Information on efforts to restore Grand Canyon native fish:

[Canyon Changes are Crucial](#)

Arizona Republic: January 16, 2002

[Grand Canyon Native fish: Going, Going, Gone?](#)

Living Rivers Currents, December 2001

[Grand Canyon Fish at Risk of Extinction](#) Living Rivers Press Release, December 10, 2001

[Living Rivers Comment Letter on Endangered Colorado River Fish to US Fish and Wildlife Service, December 10, 2001](#)

[Environmental groups criticize plan to rescue endangered fish](#)

Associated Press, December 11, 2001

[Flap over Endangered Fish](#)

Rocky Mountain News, December 11, 2001

[Resolution of the Desert Fishes Council on Colorado River Endangered Fish Recovery, November 18, 2001](#)

[Decline of the aquatic food base in the Grand Canyon](#) Northern Arizona Aquatic Ecology Research Laboratory

11/27/01

Help prevent unneeded new development at Lake Powell

The National Park Service is promoting a massive, environmentally destructive new resort at "Lake" Powell Reservoir near Page, Arizona. Now is the time to submit comments on the Antelope Point Marina project.

SUBMIT YOUR COMMENTS TODAY (details below)

MOAB, Utah, Nov. 27 -- The National Park Service (NPS) is currently accepting public comments on the proposal to build Antelope Point Marina, a sprawling resort planned for the desert shores of Lake Powell Reservoir in Glen Canyon National Recreation Area (GCNRA) near Page, Arizona. Citizen groups are protesting the project's social and environmental impacts, and calling for a full study of alternatives to the proposed action.

The Antelope Point project is currently undergoing review for an Environmental Assessment (EA) to help the agency identify and analyze expected project impacts. LIVING RIVERS and other groups are urging citizens to write the Park Service to express concerns about this unneeded, polluting facility that would be built within a National Park recreation area.

Organizations that have already come out in opposition to the project include: Bluewater Network, Colorado Plateau River Guides, Diné CARE (Citizens Against Ruining the Environment), Diné Medicinemens Association, Escalante Wilderness Project, Flagstaff Activist Network, Grand Canyon Private Boaters Association, LIVING RIVERS, Sierra Club, Utah Environmental Congress and Wild Wilderness. [Other groups wishing to join this coalition, please contact LIVING RIVERS at]

The National Environmental Policy Act (NEPA) requires project proponents to consider a range of reasonable alternatives to the proposed project. The Antelope Point project is based on an assumption embedded in the park's 1979 General Management Plan

(GMP), that another large marina is needed near Page. The existing Wahweap Marina facilities could be expanded to accommodate additional demand, rather than construct a new resort nearby. Antelope Point will essentially duplicate existing services at Wahweap.

The project, which would be built partly on national parkland and on land controlled by the Navajo Nation, includes the following features:

More than 250-300 commercial houseboat rental slips, space for 60-100 rental houseboats and 60-70 small boats, 2 large tourboats, fuel dock and pumpout facilities, marina store, restrooms, launch ramp, parking for 800 vehicles, sewage system, dry storage, repair/maintenance facilities, 150-space RV campground complex with showers and dump stations, 200-room lodging complex, restaurant and cocktail lounge, and a cultural center complex.

The project is opposed by two Navajo grassroots organizations, Diné Medicinemens Association and Diné CARE. The marina is controversial within the Navajo Nation and elsewhere. Antelope Point is billed partly as economic development for the Navajo people, yet it would be owned and operated by a privately-held, white-owned concessionaire based in Phoenix. Alternative economic development strategies have not been considered as part of the environmental planning for the project.

Construction plans call for the first cocktail lounge on the Navajo reservation. A proposal for a nearby casino and shopping center complex is currently under study by the Navajo Nation. No casino has ever operated on the reservation.

* * * * TAKE ACTION * * * *

SUBMIT YOUR COMMENTS TODAY!!! (suggestions below)

- by EMAIL:

- by US MAIL: Superintendent Glen Canyon NRA P.O. Box 1507 Page, AZ 86040

For more information, consult the NPS official project website: <http://www.nps.gov/glca/antptpl.htm>

* * * TOP TEN ISSUES FOR ANALYSIS * * *

Ask the Park Service to put you on their official mailing list for the Environmental Assessment (EA), and ask them to address as many of these "Top Ten" issues we've identified (below) as you choose. Be sure to add your own ideas if you wish! Your comments are most effective if you put your thoughts in your own words. But feel free to use the information in this message to frame the issues as you see them.

1) Antelope Point Marina is not needed. The analysis must address the purpose and need for the project, and alternatives to the proposal. Expansion of existing development should occur, if needed, before building on undeveloped national parklands. The EA must address the need, if any, for additional development and the many potential alternatives for economic development for the Navajo Nation, while minimizing environmental damage to the greatest extent possible.

2) Alternative economic development options must be considered. Antelope Point may not be the best alternative for bringing jobs to the area and improving quality of life for Navajo people. Detailed economic alternatives analysis should examine anticipated revenues expected to accrue to the Navajo Nation and to individual employees over time under each alternative evaluated. Citizens, including Diné people, have suggested that the Navajo Nation take over operation of existing resort facilities around the reservoir, including Wahweap Marina, which can be expanded to accommodate additional boat slips. This would achieve the goal of promoting economic opportunity while avoiding the environmentally damaging and economically risky option of building and operating a major new resort. The current concessionaire, ARAMARK, is reportedly interested in divesting its concessions at Lake Powell reservoir.

3) Alternative uses for the Antelope Point site must be considered. Rather than operate a high-impact, motorized recreation-oriented resort, NPS should evaluate the possibility of constructing facilities that directly benefit the Navajo people. For example, a health clinic, educational institution, scientific/ecological research laboratories, or traditional healing center (as the Diné Medicinemen's Association has proposed) may be appropriate, compatible uses in this setting. The Navajo Nation currently lacks significant infrastructure for these uses and would clearly benefit from any of these.

4) A new park-wide General Management Plan (GMP) should be prepared before additional development occurs at GCNRA. Antelope Point must not go forward without re-evaluating many of the assumptions built into the park's outdated 1979 GMP, on which plans for the marina project are based. The need and purpose for the project, and many of the assumptions used to justify them, are no longer valid. Over the decades, many recreational activities--and impacts--have changed, e.g. proliferation of jet skis, or personal watercraft (PWC). At the same time, there is growing interest among recreational users for non-motorized recreational opportunities such as sea kayaking or canoeing. No non-motorized recreational zones currently exist on the reservoir. A new GMP should address the need for new recreational opportunities and management practices around the reservoir. The old river channel around Antelope Point would make an ideal motor-free zone, since motorboat users generally travel around the north side of Antelope Island.

5) Recreational safety concerns about the site must be addressed. Antelope Point is located on a narrow bend in the old river channel, a site that is prone to potential user conflicts between powerboat, houseboat and jet ski users. On a typical holiday weekend, hundreds of boats would be moored, floating and in motion in and around the new marina, with water skiers and jet skiers in abundance. The potential for serious visitor safety conflicts and accidents at Antelope Point would be quite high. Regional law

enforcement is already stretched thin covering Wahweap, and a marina at Antelope Point would create additional burdens and responsibilities. The ready availability of alcoholic beverages for sale at the marina would only exacerbate the risk of serious accidents. In 2000, Lake Powell Reservoir was identified by the Wall Street Journal as the nation's second-most dangerous recreational area.

6) Economic risk concerns must be evaluated. No analysis has been published by NPS to demonstrate the long-term economic viability of a second major new marina in the immediate vicinity of Page. In a period of declining visitation to the reservoir, sufficient demand may not exist to justify the investment and commitment of resources to support the Antelope Point project. Since one of the primary goals of the project is to promote economic development for the Navajo Nation, it is essential that specific data be presented to assist the Navajo people in evaluating whether the project would operate in the black over the long term, if it were built. 7) The Antelope Point project should not go forward until the Park Service first resolves its policy on jetskis (PWC), and completes an Environmental Impact Statement (EIS)--currently in preparation--for PWC management at GCNRA. The EIS will examine the possibility of banning PWC and also of limiting them to certain zones of the reservoir. As stated above, the old river channel at Antelope Point would be an ideal motor-free zone, and should be evaluated in the EIS for such use. NPS should not bias its PWC planning process by assuming that Antelope Point Marina will be built.

8) Alternatives must be evaluated for mitigating archeological and cultural resource sites within the project boundary, including ceremonial sites that would be rendered unusable by construction of the project. Consultation with the Diné Medicinemen's Association and other traditional native groups must be conducted.

9) Analysis of the cumulative effects and reasonably foreseeable consequences of the Antelope Point project must be evaluated, including the potential impacts on area businesses, including Wahweap Marina. Increased use of motors on the reservoir and loss of opportunities for non-motorized recreation in the Antelope Point area must be evaluated. The impact of anticipated "companion" projects must also be evaluated (e.g. the Navajo Nation is currently considering a casino and shopping center to be located near the entrance to the resort).

10) Given the likelihood that significant environmental impacts will occur from this project, the law requires that NPS prepare a full Environmental Impact Statement.

PLEASE SEND A COPY OF YOUR COMMENTS TO LIVING RIVERS at:
info@livingrivers2.org

11/27/01

Rally for Grand Canyon Restoration

Friday, January 18, 2002 at 11:30 am
Arizona Center II
5th St and Van Buren
Downtown Phoenix

Join LIVING RIVERS and others as we send a message to federal and state agencies, and water and power interests that will be gathering in Phoenix, January 17-18, 2002. This group has been convening for the past five years, charged with developing strategies to heal the Colorado River through Grand Canyon. The ecosystem does not lie, this group is failing. It's critical that the public let them know that the time for action is NOW! Stop Killing the Grand Canyon!

[LR Currents V1, N4](#)

11/26/01

Alfalfa Blues in the Upper Basin

Living Rivers Currents December 2001
[LR Currents V1, N4](#)

Peter Lawson stands next to Professor Creek, which drains into the Colorado River 20 miles upstream of Moab, Utah. For eight months each year he diverts Professor Creek's water for hay cultivation, one of the thousands of marginal alfalfa fields that dominate irrigated agriculture in the upper Colorado watershed. He offered to share his frustrations with how state and federal programs discourage efficient agricultural water use, and make it impossible for farmers to use their water rights to benefit the environment.

When Lawson purchased his farm in 1991, every drop of the Professor Creek's water was poured on to the fields. "I went ahead and installed some fairly sophisticated sprinklers which were much more efficient in delivering water to the alfalfa," he says. "Not only was water being left in the creek, but I was able to increase my acreage under cultivation."

Despite these gains, the state of Utah forced him to buy more water rights because he was farming more land. It made no difference that he was actually using less water than before. "One can't support a family with this business as it is, then when you try to increase efficiency, such that everyone wins, they force you to spend more money."

Lawson points out that he can only get between \$80 and \$100 per ton for his alfalfa. With four cuttings per year, and about one ton per acre from each cutting, that's less than \$40,000 annually from the farm. When deductions are made for land purchase,

equipment and supplies, there's very little left for anything else. This is why many farmers in the upper basin must have another source of income to make ends meet.

"I hate subsidies, but I've applied for them from the US Department of Agriculture on two occasions. It's impossible to keep up with the flood of forms, so I've never received any money," Lawson says. "Whether you have 50 acres, or 50,000, the paperwork is the same, thus it's the large growers with their attorneys that get all the hand outs, making it that much more difficult for the family farms to compete."

Lawson believes that it's vital that all farmers are provided mechanisms so that more water can be left in the rivers for habitat preservation and restoration. "Now there's nothing but disincentives, he says." Any water that he does not use can just be taken by someone else downstream, and were he to stop irrigating altogether, his water rights would be taken away and sold to somebody else.

"Despite this, I'm still trying to figure out how I might be able to use less water," he says. He's considered shifting to orchards with drip irrigation, but the state would require him to reduce the area irrigated, or purchase even more water rights. "These laws are crazy," Lawson concludes. "It would be so easy to for us to heal our rivers, and still feed ourselves, if only the politicians would focus on addressing the problems, not preserving the corporate welfare for the larger growers."

11/26/01

Animas River Rally: Durango Turns out to Stop A-LP

[LR Currents V1, N4](#)

On a warm, sunny day 150 river activists gathered at noon in Durango, Colorado on November 9th alongside the endangered Animas River. Confidently the protestors marched downtown carrying colorful signs and banners while chanting slogans demanding the Animas remain wild and free.

The jubilant crowd, representing 35 groups, then gathered before the offices of the Bureau of Reclamation, calling for termination of the Animas-La Plata Project. Speakers included leaders of social justice, taxpayer and environmental groups from each of the Four Corners states. Citing violations of federal laws, the groups demanded an investigation of the project by the General Accounting Office (GAO).

The urgent nature of the group's complaints were heightened by the imminent excavation of ancient Native American gravesites that would occur in advance of construction. Prior to the rally, members of the Southern Ute and Navajo nations gathered at the proposed reservoir site and offered prayers for the preservation of these sacred grounds.

These concerns were listed in letters addressed to every member of Congress and deposited in the mailbox before the BuRec office. "We want accountability, not more

corporate subsidies," exclaimed Owen Lammers, executive director of LIVING RIVERS. "The real estate developers want to declare victory in this struggle, but we're here to tell them they're going to lose." The rally also signified the first public event in LIVING RIVERS' campaign to reform of the Bureau of Reclamation in its centennial year, 2002.

The march continued back to the shores of the Animas River where refreshments were presented and local musicians entertained till sunset.

11/26/01

Going, Going, Gone? Grand Canyon Native Fish

[LR Currents V1, N4](#)

New data from ongoing research in Grand Canyon National Park suggest a serious decline in humpback chub numbers in the Colorado River through Grand Canyon. This is one of the last wild populations of humpback in the world. The canyon's three other endangered species, Colorado pikeminnow, bonytail, and razorback sucker have long been extinct in the canyon.

Endangered fish throughout the Colorado River now have even more to fear. A new recovery plan issued in September by the U.S. Fish and Wildlife Service (USFWS) would make survival of these fish species largely dependent upon hatcheries, while river habitat restoration needs go unaddressed.

Fish recovery would not be based on viable wild populations that can reproduce in native habitat, but on hatchery fish being continuously dumped to maintain a given population size. "This is completely artificial," says John Weisheit, LIVING RIVERS Conservation Director. "If the river can't sustain the fish on its own, then there is no recovery."

Bowing to pressure from water and power interests, the USFWS continues to ignore the major problems driving these unique fishes to extinction: (1) dams that block migration paths and degrade habitat conditions; (2) water waste by irrigators and other users, dangerously depleting streamflows; and (3) introduced fish species that prey on and compete with natives. Final recovery goals are expected in early 2002. LIVING RIVERS and others have submitted comments, calling for a basinwide recovery plan that emphasizes dam decommissioning, habitat restoration, water conservation, and non-native fish removal. You can too! Write Dr. Robert Muth, Director, Upper Colorado River Endangered Fish Recovery Program, U.S. Fish & Wildlife Service, P.O. Box 25486, Denver, CO 80225; robert_muth@fws.gov.

11/26/01

Hay Burn: Alfalfa Subsidies and Public Health

[LR Currents V1, N4](#), December 2001

By Gordon LaBedz, M.D.

More people die of heart disease and strokes than all other illnesses combined. The cause? The red-meat-oriented American diet, high in fat, with beef and dairy as the prime culprit. And you and I pay for it through government subsidies.

While many ranchers get their share of corporate welfare, the less-visible cattle feed industry is also cashing in: Corn is the main crop for fattening cattle in the Midwest, but here in the West, it's alfalfa.

Taxpayers unwittingly fund a system that perpetuates unhealthy diets for millions of Americans, bringing on early death or illness for tens of thousands every year.

A recent US Public Health Service report concluded that 1.29 million, or 54% of all U.S. deaths can be attributed to the substantial risk factors associated with the consumption of meat products. The Economic Research Center reports \$80 billion dollars in annual medical costs and lost productivity from over-consumption of fatty foods. Cows are killing us!

According to government and independent figures, we could save on average 75% of the water used to irrigate alfalfa by planting vegetables. If we subsidize crops, why not at least grow nutritious food? We could save money and river ecosystems, but most importantly, we would help people live healthier and longer lives.

As a physician I see more than my share of patients who are being killed by the beef? and alfalfa? industries. As a taxpayer I am outraged that my dollars are being used to keep these destructive industries in business.

Gordon LaBedz, M.D., is a physician in the Greater Los Angeles area and is Chair of the Sierra Club Angeles Chapter.

11/26/01

Industrial Hay: Draining the Lower Colorado

[LR Currents V1, N4](#), December 2001

by Christine Henges-Jeck

Each year, almost half the Colorado's annual flow, some six million acre feet, arrive at Imperial Dam just 150 miles from the river's mouth in the Gulf of California. In non-flood years, the water diverted from Imperial onward irrigates 1.2 million acres in southwestern Arizona, southeastern California, and the Mexican states of Baja

California and Sonora. Despite increasing demand for water throughout the Colorado River low-value, water-intensive crops, especially alfalfa, consume a disproportionate amount of the region's water. Alfalfa is the region's most water intensive crop, second largest crop by area, and of extremely low value.

The region's farmers irrigate over 230,000 acres of alfalfa annually. Nearly three-quarters of the crop grows in California's Imperial Valley. The remaining twenty-five percent of the region's alfalfa crop grows across the border in the Mexicali Valley and, to a lesser extent, in Arizona's Yuma area. Farmers grow alfalfa because it requires less labor than other crops, can be harvested multiple times during the region's long growing season, and tolerates the poorly drained clay soils of the Imperial and Mexicali valleys.

Alfalfa consumes more water than any other crop below Imperial Dam. Farmers apply as much as seven vertical feet of water to alfalfa crops, to promote growth under the hot desert sun. Although it comprises less than twenty percent of the region's irrigated acreage, alfalfa uses over forty percent of the water used by the region's crops. Per acre, alfalfa consumes sixty percent more water than wheat, the region's largest crop, forty percent more water than cotton, the third largest crop by acreage, and seventy-five percent more water than lettuce, the fourth largest crop. The region's alfalfa crop uses more water than all these crops combined.

Although alfalfa consumes an enormous quantity of water, its value per acre is relatively low. According to Imperial County, the Imperial Valley's alfalfa crop value was \$687 per acre in 1999. This stands in stark comparison to lettuces which generated \$3,895 to \$5,021 per acre. Even cotton, another low value crop generated higher values at \$959 per acre in the same year.

Alfalfa is a feed crop, especially for dairy operations in the Imperial Valley and California's Central Valley, among other locations. The plentiful, senior water rights enjoyed by farmers in the region permit the cultivation of this water-intensive crop. If price signals were different, it is quite likely that farmers would maximize their returns by turning to other, higher-value crops. Until such changes occur, millions of acre-feet will be diverted from the Colorado River to support these low-value feed crops.

Christine Henges-Jeck is a Research Associate with Pacific Institute. For more information on water use in the Lower Colorado region, see the Pacific Institute's new report, *Missing Water: The Uses and Flows of Water in the Colorado River Delta Region*, available on-line at www.pacinst.org.

11/26/01

Trading Alfalfa for Delta Restoration

[LR Currents V1, N4](#)

Scientists estimate that the currently desiccated Colorado River delta could begin regeneration with just one percent of the river's flow. To reach the one percent conservation goal for the Colorado River alfalfa growers could:

- Shift 43,000 acres of alfalfa from sprinkler to drip irrigation.
- Shift 38,500 acres of alfalfa to higher value, less water-intensive citrus and vegetable crops; or
- Fallow 17,200 acres of alfalfa

As Mark Lewis said in his Veteran's Day column in the Farmington Daily Times, regarding the One Percent Campaign, "Are we willing to sacrifice a little so something for the overall good is accomplished? We would be giving something of ourselves for the betterment of everyone. I wonder if we are up to it."

11/19/01

Animas River--Most Endangered River--Update

AMERICAN RIVERS

FOR IMMEDIATE RELEASE

Nov. 19, 2001

Contacts:

Elizabeth Maclin, American Rivers, (202) 347-7550, x3014

Dylan Norton, San Juan Citizens Alliance, (970) 375-7935

Owen Lammers, Living Rivers, (435) 259-1063

Eric Eckl, American Rivers, (202) 347-7550, x3023

Animas River worse off since "Most Endangered" listing 6 months ago

Six months after listing as one of nation's Most Endangered Rivers, water diversion project still pending threat

Six months after American Rivers listed the Animas as one the nation's most endangered rivers, American Rivers and its partners find that the construction of a water diversion project that would threaten Native American cultural sites, local wildlife, trout fisheries and natural lands is more likely than ever.

The Animas-La Plata (ALP) project, which would divert approximately one quarter of the river's flow, will have a severe negative impact on endangered fish species, a thriving recreational rafting industry, riparian wetlands, and a gold medal trout fishery. However,

the U.S. Senate and U.S. House of Representatives both passed appropriations bills for FY 2002 that allocate \$16 million to construct ALP. At the time of this update, President Bush had not signed the legislation.

In November, a coalition of Native American, social justice, taxpayer, and environmental groups joined by American Rivers, launched a national campaign to de-authorize ALP. The coalition, which sent a letter to Congress seeking a halt to construction funding, also called for an investigation by the General Accounting Office (GAO) into numerous improprieties in the project that have been identified by citizens groups.

A significant amount of funding required to complete the project has not yet been appropriated, and efforts to block financial support for ALP will continue in an effort to prevent this half-billion dollar environmentally destructive government boondoggle from moving forward.

In April 2001, American Rivers released its annual Most Endangered Rivers report, documenting rivers of regional or national significance at the greatest risk of suffering damage in the coming 12 months. Six months later, American Rivers finds at least some positive progress on eight of the 13 rivers listed. In the report, American Rivers also identified the nation's inefficient and outmoded means for producing and consuming energy as a leading threat to rivers nationwide. Six months later, American Rivers finds that there has been no progress towards a 21st energy policy that balances supply and demand through energy conservation and efficiency, and increased reliance on renewable technologies such as wind and solar.

President Bush has released his national energy policy, a companion energy bill has passed the House of Representatives, several pieces of legislation are under consideration in the Senate, and the terrorist attacks of Sept. 11 have significantly increased pressure to expand production of fossil fuels.

For more information on the 2001 Most Endangered Rivers report, visit

www.AmericanRivers.org/MostEndangered2001. For more information on American Rivers, visit www.AmericanRivers.org.

11/18/01

Resolution of the Desert Fishes Council

Resolution adopted by Desert Fishes Council at its 15-18 November 2001 meeting. Relative to Draft Recovery Goals for the bonytail, humpback chub, Colorado pikeminnow, and razorback sucker of the Colorado River basin

WHEREAS, the draft recovery goals for the four fishes, developed by the U.S. Fish and Wildlife Service, will be integral to the future status of these fish species and the ecosystems upon which they depend; and

WHEREAS, much biological information has been presented during the development of these goals that indicates that disagreement exists regarding the appropriate approaches and methodologies to be used to develop the demographic and genetic bases for such recovery goals;

THEREFORE, BE IT RESOLVED that the Desert Fishes Council, an international society composed of professionals from academic, government, and private organizations and private individuals, at its 2001 annual meeting held in Alpine, Texas, 15 – 18 November, is opposed to the adoption of the draft recovery goals for the bonytail, humpback chub, Colorado pikeminnow, and razorback sucker of the Colorado River basin as currently written; and

BE IT FURTHER RESOLVED that the Desert Fishes Council recommends that the U.S. Fish and Wildlife Service redraft the recovery goals based upon the results of a rigorous, independent, scientific review and review of all comments received by the Service by the National Research Council or an equivalent independent scientific body; and

BE IT FURTHER RESOLVED that copies of this resolution be sent to the Director of the U.S. Fish and Wildlife Service, the Regional Director of Region 6 of the U.S. Fish and Wildlife Service, the Regional Director of Region 2 of the U.S. Fish and Wildlife Service, and the Director of the Upper Colorado River Endangered Fish Recovery Program prior to the comment deadline.

11/11/01

Are Americans up to a little sacrifice?

Farmington Daily Times
Mark Lewis/Editorial Page Editor

I was in Durango Friday reporting on a group of people protesting the Animas-La Plata Project.

It was an interesting group of people. Young, old, middle-aged, etc. In some ways it took me back to my youth, when many young people took to the streets protesting for civil rights or against the Vietnam War.

This group was different, however.

While I don't doubt the sincerity of their beliefs, they just didn't have the same energy that I remember of bygone protests. I did, however, find many people willing to talk about Animas-La Plata, something of a rarity these days.

Among them was Evert Oldham, a man I've known for some time. If I had to use one word to describe Evert, it would be thoughtful. He has always struck me as a guy who thinks about what he is going to say and the meaning of the words he intends to use.

He also is not shy about sharing his knowledge with people, sometimes going into minute detail. So, when he described some of the other folks at the protest and of how their focus had changed, it struck my interest.

Living Rivers, the organization that sponsored Friday's protest, initially concentrated on efforts to drain Lake Powell. Whether those in the group have realized that such a narrow focus wasn't going to gain popular support, especially regarding Lake Powell, or whether some other reason arose, they have expanded their focus to the entire Colorado River Basin.

One of their main interests at this time is to find a way to restore the Colorado River delta, which is drying up because of overuse of water, endangering some species of wildlife in the process.

I was even more intrigued

I studied enough biology in college to at least understand that no species can exist if isolated in an ecosystem.

In other words, trying to save one breed of plant or animal, like the Colorado pikeminnow for example, is foolish unless the entire ecosystem is either preserved or at least restored enough to maintain the plants and animals that the pikeminnow depends on for food, shelter, etc.

That's why when people say they want to prevent Animas-La Plata, I usually give them the single-raised-eyebrow look and shake my head because it is just one small piece in a very large puzzle.

But here was a group willing to tackle the entire Colorado River Basin.

One idea they have come up with is for all water users in all areas of the Colorado River Basin, which would include us along the Animas and San Juan Rivers, to give up 1 percent of the water allocated to them to preserve and restore the river delta and thereby preserve the life that depends on it.

It sounds like a good idea, but there is a problem. Nobody will do it if everybody - and I mean everybody - doesn't go along with it.

After all, why should the people in the Upper Colorado River Basin give up water just so someone downstream, who hasn't agreed to the idea, can grab it to water a new golf course in Palm Springs?

Evert also mentioned that water is a states rights issue, which causes another problem.

If the water isn't used here, it is quite possible someone elsewhere in the state would lay claim to it.

A good example would be Albuquerque. It could get water from San Juan County via the San Juan-Chama diversion tunnel. For those unfamiliar with it, it is a tunnel that takes

water from the head of Navajo Reservoir and sends it under the continental divide into the Chama River, which flows into the Rio Grande.

If people here were of a giving nature and did dedicate 1 percent of their water to the Colorado River Delta, the water probably would never see the state line. Albuquerque or some other interest down south would snap it up in a moment.

Such a plan also involves something Americans have not had to do much of during the past decade or two - sacrifice.

Giving up 1 percent of their allocated water might mean one less golf course or football field. It might mean people would have to stop planting Kentucky blue grass.

Are we willing to sacrifice a little so something for the overall good is accomplished?

We have in the past.

Today is a day to remember just such sacrifices - those made by veterans in the numerous wars and conflicts in which America has fought. I realize there really is no comparison between the sacrifices of veterans and doing without a few luxuries like golf courses, but the idea is the same.

We would be giving something of ourselves for the betterment of everyone.

I wonder if we are up to it?

Mark Lewis can be reached by calling (505) 564-4626, by e-mail at markl@daily-times.com or by writing to P.O. Box 450, Farmington, NM 87499.

11/10/01

A-LP opponents protest

Durango Herald Page A-1

PHOTO: Opponents of the Animas-La Plata Project march up East Second Avenue on Friday.

By Melanie Brubaker Mazur Durango Herald Staff Writer

Chanting "no more dams," more than 100 people marched through Durango Friday to protest the official start of construction of the Animas-La Plata Project.

Marchers waved signs as they moved from Rotary Park to the U.S. Bureau of Reclamation's Durango office at 835 E. Second Ave. and mailed more than 500 letters to the U.S. Congress and bureau headquarters. The letters protested the cost and environmental effects of A-LP and requested an investigation by the General Accounting Office into the project's funding.

The protest was sponsored by Living Rivers, an environmental group in Moab, Utah, with the support of 35 other businesses and environmental groups.

While Friday marked the government's official start of construction on A-LP, any actual earthwork in Ridges Basin, where a reservoir is supposed to be built to hold water from the Animas River, won't take place for at least a year. Design work on the pumping plant and reservoir, an archaeological study and relocation of two natural gas lines will begin with a \$16 million appropriation passed by a congressional conference committee on Oct. 17. In all, the project is expected to cost \$343.8 million.

Protesters carried signs stating "Dam the Bureau," "Revive the Colorado – an ecosystem, not a plumbing system," and "Bruce's Bathtub." The latter referred to former Interior Secretary Bruce Babbitt's support for the project. Babbitt and other supporters said the project will fulfill water treaties signed with the Southern Ute Indian Tribe.

American Indians signed treaties with the U.S. government under duress when few of them were educated about the effects of such treaties, said Thomas Morris Jr., president of the Diné Medicine Men's Association. He told the crowd at the bureau office that Navajo Indians don't live by written laws. David Orr, director of field programs for Living Rivers, a Moab, Utah, environmental group, and Owen Lammers, executive director, mail letters to Congress in front of the U.S. Bureau of Reclamation office.

"We live by nature law," he said. "It's an open law, an unwritten law."

At a post-march gathering in Schneider Park, JoEtta Goldtooth, of Tuba City, Ariz., echoed Morris' comment. Goldtooth is a member of the Diné Sovereignty Defense Association, which is trying to secure Navajo water rights in the Colorado River.

"We are a very poor nation," Goldtooth told the crowd. "If we had the rights to our water, we would be a very rich nation. Water is gold – it is life."

If water is the blood of the Earth, Goldtooth said dams are blood clots.

"That's how I look at it," she said.

Catherine Olson, of Cedar Hill, N.M., brought her four children and carried a sign reading "Consider the children of tomorrow."

"We're just lovers of flowing water," she said.

Nancy Jacques, a Durangoan and a longtime opponent of A-LP, joined the group soaking up sunshine and listening to speakers.

"A-LP truly is a dinosaur of another generation," she said. "It's time for it to die and focus on other alternatives."

The bureau should re-examine the entire Colorado rivershed and how the water is divided among different users, she said.

David Orr of Living Rivers told the protesters their actions cannot end with the rally. They need to write their representatives and inform their neighbors about the detrimental effects of the project, he said.

http://www.durangoherald.com/asp-bin/article_generation.asp?article_type=news&article_path=/news/news011110_1.htm

11/10/01

Marchers call for A-LP project to stop

A-LP Protest: Marchers call for A-LP project to stop
by Mark Lewis, Staff writer The Daily Times, page A-1, column 1 Farmington, New Mexico

DURANGO, Colo. -- Chanting "no more dams" and other slogans, about 150 people marched through downtown Durango on Friday protesting Congress' allocation of money for the Animas-La Plata Project.

David Orr, with Living Rivers, said he believes that when the facts about Animas-La Plata become known, it will be recognized as the least justifiable water project ever to come before Congress.

Animas-La Plata is a water storage project first authorized in 1968 by Congress and reauthorized in a scaled-down form in 2000. That bill was signed into law by President Bill Clinton.

The project would entail construction of a reservoir at Ridges Basin, a few miles south of Durango, and pumps on the Animas River to pump water into the reservoir. The project also involves settlement of water rights claims made by the Southern Ute and the Ute Mountain Ute tribes. Another smaller project added to the overall Animas-La Plata is a water line taking potable water from Farmington to Shiprock.

Living Rivers sponsored the march and rally in association with a number of other organizations, including the Taxpayers for the Animas River, San Juan Citizens Alliance, Four Corners River Sports, Southern Ute Grassroots Organization and the Sierra Club.

The march included people carrying picket signs, and in some cases, replicas of the endangered Colorado pikeminnow. Some marchers brought their children. while others distributed leaflets to passing motorists.

During the rally, Orr and others poured hundreds of copies of a letter detailing concerns about Animas-La Plata into mailboxes outside the Bureau of Reclamation offices in Durango. He also read the letter aloud to those gathered.

Among the allegations made in the letter were that non-structural alternatives were not given proper consideration, that the Colorado Ute Tribes don't have a legitimate claim to the water and that no needs for the stored water have been identified.

Christine Arbogast, with Kogovsek and Associates, a law firm representing project supporters, issued a statement Friday contesting the allegations made in the letter.

Arbogast counters that A-LP is a tribal water rights settlement with two-thirds of project water allocated to either the Colorado Ute tribes or the Navajo Nation.

During the rally before the Bureau of Reclamation offices, Orr and other speakers repeatedly called the project to be stopped.

"Just because its been approved doesn't mean it's been built. If need be, we can occupy," he said, referring to occupying the area at Ridges Basin where the reservoir is to be constructed.

Arbogast argues that dismissing the project would force the Ute tribes to proceed with litigation to secure their water rights.

Orr also cited alleged corruption and misdeeds associated with the project.

The statement released by Kogovsek and Associates dismisses those statements as false, citing the appearance of opponents who testified during Congressional hearings and the Environmental Impact Statement, which is several thousand pages long and took two years and multiple public hearings throughout the Four Corners to complete.

Another section of the letter which Orr read to the crowd claimed that significant Native American sites would be damaged by the reservoir, including a burial ground, and that opponents of the project should protect the interests of the tribes.

Arbogast said opponents ignored the will of tribal councils, which support Animas-la Plata, and are duly elected by the Native American people and represent their interests. The bureau also is working with the tribes to ensure that, should any be found, cultural artifacts or burials are protected, she said.

Thomas Morris, a Navajo medicine man representing the Diné Medicine Men Association in Window Rock, Ariz., said he opposed the project because it was yet another unfulfilled promise made to Native Americans. Rather than changing nature, people should learn to live with it, he said.

"We don't control nature, nature controls us," he said.

Mark Lewis: markl@daily-times.com

11/09/01

A-LP opponents to demonstrate today

By Melanie Brubaker Mazur Durango Herald Staff Writer

"The chances are pretty overwhelming the construction will go ahead, and it will get built. The environmental studies have been done, then done, then redone. I don't think a court will stop the project." - Mike Griswold, president of the A-LP Water Conservancy District

Opponents of the Animas-La Plata Project aren't giving up their fight, and they plan a demonstration at noon today.

Living Rivers, a Utah environmental group, is organizing the demonstration to protest the planned construction of the \$343 million project.

"They are draining more and more from a river that has nothing else to give," said John Weisheit, president of Living Rivers, formerly the Glen Canyon Action Network.

The group, located in Moab, is expanding its focus from deconstructing Glen Canyon Dam and draining Lake Powell to protecting all of the Colorado River watershed, Weisheit said. The Animas flows into the San Juan River, which empties into the Colorado River.

Mike Griswold, president of the Animas-La Plata Water Conservancy District, said he doesn't think protests at this point will stop A-LP.

"The chances are pretty overwhelming the construction will go ahead, and it will get built," Griswold said. "The environmental studies have been done, then done, then redone. I don't think a court will stop the project."

People opposing the project haven't kept in mind that A-LP has been scaled back 40 percent, Griswold said.

The project will use 14 percent of the Animas River's annual flow, mostly during the heavy spring runoffs.

"A lay person won't see a difference in the river levels," he said. "They won't notice it."

More than 35 groups and businesses support the protest, including the Diné Medicine Men's Association, the Sierra Club, the Southern Ute Grassroots Organization and the Wilderness Society.

The rally begins at noon at Rotary Park. Participants will then march to the U.S. Bureau of Reclamation Office at 835 East Second Ave., where protesters will present a letter to the agency and mail letters to Congress. The procession will continue south on Ninth Street to Schneider Park, north of the Ninth Street bridge, where it will culminate with speeches, refreshments and music.

Some members of the Navajo Nation say the project will destroy an ancient burial ground in the reservoir site.

"We must protect the resting places of our ancestors," said Thomas Morris, Jr., president of the Diné Medicine Men's Association and a resident of Window Rock, Ariz., in a news release. "Too many of our sacred places have already been drowned, we can't let them keep taking more."

Congress has approved the project and \$17 million in initial funding.

11/09/01

Citizens Rally in Durango to Save the Animas River

Grassroots organizations march on Bureau of Reclamation in Durango, demand halt to controversial Animas-La Plata water project

DURANGO, Colorado, Nov. 9 -- On the day that government officials had set to mark the beginning of the latest incarnation of the controversial Animas-La Plata (A-LP) water project, a crowd of 150 people, including representatives of more than 35 native and non-native organizations from across the United States rallied on the sidewalk in front of the U.S. Bureau of Reclamation here today, calling for the project's cancellation.

Chanting "No more dams!" and "Investigation, not excavation," the upbeat crowd marched through Durango's business district with colorful signs and banners on an unusually warm and sunny November day. Citing a number of improprieties and violations of federal laws and regulations, the groups demanded an investigation of the project by the General Accounting Office (GAO). The urgent nature of the group's complaints were heightened by the imminent excavation of ancient Native American gravesites that would occur in advance of construction.

"We want accountability, not more corporate subsidies," exclaimed Owen Lammers, executive director of LIVING RIVERS. "The real estate developers want to declare victory in this struggle, but we're here to tell them they're going to lose."

The noon-hour procession to the Bureau of Reclamation office began at Rotary Park and made its way along Durango's busy Main Avenue, eliciting enthusiastic expressions of support from shopkeepers, pedestrians and motorists. Among the speakers addressing the crowd were leaders of Native American, social justice, taxpayer and environmental groups from each of the Four Corners states.

Earlier in the day, members of the Southern Ute and Navajo nations gathered for a ceremonial blessing and pipe ceremony at the site of the proposed dam and reservoir, the principal structural components of the A-LP project.

Thomas Morris, Jr., president of Diné Medicinemen's Association from Window Rock, Arizona, and Sage Douglas Remington of the Southern Ute Grassroots Organization, based in Ignacio, Colorado, were among the speakers who urged the A-LP project be cancelled due to its destructive impact on traditional cultural and archeological sites.

A highlight of the event was the mailing of a letter to each member of the U.S. Congress, asking for the GAO investigation, a halt to future funding, and the ultimate de-authorization of the project. Letters were deposited in the U.S. mailbox on the sidewalk outside the Bureau's office building. [A text version of the letter is included below.]

The march continued to Schneider Park alongside the Animas River, where local musicians entertained the participants until late in the day.

The rally also signified the first public event in LIVING RIVERS' campaign for overall reform of the Bureau of Reclamation in its centennial year, 2002.

"We are asking the Bureau to shift away from reclamation toward restoration," said Mr. Lammers.

Additional information about LIVING RIVERS' "Reclaim the Bureau" campaign may be found on the organization's website:

<http://www.livingrivers2.org>

LIST OF SPONSORING GROUPS AND BUSINESSES FOR TODAY'S RALLY:

The following organizations and businesses have endorsed today's event and campaign:

Aimee's Catering, American Rivers, American Whitewater, Audubon Society of Greater Denver, Diné Medicinemens Association, Citizens Coal Council, Citizens Progressive Alliance, Colorado Environmental Coalition, Colorado Plateau River Guides, Colorado Rivers Alliance, Colorado Whitewater, Electors Concerned About Animas Water, Escalante Wilderness Project, Flagstaff Activist Network, Forest Conservation Council, Forest Guardians, Four Corners Riversports, Friends of Arizona Rivers, Friends of the Earth, Glen Canyon Institute, Great Old Broads for Wilderness, Green Party of Utah, High Country Citizens Alliance, Living Rivers, Native Forest Network, Oil & Gas Accountability Project, Old House Bakery, Remarkable Earth Photography, Ridgeline & Open Space Coalition, San Juan Audubon, San Juan Citizens Alliance, Shared Blanket Gallery, Sierra Club, Southern Ute Grassroots Organization, Taxpayers for the Animas River, Tribal Environmental Watch Alliance, Utah Environmental Congress, Utah Rivers Council, Water Information Network and Wilderness Society.

LETTER TO CONGRESS

November 9, 2001

Dear Member of Congress:

We, the representatives of 25 organizations from the Four Corners states of Colorado, Arizona, New Mexico, and Utah, Indian Nations, and other groups around the United States are writing to express our profound disappointment over the recently approved appropriation for the controversial Animas-La Plata (A-LP) water project.

We believe that once certain facts about this project are known, A-LP will be exposed as the least justified water project ever proposed to Congress. We ask your help to stop imminent harm to Native American cultural and archeological resources while an investigation of our concerns by the General Accounting Office (GAO) can be completed. In the meantime, we ask you to halt future funding for the project and to support legislation to de-authorize A-LP, once and for all.

Funding for "pre-construction" activities for this half-billion dollar project in southwestern Colorado and northwestern New Mexico was just approved in the Fiscal Year 2002 Energy and Water Appropriations bill. However, local citizens are united more than ever in our commitment and resolve to convince the Congress to de-authorize the costly, unpopular A-LP. It was authorized last year in the form of a rider, passed late in the night without benefit of sufficient debate. The collective voices of affected citizens were not heard. We call on you now for help in defending our land, water and cultural heritage.

A full and open review of the facts will confirm a well-established pattern of misrepresentations by project proponents. A GAO investigation is needed to evaluate the irregularities and improprieties identified by citizen groups over the years.

- * The American people have not been told what specific benefits this project would provide. No need for A-LP project water has been identified, and non-structural alternatives to the project were not given adequate consideration.

- * A-LP violates federal regulations that govern the planning of federally financed water projects. Project planners have steadfastly ignored these "principles and guidelines" of the President's Water Resources Council, which require rigorous economic and environmental analysis to protect the public against wasteful, special interest spending on projects like A-LP.

- * The Department of Interior and other federal agencies have refused numerous requests for documents germane to the project. In addition, three objections have been filed against the project's water rights. These agencies are currently defendants in citizen suits under the Freedom of Information Act, seeking to force the release of this information to the public.

- * A-LP has been promoted as a water rights settlement for the Colorado Ute Indian nations, but it does not satisfy community water needs. Southern Ute tribal members' proposal for a non-structural alternative to the A-LP project was dismissed.

- * An additional component of the project is a water pipeline to serve future industrial development on and off the Navajo Nation. Members of the Navajo Nation have expressed concerns that diversion of A-LP project water to non-Navajo users infringes upon their nation's reserved water rights.

We appreciate Congress' desire to assist Native Americans. However, A-LP is the wrong response to the question of resolving Indian water rights claims. Fiscally and environmentally sound options for serving community water needs on and off the

reservations were not considered. A-LP is a subsidy to industrial and real estate development, masquerading as a project to benefit Native Americans.

We need your help to prevent the misuse of federal funds, desecration of sacred sites, destruction of fish and wildlife, and further pollution of air and water. Overwhelming, compelling evidence exists to suggest that the public has been systematically deceived about the purposes and benefits of A-LP.

At a time when Congress is increasingly concerned with fiscal responsibility in the face of dramatically shifting budget priorities, it is even more crucial to take a closer look at A-LP. Spending huge sums of public money on a problem-ridden project where no rational analysis has been done is simply not prudent. Neither is it an appropriate means of addressing Indian water rights questions.

Irretrievable actions are imminent. Authorized pre-construction activities include the excavation of an extensive, centuries-old Native American cemetery, sacred to many in our region. Traditional native leaders are voicing strong objections to disturbing their ancestors' remains. Please help us find a way to prevent this, pending the outcome of the requested GAO investigation.

We invite you to come visit us, and take a tour of the affected area. Let us explain to you firsthand our concerns and the issues we face; let us show you why A-LP is the problem, not the answer. We would be happy to discuss this matter further with you or your staff. Please feel free to contact one or all of the groups listed below for additional information.

11/09/01

Coalition Asks Congress to De-Authorize AL-P

November 9, 2001

Dear Member of Congress:

We, the representatives of 25 organizations from the Four Corners states of Colorado, Arizona, New Mexico, and Utah, Indian Nations, and other groups around the United States are writing to express our profound disappointment over the recently approved appropriation for the controversial Animas-La Plata (A-LP) water project.

We believe that once certain facts about this project are known, A-LP will be exposed as the least justified water project ever proposed to Congress. We ask your help to stop imminent harm to Native American cultural and archeological resources while an investigation of our concerns by the General Accounting Office (GAO) can be completed. In the meantime, we ask you to halt future funding for the project and to support legislation to de-authorize A-LP, once and for all.

Funding for "pre-construction" activities for this half-billion dollar project in southwestern Colorado and northwestern New Mexico was just approved in the Fiscal Year 2002

Energy and Water Appropriations bill. However, local citizens are united more than ever in our commitment and resolve to convince the Congress to de-authorize the costly, unpopular A-LP.

It was authorized last year in the form of a rider, passed late in the night without benefit of sufficient debate. The collective voices of affected citizens were not heard. We call on you now for help in defending our land, water and cultural heritage.

A full and open review of the facts will confirm a well-established pattern of misrepresentations by project proponents. A GAO investigation is needed to evaluate the irregularities and improprieties identified by citizen groups over the years.

- The American people have not been told what specific benefits this project would provide. No need for A-LP project water has been identified, and non-structural alternatives to the project were not given adequate consideration.
- A-LP violates federal regulations that govern the planning of federally financed water projects. Project planners have steadfastly ignored these "principles and guidelines" of the President's Water Resources Council, which require rigorous economic and environmental analysis to protect the public against wasteful, special interest spending on projects like A-LP.
- The Department of Interior and other federal agencies have refused numerous requests for documents germane to the project. In addition, three objections have been filed against the project's water rights. These agencies are currently defendants in citizen suits under the Freedom of Information Act, seeking to force the release of this information to the public.
- A-LP has been promoted as a water rights settlement for the Colorado Ute Indian nations, but it does not satisfy community water needs. Southern Ute tribal members' proposal for a non-structural alternative to the A-LP project was dismissed.
- An additional component of the project is a water pipeline to serve future industrial development on and off the Navajo Nation. Members of the Navajo Nation have expressed concerns that diversion of A-LP project water to non-Navajo users infringes upon their nation's reserved water rights.

We appreciate Congress' desire to assist Native Americans. However, A-LP is the wrong response to the question of resolving Indian water rights claims. Fiscally and environmentally sound options for serving community water needs on and off the reservations were not considered. A-LP is a subsidy to industrial and real estate development, masquerading as a project to benefit Native Americans.

We need your help to prevent the misuse of federal funds, desecration of sacred sites, destruction of fish and wildlife, and further pollution of air and water. Overwhelming and compelling evidence exists to suggest that the public has been systematically deceived about the purposes and benefits of A-LP.

At a time when Congress is increasingly concerned with fiscal responsibility in the face of dramatically shifting budget priorities, it is even more crucial to take a closer look at A-LP. Spending huge sums of public money on a problem-ridden project where no rational analysis has been done is simply not prudent. Neither is it an appropriate means of addressing Indian water rights questions.

Irretrievable actions are imminent. Authorized pre-construction activities include the excavation of an extensive, centuries-old Native American cemetery, sacred to many in our region. Traditional native leaders are voicing strong objections to disturbing their ancestors' remains. Please help us find a way to prevent this, pending the outcome of the requested GAO investigation.

We invite you to come visit us, and take a tour of the affected area. Let us explain to you firsthand our concerns and the issues we face; let us show you why A-LP is the problem, not the answer. We would be happy to discuss this matter further with you or your staff. Please feel free to contact one or all of the groups listed below for additional information.

Sincerely,

Owen Lammers Executive Director Living Rivers

On behalf of: American Rivers, American Whitewater, Citizens Coal Council, Citizens Progressive Alliance, Colorado Plateau River Guides, Colorado Environmental Coalition, Colorado Rivers Alliance, Colorado Water Policy Institute, Colorado Wild, Electors Concerned About Animas Water, Diné Medicinemens Association, Escalante Wilderness Project, Forest Guardians, Forest Conservation Council, Friends of the Earth, Green Party of Utah, Great Old Broads for Wilderness, Native Environmental Justice Advocacy Fund, Native Forest Network, Oil & Gas Accountability Project, San Juan Citizens Alliance, Southern Ute Grassroots Organization, Taxpayers for the Animas River, Utah Environmental Congress, Utah Rivers Council.

11/09/01

Medicine man prays at A-LP site

By Brian Newsome Durango Herald Staff Writer

Thomas Morris Jr. said he did not brave lightning and pelting rain Thursday to pray for the fall of the Animas La Plata Project – he prayed to the ancestral spirits A-LP would likely displace.

The Navajo medicine man, standing atop a hill that will be underwater if the project is completed, called out to the spirits of people who may be buried at the site of the future dam and reservoir southwest of Durango. He asked for the spirits' forgiveness and protection should their remains be relocated or submerged.

The A-LP project will divert water from the Animas River to the reservoir to provide water for the Ute Indians promised in a 19th-century U.S. treaty.

American Indian remains probably will be uncovered during the construction, according to Pat Schumacher, Durango manager for the U.S. Bureau of Reclamation, which will build A-LP.

"It'd be real rare if we didn't run into some burials, because it's real common throughout Southwest Colorado," Schumacher said. Some sites could remain underwater, but others would have to be excavated, he said.

For Morris, president of the Diné Medicine Men's Association, this means more than removing bones and artifacts. It means disrespecting the dead and angering the spirits.

"This is the valley, here, where our ancestors have been laid to rest," he said.

Kenny Frost, a Southern Ute Tribal Member who works as a consultant dealing with burial sites and ancestry, said, "Our (the American Indian) belief is you're not supposed to disturb those who have passed on." He said traditionally there is a purification process for those who disturb the dead.

Morris chanted prayers in his native tongue and performed sacred rites amid five other AL-P opponents at the ceremony. Frost concluded the ceremony by singing a song to the spirits.

The group planned a second ceremony for sunset today to celebrate life and beauty at the same place, near a small parking area along County Road 211.

American Indian remains may not be the only discovery once the project begins. Oral history indicates a non-Indian family cemetery might exist somewhere within the site, Schumacher said.

If Indian remains are discovered, Schumacher said they would likely be ancestral Puebloan remains and would not be found in a burial ground comparable to modern-day cemeteries. He said the ancestral Puebloans buried their dead near kivas, large rooms used for religious and other purposes.

But how the ancestors were buried is not the issue for Morris.

"From the Western (point of view) there's no respect for native people, for their burial," he said.

Non-Indians give respect to their own dead at funerals, he said, but do not offer that same respect to other cultures. "We, native people, respect nature and leave it alone," he said.

11/09/01

Official beginning declared for A-LP

By Bob Schober Durango Herald Staff Writer With digging probably a year or more away, today marks the second time in nine years that federal officials will attempt to officially start construction of the Animas-La Plata water project.

The chief of the U.S. Bureau of Reclamation named today as the official start of construction as well as the deadline for the four nontribal partners of the project to prepay their share of construction costs without incurring interest.

The designation allows the bureau to begin physical projects, although actual earth moving is at least a year away, officials said.

The first official start date, 1992, was derailed by a lawsuit filed on behalf of a coalition of environmental groups. That resulted in an injunction against "irreversible construction," nine years of project revision, new environmental impact studies and funding cutbacks.

Now, project supporters are hopeful opponents will finally stay out of court.

"There's been a huge amount of compromise forged over the years," said Sam Maynes, the Durango lawyer representing the Southern Ute and Ute Mountain Ute tribes. "The main thing is, this is the best way to settle the tribes' water claims."

Don't be so sure, said Lori Potter, a Denver lawyer who filed the 1992 lawsuit on behalf of the Sierra Club Legal Defense Fund, Taxpayers for the Animas River and the Four Corners Action Coalition, among others. The groups are mulling over another possible lawsuit, but no decision has been made, Potter said. "It's a definite possibility," she said.

Maynes said he isn't surprised.

"I anticipate that at some point in time the national environmental groups will file a suit," he said. "They have nothing to lose. Delay is their game."

Nonsense, said Michael Black, spokesman for the Taxpayers for the Animas River.

"The reason they haven't built it is because it's a stupid project, and people realize that," Black said.

At least one group opposing the project has challenged the Department of Interior for not complying with the federal Freedom of Information Act.

Citizens' Progressive Alliance, a watchdog group based in Colorado and northwest New Mexico that opposes A-LP, filed a lawsuit Sept. 10 against the Interior Department for not providing a report evaluating the Ute tribes' water rights.

"We think the documents we are likely to get will expose so many violations of law and federal policy that it would be sufficient evidence to call for a grand jury investigation,"

said group spokeswoman Jeanne Englert. "We'll get the documents, and we'll see if that requires further action. We're still in the process of exposing their lies."

Nevertheless, today's date remains important for two reasons. As the date of the official start of construction, the Bureau of Reclamation can begin "irreversible construction," which would make stopping the project much more difficult.

"It's a huge step forward," Maynes said. "If the environmental groups are going to file, they'll have to do so before any irreversible construction."

And Congress recently approved \$16 million, plus an additional \$1 million from the fiscal 2001 federal budget, for the project.

"This will be enough to give us a good start," said Pat Schumacher, Bureau of Reclamation manager for Durango.

The San Juan Water Commission decided Sept. 2 to prepay its \$6.9 million share, saving an estimated \$2.6 million in interest.

The Colorado Water Resources and Power Development Authority, which is paying the \$7.3 million share of the A-LP Water Conservancy District, will save about \$2.5 million in interest, said Mike Griswold, president of the A-LP Conservancy District.

Those interest savings could be passed on to the city of Durango, should the municipality decide to buy water from the district in the future, Griswold said.

"We expect the cost of water would be about half (of what it is now)," he said.

A congressional conference committee passed the \$16 million appropriation for A-LP on Oct. 17. Federal officials expect the appropriations bill will be signed into law by President Bush.

The funding fell short of the \$21 million originally requested for the project for this fiscal year, but the lesser amount will pay for some key initial elements of the project – relocation of two natural gas pipelines, final design of the pumping plant and reservoir, and a study of archaeological sites that could be damaged by the construction.

The \$343.8 million A-LP project was authorized last year by Congress after the Clinton administration supported a scaled-back version. With the strong support of the Department of Interior and Colorado and New Mexico lawmakers, A-LP was approved by the House as part of an omnibus appropriations bill. The Senate later overwhelmingly approved the project.

The A-LP legislation spells out a seven-year time frame for completion, with funds appropriated on a year-by-year basis.

11/09/01

Utah Environmental Groups Strive to Halt Planned Dam

By Layne Miller Special to the Salt Lake Tribune

Several Utah environmental groups are supporting attempts to derail construction of a controversial dam near Durango, Colo.

David Orr, director of field programs for Living Rivers, with offices in Moab, is corraling Utahns to attend a rally in Durango today in opposition to construction of the Animas-La Plata project and support efforts to have the dam's authorization withdrawn.

"The project is one of the most controversial and contentious water development schemes in U. S. history," Orr said.

"Our campaign is designed to point out the deficiencies in the planning process for the project and to organize opposition against it."

Orr said a coalition of environmental and American Indian groups have agreed to attend the rally. Environmental groups include the Green Party of Utah, Great Old Broads for Wilderness, The Sierra Club and Utah Environmental Congress in addition to Living Rivers.

Under the current plan, the U.S. Bureau of Reclamation wants to divert 265,000 acre feet of water from the Animas River, just outside the city limits of Durango in Southwest Colorado.

The water will be pumped more than 500 feet uphill to a reservoir formed by the damming of Ridges Basin, a state wildlife area and elk refuge. The water will be used for industrial and culinary purposes.

The Animas-La Plata project was first proposed in the 1930s and was authorized by Congress in 1968.

In the face of criticism from taxpayer and environmental groups, the project was scaled back and the location of the dam moved.

In 1972, the Southern Ute and Mountain Ute tribes in Colorado went to court to claim 93,000 acre feet of water from the project under a promise they received from the federal government in a treaty signed in 1868. Under terms of the latest agreement the Utes will receive 60,000 acre feet of water from the project.

The project nearly died in 1995 when the U. S. House of Representatives stripped \$10 million from it. The money was restored last year only after pressure from Colorado Sen. Ben Nighthorse Campbell.

Although the Navajo and Southern Ute tribes support the project, Thomas Morris Jr., president of the DinZ Medicine Men's Association, said his group is opposing the project and will attend today's rally.

Morris said Navajo Dam on the San Juan River in Arizona and the Glen Canyon Dam on the Colorado River near Page, Ariz., which creates Lake Powell in southern Utah, have inundated many prehistoric and historic American Indian sites.

The Animas joins the La Plata River, which flows into the San Juan River, which then meets the Colorado River at Lake Powell.

"We must protect the resting places of our ancestors," said Morris.

Pat Schumacher, a spokesman for the Bureau of Reclamation office in Durango, said Wednesday that getting the \$710 million project approved was difficult, but compromises reached during the planning process have brought about a coalition of user groups that include non-Indians and three different tribes.

Archaeological work on the impacted area will comply with all laws relating to American Indian remains and artifacts.

"We know from our surface inventories that there are 300 archaeological sites in the reservoir basin," said Schumacher.

"We are working out a plan now with the tribes for what we will do with any burials we might find. That agreement is almost completed."

He said artifacts of significance will be stored at the Anasazi Heritage Museum near Dolores, Colo.

The archaeological work is scheduled to begin in the spring of 2002 and construction in 2003. © Copyright 2001, The Salt Lake Tribune

11/01/01

Glen Canyon Dam: Dam Failure Study

By Stephen E. Latham, Bureau of Reclamation July 1998

Note: This document is abridged

Purpose of Study

The purpose of this study is to estimate the magnitude of flooding that would result along the Colorado River from Lake Powell to Hoover Dam due to the failure of Glen Canyon Dam. This study was requested, pursuant to policy, by the Bureau of Reclamation. This information can be used in Reclamation's emergency action plan for Glen Canyon Dam, and as a reference in preparing inundation maps for areas downstream of the dam. It can also be used to help local authorities develop warning and evacuation plans.

Flood Scenarios Evaluated

The following two scenarios were considered to cover the range of events that could cause failure of Glen Canyon dam. Both scenarios represent worst-case scenarios that result in the largest uncontrolled releases of the reservoir. Various assumptions were made to help test the sensitivity of results to these assumptions.

1) Dam failure caused by foundation failure or other defect (Sunny-Day Failure). This scenario includes a 100-year base snowmelt inflow to Lake Powell.

2) Dam failure caused by overtopping brought about by the overtopping failure of Flaming Gorge Dam. This scenario involves an extremely large flood inflow to Lake Powell 580 miles upstream.

For this study, it was assumed that Flaming Gorge Dam would fail during overtopping. Should this overtopping failure occur with the starting reservoir water surface at normal capacity, a combined outflow of 5,320,300 acre-feet would result. With Lake Powell at its normal capacity (elevation 3700 feet), this combined outflow would exceed the available surcharge storage capacity at Glen Canyon by 2,498,560 acre-feet.

The flood forecasting computer program, BOSS DAMBRK (DAMBRK), was used to help prepare this study. For the Sunny-Day Failure, the initial water surface for the computer model was assumed to be elevation 3711, which is the design maximum water surface at Lake Powell. For the Overtopping Failure, the initial reservoir water surface for the computer model was assumed to be elevation 3700, or the top of active conservation pool. To determine the duration and magnitude of overtopping potential, a flood inflow hydrograph (due to the Flaming Gorge failure) was first estimated. The Dam Failure Inundation Study for Flaming Gorge Dam of January 1990, was used as a reference to help develop this hydrograph. Since that study ended at Green River, Utah (about 130 miles from the upper reaches of Lake Powell), peak discharges were extrapolated downstream to Lake Powell, and an estimated inflow hydrograph was generated using the Flaming Gorge failure volume (5,320,300 acre-feet). It would take roughly 34 hours for the maximum stage of the flood wave to arrive at the upper reaches of Lake Powell. Routing the estimated flood inflow hydrograph indicated that Glen Canyon Dam would be overtopped for a duration of about 40 hours, with a peak depth of 2.9 feet over the parapet wall.

While it is unlikely this overtopping flow would cause the dam to fail, for the purposes of evaluating this scenario, failure was assumed.

Outflow assumptions prior to the Overtopping Failure were as follows. Measures would likely have been taken at Glen Canyon Dam to lower Lake Powell, probably by opening the spillways 2 to 3 hours after notification of the Flaming Gorge Dam failure. Upon arrival of the flood wave at Lake Powell, it was assumed that the spillway gates would be opened uniformly to the normal maximum discharge of 238,000 cfs.

Study Results

Evaluation indicates that the leading edge of the flood wave from Glen Canyon Dam failure would likely reach Diamond Creek (Mile 225) in 10 hours to 12 hours for either failure scenario. This converts to a flood wave travel rate of 20 miles per hour (mph). Arrival of maximum flood stage would occur about 20 hours to 22 hours after dam failure.

The leading, edge of the Overtopping Failure flood wave would likely reach South American Point (Mile 296) in 13 hours to 15 hours after dam failure. This equates to a flood rate in the upper reaches of Lake Mead of 17 mph to 18 mph. Arrival of maximum flood stage would occur about 19 hours to 20 hours after dam failure

The reason for the maximum flood stage times at South American Point being less than at Diamond Creek is likely due to a combination of at least two things: 1) a much shallower channel slope at the upper reaches of Lake Mead, and (2) the fact that the canyon cross section at South American Point is suddenly very narrow and creates a constriction producing some backwater.

The Overtopping Failure of Glen Canyon was routed through Lake Mead and Hoover Dam. The results were practically identical for the water surface elevations assumed for Lake Mead. Assuming Hoover Dam does not fail, overtopping would begin about 23 to 24 hours after the failure of Glen Canyon Dam, continue for about 258 hours (10.75 days), and reach a peak depth of about 68 feet over the parapet wall on the dam crest at hour 74. The depth corresponds to a maximum water surface elevation in Lake Mead of 1304 feet. Maximum discharges would be about 485,600 cfs through the river outlet works, powerplant, and spillways, and 2.02 million cfs over the dam crest. This makes a total discharge immediately downstream from Hoover Dam of over 2.5 million cfs.

Obviously any type of structure less than 400 feet to 500 feet above the Colorado River between Glen Canyon Dam and Lake Mead as shown on USGS topographic maps would be completely inundated and destroyed by the flood from either type of failure. Even Navajo Bridge, which is about 400 feet above the Colorado River, could be damaged or destroyed. Results indicate depths of around 500 feet at this location. Flooding of this altitude here in the canyon would be very severe and lethal. Anyone still on the river at the time, would have to climb the equivalent of a 40-story building, at a minimum, to have any hope of surviving. The study indicated that the travel rate for the leading edge of the flood wave was estimated to be 20 mph to 25 mph. Although there have been no dam failures of this magnitude observed, historically, these travel rates may be reasonable for this huge a failure outflow. Some flood wave travel times from other dam failures with similar downstream reaches include:

(1) St. Francis Dam, California, failed on March 12, 1928. Flows traveled 18 mph in the first 1.5 miles downstream from the dam. Peak discharge unknown.

(2) Hell Hole Dam, California, failed on December 23, 1964. Flows traveled 14 mph through the narrow and uninhabited rock canyon 56 miles to Folsom Reservoir. Peak discharge was estimated to be 260,000 cfs. Volume released was 24,800 acre-feet.

(3) Teton Dam, Idaho, failed on June 5, 1976. Flows traveled 19 mph in the narrow canyon for 2.5 miles and averaged 16 mph for the first 8.8 miles downstream from the dam. Peak discharge was estimated to be 2,300,000 cfs. Volume released was 251,700 acre-feet.

(4). Little Deer Creek Dam, Utah, failed on June 16, 1963. Flows traveled 18.9 mph for the first 2.2 miles downstream from the dam, Peak discharge was estimated to be 47,000 cfs. Volume released was 1000 acre-feet.

The study indicated that flood depths in the upper reaches of Lake Mead would progress 507 feet at river mile 238, to 246 feet at river mile 281.5 (approximate end of Pearce Basin). More populated areas around Lake Mead that would be inundated include marinas, campgrounds, and other concentrations of population and activity. Water depths would be around 94 feet above the July target elevation of 1219.61 feet for Lake Mead.

References

Contact info: Stephen E. Latham, 303 445-2519 Peer reviewed by: Wayne Graham, 303-445-2553

- 1) Memorandum to: Director, Policy and External Affairs; Dir., of Ops; Dir., Prog. Analysis Off.; Regional Dir., PN, NP, LC, UC, OP; from Commissioner, Subject: "Policy for Establishing an Emergency Management Program at Reclamation Facilities," BuRec, Wash. D.C., Feb. 27, 1995.
- 2) Memorandum to Chief, Civil Engineering Division, Attention: D-3100; from Manager Planning Services Staff, Subject: "Transmittal of Final Probable Maximum Flood Hydrographs for Hoover Dam and Glen Canyon Dam," August 11, 1989.
- 3) Tech. Memo. No. GC-8130-1: Preliminary Evaluation of the Effects at Glen Canyon Dam Caused by the Failure of Upstream Dams, CRSP, Upper Colorado Region, BuRec, Tech. Serv. Cent., Denver, CO, January 21, 1998.
- 4) BOSS DAMBRK Flood Forecasting Program, Version 3.00, Boss Corporation, 6612 Mineral Point Road, Madison, WI, 53705.
- 5) 1996 Lake Powell Survey, REC-ERC-88-6, by Ronald L. Ferrari, Surface Water Branch, Earth Sci. Div., BuRec, Tech. Serv. Cen. Denver, CO, Dec. 1988.
- 6) Standing Operating Procedures for Glen Canyon Dam and Reservoir, CRSP, Upper Colorado Region, BuRec, Salt Lake City, UT, May 1993,
- 7) Antecedent Flood Analysis, Section 4.0, "Colorado River Basin, Probable Maximum Floods for Hoover and Glen Canyon Dams," Flood Hydrology Group. BuRec, Denver, CO, September 1990.
- 8) Dam Failure Inundation Study, Flaming Gorge Dam, CRSP, Sedimentation Section, Surface Water Branch, Earth Sci. Div., BuRec, Denver, CO, January 1990.

- 9) Drawing No. 557-D-1396, Spillway Discharge Curves for One 40' X 52.5' Radial Gate, Glen Canyon Dam, Colorado River Storage Project, BuRec, Denver, CO, May 2, 1961.
- 10) Final Environmental Impact Statement, Operation of Glen Canyon Dam, Colorado River Storage Project, BuRec, Dept. of the Interior, March 1995.
- 11) Bound Tables of Morphologically Similar Reaches for the Colorado River from River Mile 0 to Mile 225, U.S. Geological Survey, Boulder, CO, received by Tim Randle at the Tech. Serv. Cent, Denver, CO on Feb. 20, 1992.
- 12) Historical EOM Lake Mead Elevations, Lower Colorado Regional Office Website., <http://www.lc.usbr.gov> BuRec, April 1998.
- 13) May 7. 1998 discussions via telephone with Mark Gonzales, Grand Canyon Monitoring and Research Center, Flagstaff. AZ, re: findings of a preliminary survey performed in 1995-96 to assess accumulation of sediments in the upper reaches of Lake Mead.
- 14) May 7, 1998 discussions with Ron Feffari and Tim Randle, Sedimentation and River Hydraulics Group, Tech. Serv. Cent., BuRec, Denver, CO, regarding their observations on recent (September 1983 and September 1993) boat trips on the Colorado River, especially in the upper reaches of Lake Mead.
- 15) FLROUT, Flood Routing for Dams, Version 3.00, Multiple Dam, Waterways and Concrete Dams Group, Technical Services Center, U.S. Bureau of Reclamation, Denver, Colorado, May 1995.
- 16) The 1963-64 Lake Mead Survey, REC-OCE-70-21, by J.M. Lara, Office of Chief Engineer, Denver, CO, and J. I. Sanders. Region 3 Office, Boulder City, NV, BuRec, August 1970.
- 17) Hydraulic Model Study Results, Hoover Dam Tunnel Spillways, PAP-465, by Kathleen L. Houston (Frizell), Hydraulics Branch, BuRec, Denver, CO, July 24, 1994.
- 18) Project Data Book, Water and Power Resources Service, Dept. of the Interior, 1981

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Media Advisory 10/31/01

Groups to Launch National Campaign to De-Authorize A-LP Water Project

Contacts

[Owen Lammers](#), Executive Director (435) 259-1063

[David Orr](#), Director of Field Programs (435) 259-1063

November 9, March & Rally in Durango, Colorado

MOAB, UTAH -- The Animas-La Plata (A-LP) project, one of the most controversial and contentious water development schemes in U.S. history, is the focus of a de-authorization campaign that will be launched November 9 by a coalition of Native American and non-Indian organizations. The project, which includes a dam, reservoir, pumping system, and water pipeline, was authorized last year by Congress without a hearing. Citizens have called foul, and are demanding that the government repeal the authorization legislation.

A rally will be held in Durango, Colorado on Friday, November 9 to announce the campaign and detail the proposed alternatives that the coalition supports.

The central element of the A-LP project is Ridges Basin Dam and Reservoir near Durango, which would inundate valuable wildlife habitat and an area of great archeological and historic significance to the indigenous people of the Four Corners region.

"We are energized by the support we're seeing for stopping this project, and doing what's right for our people and for the river," said Sage Douglas Remington, Director of Southern Ute Grassroots Organization and resident of Ignacio, Colorado. "Congress got hoodwinked last year into voting for the project without hearing from the people, but it's not too late to fix the mistake."

Recognizing that numerous big dam projects have been shelved in the past, despite authorizing legislation, the coalition members are optimistic that they can persuade Congress to authorize an environmentally sound and socially beneficial alternative while de-authorizing A-LP.

"The billion-dollar Auburn Dam in California has been stopped dead in its tracks for fifteen years because of citizen pressure," said Mike Black of Taxpayers for the Animas River, a leader in the effort to stop A-LP in his hometown of Durango. "Echo Park Dam in Utah, Orme Dam in Arizona, and Hooker Dam in New Mexico were all cancelled in the face of public opposition, and we'll do the same with A-LP!"

A-LP would cost upwards of \$500 million with no demonstrated need for the diverted and stored water. November 9 is the date when local water agencies must commit their token share of project costs. But Congress has not yet appropriated any of the 82 percent share of taxpayer funds necessary for construction to begin.

A major concern with the project is the proposed destruction of a ancient burial ground in the reservoir site, considered by traditional people to be sacred. A large number of graves would be dug up for the Ridges Basin Dam.

"We must protect the resting places of our ancestors," said Thomas Morris, Jr., President of the Diné Medicinemen's Association, and a resident of Window Rock, Arizona. "Too many of our sacred places have already been drowned, we can't let them keep taking more."

Morris noted that Navajo Dam on the San Juan River and Glen Canyon Dam on the Colorado River destroyed countless Navajo sacred sites. The medicinemen's association has called for decommissioning these dams and restoring the San Juan and Colorado as free-flowing rivers. "We must prevent additional damage," he said.

Environmental groups are supporting the indigenous peoples' concerns, and calling for an overhaul of the federal Bureau of Reclamation, the agency responsible for development of most of the rivers of the West. The A-LP project's construction is scheduled to begin in the agency's centennial year, 2002.

"We are asking the Bureau to shift away from reclamation toward restoration," said Owen Lammers of LIVING RIVERS. "The agency has never done the job it was given by Teddy Roosevelt in 1902, to promote small family farms; instead it has from the beginning acted as a subsidy for corporate agribusiness and real estate development. A-LP is one of the worst examples of this long, sad history."

The coalition is calling for major changes in the way the Reclamation agency does business, including ending support for corporate farms and requiring mandatory water conservation measures to be put in place for the first time. In the Colorado River basin, the coalition wants a full review of the entire plumbing system--all the dams and diversions--and to take down some of the dams, including Glen Canyon Dam near Page, Arizona.

"They've had a century to get it right, and they've failed miserably at their charge," said Lammers. "The only thing they've really succeeded at is turning the rivers of the West into an elaborate, expensive network of pipes, ditches, and canals, and in driving numerous species to the brink of extinction."

MARCH AND RALLY ON NOVEMBER 9

Members of the news media are invited to attend the rally and march on November 9, which will kick off at noon at Rotary Park at 15th Street and Second Avenue in Durango. Marchers will then proceed to the Bureau of Reclamation office at 835 Second Street, where they will present a letter to the agency and mail letters to the US Congress. Then the procession will travel westward down 9th Street to the rally site at Schneider Park, on the banks of the Animas River. Brief speeches will be given by key campaign leaders. Refreshments and musical entertainment will be provided.

Organizational representatives will be available onsite for interviews. The following groups have endorsed the event and campaign to date:

American Rivers, American Whitewater, Diné Medicinemens Association, Citizens Coal Council, Citizens Progressive Alliance, Colorado Environmental Coalition, Colorado Plateau River Guides, Colorado Rivers Alliance, Colorado Whitewater, Electors Concerned About Animas Water, Escalante Wilderness Project, Flagstaff Activist Network, Four Corners Riversports, Friends of Arizona Rivers, Friends of the Earth, Great Old Broads for Wilderness, Green Party of Utah, High Country Citizens Alliance, Living Rivers, Native Forest Network, Remarkable Earth Photography, Ridgeline & Open Space Coalition, San Juan Audubon, San Juan Citizens Alliance, Shared Blanket Gallery, Sierra Club, Southern Ute Grassroots Organization, Taxpayers for the Animas River, Tribal Environmental Watch Alliance, Utah Environmental Congress, and Wilderness Society.

Reference 10/26/01

GCMRC Comments to USFWS on Humpback Chub Recovery Goals

[CLICK HERE](#) to read recovery goal comments from Grand Canyon Monitoring and Research Center

Dr. Robert T. Muth, Director
Upper Colorado River Endangered Fish Recovery Program
U.S. Fish & Wildlife Service
P.O. Box 25486
Denver Federal Center
Denver, CO 80225

Re: GCMRC Comments on U.S. Fish and Wildlife Service's Recovery Goals for the Humpback Chub (*Gila Cypha*) of the Colorado River Basin A Supplement and Amendment to the Humpback Chub Recovery Plan (draft dated September 7, 2001)

Dear Dr. Muth:

We support the work of Region 6 in developing the draft recovery goals for the Humpback chub and appreciate the opportunity to comment on this draft. The development of effective recovery goals for the conservation of humpback chub is a monumental task. We acknowledge the work that has gone into this first step and hope that our comments can make a positive contribution to improving the final product.

On October 8, 1996, the U.S. Secretary of the Interior signed the Record of Decision concerning the operation of Glen Canyon Dam. This action, in combination with the Grand Canyon Protection Act of 1992, established the Glen Canyon Dam Adaptive Management Program (AMP). The AMP is composed of the Secretary of the Interior's Designee, the Adaptive Management Work Group (AMWG), the Technical Work Group

(TWG), the Grand Canyon Monitoring and Research Center (GCMRC), and independent review panels.

The AMWG and TWG have the responsibility of recommending management objectives associated with Grand Canyon resources and making recommendations for the development of a long-term monitoring program to assess those resources. GCMRC is charged with developing and implementing long-term monitoring and research programs to obtain information needed by the AMP.

The Humpback chub (*Gila cypha*) is one of a suite of resources that the AMP is charged with managing. Given that the largest and only known successfully-reproducing population of Humpback chub in the lower basin of the Colorado River is within the Grand Canyon and falls under the responsibilities of the AMP, it is appropriate that GCMRC offer comments on the Draft Recovery Goals. However, it should be noted that the comments contained within the attached document are solely the views of the scientists within GCMRC and may not reflect the views of all of the AMP participants.

The comments contained within the attached document are relevant to the September 7, 2001, draft of "Recovery Goals for the Humpback Chub (*Gila Cypha*) of the Colorado River Basin A Supplement and Amendment to the Humpback Chub Recovery Plan" (hereafter referred to as the "recovery goals"). The attached document is organized in 2 sections: (1) general comments on the process of developing the recovery goals, and (2) specific comments on the recovery goals. Within each of these sections, our comments are numbered to facilitate any responses that are forthcoming following the review process.

Sincerely, /s/
Dr. Barry D. Gold, Chief
Grand Canyon Monitoring and Research Center

Join river lovers and advocates from the Four Corners States and Indian Nations to launch the de-authorization campaign for the Animas La Plata Project...

When: 12:00 noon, Friday, November 9

Where: Durango, Colorado

Start at Rotary Park, 15th St.& 2nd Ave.
March to Bureau of Reclamation office, 835 E. 2nd Ave.
Then to Schneider Park - music & refreshments, 9th & Roosa

The Importance of the Animas River

The free-flowing Animas River is a critically important, life-giving force for the communities and economy of southwestern Colorado and northwestern New Mexico. It is one of the last remaining undammed rivers in the southwestern United States. Rising

in Colorado's San Juan Mountains, the Animas defines the heart of Durango, Colorado, as it passes through the city, and flows into the San Juan River near Farmington, New Mexico.

The Animas is the San Juan River's largest tributary; its flows help sustain the dying San Juan's ecosystem downstream in New Mexico, where its native fish populations have been rendered virtually extinct by numerous diversions and an unnecessary dam. The survival of the San Juan River, and the recovery of its ecosystem, may depend on keeping the Animas River alive and healthy.

The Tragedy of the A-LP Project

Authorized by Congress in 2000, the Animas-La Plata Project (A-LP) is a water-wasting, environmentally destructive boondoggle that will seriously impact both the Animas and San Juan Rivers. There is no demonstrated need for the project, it's merely a subsidy for real estate developers, coal companies, and electric power utilities.

A-LP was promoted to Congress as a water rights settlement for two Ute Indian tribes. The tribes could benefit far more by implementing environmentally sound alternatives to A-LP, but no alternatives were considered. Congress held no hearings on the project last year before voting to authorize it.

The half-billion dollar fraud will drain water from the Animas River at a point near downtown Durango, and pump it 500 vertical feet over a mountain to a proposed reservoir in Ridges Basin. This pristine mountain basin has been a prime area for human habitation dating back 8,000 years. Untold ancient burial sites are located there which hold great significance to traditional Native Americans, who strongly object to disturbing these remains. The basin is a critical wildlife habitat area and includes pristine wetlands which would be lost forever were the 215-foot high dam and its 1,500 acre reservoir to be constructed.

November 9 is the date when local water agencies must commit their token share of project costs. But Congress has not yet appropriated funds for the massive federal share of the project, so groundbreaking has been put on hold.

De-fund & De-Authorize A-LP!

River advocates from across the country want to keep it that way. Project opponents, led by LIVING RIVERS, are organizing to stop federal funding for A-LP and get Congress to de-authorize the project. For nearly half a century activists have succeeded in de-authorizing numerous dams around the country, and several in the Colorado River watershed. The most famous, Echo Park Dam, was proposed for Dinosaur National Monument. Ridges Basin Reservoir and the ALP will be next.

De-authorizing ALP is a key component of LIVING RIVERS' ten-point nationwide campaign to Reclaim the Bureau of Reclamation (BuRec). With its centennial coming up in June 2002, river activists are demanding that BuRec end its compulsive dam-building behavior and enter the era of dam removal and river restoration.

Join American Rivers, American Whitewater, Diné Medicinemens Association, Citizens Coal Council, Citizens Progressive Alliance, Colorado Environmental Coalition, Colorado Plateau River Guides, Colorado Rivers Alliance, Colorado Whitewater, Electors Concerned About Animas Water, Escalante Wilderness Project, Flagstaff Activist Network, Four Corners Riversports, Friends of Arizona Rivers, Friends of the Earth, Great Old Broads for Wilderness, Green Party of Utah, High Country Citizens Alliance, Living Rivers, Native Forest Network, Remarkable Earth Photography, Ridgeline & Open Space Coalition, San Juan Audubon, San Juan Citizens Alliance, Shared Blanket Gallery, Sierra Club, Southern Ute Grassroots Organization, Taxpayers for the Animas River, Tribal Environmental Watch Alliance, Utah Environmental Congress, and Wilderness Society and others to:

Rally & march for water to meet human needs, not corporate greed.

Celebrate & preserve Native American heritage, and protect ancient burial grounds.

De-authorize A-LP Now!

Take Action!

Please write to your Member of Congress at House of Representatives, Washington, DC 20515, and your Senators at U.S. Senate, Washington, DC 20505, and ask them to DE-AUTHORIZE A-LP!

More Information:

[Download Color Rally Poster \(70k PDF file\)](#)

[Download black and white Rally Poster \(94k PDF file\)](#)

LR Press Release 10/10/01

Dam Security Measures Flawed--Public Kept in Dark Over Risk

CONTACT: Owen Lammers, Executive Director, 435-259-1063, David Orr, Director of Field Programs, 435-259-1063

In the wake of the tragic airline hijacking attacks of September 11, 2001, emergency security measures have been put in place at major dams in the Colorado River system. But the newly evolving security plans of the federal government are flawed, and reflect a continuing unwillingness to seriously address dam safety issues, as before the attacks.

LIVING RIVERS has learned that the new measures instituted by the Bureau of Reclamation (BuRec) are weakest at two of the system's most vulnerable structures, Glen Canyon and Flaming Gorge Dams. The failure of either could set the stage for a series of catastrophic events with massive human and economic impacts from Utah to Mexico.

While federal resources are currently focused on protecting 726-foot Hoover Dam near Las Vegas from possible terrorist attack, comparatively little is being done at Glen Canyon Dam upstream on the Colorado River, and at Flaming Gorge Dam upstream on the Green River. These two dams represent the second and third largest dams, respectively, in the Colorado River basin, after Hoover.

Dam failure, whether caused by terrorist attack or by floodwaters, would cause not only catastrophic damage to the reservoir and immediate downstream areas, but also a possible "domino effect" that could result in major impacts on the water supply systems of more than 25 million people in the lower basin, and lead to economic disruptions in Nevada, Arizona, California, and northwestern Mexico.

Focus on Hoover Ignores Real Risks

While around-the-clock patrols at Hoover prevent boaters from approaching the dam within a mile upstream and a half-mile downstream, no such controls are in place at either Glen Canyon or Flaming Gorge. Boats may freely approach Glen Canyon Dam from the downstream side, and only a small-diameter cable 150 yards from the dam impedes boater access from the reservoir. Boats have free access to both the visitor center and dam area at Flaming Gorge.

Trucks and trailers are prohibited from crossing Hoover Dam, and passenger vehicles are subject to search by state highway patrol officers at checkpoints on either side of the dam. Yet truck traffic still flows freely over the crest of Flaming Gorge Dam and across the Glen Canyon Dam Bridge, as before September 11. No security checkpoints have been erected at either site.

Oddly, despite the extraordinary security attention Hoover is receiving, it is by far the best-constructed component of the Colorado River plumbing system. Built into massive igneous rock canyon walls and designed with enough mass for gravity to hold its reservoir--the nation's largest--in check, a major attack is unlikely to cause structural failure. The real problems are further upriver.

Near Page, Arizona stands 710-foot Glen Canyon Dam, tucked into porous, weak, Navajo sandstone that constantly leaks water around the dam. Large pieces of sandstone adjacent to the dam routinely break away. BuRec must install increasingly longer rock bolts in an ongoing attempt to protect the dam's powerplant from falling rock, and to ensure stability of the dam's abutment. This past summer workers could be seen patching the dam's face where massive slabs of concrete had fallen off.

In 1983, high water flows caused the dam's sandstone spillway tunnels to crumble in places, posing a threat to the integrity of the abutment. The dam's greatest vulnerability is in a high-water event.

Any compromise of the crumbling sandstone abutments would allow two years' annual flow of the Colorado River to blast its way around the dam, scouring the Grand Canyon before surging across Lake Mead on its way to Hoover Dam. In the best-case scenario, this water would flow over the top of Hoover, creating a downstream flood similar to that were Hoover to fail by itself. At worst, failure of Glen Canyon would compromise Hoover Dam, multiplying the flow by a factor of two, and sending four years' annual flow of the Colorado River heading toward Mexico all at once. "Glen Canyon Dam is an accident waiting to happen," said Owen Lammers of LIVING RIVERS. "Not only should security be stepped-up, but serious plans must be put in place for the dam's controlled decommissioning, as the dam very likely could fail on its own."

A failure at Flaming Gorge Dam, with a full pool of 3.7 million acre-feet, would threaten Glen Canyon Dam downstream if Glen Canyon's reservoir were incapable of accommodating the inflow. This is often the case during peak flow periods in the spring and early summer. As at Glen Canyon, security at Flaming Gorge is comparatively weak.

Regardless of the scenario, the most significant damage would occur below Hoover Dam. Despite their smaller size, Davis, Parker and Imperial Dams constitute critically important elements of the Colorado River plumbing system. These dams are not constructed to absorb massive inflows, and would be severely damaged by a catastrophic flood event. The Central Arizona Project Canal, California Aqueduct, and All-American Canal — the region's major water delivery systems — would also be jeopardized. Municipal water supplies for cities from Las Vegas to San Diego could be wiped out.

The riverside communities of Laughlin, Nevada, Needles and Blythe, California, and Bullhead City, Lake Havasu City, and Yuma, Arizona are all at risk in the event of a major lower basin flood. The reservations of the Fort Mojave, Colorado River Indian Tribes, Chemehuevi, Cocopah, and Quechan nations lie along the lower river and are all at great risk of flooding, as are numerous Mexican farming communities in the Colorado River delta region. Three interstate highways and numerous oil and gas pipelines cross the river below Laughlin.

The federal government is supposed to make available dam failure inundation maps to inform the public of these potential threats. However, BuRec recently told LIVING RIVERS that access to these maps is restricted under new security measures. LIVING RIVERS has filed a Freedom of Information Act request, which had not yet been honored at presstime.

"We certainly don't want to aid any terrorist in mapping out potential targets, but these safety concerns exist regardless of the threat of terrorism," said Lammers. "It's time for the Bureau to get serious about addressing dam safety, starting with ensuring the public is fully aware of the risks its projects pose."

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Internet Info Resources:

Bureau of Reclamation: www.usbr.gov

Hoover Dam: www.hooverdam.usbr.gov

Glen Canyon Dam Facts: www.uc.usbr.gov/information/gcdfacts.html

Flaming Gorge Dam Facts: www.uc.usbr.gov/information/fg_factsheet.html

USGS: Grand Canyon Floods: walrus.wr.usgs.gov/grandcan/floodflows.html

1997 Flaming Gorge Emergency: www.uc.usbr.gov/pao/gorge/fgorge.html

Davis Dam Facts: www.lc.usbr.gov/~pao/davis.html

Parker Dam Facts: www.lc.usbr.gov/~pao/parker.html

Central Arizona Project: www.cap-az.com

Las Vegas Valley Water District: www.lvwwd.com

Metropolitan Water District: www.mwd.dst.ca.us/mwdh2o/index02.html

More Information:

[Glen Canyon Dam Failure Study](#)

LR in the News 10/03/01

Delta restoration meets resistance from water users

GREENWIRE April Reese, Greenwire staff writer

For most of a century, the southwestern United States has relied on Colorado River water to slake the thirst of its cities and water its crops. But now, just as growth in the region is projected to skyrocket over the next several decades, users are being asked to accommodate the needs of another recipient of Colorado River water: the river's delta.

Although a first-ever delta symposium attended by state and federal water officials, scientists and environmentalists offered hope to some that at least some additional water could eventually be sent to the delta, all of those involved acknowledge the high demands placed on limited resources will make accommodating ecological needs extremely difficult.

Historically, the delta, where the river flows into Mexico's Gulf of California, received an average of 16.7 million acre-feet (maf) of water from the river each year. Now, the delta receives about 4.2 maf per year -- a decrease of about 75 percent. (An acre-foot equals 326,000 gallons, or the amount of water that would cover a football field without the end zones to a depth of one foot.) That decrease, as well as conversion of wetlands into farmland, has reduced the delta's wetlands to less than 10 percent of their historical extent, from 1.93 million acres to about 150,000 acres, according to a report by Environmental Defense.

According to NASA's Earth Observatory program, which tracks changes in the delta using satellite images, "Irrigation and urban sprawl now prevent the river from reaching

its final destination. ... Nearly all the water that flows into the Colorado River is now siphoned off for use in crop irrigation and for residential use."

Nonetheless, the delta remains a key stop along the Pacific Flyway and supports many species of wintering waterfowl. It also harbors the largest known populations of two endangered species, the desert pupfish and the Yuma clapper rail.

In some recent years, El Nino effects have sent torrents of water down the river, boosting flows and allowing some water to reach the delta. But it's "hit or miss," with a significant amount of water making it to the sea some years and none reaching it in others, says Ed Glenn, an environmental science professor at the University of Arizona who has studied the ecosystem.

Getting more water to the delta would involve an extraordinary level of collaboration, involving two countries, nine states (seven in the United States and two in Mexico), millions of water users, and 1,450 miles of river. Although environmentalists say even a small influx of water could go a long way in reviving the delta, skeptics say galvanizing the necessary political will to send any additional water downstream will be a considerable challenge.

The basin, which drains 244,000 square miles, is managed under a complex set of state and federal laws, court decisions, an interstate compact and an international treaty, all collectively known as the "Law of the River." Under those mandates, 7.5 million acre-feet of water is fed to the upper Colorado River Basin (Colorado, New Mexico, Utah and Wyoming), another 7.5 million acre-feet of water is sent to the lower basin states (Arizona, California and Nevada); and 1.5 million acre-feet crosses the border into Mexico. Over 25 tribes also have water rights to the Colorado.

Under the current allocation scheme, a state such as California, where demand exceeds its legal allotment, can meet its needs by getting surplus water from other basin states. But as the growing cities of upper basin states demand more water over the next few decades, surpluses will no longer be available to send elsewhere. These "combustible realities," as former Interior Secretary Bruce Babbitt called them, make it highly unlikely that state water managers will be willing to send water downstream to replenish the delta, some environmentalists and water officials say.

California has come up with a plan to gradually reduce its reliance on Colorado River water to its 4.4 maf limit over a 15-year period, but those measures could cause problems in themselves, environmentalists say. For example, a plan to line canals so that less water seeps into the groundwater would save water for California, but would reduce the amount of water that makes its way into Mexico through the aquifer. And an interim plan to cover the state's water needs while it works toward its 4.4 maf goal guarantees California surplus Colorado River water every year until it reaches its legal allotment -- surpluses some environmentalists say should be sent to the delta instead.

"It won't impact the basin states, but it may impact what administrative waste that goes to Mexico," says Larry Anderson, director of the Utah Division of Water Resources, referring to the water headed for California under so-called Interim Surplus Guidelines.

The fervent opposition of some states, such as California and Arizona, to delta conservation "is indicative of the backwards, oftentimes knuckle-dragging mindset of western extractive agencies in those states," Hogan charges. He allows that some states are reacting from a practical concern about competition for scarce water resources, but adds "most of the opposition is the result of a nearly religious sentiment that any water not used by humans is wasted water."

And some are concerned increased flows may end up in Mexican farms and cities instead of in the delta. Said Anderson: "Let's just say the basin states were willing to find a block of water. Say we'll send down 30,000 acre feet. What is the guarantee that that water will ever get by the diversions for agricultural use in Mexico?"

Glenn disagrees. "Even without that water, they've done more than their share for those species," he said, pointing out that the Mexican government has created a biosphere reserve in part of the delta. "The agencies that have made those claims are the same ones that have attempted to sabotage a dialogue with Mexican agencies to work toward just that result," Hogan adds.

Environmentalists and some scientists say fears about the delta siphoning water from human needs are largely unfounded. According to separate reports by the Center for Biological Diversity and Environmental Defense, the delta could be returned to health with an increased water flow of as little as 1 percent, requiring relatively painless adjustments in water use, such as enhanced conservation and improving irrigation systems' efficiency.

"The environment has to have some standing at the table," says Glenn. "It only needs 1 percent. The delta is probably the smallest user on the river." Ironically, Glenn says, because only a small part of the original delta remains, little water is needed to replenish the wild areas that are left.

But little is known about how the delta ecosystem functions or exactly how much water would be necessary to restore it to at least some of its former glory. Although studies have been conducted on water levels needed to support vegetation in the delta, little is known about the needs of its fish and wildlife.

"I don't know that we've received the data that justifies an immediate decision," says Anderson. "When you ask for hard facts -- Will you need more? Could you do it with less? -- no one can give them to you."

But Lisa Force, program director for Living Rivers, says there is enough evidence of the delta's decline to merit immediate action. "The delta needs water now," she says. "If we're not careful, the delta could be studied literally to death."

Last December, the International Boundary Waters Commission, the government body that governs water management along the border, issued a "conceptual minute," known as Minute 306, that officially recognizes the need to "ensure use of water for ecological purposes" in the delta, and called for cooperation by the United States and Mexico in studying the ecosystem. Delta advocates say that although it is not a commitment to

take specific action, the framework is the first step to improving the ecological health of the delta.

That so many interested parties attended last month's symposium, held in Mexicali, Mexico, was a sign to some that a solution to the problem may not be so far off. "Even some of the 'water buffalos' recognized there could be enough water for the delta," said Glenn.

In the United States, the Lower Colorado River Multiple Species Conservation Plan calls for the Bureau of Reclamation (BuRec) and other water agencies to commit a certain amount of water to support over 50 endangered and threatened species in the lower U.S. stretch of the river. Ironically, however, that arrangement could threaten implementation of Minute 306, environmentalists fear.

Although the Law of the River does not include specific provisions for conservation, it does give BuRec -- the Colorado's "water master" -- some discretion in determining how the river is managed, Hogan says. That wiggle room allows the agency ample opportunity to "do what's necessary to protect the environment," Hogan adds.

Bob Walsh, spokesman for BuRec's Lower Colorado Region office in Boulder City, Nev., says it will be difficult, if not impossible, to change the current allocation framework to accommodate the delta. "The water is allocated by law, by Supreme Court decree and by treaty from Mexico, and you don't just change those things," says. "It would probably be a very long and litigious process to do that."

Instead, he says, agencies should find ways to work within the existing legal framework. For instance, purchasing marginal farmland to take it out of production could help decrease the demand for irrigation water, and agricultural wastewater could be directed to the delta, he says. Others suggest making water conservation a priority in the basin states to lessen demand.

"That's where the water would have to come from," says CBD's Hogan. "The best way to fight fear is with truth. The truth is that with strong water conservation and efficiency measures -- including limits on gross water use for such things as Las Vegas fountains and L.A. golf courses -- there is enough water for both people and long-term conservation of the river in the U.S. and its delta in Mexico."

LR in the News 09/17/01

Delta Remains at Odds With Water Rights

BY BRENT ISRAELSEN THE SALT LAKE TRIBUNE

MEXICALI, Mexico -- Once a thriving wilderness of nearly 2 million acres, the Colorado River delta is a remnant of its former self, its water and nutrients cut off by development along the river's 1,450-mile run from the Rocky Mountains to the Gulf of California.

It has been that way for decades, a seldom-discussed consequence of the much-heralded era of dam building on the Colorado that transformed deserts into farms and gleaming cities.

"It has been an abandoned topic," said Olga Ojeda Cardenas of the Mexican Secretariat of Environment and Natural Resources.

Today, the delta's plight is officially out in the open.

About 400 water users, bureaucrats and researchers from the United States and Mexico assembled here this past week to learn more about what is happening at the end of the Southwest's most important river.

Utah, a major river user, sent a delegation of five, including three representatives from the Utah Division of Water Resources and two assistant attorneys general.

The two-day Colorado River delta symposium at the Autonomous University of Baja California was the first meeting of its kind on the delta, which some observers believe could become the next big issue on the Colorado, one of the most fought-over rivers in North America.

The symposium's enthusiasm was dampened significantly by Tuesday's terrorist attacks on America. Mexican participants expressed condolences to their American counterparts, which included State Department and Interior Department officials, many of whom were ordered by their superiors to return to the United States for fear of further attacks on U.S. structures, such as dams.

Although the symposium was designed to be informational -- with experts from both sides of the border explaining the laws, plumbing systems and environmental research -- the question of how to solve the delta's problems was unavoidable.

To environmentalist Lisa Force, the answer is simple.

"What the delta needs is more water," said Force, of Living Rivers, an activist group that has lobbied to put the issue on the international agenda.

Before humans began altering the river, the estuary received from 10 million to 25 million acre-feet of fresh water from the river each year. One acre-foot equals about 326,000 gallons. The water fed a lush, 1.9 million-acre ecosystem that teemed with vegetation, fish and wildlife that supported the Cucapa Indians, whose traditional way of life has been imperiled by the delta's decline.

Today, flows to the delta range from 2.4 million acre-feet to as little as a few thousand. And it is of poor quality, laced with urban and agricultural pollutants.

Thanks to above-normal precipitation in the late 1990s, the delta ecosystem, once considered "dead," has rebounded to about 150,000 acres, prompting scientists and environmentalists to call for efforts to maintain, even enhance, delta restoration.

Researchers say maintaining and improving the delta ecosystem would require annual dedicated flows of about 32,000 acre-feet of water, with a larger "pulse" flow of about 260,000 acre-feet every three years to soak the floodplains and stimulate seed germination.

Bennett Raley, assistant Interior secretary for water and power, said he and Interior Secretary Gale Norton consider the Mexican delta "an important ecological resource."

But to restore or maintain it will take creativity and a political resolve that appears elusive at this time.

The obstacle, of course, is that the river already is almost fully tapped. In the case of California, which gulps 18 percent more than its share of 4.4 million acre-feet, the river is overused.

California's overconsumption is possible largely because the Upper Colorado River Basin states of Colorado, Utah, Wyoming and New Mexico use less than two-thirds of their 7.5 million acre-feet share. (Utah currently draws about 900,000 acre-feet from its allotment of 1.7 million acre-feet.) To protect their rights, the Upper Basin States are wary of any calls for more water downstream.

U.S. officials also have been cool to the idea of releasing more American water for the delta.

Federal Bureau of Reclamation Commissioner John Keys, who was not at the symposium, has offered to assist the Mexicans in utilizing their 1.5 million-acre allotment more efficiently, with the saved water dedicated for the delta.

"It's a lot easier to send money and expertise [to Mexico] than to send water," said Wayne Cook, director of the Salt Lake City-based Upper Colorado River Commission.

D. Larry Anderson, director of the Utah Division of Water Resources (DWR), says he does not want the delta to dry up, but he wonders whether saving it is a U.S. responsibility.

"If we have an environmental problem in the United States, there's no way we are going to get Mexico to give us some of their water, so why should we consider giving them water?" said Anderson.

Environmental activists argue that the flows needed for maintaining the restored delta are achievable through conservation or by shifting use of Colorado River water away from low-value, high-water crops such as alfalfa.

Another possible solution calls for the purchase of water rights from some farmers in Mexico, keeping the water in the river for the delta.

The International Boundary and Water Commission (IBWC), which oversees the Mexican-American water treaties, has set up working groups to draft proposals for maintaining the delta. American IBWC Commissioner Carlos Ramirez said there is no timetable for that work.

If the solution mandates additional releases from the United States, some U.S. water users fear that Mexico, whose border towns of Mexicali and Tijuana are growing rapidly, might divert delta-dedicated water for urban needs.

J. Arturo Herrera, Mexican member of the International Boundary and Water Commission, said they shouldn't worry. "We have the legal means to ensure the allocation is used for that purpose."

Mexican environmentalist Carlos Yruretagoyena doubts the debate will ever get that far: "Take one drop of water from someone in the United States for Mexican needs? I don't see it happening."

LR Press Release 09/12/01

Colorado River Delta Needs More Water

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Stakeholders From U.S. and Mexico Release Principles to Guide Restoration

MEXICALI, BAJA CALIFORNIA, MEXICO – In order to restore the damaged Colorado River Delta, the area needs water. That was the central message of a historic binational conference hosted by the International Boundary and Water Commission (IBWC), the United States Department of the Interior, and the Mexican Secretariat of Environment and Natural Resources (SEMARNAT). The participants presented research on a wide range of legal and scientific issues that affect the Colorado River Delta and surrounding areas, but the heart of the matter was water.

"For the first time, researchers, policy makers and stakeholders from the United States and Mexico have come together to learn about the delta and steps already underway to protect and restore it," noted Michael Cohen, Senior Associate at the Pacific Institute for Studies in Development, Environment, and Security. "Yet this symposium is only a first step. Now that we all know the condition of the delta, we must take action to ensure that the delta's needs are met. The principles and recommendations devised by some 20 groups from Mexico and U.S. will guide us in the right direction as we begin the work of meeting these needs," continued Michael Cohen.

One Percent of River Flow Could Save Delta

"This is an important conference because water users in the U.S. and Mexico have finally acknowledged that, despite their best intentions, too much Colorado River water is being used along the way," said Ed Glenn, Professor of Soil, water, and Environmental Science at the University of Arizona. The good news according to

professor Glenn: "As little as 1 percent of the river's flow might be enough to preserve key habitats."

"The symposium and treaty amendment give cause for hope," concurred David Hogan, Urban Wildlands and Rivers Program Coordinator for the Center for Biological Diversity. "But not one drop of water is legally dedicated to nature, so we look forward to working with others to strike a balance between water for agriculture, cities and the delta environment."

"This conference is a strong indicator of how committed the two governments are to seriously addressing the imperative of Delta restoration," said William Snape, Vice President for Legal Affairs at Defenders of Wildlife. But "The delta needs water now," added Lisa Force, Program Director for Living Rivers. "If we're not careful, the delta could be studied literally to death. The Mexican and U.S. governments and Colorado River water users need to commit to secured flows for the delta, as prescribed by the science already completed, while further studies proceed."

Participants at the conference pointed to the cooperation between U.S. and Mexican stakeholders as a key part of any solution: "Getting a good understanding of water and environmental laws in the U.S. and Mexico is an important ingredient to solving the problems in the delta," said Steve Glazer, Chair of the Sierra Club Colorado River Task Force.

Jennifer Pitt, Senior Analyst with Environmental Defense added that, "the international border creates a real challenge to good ecosystem management, but if the United States and Mexico can continue the dialogue started here, there is hope for the river."

River Restoration Faces a Host of Challenges

The symposium is an important first step towards delta conservation, but other activities in the U.S. may limit the effectiveness of Minute 306, as the agreement between Mexico and the U.S. to cooperate on Colorado River Delta restoration is called.

Among these challenges: The Bureau of Reclamation has recently approved the Interim Surplus Guidelines and water-banking regulations, which will markedly reduce the delta-nourishing floods that once spilled from Hoover Dam. And the U.S.-based Lower Colorado River Multi-Species Conservation Program may also significantly undermine the success of the agreement.

"The state's multi-species program is a real threat to the delta because contracts under the program will tie up any water which might otherwise be available for delta conservation," stated David Hogan of Center for Biological Diversity. "Both the U.S. and Mexican governments need to step up to the plate on delta restoration. With the principles contained in the binational declaration, we have created a framework for moving forward," summed Pam Hyde, Director of Policy for Southwest Rivers. "But the question remains: Do we have the political will to protect and restore this unique area for future generations?"

River News 09/02/01

Binational Declaration for the Colorado River Delta

Whereas the Mexican and United States governments, through Minute 306 of the IBWC/CILA, have agreed to:

"establish a framework for cooperation by the United States and Mexico through the development of joint studies that include possible approaches to ensure use of water for ecological purposes in this reach [of the Colorado River] and formulation of recommendations for cooperative projects, based on the principle of an equitable distribution of resources."

Whereas management over recent decades in both Mexico and the United States has devastated the Colorado River's ecosystems;

Whereas the historical record of Colorado River flow has been estimated at approximately 15 million acre-feet per year, and in recent years the flow below the last major diversion at Morelos Dam is often only 0.2% of the river's estimated historical annual flow;

Whereas the 1944 Colorado River Treaty grants to Mexico the annual right to only 1.5 million acre-feet of Colorado River water (plus 0.2 million acre-feet under certain conditions) while the Colorado River Compact grants to the United States the annual right to up to 16 million acre-feet;

Whereas the Colorado River delta encompasses several important ecosystems in need of conservation attention, including the Colorado River riparian corridor south of Morelos Dam, the open water wetlands of the Cienega de Santa Clara, the Colorado River estuary at the northern Gulf of California, and numerous brackish wetlands throughout the historic delta;

Whereas the Colorado River riparian corridor below Morelos Dam has demonstrated marked regeneration and resilience in response to recent flood releases from Hoover Dam and the Gila River, and now contains more native riparian habitat than the reach of the river from Hoover Dam to Morelos Dam;

Whereas preliminary estimates indicate that the Colorado River corridor below Morelos Dam must continue to receive at minimum an instream flow of 32,000 acre-feet annually in addition to periodic floods of 260,000 acre-feet on average every four years in order to sustain endangered species such as the Southwestern willow flycatcher, in addition to a rich diversity and abundance of other terrestrial and aquatic species;

Whereas the Cienega de Santa Clara was created by irrigation return flows from the United States and must continue to receive approximately 135,000 acre-feet of water annually with salinity no higher than present levels (2,400 ppm) in order to remain a significant wetland, providing habitat for thousands of migrating and resident waterfowl and endangered species including the Yuma clapper rail and the desert pupfish;

Whereas the Colorado River estuary at the northern Gulf of California was historically one of the world's largest and richest desert estuaries and provided important habitat for Gulf fisheries, shorebirds, migratory birds, and the now endangered vaquita porpoise and totoaba, and will require freshwater flows of unknown quantities to restore its ecosystem;

Whereas the numerous brackish wetlands that remain throughout the historic delta have not been well studied, but provide habitat for thousands of migrating and resident waterfowl, and rely on an unknown quantity of agricultural drainage from the surrounding San Luis and Mexicali agricultural valleys;

Whereas several actions recently taken or proposed within the United States threaten the existence of the Colorado River delta's ecosystems, including the use of water under the Interim Surplus Guidelines and the development of off-stream banking, both of which will eliminate flood releases from Hoover Dam and devastate the native riparian corridor below Morelos Dam, and the operation of the Yuma Desalting Plant, which will destroy the Cienega de Santa Clara;

Whereas surface water and groundwater are inseparable in the Colorado River watershed, and both water quantity and water quality are integral to ecosystem health;

Whereas the human communities in and around the Colorado River delta are impacted by the decisions of agencies both near and far that manage the River and its resources;

Whereas the participation of informed stakeholders promotes the development of sound, acceptable restoration alternatives, and Mexico and the United States have to date implemented Minute 306 with participation from Colorado River stakeholders;

The undersigned Mexican and United States conservation organizations do hereby declare that their governments should consider and adopt the following recommendations in a collaboration to restore the Colorado River delta ecosystems:

The United States and Mexico must commit to dedicating freshwater for the purpose of protecting and restoring the ecosystems of the Colorado River delta, before they are further degraded.

The United States and Mexico must adopt the precautionary principle and integrate it, based on the best available science, into existing programs. The precautionary principle would dictate that neither country should take unilateral actions that limit future actions for restoring the Colorado River delta's ecosystems.

The highest priority must be placed on determining the amount, quality, and timing of water deliveries necessary to sustain and restore Colorado River delta's ecosystems, including the riparian corridor below Morelos Dam, the Cienega de Santa Clara, the River's estuary, and other brackish wetlands.

A scientific approach that uses experimentation and includes specific milestones for long-term monitoring, as well as the flexibility to respond to new information, should be

used to determine the quantity and quality of freshwater needed to protect and restore the Colorado River delta's ecosystems.

The United States and Mexico should work together to secure funding both for research needed to develop alternatives to protect and restore Colorado River delta's ecosystems, and for the implementation of those alternatives.

Research and development of alternatives for protection and restoration of delta ecosystems must acknowledge the interconnectivity of groundwater and surface water.

The development of alternatives to protect and restore the Colorado River delta's ecosystems should be transparent and inclusive, and the United States and Mexico should include stakeholders on both sides of the border in the development of any agreements to provide these ecosystems with water.

Asociaciun Ecoiugica de Usarios del Rio Hardy-Colorado, A.C. Center for Biological Diversity Centro de Derecho Ambiental y Integraciun Economica de Sur, A.C. Centro Intercultural de Estudios de Desiertos y Oceanos, A.C. Centro Regional de Estudios Ambientales y Cientificos Defenders of Wildlife ECO-SOL Educaciun y Cultura Ecologica A.C. Environmental Defense El Grupo Ecologista Antares, A.C. Friends of Arizona Rivers High Country Citizens' Alliance International Rivers Network La Sociedad de Historia Natural Niparaj-, A.C. Living Rivers Pacific Institute for Studies in Development, Environment, and Security Pro Esteros Pronatura Peninsula de Baja California Sierra Club, Colorado River Task Force Sonoran Institute Southwest Rivers

LR in the News 08/22/01

Banning Jet Skis on Lake Powell

Lake Powell Jet-Skiers Argue Against Any Ban

By Tom Wharton THE SALT LAKE TRIBUNE

The National Park Service asked for public input this week on how personal watercraft -- known by brand names such as Jet Ski or Waverunner--should be managed at Lake Powell.

A court settlement between the federal agency and the environmental group Bluewater Network mandated that an environmental analysis be done on use of personal watercraft at the 1.2 million-acre Glen Canyon National Recreation Area.

Under that deal, jet-skis will be banned at Lake Powell after Sept. 15, 2002, without a specific rule allowing their use. Alternatives being examined include continuing existing practices, allowing use of the craft in specific areas, restricting them in sensitive areas, limiting their use to the main channel or banning them.

With more than 10,000 jet-skis registered in Utah, owners had plenty to say at Park Service meetings Monday in Page, Ariz., and Tuesday in Salt Lake City.

The public comment is part of a study looking at how use of the craft-- which make up 9 percent of the registered vessels on Lake Powell --affect the area's visitor experience and natural resources.

Some said the agency had made up its mind to ban the craft.

"It is a stacked deck in favor of the Park Service," said Bill Lindsey of Bountiful, who is against the ban. "They want to ban all two-stroke engines and then ban all the people. "

Moab-based Living Rivers favored a ban.

"Jet-skis are disproportionately responsible for accidents, injuries and deaths relative to other watercraft," said David Orr, the group's director of field programs.

According to Park Service officials most of those who commented want to continue allowing unlimited use on the 180-mile-long lake.

According to Ted Woolley, boating coordinator for the Utah Division of Parks and Recreation, a youth personal watercraft education program put into effect in 1994 has reduced accidents and injuries. He favors a mandatory licensing program for all boats, not just jet-skis.

"Our constituency wants us to be fair," said Kitty Roberts, the superintendent of Glen Canyon National Recreation Area. "And education is a big theme."

LR in the News 08/15/01

Living Rivers Forces "Lake" Powell Friends to Staff-up

Making friends: Nonprofit group *Friends of Lake Powell* hires executive director
By Seth Muller Lake Powell Chronicle August 15, 2001

From its grass roots beginnings to its status as a viable and politically recognized nonprofit organization, the Friends of Lake Powell has moved into a new phase with the creation of a paid director position.

Former Page economic development director Diane Hansen, 34, returned to the area to serve as the Friends of Lake Powell executive director, and is not taking the job lightly. Her work involves boosting membership, educating the public and gaining recognition for the organization.

"Our overall mission is to promote the positive aspects of Lake Powell and Glen Canyon Dam through education and public awareness," Hansen said. "Since the organization formed in 1997, it has relied on volunteers, but the work became overwhelming as the issues (with the lake) went public."

The issues came to light during the past few years as a group of environmentalists known as the Living Rivers want to see the lake drained. While the Friends of Lake Powell stands in opposition of draining the lake and is vocal on the issue, its primary focus is to promote the positive aspects of Lake Powell, Hansen said.

The organization is now 2,000 members strong and the growth has brought the need for a full-time, paid position.

Charter board member Steve Ward said the hiring of an executive director was inevitable.

"I think we've always known we would need a paid position," Ward said. "We know we'll also need a paid staff."

Board member Paul Ostapuk believes Hansen will increase the organization's viability.

"With Diane, we will take membership to new levels," he said.

Ward led a small tour on Lake Powell Aug. 2. He took Hansen and Ostapuk to places like Independence Cove and Face Canyon to get them some time on the lake and show them areas where the amount of carved graffiti has increased.

One of the projects Friends of Lake Powell plans to undertake is the removal of the vandalistic carvings. The project will involve a partnership with the National Park Service, which started efforts to remove the graffiti this spring.

While Hansen enjoyed getting some time on the lake during the trip, she spends most of her time working out of the Page-Lake Powell Chamber of Commerce, where her office is located.

Hansen is currently working closely with U.S. Rep. John Shadegg's office on upcoming projects and continued political support. Shadegg, R-Phoenix, strongly advocates the preservation and improvements on Lake Powell. He recently proposed an amendment to a Coast Guard bill to examine the carbon monoxide problem on houseboats.

Hansen's work further includes updating all of the organization's literature, working on the membership database, attending meetings and forums as a representative of Friends of Lake Powell and responding to e-mail and requests for information.

Hansen said a number of inquiries come from college students who are working on papers concerning Lake Powell.

Hansen is enthusiastic about her new position that serves as a milestone for Friends of Lake Powell.

"Having a full time director takes it to another level," Hansen said.

LR in the News08/07/01

Arizona Republic Op Ed on Gail Norton's visit

ARIZONA REPUBLIC

August 7, 2001

Interior chief needs to talk conservation

Secretary of the Interior Gale Norton is coming to town.

She will be in Flagstaff tomorrow and Phoenix on Thursday to talk about water, the most vital natural resource in the arid Southwest. We welcome Secretary Norton's attention to this issue on which our cities, jobs and ecosystems depend.

The situation with water in the Southwest has come down to this: we're running out.

The Colorado River, our primary source of water in Arizona, has been over-allocated, meaning more water has been promised to the seven Basin states and Mexico than exists. This hasn't been a problem so far because some of the states haven't needed their full allocation. But that's over.

According to the 2000 U.S. census, four of the five fastest-growing states in the country are in the Colorado River Basin, with populations, ecosystems, growth and economies all dependent on Colorado River water. The growth boom in those states, including Arizona, is expected to continue.

Meanwhile, groundwater tables are dropping, rivers are drying up, habitats and species are disappearing and battles over the last remaining aquifers are reaching fever pitch.

Suggested new sources such as importation of water from Canada, trans basin exchanges, "glacier mining" and construction of new dams do not create more water.

Moreover, these proposals are simply methods for moving water around, when the real issue is how to use water more efficiently.

Unfortunately, the secretary's visit will include only water-movers: Central Arizona Project, Colorado River dam operators, Sen. Jon Kyl, R-Ariz., and Gov. Jane Hull. Yet the only long-term feasible new source of water is conservation.

Norton often cites natural resource conservation as a goal of the current administration. In fact, she consistently states her desire to develop workable, consensus-based programs and cites her "4 C's: communication, consultation, and cooperation, all in the service of conservation." Yet when Living Rivers, representing more than 130 conservation organizations, requested a meeting with Norton during her Arizona visit, we received a swift and blunt "no" from the secretary's office.

We hoped to discuss with Norton Colorado River management issues, particularly preservation of the Colorado River delta, which would require less than 1 percent of the river's flow and could be achieved through very modest conservation measures. The

delta is just one of several Colorado River-dependent ecosystems that is on the verge of disappearing due to near-total diversion and pollution of the river's flows.

Conservation will be effective for preserving ecosystems, as well as for satisfying the needs of increasing human populations, for one simple reason. Ecosystems are dying not because nature has been stingy with water but because humans have wasted it with impunity.

Agribusiness dumps billions of gallons of water on crops never meant to grow in the desert, using flood irrigation, the most wasteful technique available.

Secretary Norton, we understand that there are many interests who want your attention during your visit, and that you must be selective. Again, we encourage you to select a constituency of 12 million Americans, the largest coalition of groups ever to form around Colorado River issues, for a discussion concerning conservation. We respectfully request a 30-minute meeting. That's 0.00015 seconds per person. We'll be brief.

Lisa Force is program director of Living Rivers, a national non-profit organization with offices in Utah and Arizona. She is based in Scottsdale.

08/07/01

Interior Secretary Norton Refuses to Meet with Environmentalists

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U.S. Interior Secretary Gale Norton has refused a request sent last week by an environmental coalition to meet and discuss Colorado River conservation issues during her Arizona visit this week. The environmental coalition had hoped to discuss with Norton several Colorado River conservation and management issues such as the delta and faulty Lower Colorado River Multi-Species Conservation Program.

Living Rivers sent a letter requesting the meeting on August 3rd on behalf of itself, the Center for Biological Diversity, Friends of Arizona Rivers, Environmental Defense, Southwest Rivers and the Pacific Institute. Conservation of the Colorado River delta is a top concern for the groups. The issue has galvanized the largest coalition ever formed promoting Colorado River restoration: 130 organizations representing 12 million people from the US and Mexico. An Interior spokesperson declined to explain Norton's refusal to meet with the groups.

"We are disappointed in Secretary Norton's initial refusal to meet with our coalition," said Lisa Force, Program Director of Living Rivers. "We're hoping she'll reconsider given the importance of the delta and the number of people who are concerned with its protection."

The Colorado River delta is of international importance, yet today is facing a water crisis. The delta has been reduced to less than ten percent of its original size due to the near-total diversion of the river's flows on both sides of the border. Water banking, offstream storage, and other efforts to divert even more water for urban sprawl and agribusiness have put wildlife, fisheries, bird populations, indigenous communities and the total ecosystem at risk.

Scientists have made preliminary estimates that the delta conservation process can begin with a modest amount of water - less than one percent of the river's average annual flow. "Southwestern states and the federal government have so far rejected the notion of providing so much as a drop of guaranteed water for delta conservation," said David Hogan, Rivers Program Coordinator for the Center for Biological Diversity. "They're just not willing to budge."

"Addressing the major issues on the Colorado River will require reaching out to all interested groups, not just the traditional water and power interests," says Michael Cohen of the Pacific Institute. "By ignoring environmental interests, Secretary Norton does a real disservice to the rising spirit of cooperation in the basin."

Environmentalists have led recent efforts to bring the basin states, federal agencies and other stakeholders to the negotiating table to discuss delta restoration. In December 2000, an accord was signed which commits the U.S. and Mexico to discuss studying the delta problem. "Closing the lines of communication just moves everyone back a step," says William Snape of Defenders of Wildlife. "The accord commits the US and Mexico to open dialogue that includes environmental groups. Secretary Norton's refusal to meet with us violates the spirit of the accord."

LR in the News 08/07/01

McDonald's Attracts Criticism from Activists

THE SALT LAKE TRIBUNE

Saturday, August 4, 2001

By Brent Israelsen

In the realm of modern marketing schemes, this one seems rather tame: Offer the hamburger-buying public the chance to win cash, electronics, vacations and vehicles.

But McDonald's Corp. -- regular target of criticism for its food and global corporate imperialism -- has managed yet again to attract activist ire. This time, it's about a category of prizes McDonald's is awarding in its Monopoly game promotion.

Collect all four railroads and you win a snowmobile, an all-terrain vehicle (ATV) or a personal watercraft -- all of which are despised by environmentalists. "This is about

promoting deadly machinery as giveaway toys. . . . It's no happy meal," said David Orr, field director for Living Rivers, based in Moab.

Living Rivers and two dozen other environmental groups on Friday urged McDonald's CEO Jack Greenberg to remove the "thrillcraft" from the prize list.

A McDonald's spokeswoman did not return a phone call for comment. But the Pocatello, Idaho-based Blue Ribbon Coalition, which represents the off-highway vehicle industry, called the anti-McDonald's campaign "bizarre."

"This is another example of environmental extremism," said the coalition's Adena Cook.

In a letter mailed to Greenberg, Living Rivers and allies praised McDonald's for its recent efforts to become more environmentally conscious. But they chided the company for not considering the impacts of snowmobiles, ATVs and personal watercraft, such as Jet Skis.

"[These] prizes are certainly inconsistent with McDonald's stated corporate values of environmental and social responsibility," states the letter.

For the past decade, environmental groups have stepped up their campaigns against adventure vehicles, arguing they cause air, water and noise pollution, damage the land and disturb wildlife.

During the Clinton administration, the campaigns to a large degree paid off, though President Bush appears poised to reverse some of the decisions.

The National Park Service last year banned snowmobiles in most national parks, including Yellowstone. Facing a lawsuit by the snowmobile industry, the Bush administration this year put the Yellowstone ban up for further review.

The Park Service also banned personal watercraft, pending comprehensive park-by-park environmental studies. Public meetings on whether personal watercraft should be allowed at Lake Powell are scheduled this month in Arizona and Utah.

Environmentalists also have fought to restrict the use of ATVs and other off-highway vehicles in national forests and on Bureau of Land Management lands. They argue the machines tear up vegetation, cause erosion and disrupt wild animals' reproductive cycles.

In addition to pointing out the environmental consequences to McDonald's, environmental groups cite Consumer Product Safety Commission statistics showing that ATVs caused 95,000 injuries and snowmobiles sent 14,000 people to the hospital last year. Personal watercraft, they noted, account for 40 percent of boating accidents even though they account for just 10 percent of boating traffic.

Snowmobiles, ATVs and personal watercraft "may be fun to the user but they are an annoyance to nonusers. They cause injury and death and damage to the environment," Orr said.

McDonald's need not feel alone in the criticism, however. "Pepsi is offering Jet Skis, snowmobiles and ATVs as prizes too," Orr said. "We're going after them next." © Copyright 2001, The Salt Lake Tribune

LR Press Release 08/03/01

Groups Target McDonald's to Halt Promotion of Polluting Jet Skis

Contact:

Katy Rexford, Bluewater Network 415.788.3666 x157

David Orr, Living Rivers 435.259.1063

MCDONALD'S PROMOTES DEADLY MACHINERY AS TOYS IN "MONOPOLY" GAME

GROUPS ASK COMPANY TO SUBSTITUTE SAFE, NON-POLLUTING
ALTERNATIVES FOR SWEEPSTAKES PRIZES

Leaders of 26 organizations representing the environment, consumer advocates, and concerned parents from across the nation blasted McDonald's Food Corporation for offering as sweepstakes prizes three of the deadliest and most environmentally harmful recreation vehicles currently on the market — snowmobiles, personal watercraft (PWC, or "jet ski"), and all-terrain vehicles (ATV). In a joint letter sent today to McDonald's CEO Jack Greenberg in Oak Brook, Illinois, 23 organizations called on the fast-food magnate to substitute safer and less environmentally-destructive products for the company's nationwide "Monopoly" sweepstakes game.

"The McDonald's Corporation promotes itself as caring about 'safe fun for children' and protecting the environment, but the Monopoly game prizes contradict those corporate values," said Katy Rexford of Bluewater Network. "We're shocked that McDonald's would offer to children prizes that are responsible for so many injuries and deaths."

According to the Consumer Product Safety Commission, ATVs alone sent over 95,000 Americans to the emergency room in 2000; snowmobiles were responsible for over 14,000 emergency room visits. Moreover, while PWCs comprise only 10 percent of the United States' recreational boating population, they are responsible for over 40 percent of injury accidents.

The National Park Service (NPS) recently agreed to ban PWCs from most national parks, and a subsequent federal court settlement agreement with NPS calls for a possible ban on PWCs at all other park units, including Lake Mead and Lake Powell on the Colorado River.

"Jetskis are unsafe and contribute to the pollution of water supplies for more than twenty million people in the Colorado River alone," said David Orr, of Living Rivers in Moab, Utah, a co-plaintiff with Bluewater Network on the NPS lawsuit. "While citizens struggle to protect their families and their drinking water from these destructive machines, McDonald's is busy serving them up as good, clean fun."

Not only do these motorized "thrillcraft" have abysmal safety records, they are bad for the environment. Almost exclusively powered by dirty two-stroke engines, these machines dump between 25 and 30 percent of their unburned fuel mixture directly into the water, or onto the land or snow over which they ride.

Joining Bluewater Network and Living Rivers in the letter to McDonald's were groups from Alaska to Virginia, including the Alaska Center for the Environment, American Canoe Association, Bay Area Wilderness Training, Boreal Footprint Project, California Wilderness Coalition, Campaign to Safeguard America's Waters, Center for Biological Diversity, Colorado Mountain Club, Friends of the River, International Marine Mammal Project, John Muir Project, Minnesotans for Responsible Recreation, Montana Wilderness Association, National Parks Conservation Association, Planning & Conservation League, Public Citizen, Schubert & Associates, Sea Turtle Restoration Project, Superior Wilderness Action Network, Swan View Coalition, Wild Wilderness, Wildlands Center for Preventing Roads, Winter Wildlands Alliance, and the Yggdrasil Institute.

In their letter, the groups expressed their desire to work with Mr. Greenberg to "change the emphasis of the Monopoly game from one of dangerous, disruptive, and disproportionately polluting motorized recreation to a wholly different set of values that respects the environment and promotes the 'safe fun for children' theme that McDonald's proudly proclaims."

- The California Air Resources Board reported that a seven-hour ride on a PWC emits the same amount of smog-forming air pollution as does driving over 100,000 miles in a typical passenger car.
- Snowmobiles in Yellowstone National Park were responsible for spewing over 90 percent of the total hydrocarbon pollution in the park, despite being outnumbered by automobiles 16 to 1. Fresh oxygen has to be pumped into the ranger station at the West Yellowstone entrance because rangers complained of nausea, headaches, and dizziness from carbon monoxide poisoning.

McDonald's Food Corporation claims to be an environmental leader, yet the message sent by these sweepstakes prizes is one of environmental dominance and destruction rather than harmony and respect.

Thrillcraft manufacturers often claim that damage and injuries caused by thrillcraft are the result of a few "bad apple" operators; however, it is the inherent design and intended use of the machines that is problematic.

LR in the News 08/02/01

Groups Seek Meeting with Interior Secretary Norton on Colorado River Delta

The Honorable Gale Norton
Secretary
U.S. Department of the Interior
1849 C Street
Washington, D.C. 20240
Dear Secretary Norton:

Thank you for your attention to Colorado River issues and for your interest in reaching out to local stakeholders to develop workable, consensus based programs. We look forward to your scheduled visit to Arizona next week and the opportunity it affords to engage in a meaningful dialogue with all Colorado River stakeholders. To that end, we respectfully request a meeting with you during your visit to discuss our interest in Colorado River management, particularly in regards to the Colorado River delta.

The Colorado River delta is of international importance, yet today the delta is facing a crisis. It has been reduced to less than ten percent of its original size due to the near total diversion of the river's flows on both sides of the border. Pressure to develop even more water for consumptive use from the Colorado River is relentless, and wildlife, freshwater fisheries, marine fisheries, bird populations, indigenous communities and the ecosystem itself are at risk.

Scientists have made preliminary estimates that the preservation process can begin with a modest amount of water -- less than one percent of the river's average annual flow. A guaranteed base flow of 32,000 acre feet per year, plus a flood flow of 260,000 acre feet every three to four years, would provide a minimal source of life sustaining water for the recently regenerated, native riparian habitat. In addition, dedication of some 100,000 acre feet of brackish agricultural wastewater would ensure the future of the Cienega de Santa Clara.

As you know, your predecessor and several basin state representatives have noted the importance of recognizing and addressing the issue of Colorado River delta restoration. Recently, representatives of the basin states, federal agencies, and the environmental community have been working together to plan a binational symposium that will provide Colorado River stakeholders with a common understanding of the Colorado River delta and its needs. This level of cooperation represents a welcome step forward, increasing communication and trust as we strive to address ecosystem needs along the lower Colorado River.

We are hopeful that, in the spirit of communication, consultation, and cooperation, all in the service of conservation you will be able to make time during your trip to Arizona next week to meet with us to discuss a consensus based approach to Colorado River delta restoration. Please contact Lisa Force of Living Rivers, at (480) 990-7839 so that we might schedule a meeting that is convenient for you.

We are sending you this request on behalf of Living Rivers, Environmental Defense, Pacific Institute, and Friends of Arizona Rivers. In addition, we would like to request a parallel meeting with you at your earliest convenience in Washington, D.C. Attached is a copy of a letter which went to Colorado River water users and agencies in March on behalf of the 133 groups, representing more than 12 million people from the United States and Mexico, who support delta restoration.

We look forward to working with you in the service of conservation.

Sincerely,

Lisa Force
Program Director
Living Rivers

On behalf of:

Jennifer Pitt, Environmental Defense
Michael Cohen, Pacific Institute
Tim Flood, Friends of Arizona Rivers

LR Letter

July 18, 2001

Letter to Commissioner Keys, U.S. Bureau of Reclamation

Mr. John W. Keys, III
Commissioner
United States Bureau of Reclamation
Department of Interior
1849 'C' Street, NW
Washington, DC 20240-0001
Sent via fax: 202-513-0314

July 18, 2001

Dear Commissioner Keys:

We wish to congratulate you on your recent appointment and confirmation as Commissioner of Reclamation. You have undertaken an important challenge at a difficult time for the once-powerful Bureau of Reclamation, as the agency approaches the end of its first century. June 17, 2002 will mark the centennial anniversary of the federal Reclamation Act, which led to the creation of the Reclamation Service and the dramatic transformation of the rivers and landscapes of the American West that followed.

At this moment, irrigators in New Mexico are threatening to blow up Navajo Dam on the San Juan River, while in Oregon's Klamath basin, farmers are excavating a new channel bypass around the Reclamation-owned A-Canal Dam. Never before has the agency faced such criticism and anger from the very constituents that it was founded to serve. Clearly, your job will not be easy as you struggle to balance competing demands for protecting the environment while providing subsidized water and power to irrigators, cities, and industries in the West.

Major coalitions have formed over the last year, demanding that Reclamation implement basinwide environmental impact studies to restore endangered species throughout their historic ranges, decommission major dams like Glen Canyon on the Colorado River, and restore flows to the dried-up deltas of the Colorado and Rio Grande Rivers.

This letter is an invitation to work with you and your staff to address these concerns and to help shape the Bureau's future, to reflect the changing needs of our society and the needs of the rivers themselves.

Today, more than 450 Reclamation dams and diversions stand across our Western rivers in seventeen states, creating about 350 reservoirs that provide water for 180 irrigation projects and water supply for more than 30 million people. These structures and engineering achievements, some of which are among the largest in the world, store huge amounts of water and generate over forty thousand megawatts of electric power, combined. Over nine million acres of farmland are irrigated by Reclamation projects. The scope and magnitude of the public works undertaken by Reclamation is unsurpassed in terms of the effects these projects have had on the lives of the millions of people who depend in some way on the rivers of this arid region.

Certainly many associated with the Bureau of Reclamation will find cause for celebrating the upcoming centennial. But for those committed to the sound stewardship of the rivers of the West, the sentiment is reversed. This century of impounding and diverting has brought with it extensive environmental and social problems that only worsen with time.

Western rivers are critical to the protection of the region's biological diversity. Scientists tell us that many Reclamation projects are at least partly to blame for the near-extinction of many native fish and other river-dependent species across the West. Pressure is building to take down some Reclamation dams, in order to restore rivers' ecological health and recover populations of native fish and river-dependent wildlife.

A century after its founding, the agency finds itself facing declining budgets, increasing pressure to reduce the enormous subsidies to water and power users that have fueled the engine of political support for much of the Bureau's public works. Reclamation itself has said, "the arid West essentially has been reclaimed." Yet some politicians still look to Reclamation to fulfill the elusive dream of boundless resource use. While the West may have been reclaimed, its rivers are far from functioning as ecosystems and may best be described as plumbing systems.

To that end, we submit to you a summary of the key issues we look forward to addressing with you and your staff. They reflect the growing public concern that Reclamation's actions and policies are out-of-step with the environmental constraints and social demands of this modern era.

1) **RECOGNIZE FEDERAL PRIMACY OF A PUBLIC RESOURCE:** Reclamation must recognize that the rivers under its jurisdiction are not the property of water agencies under contract, the states, or even in some cases the United States alone, but are held in trust for the benefit of the public. Uniform leadership, authority and policy must come from the Bureau. Reclamation must begin working to overhaul antiquated laws such as the Colorado River Compact that no longer reflect current realities of the region's available water supplies or public demands for habitat preservation and social equity.

2) **BASINWIDE EIS ON RIVER MANAGEMENT:** Reclamation must conduct Environmental Impact Statements (EISs) on the operations and management of dams and diversions, on each river basin, for the purpose of restoring ecosystem function, to fully recover endangered native fish species throughout their historic ranges, and to address the cumulative impacts resulting from both subsidized water and hydropower development.

3) **BUILD NO NEW DIVERSION OR DAMS:** Reclamation must focus its attention on reversing the environmental damage and social inequities brought on by its projects. Building new infrastructure will only exacerbate existing problems and conflicts. Reclamation must support de-authorization of the proposed Animas-La Plata water project in southwestern Colorado, for which no need has been identified for the water that would be diverted from the Animas River, and which is estimated to cost federal taxpayers at least a half-billion dollars.

4) **REDUCE THE NUMBER OF DAMS AND DIVERSIONS:** Reclamation must conduct regular reviews in accordance with NEPA guidelines of the operations of Bureau dams, as is required of private dams under FERC. Prepare decommissioning plans for all Bureau dams, so the public is aware of direct and indirect costs that will need to be incurred once decommissioning is technically, economically, or politically deemed necessary.

5) **UPHOLD INDIAN RIGHTS:** Reclamation must fully and fairly compensate Indian Nations for their water rights and offer attractive financial incentives for these Nations to dedicate a portion of their water for instream flows for habitat protection. Reclamation must ensure that all traditional fishing rights are restored and maintained, and that efforts are made to restore sacred sites impacted by Bureau infrastructure.

6) **ASSURE INSTREAM FLOW RIGHTS:** Reclamation must establish basinwide accounting systems that establish instream flows as beneficial uses and guarantee that water left in the rivers as a result of implementing conservation programs will not be available for appropriation by other users.

7) DELTA RESTORATION: Reclamation must allocate necessary water and sediment flows to restore and protect river deltas, with immediate action for the Colorado and Rio Grande Rivers.

8) MANDATORY WATER CONSERVATION & RECYCLING: Reclamation must mandate all users of federal water projects, regardless of water rights priority status, to meet mandated targeted reductions in water consumption, by implementing water conservation and recycling programs and promoting efficient technologies in municipal, industrial, and agricultural sectors. Reclamation must mandate shifts in cropping patterns by requiring irrigators to replace water-wasting, low-value alfalfa, hay, and other livestock feed crops grown on lands served by Reclamation irrigation contracts, with vegetable and other crops that use significantly less water per acre. Reclamation must work to revive the spirit of the Reclamation Act to support only family-owned farms with federal project water.

9) REFORM HYDROPOWER MARKETING: Reclamation must adjust subsidized rates for hydropower generated at federal dams to reflect current national-average wholesale price for electricity. Require retailers of federal power to meet mandated targeted reductions in customer consumption by implementing aggressive demand-side management and energy conservation programs, including providing low-cost loans to all ratepayers for installing their own renewable energy supply infrastructure.

10) ENFORCE ENVIRONMENTAL LAWS: Reclamation must assist in the aggressive enforcement of environmental laws including the Clean Water Act, Endangered Species Act, and other laws, to stop the point and nonpoint sources of pollution, and ensure clean-up of all known pollution sources by 2010, and recognize a right to clean drinking water for all people in the watershed.

Too many dams have been built across the over-allocated rivers of the West, and too much water is being diverted from them. Outdated laws discourage water users from conserving and stand in the way of restoring water flows to stressed streambeds. The dried-up deltas of the Colorado and Rio Grande Rivers bear silent testimony to Reclamation's failure to act as responsible stewards of the rivers it has developed.

Living Rivers looks forward to working with you to bring about the long-needed changes at the Bureau of Reclamation. We look forward to a meeting with you at your earliest convenience.

But please also understand that the rivers of the West can't survive much longer the bureaucratic inertia and neglect that has characterized Reclamation's first century. If the agency is unwilling to change, then conflicts such as those currently being played out in the Klamath Basin and the San Juan River are bound to continue. For the sake of rivers and the people and other life that depends upon them, we look forward to working with you as you face this challenge of leading the Bureau of Reclamation into its second century.

Sincerely,

Owen Lammers
Executive Director

On behalf of:

Denise Boggs
Executive Director
Utah Environmental Congress
Salt Lake City, Utah

Shawn Cantrell
Northwest Director
Friends of the Earth
Seattle, Washington

Daniel Patterson
Ecologist
Center for Biological Diversity
Tucson, Arizona

LR Press Release 07/18/01

John W. Keys, III takes over helm of Bureau of Reclamation

Environmental groups welcome new Reclamation Commissioner, express desire to work with agency during troubled times to redirect the Bureau's mission toward restoration.

MOAB, UTAH -- Environmentalists welcomed today John W. Keys, III as Commissioner of Reclamation, expressing their desire to work with him and his agency in redirecting the mission of the US Bureau of Reclamation from development to environmental restoration.

In a letter sent today on Mr. Keys' first full day at work, the environmental group Living Rivers requested a meeting with the new Commissioner to discuss a ten-point restoration agenda for Reclamation's second century. The city of Moab, Utah is Mr. Keys' hometown, as well as Livingm Rivers' headquarters.

"We welcome Mr. Keys' appointment and look forward to working with him on critical issues affecting the rivers of the West, and ensuring that Reclamation will be admired in its second century as an agency that solved the problems of dried-up rivers and fish species going extinct," said Owen Lammers, executive director of Living Rivers. "With only 334 days left in Reclamation's first century, time is running out to address the major problems with the collapse of the elaborate plumbing systems the agency has constructed and managed."

Joining Living Rivers in the letter to Mr. Keys was the Tucson, Arizona-based Center for Biological Diversity, Salt Lake City-based Utah Environmental Congress, and the national organization Friends of the Earth.

Mr. Keys is taking the reins at Reclamation during an historical and difficult time for the once-powerful federal bureau. His confirmation comes amid reports that angry irrigators are committing vandalism at Reclamation facilities in Oregon's Klamath Basin and threatening to blow up the Navajo Dam in New Mexico.

"Protection and recovery of endangered fish and other species dependent on healthy Western rivers needs to be the number-one priority for Reclamation," said Daniel Patterson, ecologist with the Center for Biological Diversity. "Reclamation must act swiftly and decisively to stop the illegal vandalism and anti-environmental threats by irrigators, and get to work saving the species before they go extinct."

The groups noted in their letter that the agency will celebrate its centennial in 2002, and sought a meeting with the new Commissioner.

"A hundred years of dam building, canal digging, tunnel blasting, and flood irrigating have created benefits but also many problems," said Shawn Cantrell, the Seattle-based northwest director of Friends of the Earth. "Leadership is sorely needed in the federal agencies at this time to reassert federal control over Western rivers and begin dismantling fish-killing dams such as those along the Snake River."

River activists across the country are now coming together to promote major reform within the Bureau, and demanding the agency undertake basinwide studies to reveal the most effective and fastest ways to recover endangered species, restore the dying deltas of the Colorado and Rio Grande Rivers, halt construction of new dams such as Animas-La Plata in southwestern Colorado, and decommission dams such as Glen Canyon Dam on the Colorado River.

"Reclamation's engineering prowess may have been the theme of its first 100 years, but cleaning up the mess and ensuring equitable water supplies and environmental restoration must be the focus now," said Denise Boggs, executive director of the Utah Environmental Congress. "While our children will be paying for Reclamation's multibillion dollar boondoggles well into the next century, we still have a narrow window of time to fix much of the physical damage to the rivers' ecosystems."

The above organizations represent part of the rapidly growing nationwide coalition that is organizing around the agency's centennial to mobilize public awareness of the need for reform of the Bureau of Reclamation.

07/30/01

Commissioner Keys Responds

United States Department of the Interior
Bureau of Reclamation
Washington, D.C. 20240
Owen Lammers
Executive Director, Living Rivers
P.O. Box 466
Moab, UT 84532

Thanks for [your letter of July 18, 2001](#). I am indeed excited about being the 18th Commissioner of the Bureau of Reclamation. It gives me the opportunity to work with water users and water user organizations all over the West to address our many pressing water issues.

I am especially honored to be the Commissioner of Reclamation during the 100th anniversary of the passage of the Reclamation Act of 1902, which created the Bureau of Reclamation. There's much more to a centennial celebration than just looking back at what has happened over the last 100 years. We can be proud of our accomplishments over that time, but we must also look to the future to see how the Bureau of Reclamation and its facilities can best be used to help meet the resource management challenges of the next 100 years in the West.

The Bureau of Reclamation will be good stewards of our valuable land and water resources. In some cases, that means guarding our remaining free flowing rivers and streams. In other cases that means using our multi-purpose reservoirs for all of their varied intended uses. We can manage the releases of water from our reservoirs to meet multiple uses throughout its flow to the end user. Water can be used for recreation while stored in the reservoir, then for hydro power generation when it is released, for instream flows, fish and wildlife, and additional recreation while in the river, for water quality control in the river, and in the end for irrigation, municipal and industrial needs, and domestic water supply. The challenge for all of us is to manage these flows in a manner that is best for the water users, the river, and its associated ecosystem.

The Bureau of Reclamation is, and will continue to be, an agency of the future. We will remember our heritage, but we will recognize that traditional project needs must be balanced with ever increasing and changing demands for water so that we can be the best stewards of our water resources in the future.

Some of the points raised in your letter are issues that we can work on with you and your organization. Some of the points have already been addressed, and we should get on with business with the decisions that have been made. The Bureau of Reclamation will meet all the rules, regulations and laws that Congress has passed to govern our work. We will meet our contracts for water deliveries, when at all possible. We will work closely with all water users to try to find new and innovative ways to meet their needs. We will work closely with the states to comply with the water rights they administer, and,

we will work with all of the Native American Tribes to fulfill the Department of the Interior's trust responsibility to them.

With all of that said, I believe that you will see a Bureau of Reclamation for the 21st century that is well versed in collaborative and cooperative approaches to complex and contentious water problems, a Bureau with the expertise to meet the technical challenges of making those water deliveries and generating the power needed by our country, a Bureau that is environmentally sensitive, and a Bureau that is responsive to the ever changing needs of our society.

Thanks again for your intriguing letter. I hope to see you in Moab sometime in the near future. Maybe you can buy me an ice cream cone.

Sincerely,

John W. Keys, III
Commissioner

07/15/01

Centennial Reform Proposal for the Bureau of Reclamation

1) **RECOGNIZE FEDERAL PRIMACY OF A PUBLIC RESOURCE:** Reclamation must recognize that the rivers under its jurisdiction are not the property of water agencies under contract, the states, or even in some cases the United States alone, but are held in trust for the benefit of the public. Uniform leadership, authority and policy must come from the Bureau. Reclamation must begin working to overhaul antiquated laws such as the Colorado River Compact that no longer reflect current realities of the region's available water supplies or public demands for habitat preservation and social equity.

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4) **REDUCE THE NUMBER OF DAMS AND DIVERSIONS:** Reclamation must conduct regular reviews in accordance with NEPA guidelines of the operations of Bureau dams,

as is required of private dams under FERC. Prepare decommissioning plans for all Bureau dams, so the public is aware of direct and indirect costs that will need to be incurred once decommissioning is technically, economically, or politically deemed necessary.

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LR Testimony 07/09/01

House Subcommittee on Water and Power

Written testimony submitted for the Field Hearing of the United States House of Representatives Subcommittee on Water and Power, held in Salt Lake City on Monday, July 9, 2001, on the subject of "Management of the Colorado River in the 21st Century, a Seven State Perspective"

**A CITIZENS' TEN-POINT AGENDA FOR MANAGEMENT OF THE COLORADO RIVER
IN THE TWENTY-FIRST CENTURY**

JULY 9, 2001

Honorable Jim Hansen
Chair, Resources Committee
House of Representatives
Washington, DC 20515

Mr. Chairman and Members of the Subcommittee on Water and Power:

We thank you for the opportunity to present testimony on the subject of "Management of the Colorado River for the 21st Century." We respectfully submit the following remarks on behalf of the environmental groups Living Rivers and Utah Environmental Congress.

Living Rivers, based in Moab, Utah, and Scottsdale, Arizona, is the leading advocacy group dedicated to restoring the Colorado River's natural ecosystems throughout the basin. The Utah Environmental Congress has its headquarters in Salt Lake City and focuses its work primarily on protecting Utah's national forest lands and other federally owned public lands within the state. A major priority for both our organizations is in promoting public awareness of the value of healthy rivers and watersheds.

We submit these comments for the record to register our interest and concern that the Colorado River has been managed primarily for the purpose of promoting unsustainable growth and development in the Southwest, often with little apparent regard for the ecological constraints of the river's ecosystem.

Many citizens today have grave concerns about the Colorado River and its future. Scientists tell us that the river's ecosystem in many places is in trouble or in a state of collapse. Many millions, perhaps hundreds of millions, of taxpayer dollars have been spent to date, with decidedly mixed results, attempting to mitigate environmental damage caused by Reclamation-sponsored water project throughout the river basin.

Recently a proposal was approved by the House of Representatives to begin site preparation work on a particularly irrational water project known as Animas-La Plata. The A-LP, as it is known, may be the last big-spending Reclamation project, and appears to embody some of the worst economics of any project in the agency's history. Taxpayers may end up footing the bill for much for the entire project, for which no use or need has yet been demonstrated.

A number of other problems in the river basin are acute or soon will be so. Endangered species are threatened with extinction, toxic pollutants throughout the basin threaten water quality. High evaporation rates from reservoirs such as Lake Powell and Lake Mead account for losses several times what's needed to provide significant restoration benefits for the delta.

But along with crises, important opportunities often arise. The U.S. and Mexican governments in December last year signed a diplomatic agreement--Minute 306--committing the two nations to a binational dialogue on ways of addressing the pressing question of providing flows to the delta. We strongly support this process and look forward to participating in the dialogue, which is now scheduled to begin officially in mid-September in Mexicali, Mexico. It is our hope that the Congress will be supportive of this process. It is time to look for creative solutions

Next year, 2002, will mark the Centennial of the Reclamation Act and nearly 100 years of federal role in building and operating irrigation and other water projects across the West. Recently Living Rivers led a number of groups in sending a letter to Acting Commissioner of Reclamation, Mr. William McDonald, inviting him to join us in supporting a major restructuring of the agency, toward large-scale river restoration and away from water development. We suggested renaming the agency to the "Bureau of Restoration" to reflect a shift in bureaucratic priorities.

We believe the time has come for some important decisions about the future of the Colorado River. No longer can we continue taking water out without giving something back. For three-quarters of a century, the 1922 Colorado River Compact has overallocated the river and created a system of incentives that reward water users for taking as much water as possible--instead of finding ways to conserve. Today the Colorado River has no additional water to give; the river's limited waters can only be reallocated. Present and future management of the Colorado River turns on this important point.

We call upon the United States and all the seven basin states--Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming--to come together in support of reforming both the Bureau of Reclamation and the antiquated and increasingly unworkable system of water allocations under the Colorado River Compact. The interests of diverse, river-dependent communities of people--and wildlife--must be represented and given equal consideration with other users for access to water supplies. In particular, the federal and state governments must respect and give special priority to the interests of the indigenous peoples of the US and Mexico whose water rights in many cases predate the large industrial users.

A primary goal is to make the Colorado River of the 21st century function once again as a river. Governmental officials must acknowledge that the long-term interests of the region's inhabitants cannot be served so long as the river continues to be viewed and managed as a conveyance system.

We have identified the following issues that must be addressed in the context of reprioritizing and reallocating the river's limited water supplies:

1) ONE PERCENT FOR THE DELTA: Allocate, in concert with the Republic of Mexico, at least one percent of the river's annual flow to delta restoration.

2) BASINWIDE EIS ON RIVER MANAGEMENT: Conduct an Environmental Impact Statement (EIS) on the operations and management of the Colorado River, its dams and diversions, for the purpose of restoring ecosystem function, fully recovering endangered native fish species, and addressing cumulative impacts resulting from subsidized water and hydropower development.

3) REDUCE THE NUMBER OF DAMS AND DIVERSIONS: Build no new diversions or dams on the Colorado River or its tributary streams, and prepare decommissioning plans for all federal dams in the basin, including Glen Canyon Dam.

4) COMPENSATE INDIAN WATER RIGHTS: Fully and fairly compensate Indian Nations in the Colorado River basin for their water rights and offer attractive financial incentives for Nations to dedicate a portion of their water for instream flows to the Gulf of California.

5) ASSURE INSTREAM FLOW RIGHTS: Establish a basinwide accounting system, common to all states, that establishes instream flows as a beneficial use and guarantees that water left in the rivers as a result of implementing conservation programs will not be available for appropriation by other users, and can flow undiverted to the Gulf of California.

6) MANDATORY WATER CONSERVATION & RECYCLING: Require all users of river water in the basin, regardless of water rights priority status, to implement mandatory water conservation and recycling programs to reduce overall consumption, discourage waste, and promote efficient technologies in municipal, industrial, and agricultural sectors.

7) ENFORCE CLEAN WATER LAWS: Aggressively enforce the Clean Water Act basinwide, on both point and nonpoint sources of pollution, and ensure clean-up of all known pollution sources by 2010, and recognize a right to clean drinking water for all people in the watershed, and provide state of the art water and sewer treatment facilities for all communities in the US and Mexican portions of the basin.

8) REFORM HYDROPOWER MARKETING: Adjust subsidized rates for hydropower generated at federal dams in the Colorado River basin and marketed by the Western Area Power Administration (WAPA), to reflect current national-average wholesale price for electricity, and require retailers of WAPA power to establish aggressive demand-side management and energy conservation programs, including providing low-cost loans to all ratepayers for installing solar photovoltaic units on new and existing structures.

9) CANCEL ANIMAS-LA PLATA: Deauthorize the Animas-La Plata water project in southwestern Colorado, for which no need has been identified for the water that would be diverted from the Animas River, and which is estimated to cost federal taxpayers at least a half-billion dollars.

10) REFORM IRRIGATION PROJECTS: Shift cropping patterns on participating water projects, by requiring irrigators to replace water-wasting, low-value alfalfa, hay, and other livestock feed crops grown on lands served by Reclamation irrigation contracts, with vegetable and other crops that use significantly less water per acre.

These ten policy points are not intended to be an exhaustive list of the reforms needed in Colorado River management but constitute a brief summary and representation of the need for reform. We extend an invitation to the federal and state governments to work with members of nongovernmental organizations such as ours, and the indigenous communities on both sides of the international border, to devise a workable and just solution to the pressing problems, some of which we have discussed here in this brief paper.

What we suggest can be viewed as no less than a new compact for the river--an inclusive, multilateral agreement marking a significant break from tradition. It would require a commitment by the states and the federal government to cooperate with and negotiate with a set of partners in a manner unprecedented in the history of Western water law. A dramatic proposal, and one that we submit is desperately needed by the ailing river and the communities on its banks.

Change does not come without cost, and there are some significant costs involved in making any changes to current management priorities and cleaning-up the river's problems. But as with all economic decisions, it is important to ask what will be the cost of not taking action now. Waiting until some future date when the clean-up will only be more difficult--if not impossible. We may not have the luxury of putting off these decisions much longer if we are to preserve the biological diversity and cultural uniqueness that helps define the Colorado River watershed.

Through the previous century, regional leaders tended to look at the river principally as a source of water and hydroelectric power to support industrial and economic development. Federal subsidies for water and power infrastructure made possible a development boom in the Southwest that seems at least as robust today as at any time in the last century. Each day hundreds more people take up residence in Las Vegas and Phoenix. The phenomenal migration is the direct result, from a historic standpoint, of the construction of dams on the Colorado River. Pressure is building for change, as Nevada grapples with tight supplies yet the neighboring State of Utah remains nowhere near its allocation limit.

Colorado River water is fast becoming a valuable commodity, and many predict that basinwide water marketing will by necessity become a reality, while others resist the idea. The stakes are high. Inaction may not be an option much longer. The 21st century may well see a reversal of many of the outdated policies that have in part caused the current situation. With luck and leadership, the future will be much kinder to the Colorado River and the people living along it.

We leave this discussion, however, with a caveat and a request. Nongovernmental organizations such as Living Rivers and the Utah Environmental Congress are building networks of people who are increasingly well informed on river and watershed issues,

and whose values have more in common with protecting the natural world than exploiting it. A significant demographic shift is occurring in the Southwest, one that threatens the political supremacy of the ranching, logging, and mining industries. We respectfully submit that the economic, social and cultural future of the region depends on our leaders' ability to recognize and prepare for the inevitable changes that will accompany the changing priorities of the residents.

Our organizations are working to make possible the kind of management needed to salvage the Colorado River and begin the task of restoring its ecosystem to a functional semblance of its former glory.

If we may be of assistance to the Subcommittee by providing you with information and elaboration on the points we make in this letter, please do not hesitate to contact us at the address below. The solutions to the problems we have identified can only be reached by first engaging a constructive dialogue, both regionally and nationally, about the lands and waters that make up this amazing watershed.

With your permission, Mr. Chairman, we ask that these remarks be inserted in the official record of this hearing. We are available to answer any questions the Subcommittee may have.

Sincerely,

David Orr
Living Rivers
Moab, Utah
435.259.1063

Craig Axford
Utah Environmental Congress
Salt Lake City, Utah
801.466.4055

High Country News
Writers on the Range

July 5, 2001

by Michelle Nijhuis

I step into the elevator, the doors close, and we start dropping ... and dropping ... and dropping. Our tour leader clears his throat. "My name is Mark," he announces, "and I'll be your dam" -- pause for emphasis -- "guide."

All 20 of us in the elevator laugh at the corny joke, probably because we're nervous. We're descending into Hoover Dam, the oldest concrete plug on the Colorado River and

the tallest dam in the Western hemisphere. From the inside, the thing does feel pretty dam enormous.

When we hit bottom, we extract ourselves from the elevator and tail obediently after Mark. We gape at the giant turbines, pushing back our Bureau of Reclamation-issue hardhats to get a better view. When we step outside, the dam looms above us, 726-and-a-half feet of impassive concrete. I feel about two inches tall.

The equipment is impressive, but it's the stories about the dam workers that stick in my head. The concrete, shoveled and smoothed by hand, could be stretched into a two-lane highway from San Francisco to New York. For four to five dollars a day, Mark tells us, men muscled the structure into shape, sweating their way through hundred-degree temperatures. Their wives and kids were equally tough, surviving in a scatter of shacks while they waited for company housing.

When the dam was dedicated in 1935, the dam workers and their families were national heroes. Their labors had given the nation something to be proud about, and national pride was in short supply in the 1930s. But even Mark, a dedicated dam-booster if there ever was one, hints that the story isn't as simple and heartwarming as it sounds. Though he doesn't tell the whole history, he makes it easy to piece together.

These days, the dam does provide electricity, and it stores water for sprawling Las Vegas. But neither was its primary reason for being. All that concrete was originally intended to keep the lower Colorado River from doing what it had done for eons: flood California's Imperial Valley.

Produce farmers had been thrilled to discover the valley's rich soil in the late 1800s, but the massive floods, they soon found, were inconvenient.

So they lobbied the federal government for an upstream dam, a bulwark against what they saw as the river's bad habits. Congress signed off on the Boulder Canyon Project Act and put up \$165 million -- big money in those lean days. The project eventually paid for itself through electricity sales, and the government thought it had gotten a great deal.

But the real winners were the Imperial Valley produce-barons. When the dam was completed, investors flocked south and business in the valley took off. California's desert basin still produces millions of dollars every year in artichokes, oranges and other goodies.

I am sure the men who built Hoover Dam worked hard and skillfully, and the monolith they built remains impressive. It's the dam's effects these days that I'm wondering about. When the tour ends, and I'm left standing by the highway on top of Hoover Dam, I look over the edge, fighting vertigo, and stare at the cold, clear water far below.

This dam isn't my idea of an icon. My generation didn't grow up during the Depression, and we didn't grow up desperate for a national morale boost. With the benefit of hindsight, we can see what the dam has accomplished.

There are a thousand books that tell us how Hoover spawned a plumbing system of river plugs, up and down the Colorado. There are dozens of river runners who remember how the dams destroyed magnificent canyons, and hundreds of tribal members who have seen their sacred sites disappear underwater. There are environmental activists -- lots and lots of 'em -- who can tell us about the wildlife and wild habitats that are no more. And there are the people who live downstream, in the river's delta in Mexico, who have a story to tell about a paradise wrecked.

So I'm hoping my generation can create an icon of its own. How about a Colorado River that acts in spring like a river? One that could spill floodwaters through these dams, gradually restoring native wildlife habitat from Wyoming to Mexico.

A group of young activists from the Glen Canyon Action Network want to make that kind of river real, so this spring they took their message on the road. They drove an empty water truck from Salt Lake City to Los Angeles, weaving along the course of the Colorado. They stopped in cities and towns along the way, preaching water conservation and talking about the river that could be.

They've got big dreams. But then, so did the people who built Hoover Dam.

Michelle Nijhuis is a contributor to Writers on the Range, a service of High Country News in Paonia, Colorado (www.hcn.org). She is a reporter and associate editor of High Country News.

Media Advisory 07/05/01

Congressional hearing on Colorado River issues ignores citizens' input

Congressional hearing on Monday will focus on Colorado River management issues; Governors invited to testify--but not citizens
Environmental groups to offer alternative view

The US House of Representatives' Resources Subcommittee on Water and Power will hold a field hearing Monday in Salt Lake City on the topic of "Management of the Colorado River for the 21st Century: A Seven-State Perspective." Representative Jim Hansen of Utah, Chair of the House Resources Committee, is expected to preside. The hearing will be at the Utah Department of Natural Resources building, 1594 W. North Temple Avenue (corner of Redwood Road), at 9:30 AM July 9.

Subcommittee staff indicated on Thursday that the Chairman has invited the Governors of the seven Colorado River basin states to testify and give their views on Colorado

River management. The seven basin states are Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming.

Representatives of Indian Nations and citizens groups reportedly will not be permitted to testify at Monday's hearing.

Nevertheless, Living Rivers--Utah's leading advocacy group promoting Colorado River restoration--will be in attendance to offer an environmentally sound and socially equitable vision for the river. The Utah Environmental Congress and other Utah environmental organizations will be joining Living Rivers in support of healthy watersheds and river ecosystems.

"Throughout the 20th century, the government dammed, diverted, and developed the Colorado River into the world's most elaborate plumbing system," said David Orr, Field Program Director for Living Rivers. "In the 21st century, the people of Utah and the other basin states are calling for restoration of the river's ecosystem and rational allocation of the river's limited water supplies."

Current efforts to mitigate damage to the river and restore ecological function are considered to be inadequate, according to Orr. Despite the expenditure of tens of millions of federal tax dollars over more than a decade, endangered fish species recovery programs in the basin have little success to show. The Colorado River no longer reaches the sea because of diversions, and the once-productive delta is completely dry. Water allocations based on faulty, 80-year old data reward waste and inefficiency while discouraging conservation.

An environmental agenda for the Colorado River in the 21st century requires reforming the US Bureau of Reclamation, the agency most responsible for damming and diverting the rivers of the West.

"Reclamation's centennial will be celebrated in 2002," said Orr. "We call for a change of mission--from being the agency of big dams and dried-up rivers to the 'Bureau of Restoration.'"

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LR in the News 07/02/01

Environmental group riled up over rainbows

By ROB BREEDING
Associate Editor
Arizona Daily Sun

The trout fishery at Lees Ferry is a freak, an anomaly caused by the construction of Glen Canyon Dam. No trout could survive the warm, silty water found in pre-dam Glen Canyon.

But since 1963 the dam has changed the river, releasing a steady current of cold, clear water that creates ideal conditions for trout. Rainbow trout stocked by the Arizona Game and Fish Department have taken hold, and Lees Ferry has developed into a blue-ribbon trout fishery with an international reputation. The Ferry has become a mecca for fly fishers, especially in the winter months when the spawning rainbows are most vulnerable to anglers.

For the last three decades, the trout fishery at Lees Ferry has generally been regarded as an asset -- an unexpected benefit of Glen Canyon Dam -- that provides recreational and economic opportunities for northern Arizona.

So it came as something of a surprise last week when Living Rivers, a Moab, Utah-based group that describes itself on its Web site as "A people's movement working to protect and restore riverine ecosystems," sent out a media advisory stating the group planned to protest the presence of rainbow trout at Lees Ferry at a pair of National Park Service scoping meetings in Flagstaff and Page.

Living Rivers would also like to see motorized boats banned from the Lees Ferry reach, and it wants public access to the tunnel near Page that provides access to the river at the base of the dam. Only Wilderness River Adventures, a commercial outfitter that runs tours down the Lees Ferry reach, now has access.

The Lees Ferry reach of the Colorado is part of the Glen Canyon National Recreation Area. Recent visitor surveys have revealed an increasing perception of conflicts between user groups. In addition, some visitors have reported concerns with crowding and a diminished quality of experience.

For these reasons, the Park Service has initiated a Recreation Management Plan for the river that will address visitors' perceptions of crowding, identify any resource conflicts, and evaluate the need for new management strategies. The overall study process is expected to extend over an 18-month period.

Stable flows in recent years have led to a boom in rainbow trout reproduction at Lees Ferry. In fact, Game and Fish hasn't stocked rainbows at Lees Ferry since 1999. Game and Fish now estimates a rainbow trout population of 250,000 to 300,000 adult fish in the 15-mile reach of Lees Ferry.

Living Rivers Field Program Director David Orr fears the trout are migrating downstream and eating juvenile humpback chub in their last Grand Canyon redoubt: at the confluence with the Little Colorado River, where the fish spawn in the warmer waters of the tributary stream, some 61 river miles downstream from Lees Ferry.

"It's likely (rainbow trout) are being pushed downstream," Orr said.

Bill Persons, a Game and Fish fisheries biologist, said past research hasn't indicated a downstream migration of rainbow trout.

From 1991 to 1997 Game and Fish stocked about 400,000 rainbow trout that were marked with wire tags at Lees Ferry. From 1992 to 1999, 2,021 downstream rainbow

trout were examined for tags and just three turned up positive. Actually, it's not even certain the three positives were Lees Ferry fish since the scanner only detected the presence of metal in the fish. The positive readings could have been broken-off fish hooks.

If the fish weren't Lees Ferry fish, then where are they coming from?

There are two trout strongholds in the Canyon closer to the Little Colorado than Lees Ferry. A concentration of rainbow trout is found near the mouth of Nankoweap Creek about 10 miles upstream from the Little Colorado River. And a population of brown trout, a more notorious fish eater, is concentrated near Bright Angel Creek about 27 miles downstream from the Little Colorado. The Bright Angel brown trout were originally stocked by the Park Service in 1923, and are now a self-sustaining population.

Last year, Game and Fish biologists collected stomach contents from 800 brown trout in the Canyon. The contents are being examined to see if they include humpback chub remains.

As for rainbow trout, the role of predation on native fish is unclear. Unlike brown trout, rainbows do not focus on eating other fish. Instead, aquatic insects and freshwater shrimp make up the bulk of their diet. But large rainbow trout will eat smaller fish.

Persons said Game and Fish might install a fish weir at the mouth of Bright Angel Creek. The weir would trap spawning trout as they move upstream. Persons said the data collected would help determine whether the Bright Angel population is spawning in the creek, or in the mainstem of the Colorado.

The results might ultimately lead to the construction of some type of fish barrier in Bright Angel that would cut off brown trout from spawning areas upstream, but that action would require an environmental analysis to be completed first, Persons said.

Humpback chub are native to the Colorado River system and are uniquely adapted to the pre-dam conditions of highly fluctuating flows in the Canyon before Glen Canyon Dam was built. In fact, some biologists speculate the unique hump of the chub is an adaptation that allows the fish to use the pressure of the current to hold its place on the bottom during high flows.

In the pre-dam Canyon, flows could range from 1,000 cubic feet per second during the winter months to torrents of 100,000 cfs or more of chocolate-colored, silt-laden runoff in the spring. Water temperatures pre-dam were just as variable, ranging from near freezing to the 80s during the summer.

Today, flows range from 5,000 cfs up to the high teens, with occasional spike flows of 30,000 cfs or more. The water pours from the dam at a steady 48 degrees.

The only remaining breeding population of chub in the canyon uses the warmer flows of the Little Colorado River to spawn. Orr fears that a major disruption of that river system, such as a chemical spill in the Little Colorado where Highway 89 crosses it near

Cameron, could wipe out the fish. Orr said that additional spawning sites for chubs were critical to the endangered fish's recovery.

Persons agreed, but said that was unlikely without significantly warming the river. And that solution comes with its own set of complications. For instance, striped bass -- native to the Atlantic Ocean and a voracious schooling predator that can reach 50 pounds or more -- are plentiful in Lake Mead below the Canyon. The frigid water in the Canyon keeps the fish downstream. Stripers are also found in Lake Powell, as are another introduced predator, smallmouth bass.

Losing the trout fishery at Lees Ferry would have an economic impact in small, northern Arizona communities like Marble Canyon. Dave Foster, whose family owns Marble Canyon Lodge, said anglers make up about 30 percent of their business. Most of the angler traffic comes during the winter, when regular tourist traffic slows down.

"Fishing picks up that slack and keeps us going through the winter months," said Foster, who also runs Marble Canyon Guides.

Foster and Lees Ferry Anglers co-owner Jeff English said they are converting their powerboats to four-stroke engines, instead of two strokes, which are noisier and create more air and water pollution. English said 13 of Lees Ferry's 15 guide boats are four strokes. Three of Foster's five guide boats run four strokes. Both recognize that two strokes will ultimately be phased out altogether.

In the absence of good evidence that Lees Ferry trout are preying on Grand Canyon humpback chub, Game and Fish will likely reject Living Rivers' call to eliminate any limits on trout at Lees Ferry (all limits for non-native fish have been lifted in the Grand Canyon) and continue its two-pronged management strategy in the Colorado River.

"We place great value, and the public places great value, on the trout fishery at Lees Ferry. We also place high value on the humpback chub in Grand Canyon. Our goal is to manage for both," said Larry Riley, Game and Fish fisheries branch chief. "I'm not sure they have to be mutually exclusive."

Rob Breeding can be reached at 556-2263, or by e-mail at rbreeding@azdailysun.com.

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Regional News 06/27/01

Hopi and Navajo protest Peabody's coal slurry pipeline

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Indian Country Today

June 27, 2001

By Brenda Norrell

Today staff

FLAGSTAFF, Ariz. - Former Hopi Chairman Ferrell Secakuku joined Navajos from Big Mountain to protest the use of aquifer water for Black Mesa coal slurry and urge creation of new, sustainable forms of energy.

"We are not always on the same side of the fence, but today we are all trying to do something on the same side of the fence," Secakuku told a crowd of American Indians and other environmentalists that included longtime resisters of Navajo relocation at Big Mountain.

"We found out the water table is being depleted," Secakuku said, denying reports by the federal government and Peabody Western Coal Co. that claimed otherwise.

Secakuku entered the offices of Black Mesa Pipeline Inc. to urge officials to halt the slurry pipeline that annually depletes 1.3 billion gallons from the Navajo Aquifer. He said using water to transport coal threatens to leave the Hopi village of Moenkopi without water in the year 2011.

"Every time you breathe, Peabody is pumping 50 gallons," Secakuku had told the crowd.

Secakuku said even though he is a Republican, Bush's energy policy, pressing to increase electricity and oil production, causes him serious concern.

Further, he said there has been no response from Interior on a proposal to provide Lake Powell water to Hopi for drinking water. He said if no alternative water source is provided by the year 2004, he and Preston would march to the Hopi Tribal Council and demand that contracts be severed, ending the slurry and coal mining on Black Mesa.

"By the year 2004, we will stop the mining."

"Soon the aquifer will crumble and no longer take the recharge."

Minutes after Secakuku entered the office, one protester outside was handcuffed, arrested and charged with blocking the sidewalk.

As the group of about 25 peaceful protesters dispersed, Flagstaff police arrived in five police cars, a police panel truck and undercover officers in unmarked vehicles.

An hour earlier, during the peaceful kickoff of the "Just and Sustainable Energy Campaign," Roberta Blackgoat, held a sign proclaiming, "The Creator is the Only One who is Going to Relocate Me," and appealed for protection of Mother Earth.

"I'm traveling for the whole universe, and the people around the globe," said Blackgoat who has spent years opposing Navajo relocation. She said coal is the liver of Mother Earth and the gouging of her liver is making the Earth sick.

"Mother Earth is really suffering. She is having a lot of pain." Appealing for future generations, she said, "I am doing this for all these unborn."

Blackgoat said money and materialism possess the peoples' mind and hearts. "The money is the most important part of the government."

Her son, Danny Blackgoat, told protesters, "With one voice we can free the globe.

We are all in a common struggle." He said corporations are draining the resources of the world. "They have been taking, taking, taking. They have never been able to give anything in return."

Urging life in harmony with nature, he countered those who say life is harsh on Big Mountain and Black Mesa. "The environment is very nurturing, you just have to know how to live with it."

Hunter Red Dog, Diné/Dakota member of Casper's 602 Band, and Tohono O'odham Tim Toro and Mike Flores were among Hopi, Navajo, Tohono O'odham and Dakota opposing coal slurry and calling for creation of alternative energy sources.

David Orr, director of field programs for Living Rivers in Moab, Utah, urged solidarity between Indigenous groups fighting for protection of Mother Earth and environmentalists struggling for restoration of the Colorado River watershed and other ecosystems.

Paul Torrence, of Arizonans for the Arctic Refuge, said proposed oil drilling in the Arctic National Wildlife Refuge threatens caribou, grizzly bears, snow geese and owls. It also threatens the culture and way of life of Gwich'in Indians.

"It would destroy the caribou herd," he said of the 129,000-member Porcupine River caribou herd.

The protest focused on Black Mesa Pipeline, which carries coal slurry from Peabody's Black Mesa Mine. Enron Corp., a major contributor to the Bush campaign, owns the pipeline. Financial disclosures last month showed Bush's White House staff owned stock in Enron.

Bucky Preston, Hopi, encouraged traditional American Indians to share their ways with others to preserve the Earth and its resources. "We need to close the mines down wherever they may be. We need to teach the whole world what we know.

"We need to do this in order to be who we are."

Flagstaff Activist Networks organized the protest with Hopis, Navajos, Sierra Club, Black Mesa Trust, Glen Canyon Action Network, Living Rivers and others. The groups urged participation in a "Lights Out! On Cheney Bush Energy Policy," a rolling national electricity blackout, June 21 from 7 to 10 p.m.

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LR Press Release 06/18/01
Stop Animas-La Plata Project

CONTACT: John Weisheit or David Orr 435-259-1063

Citing Animas-La Plata Project as a "Dinosaur," groups call for investigation of project's economic and environmental problems

Environmental groups call on Reclamation Commissioner to reform agency

DURANGO, COLORADO, June 18 -- On the 99th anniversary of the passage of the federal Reclamation Act, a coalition of fifteen regional grassroots environmental, agricultural and citizens organizations sent a letter to Acting Commissioner of Reclamation J. William McDonald, calling on him to lead the Bureau of Reclamation in a new, environmentally sound direction as the agency approaches its centennial celebration next year.

*** Full text of groups' letter attached below ***

The groups also called for an investigation by the agency of apparent economic improprieties and environmental damage caused by the recently authorized Animas-La Plata (A-LP) project in southwestern Colorado and northwestern New Mexico. The Bush Administration recently recommended a multimillion-dollar appropriation for the project that would divert large amounts of water from the Animas River into a proposed off-stream reservoir near Durango.

The letter is the first in a series that will highlight outdated and environmentally harmful programs and activities of the Bureau of Reclamation, the groups said.

"As we near the end of a century of Reclamation's public works, we look around us and see dams, ditches, and dewatered rivers across the West," said John Weisheit, Conservation Director of Living Rivers, based in Moab, Utah. "The agency has to turn around and begin restoring the natural beauty and ecological functioning of the rivers of the West."

Environmental groups from around the Four Corners region joining with Living Rivers in signing the letter to Acting Commissioner McDonald include: Animas River Agriculture Irrigators Association, Cedar Hill Clean Water Coalition, Citizens Progressive Alliance, Colorado Public Interest Research Group, electors Concerned about Animas Water, Forest Conservation Council, Forest Guardians, Four Corners Action Coalition, Friends of the Animas River, Glen Canyon Action Network, San Juan Audubon Society, San Juan Citizens Alliance, Sheep Mountain Alliance, and Taxpayers for the Animas River.

"The Animas-La Plata project is a dinosaur," said Philip Doe, chairman of the Citizens Progressive Alliance and a retired policy officer with the Bureau of Reclamation. "The bad planning, bad economics, and lack of concern for the environment that characterize this half-billion dollar boondoggle should move the Bureau and Congress to conduct a full investigation before a single yard of dirt is ever moved."

In their letter, the groups cited the apparent lack of uses or need for the Animas River water to be diverted by the proposed A-LP project. The withdrawal of significant amounts of water from the river will adversely affect recovery of endangered fish species in the San Juan River, downstream of the project. The Animas is one of the last free-flowing rivers in the region.

"The A-LP is just another big government pork-barrel, only worse," said Weisheit. "We hope the Commissioner will agree that Reclamation's reputation and future are on the line with this project."

The groups' letter represents the beginning of a grassroots movement to reform the Bureau of Reclamation.

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For more information on the Animas-La Plata project:

electors Concerned about Animas Water's A-LP Central home page: <http://www.angelfire.com/al/alpcentral/>

Sierra Club A-LP home page: <http://www.colorado.sierraclub.org/alp/>

Bureau of Reclamation A-LP home page: <http://www.uc.usbr.gov/special/alp/>

Co-signing organizations' websites:

Living Rivers <http://www.livingrivers.net/> Colorado Public Interest Research Group <http://www.copirg.org/> Forest Conservation Council <http://www.forestconservation.org/> Forest Guardians <http://www.fguardians.org/> Glen Canyon Action Network <http://www.drainit.org/> San Juan Citizens Alliance <http://www.sanjuancitizens.org/> Sheep Mountain Alliance <http://telluride2.com/colorado/Sheep-Mountain-Alliance.htm>

----- - TEXT OF GROUPS' LETTER - -----

Mr. J. William McDonald Acting Commissioner US Bureau of Reclamation Department of Interior 1849 'C' Street, NW Washington, DC 20240-0001

sent via fax: 202-513-0314

June 18, 2001

Dear Commissioner McDonald:

This week marks the ninety-ninth anniversary of the passage of the federal Reclamation Act, and the creation of the Reclamation Service, later to become known as the Bureau of Reclamation. One year from now—June 17, 2002—will mark the centennial of the law that led to a dramatic transformation of the rivers and landscapes of the American West.

This letter is a request for action. The many pressing problems besetting the rivers of this region deserve the full attention of the Bureau of Reclamation. Our fifteen environmental, agricultural and citizens organizations, listed below, respectfully request your personal intervention and commitment to changing Reclamation's priorities to reflect the changing needs of our society, and the needs of the rivers themselves.

Today more than 450 Reclamation dams and diversions stand across our Western rivers in seventeen states, creating about 350 reservoirs that provide water for 180 irrigation projects and water supply for more than 30 million people. These structures and engineering achievements, some of which are among the largest in the world, store huge amounts of water and generate over forty thousand megawatts of electric power, combined. Over nine million acres of farmland are irrigated by Reclamation projects. The scope and magnitude of the public works undertaken by Reclamation is unsurpassed in terms of the effects these projects have had on the lives of the millions of people who depend in some way on the rivers of this arid region.

Certainly many associated with the Bureau of Reclamation will find cause for celebrating the upcoming centennial. But for those committed to the sound stewardship of the Colorado and other rivers of the West, the sentiment is reversed. This century of impounding and diverting has brought with it extensive environmental and social problems that continue to worsen. Western rivers are critical to the protection of biological diversity in this arid region. Scientists tell us that many Reclamation projects are at least partly to blame for the near-extinction of many native fish and other river-dependent species across the West. Pressure is building to take down Reclamation dams in some places, to restore rivers' ecological health, and recover populations of native fish and river-dependent wildlife.

The organizations listed below join together in marking the culmination of this "Reclamation Century," by calling on the Bureau of Reclamation to acknowledge the harm that its projects have often caused, and dedicate itself to making river restoration, not exploitation, the agency's focus in the years ahead.

A century later, the agency finds itself facing declining budgets, increasing pressure to reduce the subsidies to water users that have fueled the engine of political support for much of the Bureau's public works. Reclamation itself has said, "the arid West essentially has been reclaimed." Yet some politicians still look to Reclamation to fulfill the elusive dream of boundless resource use.

To that end, we come to the first point of grave concern to which we wish to draw your attention: the Animas-La Plata (A-LP) Project in southwestern Colorado. This environmentally destructive scheme is an economic boondoggle that will cost federal taxpayers hundreds of millions of dollars with few benefits. Environmental advocates and others have been engaged for more than a decade in an effort to protect the Animas River from this dinosaur project.

A brief summary of the problems with the A-LP reveals an unsettling picture. If it were built, the project would:

- o Divert one of the region's last free-flowing rivers, and inundate a productive refuge for wildlife at a cost of \$340 million dollars or more;
- o Reduce flows in an already heavily depleted San Juan River system, placing additional pressure on the endangered native fish and other river-dependent species in the basin; and
- o Provide taxpayer-subsidized water for as-yet unidentified and unneeded development projects, only adding to the Bureau's "pork-barrel" legacy.

Therefore:

We the undersigned citizen groups call on you to recognize the seriousness of the Animas River's plight, and we ask you to seek funding from the Administration and the Congress to prepare a report investigating the environmental and economic concerns that have been raised by citizen groups about the project. We ask that you oppose appropriating any funding for project construction pending the outcome of these studies.

We also ask that you consider Reclamation's future direction, and the benefits of shifting the agency's mission from development to restoration. Return the agency to its roots as a supporter of small family farms, not a subsidizer of globalized corporate agribusiness. Add an essential component to Reclamation's mission--to become a protector and defender of the environmental quality and health of river ecosystems.

Over the coming year, our organizations will be communicating with you on a regular basis about a number of other issues and concerns that warrant corrective action by your agency.

The policies that govern Reclamation's actions, as well as those set by the Bureau itself, are out-of-step with the environmental constraints and social demands of this modern era. Too many dams have been built across the over-allocated rivers of the West, and too much water is being diverted from them. Outdated laws discourage water users from conserving, and stand in the way of restoring water flows to stressed streambeds. The dried-up Colorado River delta in Mexico bears silent testimony to Reclamation's failure to steward properly the rivers it has developed.

Our organizations look forward to working with you to bring about long-needed changes at the Bureau of Reclamation. In the coming year, we will be sharing more of our concerns with you in the spirit of a frank and open dialogue. Please feel free to call upon us for consultation at any time. But please also understand that the rivers of the West can't survive much longer the bureaucratic inertia and neglect that has characterized Reclamation's first century. If the agency is unwilling to change, then we will feel compelled to work in a more adversarial mode to impose change on the agency, for the sake of rivers and the people and other life that depends upon them.

Sincerely,

John Weisheit Conservation Director Living Rivers Moab, Utah

on behalf of the following organizations:

Orion Utton Animas River Agricultural Irrigators Assn. Aztec, New Mexico

Philip Doe, Chairman Citizens Progressive Alliance Denver, Colorado

Jacob Hottell, Chairman Cedar Hill Clean Water Coalition Aztec, New Mexico

Matt Baker, Executive Director Colorado Public Interest Research Group Denver, Colorado

Steve Cone, Director electors Concerned about Animas Water Farmington, New Mexico

John Talberth, Executive Director Forest Conservation Council Santa Fe, New Mexico

Susan Tixier, Executive Director Forest Guardians Santa Fe, New Mexico

Carl Weston, Vice-President Four Corners Action Coalition Bondad, Colorado

Nancy Jacques, President Friends of the Animas River Durango, Colorado

David Orr, Field Program Director Glen Canyon Action Network Moab, Utah

Jean Lyle, President San Juan Audubon Society Durango, Colorado

Mark Pearson, Executive Director San Juan Citizens Alliance Durango, Colorado

Joan May, Executive Director Sheep Mountain Alliance Telluride, Colorado

Michael Black, Spokesman Taxpayers for the Animas River Durango, Colorado

LR in the News 06/03/01

Activists Want Uranium Plant Closed

White Mesa mill near Blanding is compared to troublesome Atlas site

The Salt Lake Tribune
Sunday, June 3, 2001

By Lisa Church, Special to the Tribune

MOAB - Some environmentalist groups say the White Mesa uranium mill near Blanding should be closed before the state has another contaminated tailings site on its hands similar to the Atlas site north of Moab.

Representatives of the Utah Sierra Club Glen Canyon Group and Living Rivers, both based in Moab, made their remarks during a public comment period to the state's Radiation Control Board, the oversight board for the Division of Radiation Control, during a meeting in Moab on Friday.

The White Mesa Mill, in San Juan County, is owned by International Uranium Corp. It uses an acid-leach process to extract uranium and other valuable metals from radioactive waste shipped to the site from around the country. The remaining materials are disposed of in the mill's tailings site. A \$10 million bond is in place for reclamation, should the site close, but residents say that is not enough money to pay for cleaning the site.

On Friday, the environmentalists described the waste disposal area as being similar to the 13 million tons of tailings produced by Atlas Corp., which processed uranium as a site near the banks of the Colorado River and has been a source of headaches for the state and federal agencies since the company closed its plant in 1984 and filed for bankruptcy protection in 1998. After 10 years and millions of dollars in studies and stabilization work, the Atlas site will be turned over to the U.S. Department of Energy in September.

Environmentalists told Radiation Control Board members the White Mesa Mill is a toxic waste dump, accepting materials that will produce little uranium or valuable metals. They said the mill also could pollute the underground aquifer that is the water source for the Ute Reservation, and said the aquifer would then carry the toxins into the San Juan River which joins the Colorado River at Lake Powell.

"This is a huge watershed that feeds the entire West," said John Weisheit, chairman of the Glen Canyon Group of the Sierra Club. "I'm disappointed in the leadership of Utah. We don't want nuclear waste here."

Sierra Club member and longtime environmental activist Ken Sleight urged the board to close the White Mesa mill, which earlier this year applied to the federal Nuclear Regulatory Commission for a license to transport and process radioactive lead waste from a site in California.

Owen Lammers, executive director of Living Rivers, told board members the International Uranium, which has operated the mill located on the Ute Reservation south of Blanding since 1980, is not financially stable. He cited figures from the company's 2000 annual report filed with the federal Securities Exchange Commission, which show that the company's assets have dropped from \$32 million in 1998, to \$6 million last year. "We have a situation where the company is declining. They're having trouble," Lammers said.

Urging the state to "investigate independently" how much reclamation of the White Mesa site will cost, Lammers cautioned board members to carefully review the financial disclosures in the company's annual report.

International Uranium president Ron Hochstein, who attended Friday's meeting, said the company is financially secure and stressed that White Mesa is a working mill, not a toxic dump.

He said the company's annual report shows lower assets because the value on mining properties the company owns had declined in recent years due to a drop in the price of uranium.

River News 06/03/01

Barely a river

Stories by Mitch Tobin and photos by Jeffry Scott

ARIZONA DAILY STAR

The "Cucapah" sits in the sun-baked flats of the Colorado River delta about 40-miles south of San Luis Rio Colorado, Mexico. The river that carved the Grand Canyon is barely a trickle this far south and what water there is here is primarily from the Sea of Cortez.

Pressure is on U.S. to help revive Mexico's Colorado Delta

Their dream is to pull endangered species back from the brink, stimulate marine life in the Gulf of California and rejuvenate a landscape that was once a tropical swamp prowled by jaguars and bears.

Today, the 3,000-square-mile delta offers only hints of its former self.

The upstream damming of the Colorado, and its diversion to places including Tucson, has caused stark and sterile salt flats to replace most of the marshes and forests. In dry years, a river once mighty enough to sculpt the Grand Canyon and flip a 36-ton steamboat doesn't even reach the sea.

Recent wet years, however, have let more fresh water reach the delta, spawning patches of new habitat and bumper harvests of fish and shrimp. It's proof that the delta could be revived if it could only get a little more water from upstream users such as Arizona, some advocates and University of Arizona researchers say, End of a River

'There's plenty of water. The thing is, we abuse it.' Lisa Force, director of Living Rivers

One month ago, Tucson became the latest city to tap the Colorado when it began using its allocation from the \$4 billion Central Arizona Project.

In total, the Tucson area has rights to about 1 percent of the Colorado's flow - the amount some conservation groups want to see dedicated to ecological purposes in Mexico.

If the delta's backers succeed, Tucson and the rest of the Colorado's users could be forced to give up some of their precious water supply.

But the campaign to send heavier flows down the river faces a steep, uphill climb. And the trickle that arrives in the delta today might not be there tomorrow.

Upriver from the delta, an era of civil engineering that rivaled Egypt's pyramid building has turned the Colorado into an elaborate plumbing system that provides drinking water for 25 million Americans and irrigation for some of the world's most productive farmland.

Every drop of the Southwest's biggest river is already accounted for. And in the nation's fastest-growing region, no one is rushing to give up his share.

"There's a shortage of water in the system already, and both California and Nevada need more," noted LeGrand Nielson, deputy director of the Bureau of Reclamation, which led the last century's dam-building crusade.

Environmentalists on both sides of the border have sued the Bureau of Reclamation several times in the past year, claiming the agency is violating the Endangered Species Act by depriving the delta of water. Federal officials respond that the U.S. law doesn't apply in Mexico.

Even so, the recent litigation marks an unprecedented focus of attention on an inhospitable region that has been a blind spot for most Americans.

With summer temperatures topping 120 degrees and 3 inches of rain falling in a good year, the delta remains one of North America's most forbidding places. Humidity from the sea and irrigated fields, mosquitoes from standing water and the abject poverty of farm workers' shantytowns hardly beckon visitors.

The delta may never become a hot spot for tourists. But even some of the Colorado's most prominent water users are starting to acknowledge its needs. When activists on a "One Percent for the Delta" road trip arrived in Las Vegas in March, the city's top water official, Patricia Mulroy, told them the delta is "an issue whose time has come."

Author Marc Reisner, in his 1986 book "Cadillac Desert," saw the Colorado's transformation as a metaphor for our time: "One could say that the age of great expectations was inaugurated at Hoover Dam - a fifty-year flowering of hopes when all things appeared possible. And one could say that amid the salt-encrusted sands of the river's dried-up delta, we began to founder on the Era of Limits."

River News 06/03/01

Colorado River is farmer's lifeblood

Stories by Mitch Tobin and photos by Jeffry Scott
ARIZONA DAILY STAR

Ramon Alvarado Garcia grows grass for cattle feed in a ditch beside the canal carrying the river's remnants.

For Evanisto Beltronas, 74, the damming and diversion of the Colorado has been a good thing. At high noon, in a cotton field 20 miles south of Yuma, with the temperature climbing toward 105 degrees, the Mexican farmer said an aqueduct from the Colorado has made his life easier.

"When the river was still here, there wasn't a road, there wasn't electricity, there wasn't anything," he said.

Beltronas makes 80 pesos for a six-hour shift on someone else's land - about \$1.25 an hour. At the end of his day he crosses a canal choked with algae and disappears into a village of crude shacks.

A 1944 treaty guarantees Mexico about 10 percent of the river's flow. Most of that water is diverted to farmland by a concrete river that starts at Morelos Dam west of Yuma; the rest goes to the booming border cities of Mexicali and Tijuana, which are growing at more than 3 percent annually.

For farmers north of the border, harnessing the Colorado's flow has allowed them to exist in the continent's driest region. The dams have also provided hydroelectric power and reduced the threat of deadly flooding. To some, river water that reaches the sea is still "wasted."

California's Imperial Irrigation District, which uses about 20 percent of the Colorado's flow, harvests a half-million acres and produces \$1 billion in crops each year. It is politically powerful enough to stand toe-to-toe with the cities of Southern California, which desperately want farmers' water for their growing populations.

Although cities in the Southwest are drawing an increasing amount from the Colorado, farms still account for 72 percent of the river's use. Some of that water grows produce and cotton; most irrigates cattle feed.

As a result, environmental groups argue that slight improvements in farms' water efficiency - using drip irrigation instead of flooding fields, for example - could create enough surplus water for the delta.

"There's plenty of water. The thing is, we abuse it," said Lisa Force, director of the Moab, Utah-based Living Rivers.

Because it takes 3,200 gallons of water to create enough feed for 1 pound of beef, Force says, if everyone dependent on the Colorado skipped just one half-pound burger per year, there would be enough for the delta. The same gains would result from each of those people conserving 3 gallons per day.

"We're not preaching vegetarianism or veganism," she said. "We just want to make little notches in the extreme extravagance with how we treat water."

But Imperial Irrigation District spokeswoman Susan Giller said the district has already lined nearly all of its canals to prevent seepage and has become one of California's most efficient agricultural areas.

"The more efficient you become, the more complicated and expensive it becomes to save water," she said.

Drip irrigation isn't practical for crops such as alfalfa because the plants are harvested several times a year and the tubes would be ripped up, she said.

The Imperial Valley also must frequently flush salts from the soil because the Colorado's naturally high mineral content gets even more salty by repeated irrigation upstream.

"If you cut production here," Giller said, "that means your food will cost more."

But even if U.S. water users agree to give up water for the delta, skeptics argue that Mexican farmers would intercept it as soon as it crosses the border.

That's why the delta's boosters say a binational pact would be essential. Such a deal would likely pass through the International Boundary and Water Commission, which regulates U.S.-Mexican water issues.

Tucsonan John Bernal was the commission's U.S. representative for the past six years, and one of his last acts in office in December was signing an agreement with Mexico to start working on solutions for the delta.

But with new leaders in both countries, it's unclear what will happen, Bernal said.

Others note that as the upstream user, the United States has absolute leverage to prevent Mexico from reneging on an agreement.

"We've got our hand on the faucet," said Stuart Hurlbert, a San Diego State University biologist who has led field trips to the delta since 1978.

Accidental marsh unveils past

Dream vs. reality Once, much of the 3,000 square-mile Colorado River delta looked like this remnant, the 12,000-acre cattail marsh known as Cienega de Santa Clara.

Visitors can still glimpse the delta's pre-dam appearance at the Cienega de Santa Clara. Located 50 miles southwest of Yuma, the 12,000-acre cattail marsh is an oxymoron - the Sonoran Desert's largest wetland.

Nearly 300 bird species - including thousands of endangered Yuma clapper rails - visit or live in the cienega's hissing reeds. Its olive, brackish waters are also home to the endangered desert pupfish.

The cienega's existence is an accident. It was supposed to be the dumping grounds for brine coming from the Bureau of Reclamation's Yuma desalination plant. But that \$250 million facility, meant to reduce the salinity of Colorado River water the United States must deliver to Mexico, operated only for a few months in 1993 and is now in mothballs.

So, instead of the dregs of desalination, the canal from the plant now transports 325 billion gallons of agricultural runoff from Arizona's Wellton-Mohawk farming area each year.

"This water is too brackish for agriculture, so that's why it's here. Nobody wants it," said Jose Campoy, manager of the national preserve that includes the cienega.

The desalting plant's brine would have killed the cienega and made it as biologically poor as thousands of acres of dusty plains surrounding it - pampas cracked like sunbaked skin and coated with a frosting of salt.

Instead, the cienega resembles the green lagoons that ecologist Aldo Leopold wrote about - a poetic description of the delta's shifting landscape that advocates rarely fail to cite.

Leopold, whose blending of ethics and aesthetics has become the intellectual fountainhead for many American Greens, explored the delta by canoe with his brother in 1922, roasting quail over mesquite fires and climbing cottonwoods to scout the river's path.

"The river was nowhere and everywhere, for he could not decide which of a hundred green lagoons offered the most pleasant and least speedy path to the Gulf," Leopold wrote. "So he traveled them all, and so did we."

In the pre-dam days, Leopold recorded clouds of waterfowl, families of raccoons munching on water beetles and bobcats fishing for mullet. Though he never spotted a jaguar - el tigre - he said its "personality pervaded the wilderness."

The several million acres of wilderness that Leopold traveled through have shrunk to about 150,000 acres, according to UA scientist Ed Glenn, whose research on the delta has become exhibit A in environmentalists' case for sending more water there.

Glenn's study of the cienega and the sprouting of cottonwood-willow forests along the river's main stem after flooding in the 1980s and 1990s has led him to believe that a small, steady flow from the Colorado with surges every four or five years could do wonders for the area's ecology.

But before advocates see the delta's native vegetation spread, they might be fighting to preserve what little remains.

Flooding that has regenerated parts of the delta isn't guaranteed to continue. A drought in the Colorado's 244,000-square-mile basin could snatch back gains made in the past 20 years.

While the Yuma desalination plant is now dormant, it advertises "water for sale" on its Web site, www.yao.lc.usbr.gov/ydp5.htm.

Bureau of Reclamation Deputy Director LeGrand Nielson said the agency is "dead serious" about meeting its water obligations to Mexico without operating the plant. And the agency has begun the first "baby steps" in searching for other water sources for the delta, he said.

One idea is to "bank" river water in Arizona's aquifers during flood years. In droughts, Arizona would then use that stored water in exchange for giving up some of its Colorado allocation for the delta.

Another proposal would help Mexican farmers pump salty ground water that hurts their crops and send it to the delta.

"If people can just be patient and stay at the table, we can do something here," Nielson said.

Tribe suffers with delta

The delta is a fickle place.

Erratic flows from the Colorado, and the ebb and flow of the gulf's tides change conditions from hour to hour, season to season and year to year.

The dynamic process is most obvious in the intertidal zone, the 30- to 40-mile stretch of the river's main channel where the coming and going of the sea creates shifting zones of salinity.

It is in these traditional fishing grounds of the Cucapá Indians where the delta's mighty "tidal bore" once reigned. The collision of the incoming sea water and the outgoing river would create a wall of water that sometimes topped 15 feet and migrated with the tides.

In 1922, not long after Aldo Leopold visited, the tidal bore - el burro to Mexicans - killed 86 peasants from Guaymas when it rolled the 36-ton steamer Topolobampo. Only 21 bodies were found, and just 39 passengers survived.

"Days later they were still being dragged out from the mud flats nude, half insane from thirst, blistered by the sun and raw from predatory swarms of insects," wrote Frank Waters in his 1944 book, "The Colorado."

Today, with el burro tamed by upstream dams, Cucapá fishermen worry more about the simple lack of fish. A tribe that once flourished now struggles to find enough to eat.

Like the Tohono O'odham near Tucson, the Cucapá are divided by the international border. Near Yuma they run a casino, but the benefits don't appear to have trickled down to tribal members in Mexico.

"The river here used to have lots of water. We could drink from it, not >from bottles," recalled Inocencia Gonzalez, 65, one of the tribe's leaders. "There also used to be lots of fish. Now there are hardly any."

The Cucapá have fishing rights to Laguna Salada, a brackish lake 30 miles southeast of Mexicali that was once so productive it was said to "boil" with fish. The Colorado used to feed Laguna Salada, but today the lake is mostly dry and devoid of life.

A century ago, the Cucapá numbered in the thousands, but the tribe has dwindled due to assimilation, intermarriage and the decline of a lifestyle dependent on the river.

"They used to be a thriving, dynamic community. Now it's just a few hundred people hanging on," said Mark Briggs, conservation director of the Tucson-based Sonoran Institute.

Javier Mosqueda, president of a 2-year-old advocacy group of delta residents, said Mexico continues to suffer from the unfair division of the Colorado.

"The laws seem to be working for the people up there in the U.S., but for the people down here, they aren't," he said.

He said the delta's situation won't improve without cross-border cooperation.

"The water doesn't belong to the people of the U.S. or Mexico," he said. "It belongs to the river."

Mud flats are gulf's nursery

On islands north of San Felipe, shells are exposed as far as the eye can see. Erosion by gulf waters and lack of Colorado River sediment lay them bare.

For millions of years, the Colorado's surging spring snowmelt carved the Grand Canyon and countless other chasms. The river then transported 70 percent of that sediment hundreds of miles to the delta, where it fanned out in the northern Gulf of California.

Today, tides that vary as much as 25 feet in a day expose the delta's innards in mile-wide mud flats that are rippled with hallucinatory patterns from the receding and advancing sea. The spongy, chocolate-colored mud is literally crawling with snails, crabs and worms.

These invertebrate species near the bottom of the area's food chain nourish fish, stingrays and scores of bird species.

University of Arizona scientist Ed Glenn examined the records of shrimp fishermen from San Felipe, on the Baja California Peninsula, and concluded that the year following floods, their harvest doubled or tripled. Catches of corvina, once thought to be "fished out," rebounded tenfold after the delta got more water.

Some scientists suggest the Colorado supplies valuable nutrients to the upper gulf. Glenn, however, believes the river mainly helps marine life by discouraging predator fish from entering the Colorado's final stretch, which serves as a refuge for shrimp larvae and corvina fry.

Many biologists also think that healthier flows of fresh water to the gulf would have a cascading, positive effect on the gulf's other marine species, including the vaquita, an endangered porpoise.

San Felipe fishermen such as Arnaldo Espinoza Solano also thinks more river water would help.

"When there's more water in the river, it's more productive," said Solano, 35, who estimated unemployment in the area at 30 percent.

Born to the south in Sinaloa, Solano moved north to San Felipe six years ago to look for work. This summer, he'll be going north again, visiting a relative in Phoenix, working as a cook in a seafood restaurant and maybe staying in the United States.

"El agua es la vida," Solano said as he stared out at the sea.

Water is life.

GLEN CANYON ACTION NETWORK
PO Box 466 • Moab, UT 84532 • 435-259-1063
www.drainit.org

FOR IMMEDIATE RELEASE

APRIL 13, 2001

NATIONAL PARK SERVICE BANS JET SKIS AT LAKE POWELL, LAKE MEAD, BY
2002

GROUPS HAIL VICTORY, QUESTION NEED FOR ANTELOPE POINT MARINA

MOAB, UTAH -- On Thursday, a federal district court judge in Washington, DC, approved a settlement agreement between environmental groups and the National Park Service (NPS), requiring NPS to prohibit the use of personal watercraft (PWCs), also known as jet skis, on all federal park units nationwide by Fall 2002. The ban applies to the reservoirs at Glen Canyon (Lake Powell) National Recreation Area, near Page, Arizona, and Lake Mead National Recreation Area, near Las Vegas, Nevada.

Under terms of the settlement, the only exception would be in cases where the agency could prove that the machines do not cause harm to the environment on a given reservoir.

"This agreement is a victory for public safety and environmental protection," said David Orr, Director of Field Programs for Glen Canyon Action Network (GCAN), a plaintiff in the lawsuit. "Jet skis don't belong in our national parks, period."

The PWC ban should lead to a significant reduction in water pollution and unsafe recreational activities on the reservoirs. Concerns about public safety and environmental impacts of PWCs have never been higher.

On April 9, for example, a fatality occurred at Lake Mead Reservoir when two jetskiers collided head-on at high speeds.

PWCs are recognized by the US EPA as responsible for dumping large amounts of petroleum and other chemicals into waterbodies where the machines are used. The impact of PWC pollution on drinking water resources is well documented. The Lake Powell and Lake Mead reservoirs are part of the Colorado River plumbing system that provides drinking water for more than twenty million people.

At a time when NPS should be working to reduce the heavy impact of PWCs and other motorized watercraft, the agency is promoting increased use.

For example, environmental groups are questioning the proposed Antelope Point Marina project on Lake Powell Reservoir. GCAN is working in coalition with other leading environmental and Native American groups in the region, to contest the development. Concerns have been raised over increased watercraft usage, water quality degradation, and more damage to natural and cultural resources in the vicinity.

"We are working to save our sacred sites and protect our cultural heritage," said Thomas Morris, Jr., of Window Rock, Arizona, and President of the Diné Medicinemens Association, one of the groups protesting the marina. "The waters themselves are sacred."

While Native Americans and environmentalists celebrated their victory, PWC industry trade groups, the Personal Watercraft Industry Association and the American Watercraft Association, were not so happy. The court decision handed them a stunning defeat when their motion to intervene in the case was denied. In a strongly worded order, the judge ruled that the PWC industry's interests would not be injured by the terms of the settlement and therefore the industry had no standing to intervene in this matter. The nine page order also stated that some of the industry's claims bordered on the "frivolous."

For additional information on the lawsuit, or on two-stroke motors in general, please visit the website of Bluewater Network, a co-plaintiff in the case: www.bluewaternetwork.org/

For information on the Antelope Point Marina project, please visit GCAN's website: www.drainit.org/

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03/16/01

Epilogue as Prologue...Sustainable Water Project Tour

It was dark when we finally arrived at the point of the Colorado River's passage into Mexico, just below Morelos Dam amidst flat farmlands near Yuma, Arizona on March 15th. We'd traveled 2,800 miles along portions of the river's main stem as well as its primary tributaries: the Green, San Juan and Gila rivers.

Our craft was not a boat, as was used by John Wesley Powell and earlier explorers, but a 4,000-gallon water tanker truck. Nor was our mission one of natural discovery, but one of building social awareness for the watershed's restoration, especially its dying delta that begins just downstream. We had come to deliver back to the river the water that we had collected on our 11-day journey — water which under more natural conditions would flow down the river to replenish the delta and the Gulf of California.

Today however, the river's flow is diverted entirely through the Colorado's vast plumbing system of dams, reservoirs, pipelines and tunnels. Our truck's payload would represent less than one billionth the amount of water that historically flowed past this point each year. Yet, given the river's present state, our contribution felt more than symbolic. The night's darkness could not mask the river's pain: just a trickle meandered through the channel. Behind the thin veneer of vegetation, the river's shriveled self appeared little different from the hundreds of irrigation ditches we passed earlier that day. It was difficult to distinguish at first between nearby ditches and the river.

The large main canals near Yuma, in contrast, carry far more of the river's flow than the river itself. A collection of lawn hoses from a Las Vegas suburb seemed capable of dispensing more water than what flowed past us there on the banks of this once-mighty river. We stood at the international boundary, representing a coalition of 122 organizations and twelve million people from the United States and Mexico who want water to reach the delta once again. This tour marked the founding of the largest and broadest-based movement yet to call for Colorado River restoration. Just one percent of the river's average annual flow is all we ask of water agencies. We want them to agree to leave this tiny amount in the river so that the eight percent of the original delta that still remains can at least be kept on life support.

We held rallies, teach-ins and organizing meetings during our Sustainable Water Project Tour. We hand-delivered letters on behalf of the coalition to water agencies requesting their one percent contribution. We generated television, radio and newspaper coverage for the river and delta. Along the way, our truck rolled down the highways and through the communities of the Colorado River watershed, collecting water "donations" from reservoirs, municipal water systems, and irrigation ditches. But as our journal illustrates, it's not just the delta that's suffering.

Major stretches of the basin's rivers and riverine habitat are also in peril. Colorado River water misuse and abuse is needlessly killing one of North America's most geologically, biologically and culturally diverse river systems. Our delivery to the delta that night

carried with it the spirit of people living in towns, cities and rural communities across the region and beyond, who are united in their commitment to preserving and restoring the river and its watershed. The launching of the "1% for the Delta" campaign is the latest effort to make this happen.

Media Advisory 03/13/01

Los Angeles Rally--International Day of Action for River Restoration

"Sustainable Water Project Tour" Asks for Water for the Colorado River Delta

CONTACT: Owen Lammers, mobile 435.260.2590, 260.2591; message 435.259.1063

Lisa Force, mobile 602.321.1753

Tuesday, March 14, 2001 Noon-1:30 PM Olvera Street Plaza, downtown Los Angeles

Los Angeles environmental organizations will rally on Wednesday to welcome the "Sustainable Water Project Tour" when it rolls into the city on the tenth day of a roadshow across the Southwest. Representing more than 120 advocacy groups and twelve million people in the U.S. and Mexico, the tour will bring a water tanker truck to the headquarters of the Metropolitan Water District of Southern California (MWD), symbolically seeking donations of water for the Colorado River's dying delta.

A rally will be held at noon at the Old Pueblo Plaza on Olvera Street, sponsored by Southern California's leading environmental and river advocacy groups, including Action Resource Center-Los Angeles, Angeles Chapter of Sierra Club, California EarthCorps, Friends of the Los Angeles River, and Wetlands Action Network.

Following the Olvera Street rally, marchers will walk one mile to the Los Angeles River at the historic "Cornfields" on Main Street in Chinatown, the location of one of the earliest irrigated farms in California. The march will highlight efforts to save this site from development and protect it as parkland.

Wednesday, March 14, is the Fourth International Day of Action for Rivers and is being celebrated in over 50 actions in 28 countries around the world. The Sustainable Water Project Tour is one of the largest such actions and is promoting river restoration through water conservation in the Southwest. The tour is sponsored by Living Rivers of Phoenix, Arizona, and Glen Canyon Action Network of Moab, Utah.

Gathering at the Olvera Street bandstand, the groups will call on water agencies to take action to restore the river. They will deliver a letter to the MWD, the largest municipal user of Colorado River water, asking the agency to give back one percent of its current Colorado River usage for ecological restoration. Numerous endangered species, including the vaquita porpoise--the world's smallest and rarest marine mammal--depend on the river and its delta for survival.

"Over 90 percent of California's wetlands and the Colorado River delta's wetlands have been destroyed," said Marcia Hanscom, executive director of Wetlands Action Network. "It's time we start leaving water in the rivers to help get back these wetland systems--

which historically serve as critical stopover habitat for hundreds of species of birds navigating the Pacific Flyway,".

If one-third of the 15 million California residents who are plumbed into the Colorado River's water supply system were to bring their communities' water consumption down to the national average of 101 gallons per day, that alone would be enough water to begin the delta restoration process.

"We must work towards sustainable use of our rivers and watershed," said Zhetonia Tiluso, RiverWatch Coordinator for Friends of the Los Angeles River, the leading organization supporting restoration of the river throughout its length. "It's time to give back to the Earth the life force she gives to us."

Friends of the L.A. River is currently working to establish a park at the Cornfields, the termination point of Wednesday's rally and march.

Other Southern California groups cosponsoring the event include: Access for All, Christians Caring for Creation, Center for Biological Diversity, EcoLinks, El Dorado Audubon Society, Friends of the Santa Clara River, John Muir Project, Los Angeles & San Gabriel Rivers Watershed Council, National Wildlife Federation Southwest Regional Office, San Diego Audubon Society, San Fernando Valley Audubon Society, Santa Clarita Organization for Planning & Environment, Sierra Club Tahquitz Group, and Spirit of the Sage Council.

The Sustainable Water Project Tour has visited Salt Lake City, Albuquerque, Phoenix, Las Vegas, and other cities along its route. Living Rivers and Glen Canyon Action Network are nonprofit advocacy groups dedicated to the protection and restoration of the Colorado River watershed.

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"ONE PERCENT FOR THE DELTA" LETTER FOLLOWS.

March 14, 2001

Dear Water Agency/User:

On behalf of the 122 organizations and more than twelve million people they represent, we are writing to you to request your support for restoring the Colorado River delta.

As you know, the Colorado River is a limited source of water for millions of people in seven of the United States, Mexico and numerous Indian Nations. The river once supported a delta, marshland and estuary system of almost two million acres, but today has been reduced to less than ten percent of its original size because of near-total utilization of the river's flows, on both sides of the international border. It has been further compromised by land use changes in Mexico, the invasion of tamarisk (salt cedar), and the entrapment of sediment behind upstream dams, causing the delta to shrink rather than grow. The wetlands of the Colorado River delta have been designated

both a biosphere reserve and a Ramsar site (high-priority critical habitat area identified for protection and restoration under the international Convention on Wetlands).

Today the delta is in crisis; the birds and other wildlife, the fisheries, and the ecosystem are all in dramatic decline. Scientists have warned for years of the consequences of ignoring the lack of freshwater inflows. Some flood flows over the past twenty years have helped to keep the delta from drying up entirely, and even allowed for some modest improvement, but no mechanism is in place for the delta's long-term protection. Unless action is taken soon, we could lose what little still remains.

A significant obstacle to progress is the lack of agreement among the community of Colorado River water users to pursue a solution. We, the undersigned individuals and organizations, come to you with a request for acknowledgment of the seriousness of the problem, and a commitment to take action by voluntarily offering to leave in the river a very small portion of the water that your organization currently withdraws.

Scientists estimate that the restoration process can begin with a modest amount of water-less than one percent of the river's average annual flow. A guaranteed base flow of 32,000 acre-feet per year, augmented by a simulated flood flow of 260,000 acre-feet every three to four years would provide a minimal source of life-sustaining water for this once vast span of wetlands, riparian habitat, freshwater marshes and estuary.

We have an important responsibility to future generations to assure the preservation of this internationally acclaimed bioregion. Although such accommodations were not priorities when the Law of the River began to evolve, they have become a priority for society now. An average annual contribution of 106,000 acre-feet will help maintain what little remains along the river's main channel. This represents less than one percent of the 15 million acre-feet that the basin's water users divert on average each year. A modest amount indeed, but a major contribution toward preserving this endangered habitat and the many lives that it supports.

Therefore, we ask you to pledge "One Percent for the Delta"-a realistic goal that can readily be achieved by implementing additional water conservation measures. In addition, we ask that you pledge flows necessary to maintain the Cienega de Santa Clara at its current size and water quality. Finally, we ask that you support the delivery of additional water to the delta region when such water becomes available through purchase or voluntary agreement.

The United States and Mexico have agreed to meet, discuss and make recommendations for possible actions to implement a Colorado River delta restoration program. Your voluntary commitment will send an important signal to the governments of the two nations, amplifying the growing public support and consensus that the Colorado River, its delta wetlands, and the northern Gulf of California must once again become a place of life for humans and other living things.

We also request that you publicize to all your clients and customers the need for implementing these conservation measures in the context of delta restoration. All users should be made aware of the problems occurring in the delta and the simple steps we

can take to help remedy them. We are available to assist you and your organization in any way possible to put such a program in place.

Thank you for your attention to this matter, and we look forward to your reply and pledge of support.

Sincerely,

John Weisheit President Living Rivers/Glen Canyon Action Network

On behalf of the 121 organizations listed below:

Access for All (CA); Action Resource Center-Los Angeles (CA); Alameda Creeks Alliance (CA); Algalita Marine Research Foundation (Mexico/US); Alliance for Sustainable Jobs & the Environment (national); Alliance for the Wild Rockies (northern Rockies); Ambience Project (MT); American Lands Alliance (national); American Whitewater (national); American Wildlands (MT); Arizona Green Party; Biodiversity Legal Foundation (national); Black Canyon Audubon Society (CO); Bluewater Network (CA); California EarthCorps; California Floaters Society; Center for Biological Diversity (AZ/CA/NM); Center for Environmental Equity (OR); Centro de Derecho Ambiental e Integración Económica del Sur (Mexico); Christians Caring for Creation (national); Citizens' Progressive Alliance (CO); Colorado Plateau River Guides (CO/NM/UT); Colorado Plateau Wildlands Defense Council (AZ); Colorado River Ward Valley Coordinating Committee (AZ/CA/NV); Colorado Rivers Alliance; Columbia Gorge Coalition (OR/WA); Desert Fishes Council (international); Ecological Association of Users of the Hardy & Colorado Rivers Civil Association (Mexico); El Dorado Audubon Society (CA); Electors Concerned about Animas Water (CO/NM); Endangered Species Coalition (national); Eyak Preservation Council (AK/CA); Flagstaff Activist Network (AZ); Forest Conservation Council (NM/FL); Forest Guardians (NM); Friends of Arizona Rivers; Friends of Cabeza Prieta (AZ); Friends of Nevada Wilderness; Friends of the Earth (international); Friends of the Los Angeles River (CA); Friends of the River (CA); Friends of Rough & Ready Creek (OR); Friends of the Santa Clara River (CA); Friends of Scherer Park (CA); Friends of Yosemite Valley (CA); Glen Canyon Action Network (southwest US); Grand Canyon Private Boaters Association (AZ); Great Salt Lake Audubon Society (UT) Green Party of Utah; Green Party of Nevada; Greenpeace USA; Grupo Ecologista Antares (Mexico); Heartwood (eastern US); Humane Society of the United States; Idaho Sporting Congress; Instituto de Investigaciones Oceanologicas de la Universidad Autonoma de Baja California (Mexico); International Marine Mammal Project (CA); International Rivers Network; John Muir Project (CA/WA, DC); Klamath-Siskiyou Wildlands Project (CA/OR); Living Rivers (AZ); Maricopa Audubon Society (AZ); Mining Impact Coalition (WI); Mosaic Outdoor Club (N.Y.); National Wildlife Federation; Native American Environmental Justice Advocacy Fund (CO); Native Cultures Institute of Baja California (Mexico); Native Forest Council (OR); Native Forest Network (international); Nevada Desert Experience; Northern Arizona Audubon Society; Northern Arizona Univ. Campus Greens; Northern Arizona Univ. Students Against Sweatshops; Oregon Natural Resources Council; Oregon Wildlife Federation; Palo Verde Valley Farmworkers Organization (CA); Payette Forest Watch (ID); Phoenix Zoo;

Pro Esteros (Mexico); Rainforest Information Center (Australia); RangeBiome (western US); Rio Grande Restoration (NM); Rocky Mountain Peace & Justice Center (CO); San Diego Audubon Society; San Fernando Valley Audubon Society (CA); San Juan Citizens Alliance (CO); San Pedro 100 (AZ); Santa Clarita Organization for Planning & Environment (CA); Santa Cruz Earth First! (CA); Save the West! (ID/OR/WA); Shundahai Network (CA/NV); Sierra Blanca Legal Defense Fund (TX); Sierra Club (international); Sonoran Desert National Park Friends (AZ); Southern Appalachian Biodiversity Project (GA/NC/TN); Southern California Watershed Alliance; Southern Utah Wilderness Alliance; Southwest Environmental Center (NM); Spirit of the Sage Council (CA); Stop Taking Our Parks (CA); Superior Wilderness Action Network (MN/WI.); Surfrider Foundation (international); Sustainable Salt Lake (UT); Terra Firma (UT); The Brower Fund (CA); U.S. Public Interest Research Group; Utah Animal Rights Coalition; Utah Environmental Congress; Utah Rivers Council; West Texas Water Protection Fund; Western Land Exchange Project (Washington); Western Watersheds Project; Western Wildlife Conservancy (UT); Wetlands Action Network (CA); Wild Utah Project; Wild Wilderness; Wildfire Infoshop; WildLaw (eastern US); Wildlife Advocacy Project (national); Willow Creek Ecology (UT); Witness Against Lawless Logging (CA/OR/WA); and Wyoming Outdoor Council.

LR Press Release 03/12/01

Activist Roadshow for the Colorado Delta Stops in Las Vegas

Tour Groups Rally in Las Vegas for River Restoration through Water Conservation
"Sustainable Water Project Tour" Asks for Water for the Colorado River Delta
CONTACT: Owen Lammers, mobile 435.260.2590, 260.2591; message 435.259.1063
Lisa Force, mobile 602.321.1753

Monday, March 12, 2001 Noon-1:00 PM Las Vegas Valley Water District Headquarters
1001 South Valley View Blvd. (corner of Charleston)

Six Las Vegas-based organizations will rally on Monday to welcome the "Sustainable Water Project Tour" when it rolls into Las Vegas on the seventh day of a ten-day roadshow across the Southwest. The tour is promoting river restoration through water conservation, and is sponsored by Living Rivers of Phoenix, Arizona, and Glen Canyon Action Network of Moab, Utah.

Gathering at the headquarters of the Las Vegas Valley Water District, the groups will call on water-using agencies in the Colorado River basin to take action to restore the river's dying delta.

"We're only asking for one percent of the river's flows to reach the delta," said Lisa Force, Living Rivers' program director. "This is such a reasonable request to address an ecological emergency."

Citizen Alert, Friends of Nevada Wilderness, Nevada Desert Experience, Nevada Green Party, Shundahai Network, and the Sierra Club Southern Nevada Group are joining 115

other organizations representing more than eight million people in the United States and Mexico, in delivering a letter to the water district, asking for conservation measures to be implemented to provide assured flows for ecological restoration south of the international boundary.

Recent U.S. government figures show Nevadans use twice the national average--more than 200 gallons of water per person per day. By reducing their consumption to a level par with the rest of the nation, Nevada's citizens could save more than enough water to keep the delta's endangered species from going extinct.

"We need some water for the river and not for sprawl," said John Weisheit, President of Glen Canyon Action Network. "There's no reason we can't meet human needs and the needs of fish and wildlife."

Weisheit and his crew are driving an empty water tanker truck from city to city, symbolizing the need for donations of water from the agencies that collectively consume 100 percent of the Colorado River's flow.

On Sunday, the Sustainable Water Project Tour visited Hoover Dam, where the police chief graciously provided an escort for the water tanker truck across the dam's crest, to obtain a donation of water directly from Lake Mead reservoir.

The tour is being organized in conjunction with the Fourth International Day of Action for Rivers, March 14, 2001. From Las Vegas, the tour will head to Blythe, California, for a rally on Tuesday, March 13, and then to Los Angeles on Wednesday, March 14.

Living Rivers and Glen Canyon Action Network are nonprofit advocacy groups dedicated to the protection and restoration of the Colorado River watershed.

"ONE PERCENT FOR THE DELTA" LETTER FOLLOWS...

March 5, 2001

Dear Water Agency/User:

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Restoration (NM); Rocky Mountain Peace & Justice Center (CO); San Diego Audubon Society; San Fernando Valley Audubon Society (CA); San Juan Citizens Alliance (CO); San Pedro 100 (AZ); Santa Clarita Organization for Planning & Environment (CA); Santa Cruz Earth First! (CA); Save the West! (ID/OR/WA); Shundahai Network (CA/NV); Sierra Blanca Legal Defense Fund (TX); Sierra Club (international); Sonoran Desert National Park Friends (AZ); Southern Appalachian Biodiversity Project (GA/NC/TN); Southern California Watershed Alliance; Southern Utah Wilderness Alliance; Southwest Environmental Center (NM); Spirit of the Sage Council (CA); Stop Taking Our Parks (CA); Superior Wilderness Action Network (MN/WI.); Surfrider Foundation (international); Sustainable Salt Lake (UT); Terra Firma (UT); The Brower Fund (CA); U.S. Public Interest Research Group; Utah Animal Rights Coalition; Utah Environmental Congress; Utah Rivers Council; West Texas Water Protection Fund; Western Land Exchange Project (Washington); Western Watersheds Project; Western Wildlife Conservancy (UT); Wetlands Action Network (CA); Wild Utah Project; Wild Wilderness; Wildfire Infoshop; WildLaw (eastern US); Wildlife Advocacy Project (national); Willow Creek Ecology (UT); Witness Against Lawless Logging (CA/OR/WA); and Wyoming Outdoor Council.

LR in the News 03/10/01

Arizona Republic

Truckin' for the environment Group pushing for Colorado River delta restoration
By Kathleen Ingley

Environmentalists drove an empty water tanker into Phoenix on Friday, dramatizing their call to boost flows in the Colorado River and bring life back to its delta.

Their campaign, "One Percent for the Delta," is asking water users to give up 1 percent of their river allocations.

"Because of our greed, we've killed the delta," said Lisa Force, program director of Living Rivers, a Phoenix-based advocacy group.

Over the years, dams and canals have captured most of the Colorado River, leaving only a trickle - if any - to go all the way to the sea. The delta, where the river meets Mexico's Gulf of California, has lost more than 90 percent of its vegetation in recent decades, she said.

"It used to be 2million acres of lush wetlands," Force said, "and it's now mostly dried mudflats." The animals and fish that live there, such as jaguars, are disappearing.

The "One Percent" campaign is touring major cities in the Southwest. At Friday's rally outside the Arizona Department of Agriculture, about three dozen people waved signs and chanted, "Let it flow."

Agriculture uses 80 percent of the water in Arizona, and is the logical place to cut consumption, said Frank Welsh, author of *How To Create a Water Crisis*. He suggests more efficient irrigation, and reducing crops that use a lot of water but have low value, like alfalfa.

Jack Lavelle of the Arizona Department of Water Resources said, "Agriculture is pretty efficient as it is," and the department is reviewing irrigation.

Environmentalists also urged individuals to save water, from fixing leaks to planting less grass.

But Robert Barrett, spokesman for the Central Arizona Project, which manages the 336-mile canal carrying Colorado River water to Phoenix and Tucson, said there's no way to make sure the river benefits from conservation.

"If Arizona gives up 1 percent," he said, "I can guarantee that California will take it."

There's also the risk that Mexican farmers will tap any extra water flowing south. Force said Mexico has signed an agreement to prevent that.

Top officials from the Department of Water Resources visited the delta just last week. "We're vitally concerned about anything that has to do with the Colorado River," Lavelle said.

But with the complexities of water rights and foreign policy, he doubts that the "1 percent" solution is feasible.

Reach the reporter at kathleen.ingley@arizonarepublic.com or (602) 444-8171.

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What's New

www.drainit.org PO Box 466, 21 N. Main Street Moab, UT 84532 (435)259-1063
info@drainit.org

LR in the News 03/09/01

UNLV Rebel Yell

Roadshow tours to revive delta

By Shervin Hess

Next time you drive over the Hoover Dam, stick your head out the window and take a good look down the deep end. That rushing, gushing 20,000-cubic foot per second flow known as the Colorado River supplies 30 million people with H2O.

After being thoroughly tapped by Lake Mead, it continues south, providing every shower, flushing every toilet and irrigating every crop it happens upon until the end of

the line, a dried-up delta in Mexico. By the time its 1,400-mile journey to the sea is completed, 100 percent of its annual flow will have been consumed, making this river one of the largest plumbing systems in North America.

The Glen Canyon Action Network (GCAN) wants to restore this remnant of what was once considered one of the most diverse ecosystems in the Western U.S. They will be coming to Las Vegas next Monday as part of the Sustainable Water Project Roadshow. GCAN is driving an empty water tanker, symbolizing the thirsty Colorado, through six major cities, asking citizens and water agencies to "give back 1 percent for the Delta." This is in reference to roughly 1 percent of the river's average annual flow, which scientists agree would be sufficient to keep the estuary and wetlands complex alive.

"If everybody flushed their toilets once less per day, it would give us the one percent we need to restore the delta," explained GCAN Executive Director Owen Lammers.

Seven states and Mexico have beneficial interests in the Colorado River Basin. The average water consumption in the U.S. is 101 gallons per person, per day. Nevadans devour nearly twice that, making us the largest per capita water consumers in the country. Rapidly evaporating fountains, golf courses and artificial canals are the main source of the problem, but Las Vegas can conserve by simply being careful not to waste.

The focus of GCAN's visit will be to rally at the Las Vegas Valley Water District at noon Monday on the corner of Valley View and Charleston. GCAN invites the community to participate at their meeting with District Director Patricia Mulroy.

According to Lammers, Las Vegas, the leader in nonessential water consumption, has the opportunity to show a lot of leadership by owning up to conserving that 1 percent for the Colorado.

"We're talking about a need for water conservation not for the benefit of additional development, but to put back in the river," Lammers added.

For more information on the Sustainable Water Project Tour visit GCAN's Web site, www.drainit.org. @drainit.org

Media Advisory 03/08/01

Activists Tour for the Colorado Delta Stops in Phoenix

Tour March Rally a Call to Curb Water Over-Consumption March Rally a Call to Curb Water Over-Consumption

For Immediate Release: March 8, 2001 Contact: Lisa Force (480) 990-7839 Michelle Harrington (602) 628-9909

Event: Rally to ask Arizona users of Colorado River water to share just 1% with the suffering people and species of the Delta

When: Friday, March 9, 2001 Time: 11 a.m - Noon (A light lunch will be served) Where: In front of the Department of Agriculture Bldg, 1688 W. Washington (Cattycorner from the Capitol Mall; Free parking at the Capitol Mall parking lot)

Speakers: Lisa Force; Robert Witzeman, M.D.; Frank Welsh, author of How to Create a Water Crisis; Owen Lammers, executive director of Glen Canyon Action Network in Moab, UT

Music By: Chemehuevi Indian Drummers, Peace and Dignity Journeys Visuals: 40-foot 'dancing' Chinese Dragon, representing rivers' energy Water 'donations' poured into empty water truck

Phoenix, Arizona (February 22, 2001) - Arizona depends heavily upon Colorado River water. Even as cities grow, ecosystems suffer and demand for water increases, trillions of gallons of water are wasted. Phoenix-based Living Rivers and a broad coalition of 120 organizations, representing 8 million people, will hold a rally and news conference where they will publicly call upon users and distributors of Colorado River water to conserve and leave just 1% in the river to restore the Delta in Mexico.

The Colorado River is the most dammed and diverted channel of water in the United States. Traveling through seven states and into Mexico, the Colorado ends at the Gulf of California. However, these days, the river rarely meets the sea. Living Rivers is touring cities of the Colorado River Basin, with an empty water truck, seeking 'donations' of water for the Delta. The Tour began in Salt Lake City on March 5.

"We have been getting terrific public support and response at these rallies," says Living Rivers program director, Lisa Force. "The 'One Percent for the Delta' campaign serves a very modest and attainable goal-the restoration of crucial ecological habitat that supports Native people and numerous species who depend on it for survival. The delta can be revived with an average of less than one percent of the river's total flow in most years. We are asking agencies to conserve a very modest amount of water towards restoring the once vast Colorado River Delta ecosystem," says Force.

In addition to this rally, a presentation will be held at ASU beginning at 2 p.m. in Room LSA163 in the Science Building at 2:00 p.m. to discuss the issues and potential restoration on the Colorado River, including Glen Canyon Dam and the Delta. The presentation is open to the public.

03/08/01

Day 4...Sustainable Water Project Tour

This day was mostly a driving day, as we had to cover 550 miles and two watersheds! We pulled out of Albuquerque around noon, headed south on Interstate 25 for the town of Belen, an old farming community along the Rio Grande River. We passed by the University of New Mexico's Championship 18-hole golf course in south Abq, but we did not have time to stop for a photo op or a tee off. UNM promotes this golf course as a

site for national golf tournaments. The City of Albuquerque boasts of more than 15 courses in the city. Well-watered, no doubt.

The first community we pass through is the Isleta Pueblo Indian Reservation. The Rio Grande flows through the Isleta Nation. The tribe, for whom the river is sacred, successfully sued the City of Albuquerque several years ago for dumping partially treated sewage into the river upstream of the reservation. This established an important legal precedent for both environmental protection and tribal sovereignty, because the courts for the first time recognized that Indian nations have authority to enforce environmental laws on their lands and in their streams, even if the culprit is off the reservation.

We were heartened to see a healthy, dense riparian forest of cottonwoods, willows, and other native plants along the riverbanks as we crossed the river at Isleta. The local term for this riparian forest is "bosque," and the bosques are in real trouble because of lowered water tables caused by heavy agricultural water withdrawals and by clearing land for crops. In many areas of the Rio Grande, exotic tamarisk (salt cedar) has invaded and choked out native vegetation.

The Rio Grande south of Albuquerque is often two parallel streams--the river and one or more ditches. At certain times the ditches carry more water than the river.

Our first stop for the day was the Middle Rio Grande Conservancy District (MRGCD) in Belén, one of a string of communities along the river that have been inhabited for centuries. Some are called "pueblitos"--a term that evokes the rich Hispanic heritage of the region.

The MRGCD has its corporate headquarters in Albuquerque but we chose instead to visit the distribution arm of the Irrigation Division, a nondescript cinder block structure with no identifying signage. We drove the water truck into the parking lot for our photo op, then we walked inside. There we met the affable Manager, Mr. Richard Jaramillo. We presented him with a copy of our letter requesting one percent for the Colorado River delta, and asked for his consideration. He very politely responded by telling us that he would bring this issue to the attention of his board of directors. We thanked him for his time and headed back out on the road.

I-25 follows the river south. It's just another piece of industrial infrastructure on the landscape, but the freeway also reflects the determinative role the river has played in the cultural and economic geography of the southwest. Where for generations people walked, and later rode horseback, along the river, today a steady stream of autos, RVs, 18-wheelers, and yes, (full) water tankers flows by...

We pass by the Sevilleta National Wildlife Refuge near Socorro, and later the Bosque del Apache Refuge. These refuges are vital to the waterfowl populations that migrate along the Rio Grande. Sadly, however, agribusiness and hunters keep a tight rein on the management of these refuges. Parts of the refuge are open to hunting, where the trigger-happy can find joy in shooting ducks at the "refuge."

Alfalfa and other grain crops are grown for cattle feed and duck feed on these federal public lands, providing yet another subsidy to the livestock industry in a region whose economy was largely founded on such subsidies.

We rolled into Truth or Consequences, N.M. in late afternoon. This charming town, known for many years as "Hot Springs," made a deal with a TV game show back in the 1950s, in which the town changed its name to help promote the program. Today the town's name could well apply to the management of the river that flows by it.

We had water, not TV, on our minds however as we drove through downtown T or C, as it's known locally. We were headed to the far side of town, to a place known as Elephant Butte Dam on the Rio Grande. This was one of the first concrete dams constructed by the US Bureau of Reclamation in the early twentieth century. Rather ornately accented by a row of lights on concrete standards across the dam's crest, the dam is a sad sight. The reservoir has the dubious distinction of evaporating as much as 25% of the river's flow.

The water level in the reservoir was low, as usual. This reservoir is one of several in southern New Mexico that divert water for the state's agricultural sector. The town of Hatch, a few miles downstream from T or C, is the world-renowned center of the chile pepper industry. The peppers are a mainstay of the economy and the culture of the valley and are grown with Rio Grande water. But the biggest crop of the valley is cattle feed such as alfalfa, grown for the benefit of feedlots and dairy farms in the vicinity.

Our water truck was one ton over the weight limit so we were unable to drive across the dam. We did get a photo of the truck, though, with the dam in the background.

Back on the highway, we cruised across the stunningly beautiful landscape of the Chihuahuan Desert and over the Continental Divide, where we re-entered the Colorado River watershed. The Gila River, which rises in the Gila Wilderness country to the north, is a tributary of the Colorado. We'll be travelling through the Gila's watershed as we pass through Tucson and Phoenix.

As we pass into the Great State of Arizona, we are detained briefly at the Weigh Station where the authorities express skepticism at our story that we are driving this 11-ton truck around the Southwest for environmental education purposes. But they can't find anything to cite us for, so they let us go and we are off once again into the night.

The moon is almost full and we drive through southern Arizona in the soft lunar glow. Our destination tonight is Phoenix, and tomorrow we will rally downtown. Stay tuned for the next report!

03/07/01

Day 3...Sustainable Water Project Tour

Albuquerque Welcomes Sustainable Water Project Tour

Albuquerque, N. Mex., March 8 -- The tour continued in Albuquerque yesterday as we gathered at City Hall Plaza to call on the city to give back one percent of its contracted water from the San Juan River and assist in restoring the dying Colorado River Delta.

A light rain set in at noon as the program commenced with presentations by leaders of the Diné Medicinemens Association. Thomas Morris, Jr., and Phillip Bluehouse addressed the crowd both in the Navajo language and in English about the importance of water and about healing the damage that has been done to our rivers.

Bill Guerra Addington, a leader of the Albuquerque-based Water Information Network and a resident of the Rio Grande Valley in Sierra Blanca, Texas, spoke about the need for restoring the Rio Grande, where the river sometimes runs dry from upstream diversions. The cities of Albuquerque, Ciudad Juarez and El Paso and large farms in the valley take life-giving water out of the streambed, imperiling river-dependent species such as the endangered Rio Grande silvery minnow. Addington said that the river where he lives is a meager trickle compared to the healthy flows of many years past.

John Horning of Forest Guardians, based in Santa Fe, addressed the crowd on the current ecological crisis on the Rio Grande, where dewatering of the river in recent summers has pushed fish species to the brink of extinction. One of the prime culprits is the Middle Rio Grande Conservancy District (MRGCD), which withdraws up to four times more water from the river than the next larger user. The MRGCD provides irrigation water primarily for growing alfalfa and other cattle feed crops. Horning said that because the MRGCD has never perfected its water rights with the State Engineer's Office, it is operating outside New Mexico state water law.

John Weisheit, President of GCAN, introduced our letter on behalf of 121 organizations in the US and Mexico, seeking donations of one percent of currently used water diversions to restore the Colorado River delta. John spoke about the diversion of water to the Rio Grande from the San Juan River basin through the San Juan-Chama Project tunnel in northern New Mexico. This tunnel takes water out of the Colorado River basin to be used for growing cattle feed in the Rio Grande valley. The City of Albuquerque has more than 50,000 acre-feet of San Juan-Chama (SJ-C) water under contract, and has expressed intention to build an expensive water treatment plant to use SJ-C water as the city's primary municipal supply.

Our letter, which we will present to Mayor Jim Baca, asks the city to join our "One Percent for the Delta" effort and reallocate some of the city's contracted water to restoration.

Musical entertainment was provided by Peter Neils, a local activist and singer who performed original music he wrote to commemorate the exquisite beauty as well as the environmental tragedy of the Rio Grande River today.

Our program was capped off by singing and drumming from the Peace & Dignity Spirit Runners, who performed traditional Native American music. The runners, Moe Gonzalez and Jesús Figueroa, are travelling with us the entire journey. They are helping us plan a Spirit Run that will celebrate the river.

Following our City Hall rally, we loaded up the trucks and drove out to the banks of the Rio Grande River along the old Route 66 east of downtown. There, we had a brief ceremony with Albuquerque activists and medicine people.

We saw a river lined with large, old cottonwood trees and some newly planted trees that are part of a restoration program in the community.

From the riverbanks, we drove a short distance to visit with new friends at the Southwest Network for Environmental & Economic Justice (SNEEJ), a group of community activists working primarily on environmental justice issues in and around the Albuquerque metropolitan area. SNEEJ has been particularly effective at raising awareness of the impact that the local Intel microchip plant has had on the local environment and social fabric of the community. Intel is one of the largest industrial water users in the Rio Grande valley.

We joined our friends from KP Vision Paper for a spicy New Mexican dinner. Tom and Lynn Rymsza are the founders of the kenaf paper industry in the United States, and have their headquarters here in Albuquerque. We discussed the promise of a growing shift to alternative fiber papers, and the prospects for developing a larger kenaf industry to relieve pressure on our forests. The production of kenaf paper uses no chlorine and half the amount of water of typical tree-based paper pulping. The conversation turned to the question of when U.S. environmental groups will abandon tree-fiber paper for the environmentally preferable kenaf fiber. Although it currently costs about twice as much as tree-fiber paper, kenaf is used by GCAN and a growing number of smaller groups to protect forests and create a viable market for the fiber. By building demand for kenaf, we help to bring the price down. We encourage all environmental groups to join with us in demonstrating that paper needs can be met without destroying forests and watersheds.

From Albuquerque today, we are heading south on Interstate 25, following the course of the Rio Grande River first to the town of Belén and home office of the MRGCD, where we will present our letter. Our next stop will be the Elephant Butte Reservoir near Truth or Consequences, NM. This reservoir is formed by one of the first concrete dams ever constructed by the US Bureau of Reclamation early in the twentieth century. As much as 25% of the river's flow evaporates from the reservoir annually into southern New Mexico's desert skies. Our next rally will be tomorrow morning in Phoenix, Arizona, at the State Department of Agriculture building downtown.

Day 2... Sustainable Water Project Tour

MEDICINEMEN, ACTIVISTS PRAY FOR DECOMMISSIONING OF NAVAJO DAM NAVAJO DAM, N. MEX.,

March 6 -- An unusual alliance of environmentalists and Native American traditional and spiritual leaders gathered today at the crest of Navajo Dam on the San Juan River east of Farmington, New Mexico, to conduct a healing ceremony for the river and for the decommissioning of Navajo Dam.

This site was chosen as the second stop in our five-state "Sustainable Water Project Tour" of the Southwest sponsored by Glen Canyon Action Network, Living Rivers, the Diné Medicinemens Association, and 121 organizations in the U.S. and Mexico, to focus public attention on the need for restoration of the Colorado River watershed and its delta.

We were forced to delay our 3:00 PM damsite ceremony beyond its originally planned start time while we waited for uninvited law enforcement officials to leave the area, and provide for a calm environment in which to conduct the ceremony.

Activists joined leaders of the Diné Medicinemens Association (DMA) and the Peace & Dignity Spirit Runners to grieve the loss of a large number of sacred sites inundated by the waters of Navajo Reservoir, following construction of Navajo Dam in 1962.

Over the course of the day, DMA President Thomas Morris, Jr. of Window Rock, Arizona, conducted three ceremonies calling for the restoration of ecological and cultural resources along the San Juan River and throughout the Colorado River basin.

"I came here early in the morning today to pray for the river, Earth, and sky, and apologize for what has been done to harm them," said Mr. Morris who as a young man visited the sacred area now flooded beneath Navajo Reservoir with his grandfather, also a medicineman. "The costs we have been forced to pay for the convenience of storing all this water are only now being accounted for."

Ancient archeological and ceremonial sites, as well as the entire town of Santa Rosa, New Mexico, were submerged beneath the rising waters of the reservoir almost forty years ago.

Costs for the Navajo Indian Irrigation Project (NIIP) near Farmington, for example, are still rising, thirty years after the project was supposed to have brought prosperity to the Navajo people. Water from Navajo Reservoir is used by the Navajo Nation to grow mostly low-value crops, such as alfalfa and potatoes. Recently, the Tribal Council approved a \$10 million dollar bailout for the fiscally troubled program.

Once we had been notified that the damsite was occupied by law enforcement officers prior to our prearranged 1:00 PM ceremony, we chose instead to conduct a service at an undisclosed nearby site downstream of the dam. We met on the banks of the San Juan River to pray for the river's release to allow the San Juan to flow unimpeded to the sea.

"This river, once a vital tributary to the Colorado River, is sick and dying," said John Weisheit, President of GCAN. "Dams and diversions are now draining the river dry."

While the riverside ceremony was underway, law enforcement officers, thinking the event at the dam's crest had been cancelled, left the area. Once the natural calm had been restored, we caravanned to the dam where the last ceremony of the day was conducted.

After a series of traditional prayers, songs, and drumming, the ceremony concluded by pouring into the tour's water tanker truck a symbolic donation taken from Navajo Reservoir.

The truck, emblazoned with the slogan "An Ecosystem, Not a Plumbing System," accepted the water donation for later delivery downstream in a demonstration of the need for restoring water flows to the river's delta in Mexico.

We departed from Navajo Dam in high spirits, heading south for Albuquerque, New Mexico, the next stop on our tour, where we will rally at noon on Wednesday, March 7, at City Hall, calling on the City to give back one percent of its contracted water from the San Juan River diversion to help keep the Colorado River delta alive.

LR in the News 03/06/01

Salt Lake Tribune

Tour Groups Want Water Left in Colorado River
BY BRENT ISRAELSEN

There is a new rallying cry among environmentalists. "One percent for the delta!" No, it's not about giving another tax break to Utah's favorite airline. It's about keeping more water in the Colorado River -- water that would flow all the way to a dying delta at Mexico's Sea of Cortez. "Scientists say we need at least 1 percent [of the Colorado River's historic flow] just to keep the delta on life support," said David Orr, field director for the Moab-based Glen Canyon Action Network. Orr's is one of 120 environmental groups that on Monday launched a five-state "Sustainable Water Project Tour" to call attention to the delta's plight and to urge the U.S. government and Colorado River water users to leave water in the river.

For much of the year, the delta -- once a 2 million acre oasis to hundreds of species of birds and fish -- is a mudhole, shrunk by 60 years of dam-building and diversions on the Colorado River. The projects have provided water and electricity to Wyoming, Colorado, Utah, New Mexico, Arizona, Nevada and California, as well as Mexico.

Bring on another drought cycle and the delta will shrink even more, further endangering dozens of endangered species, not to mention the livelihoods of Mexicans and Indians who depend on the delta for survival.

Environmentalists -- who demonstrated Monday outside the U.S. Bureau of Reclamation downtown -- say it is time for states to reduce their water demand, leaving more of it in the river.

"We're talking just 1 percent. That's not a lot to ask," Orr said. One percent of the river's historic (pre-dam era) annual flows equals about 150,000 acre feet of water, or about 48 billion gallons.

In a good year, only 2 million acre feet of water finds its way to the delta, but much of it is salt-laden "return flows" from agricultural lands. The rest of the water comes in the cooler months, when it is not needed.

An additional 150,000 acre feet of fresh water would come as welcome relief to the over-stressed delta, said Mark Briggs, an ecosystem restoration researcher at the Tucson, Ariz.-based Sonoran Institute.

Ideally, most of the additional water would be delivered during May, June and July, when new plants are struggling to survive, Briggs said.

The simplicity of the environmentalists' 1 percent plan is overshadowed by the complexities of the river's politics and its overallocation in a region that is the fastest-growing in the nation.

Getting seven western states and Mexico -- along with all their agricultural and municipal water users -- to agree on giving up water for environmental purposes will require no small miracle.

The river users are focused on protecting their allocation (see box) and ensuring that California reduces its draw on the river. Though entitled to 4.4 million acre feet, California currently uses about 5.2 million.

There is cause for hope, however. In December at the annual meeting of the Colorado River Water Users Association, Patricia Mulroy, general manager of the Southern Nevada Water Authority, told her fellow water users that they no longer can ignore the delta.

And for the first time in the 60 years of water development along the Colorado River, the Mexican government, powered by a new political party, is putting environmental concerns on its agenda.

The Sustainable Water Project Tour, which consists of an empty water truck decorated with environmental slogans, will run for 10 days with stops in Albuquerque, Phoenix, Las Vegas, the Imperial Valley of Southern California and Los Angeles.

How the water of the Colorado River is divvied up: California: 4.4 million acre-feet
Colorado: 3.86 million acre-feet
Arizona: 2.85 million acre-feet
Utah: 1.71 million acre-feet
Wyoming: 1.04 million acre-feet
New Mexico: 838,000 acre-feet
Nevada: 300,000 acre-feet

03/05/01

Day One...Sustainable Water Project Tour

Tour Launch at the Bureau of Reclamation

On a brisk Monday morning, our empty water-tank truck rolled to a stop in front of the Wallace Bennett Federal Building in Salt Lake City. The large, white water truck—weighing in at 23,000 pounds gross vehicle weight and normally used for dust control on construction sites—was emblazoned on both sides with large banners proclaiming the Colorado River “An Ecosystem, Not a Plumbing System.” The truck symbolized our urgent call to the US Bureau of Reclamation (BuRec) to encourage Colorado River water agencies to voluntarily give back at least one percent of the Colorado River water they currently use, in order to restore the river’s dying delta south of the border with Mexico.

A dozen Utah-based groups gathered on the downtown plaza, cheering as speakers, musicians and Native American drummers stepped up to the microphone, one after another, sharing their concerns about the Colorado River’s decline and their hopes for quick corrective action by the water agencies. The rallying cry was “1% for the Delta, 1% Now!” The program opened with traditional drumming and singing by the Peace and Dignity Spirit Runners, Native Americans who have made several trips from Alaska to Mexico on foot, while nine activists danced with a 50-foot Chinese Dragon named Glen, who made his debut a year ago at a rally calling for the decommissioning of Glen Canyon Dam, the second largest dam on the Colorado.

One of the hot-button issues raised by environmentalists at the rally is a proposed water pipeline that would pump water from Lake Powell reservoir on the Colorado River to faraway St. George, Utah. Southern Utah Wilderness Alliance attorney Steve Bloch said this project would threaten areas proposed by citizens groups for wilderness protection, and spur development sprawl in the environmentally sensitive Mohave Desert. Utah has the third-highest per capita water consumption of any state in the US, and St. George reportedly has the highest water consumption rates in Utah. Making more subsidized water available for a growing community would only stimulate more unbridled, unsustainable growth.

Denise Boggs of the Utah Environmental Congress, a group that fights timber sales and grazing on public lands, pointed out that the ecological integrity of the entire Colorado River watershed is threatened by resource extraction, and called for ending federally subsidized logging and grazing programs. By redirecting the huge subsidies that flow to these industries today, to worker retraining and ecological restoration public works projects, we could protect the Colorado River basin all the way from its headwaters downstream to the delta—the end of the “pipeline” of the Colorado River. Eric

Ward of the Utah Animal Rights Coalition brought along a friendly cow (okay, it was really a vegan in a cow costume) to graphically identify the primary consumer of crops grown with Colorado River water. Growing alfalfa, a crop that requires huge amounts of water, is a wasteful and inefficient use of irrigation water. Ward said that if we were to grow less feed for cattle, and more fruits and vegetables for humans, we could reduce

our consumption of Colorado River water while encouraging more people to eat a healthier diet. By eating less meat, or giving it up altogether, we could reduce our environmental impacts in many important ways.

At the rally's finale, John Weisheit, president of GCAN and Living Rivers, read the letter he would be presenting to the regional director of BuRec on behalf of 122 organizations calling on Colorado River basin water agencies to give their one percent for the delta. Weisheit and Living Rivers project director Lisa Force then ceremoniously dumped a bucket of Central Utah Project water into the empty tank of the water truck, symbolizing the need for water donations for the thirsty delta. The action exemplified the grassroots nature of the "1% for the Delta" campaign, and the effort that would be required in the coming

months to raise awareness and pressure the water agencies to do the right thing. The event was reported on by television, radio and print journalists. Following the Salt Lake City event, we drove southward to the Colorado Plateau, to GCAN's home in Moab for a good night's sleep, one of the last we'd have for some days to come.

LR Press Release 03/02/01

GCAN Launches the

"Sustainable Water Project Tour"--Itinerary
Groups Call for Restoring the Colorado River Delta

CONTACT: Owen Lammers, 435-259-1063

Moab, Utah--The Glen Canyon Action Network will launch our five-state, six-city tour of the Southwest on Monday, March 5, calling for restoring flows to the Colorado River delta. Working with over eighty groups in the U.S. and Mexico, GCAN and our sister organization in Phoenix, Living Rivers, are organizing a "Sustainable Water Project Tour" that will visit Salt Lake City, Albuquerque, Phoenix, Las Vegas, Blythe CA, and Los Angeles, carrying our message of River Restoration Through Water & Energy Conservation to the public.

These events coincide with the celebration in dozens of other countries of the Fourth International Day of Action For Rivers, Water and Life. Last year, many of you joined us in celebrating the Day of Action with our late cofounder David Brower at Glen Canyon Dam. This year, however, we're taking our show on the road, directly to the people!!!

We'll be driving an empty water tanker truck on our tour, symbolizing the dying delta's desperate need for water, and we'll be soliciting donations from the very water agencies responsible for draining the river dry. We will ask in a letter for these agencies to voluntarily contribute "One Percent for the Delta." This is in reference to an amount of water roughly equal to one percent of the river's average annual flow, that scientists agree is needed just to keep the once-vibrant estuary/wetlands complex alive--on life support.

Surely the agencies should agree to a plan that would help prevent the extinction of species dependent on restoring freshwater flows to the region that was, only fifty years ago, still considered to be one of the most significant biodiverse ecosystems in the Western U.S.!

This is the first broad-based organizing effort among the basin's environmental and social justice communities, of the need to transform this vast plumbing system back to an ecosystem.

We invite you to join us at one or more of our stops along the way (see schedule below) and have fun rallying with us for the rivers. Rallies will underscore the timeliness of the delta restoration effort, and provide water users an opportunity to demonstrate leadership and responsibility for repairing the damage caused by diversions so extensive that the river no longer reaches the ocean.

In addition to the advertised tour events listed on our website (www.drainit.org), we are planning some unscheduled events along the way that will further highlight the themes and issues that are important to the restoration of the watershed.

GCAN will be announcing these "extra" events throughout the tour, which begins noon Monday, March 5 at the Federal Building in Salt Lake City.

From the regional office of the Bureau of Reclamation, we will embark on our journey that will take us to a rendezvous on Tuesday the 6th at Navajo Dam on the San Juan River in northern New Mexico. There we will be joined by representatives from the Diné Medicinemens Association and the Native Environmental Justice Advocacy Fund and other San Juan River activists. We'll discuss actions we can take to address the many problems of the San Juan--including the pending construction of the Animas-La Plata reservoir project. Join us at 1:00 pm at the top of the dam, if you can make it!

We'll make our way south from Navajo Dam down to Albuquerque for a rally at noon on Wednesday, March 7, at the plaza across from City Hall. We'll be raising awareness of the city's plan to begin using Colorado River basin water from the San Juan-Chama Project to support more growth and development along the Rio Grande!

Following our event in "Duke City," we'll hit the road again and head to sunny Arizona. We'll meet our friends from Living Rivers in Phoenix for a downtown rally at 10:30 AM on Friday, March 9, at the State Department of Agriculture, to be followed by an afternoon teach-in at the Arizona State University campus (email us for location, time, etc.).

We're heading north to Flagstaff from Phoenix, where we will visit our friends at the Flagstaff Activist Network on Saturday. This is just a stopover on the way to our next event, to be held sometime Sunday afternoon at the legendary Hoover Dam on the Arizona-Nevada border. We invite you to join us for this unpublicized tour stop, where we'll enjoy the thrill of driving our tanker truck across the world's most famous dam!

Once we've had our fill of fun and frolic at Hoover Dam, we're off to that Den of Iniquity, La\$ Vega\$, where they gamble every day with the future of the Colorado River. Join us for an action-packed, fun-filled whirlwind tour of such memorable sights as the world-famous Bellagio Casino, home of one of the world's largest (computer-controlled!) fountains, shooting precious Colorado River water high into the desert skies, 24/7. We'll visit the steel-gated Desert Lakes subdivision, where opulent multimillion-dollar palaces line artificial canals. But the focus of our visit will be a rally at the Las Vegas Valley Water District at noon, Monday, March 12, at the corner of Valley View and Charleston. We invite you to participate as we seek a meeting with the District Director Patricia Mulroy.

From Vegas, we head south to Laughlin, home of the infamous Mohave Generating Station, that burns coal mined on the Hopi Reservation at Black Mesa. We'll drive the truck past the last set of casinos and across Davis Dam (that forms Lake Mohave) back into Arizona. We'll head south to visit the Central Arizona Project canal and stop for a photo op at the ORIGINAL London Bridge, one of the world's weirder tourist attractions on "beautiful" Lake Havasu.

Farther south, we'll cross over Parker Dam--the world's DEEPEST dam (it's not high, it's deep!) into the Golden State of California, and we'll stop near the intakes for the Colorado River Aqueduct, the second-largest volume water extraction system on the river. Following the river south, we'll travel through the Mojave Desert to see the Palo Verde Diversion Dam, then we'll pay our respects to the Giant Desert Figures, one of the largest rock art sites in North America and a sacred site for local Indian tribes.

The evening of March 13th, we'll meet up with farm workers in Blythe, CA, to rally in protest of the proposed Blythe Energy Project, a gas-fired power plant for which the Governor wants to fast-track the construction permits. The farm workers see their jobs going up in smoke if the plant is built, since the water that is proposed to cool the plant is currently used to irrigate high-value citrus crops. The orchards are to be sacrificed to sell peaking power at retail prices to far-away consumers.

That night, we'll drive by moonlight into Los Angeles and we'll rendezvous with activists from across Southern California for a noon rally at the Old Pueblo Plaza downtown on Olvera Street--across the street from the headquarters of the Metropolitan Water District! We'll enjoy music and traditional dancing, as we prepare for a March to the River--the L.A. River, that is. From Olvera Street, we'll walk a mile to the Cornfields, a site proposed for a mega-condo project that is also the site of the earliest Euro-American irrigation project in western North America. There near the banks of the concrete-lined channel that is the once and future Los Angeles River, traditional practitioners will conduct a planting ceremony to symbolize the beginnings of a social movement for watershed restoration.

We are grateful to all the many activists and organizations that have volunteered their time to help us make this tour a success, and we thank them in advance for all their assistance and cooperation.

Please check our website daily at www.drainit.org for details on the events as they unfold. We hope you will be able to meet up with us along the way, and for those of you who can't make it this time, we'll keep you posted and hope to see you at our next event!

LR Press Release 03/02/01

Groups Launch

Contact: Owen Lammers, 435-259-1063, cell 435-260-2590 Lisa Force, 480-990-7839, cell 602-321-1753

Environmental and community groups across the Southwestern United States and Northwest Mexico are calling for restoration of the Colorado River's delta. More than seventy-five NGOs are taking their concerns directly to the people with the "Sustainable Water Project Tour," set to begin in downtown Salt Lake City on Monday, March 5, at a rally at the Federal Building.

Led by Glen Canyon Action Network (GCAN) of Moab, Utah, and Living Rivers, of Phoenix, Arizona, the travelling roadshow will seek donations of Colorado River water to restore flows to the dried-up delta just south of the U.S.-Mexico border.

"It took millions of years to form the vast delta region of the Río Colorado, but it took only fifty years to destroy," said Ernesto Reynoso of the Centro Regional de Estudios Ambientales y Socioeconomicos, based in Mexicali, Mexico. Señor Reynoso will be participating in several of the tour events.

The groups will drive an empty water tanker truck, symbolizing the lack of water in the delta, to additional rallies in Albuquerque, Phoenix, Las Vegas, Blythe CA, and Los Angeles.

A letter will be sent to water users seeking voluntary contributions of "One Percent for the Delta"--of their currently used Colorado River water allocations. Rallies will underscore the timeliness of the delta restoration effort, and provide water users an opportunity to demonstrate leadership and responsibility for repairing the damage caused by diversions so extensive that the river no longer reaches the ocean.

"This is the first broad-based organizing effort among the basin's environmental and social justice communities, of the need to transform this vast plumbing system back to an ecosystem," said John Weisheit, President of GCAN.

The Colorado River basin today contains more than forty dams and diversions, and functions more as a system of regulated canals and reservoirs than a river. One of the Colorado's major tributaries (Gila River) typically runs dry for approximately 150 miles in Arizona.

Groups are targeting the delta now because the U.S. and Mexican governments recently agreed to explore legal and technical means of assuring restorative flows to the delta. The Sustainable Water Project Tour is encouraging the two nations to take seriously their responsibility to ensure the survival of the people and wildlife that depend on the delta.

"It's time for the water agencies to take responsibility for their practices," said Lisa Force of Living Rivers. "We hope they will agree to work with us to find long-term solutions that will meet both human and ecological needs."

Additional events will be held at the City Hall Plaza in downtown Albuquerque, Wednesday, March 7; the State Department of Agriculture Building in downtown Phoenix, Friday, March 9; Las Vegas Valley Water District in Las Vegas at the corner of Valley View & Charleston, Monday, March 11; Todd Park near City Hall in Blythe CA, Tuesday, March 12; and the Olvera Street Plaza in downtown Los Angeles, Wednesday, March 14.

For details on these events, please check the GCAN website, or call GCAN or Living Rivers at the phone numbers listed above. Glen Canyon Action Network is a nonprofit advocacy group dedicated to the protection and restoration of the Colorado River watershed. Living Rivers is an advocacy organization specializing in public education for river restoration and water conservation in the Southwestern United States.

These events are organized in support of the Fourth International Day of Action Against Dams and For Rivers, Water and Life, March 14, 2001. For additional information on Day of Action events elsewhere in the world, please contact International Rivers Network in Berkeley, CA. Phone: 510-848-1155; www.irn.org.

LR Press Release 03/02/01

Sustainable Water Project Tour to Stop in Albuquerque

CONTACT: Owen Lammers, 435-259-1063, mobile 435-260-2590 John Horning, 505-988-9126

Wednesday, March 7, 2001 Noon-1:00 PM Albuquerque City Hall (Civic Plaza)

Fresh from its kick-off event at the US Bureau of Reclamation Regional Offices in Salt Lake City and organizing meetings with river restoration advocates along the San Juan River, the Sustainable Water Project Tour will roll into Albuquerque on Wednesday, March 7 for a rally at City Hall.

Sponsored by more than ninety advocacy groups from throughout the Southwest, across the country and from Mexico, the tour is publicizing the need for water agencies using Colorado River water to give back one percent of their water to restore the Colorado River delta. The City of Albuquerque has rights to water that otherwise would flow to the Colorado River delta. It is diverted from the San Juan River of the Colorado watershed into the Chama River of the Rio Grande.

"These are ecosystems, not plumbing systems," says John Weisheit, President of Glen Canyon Action Network, one of the principle organizers of the six-city, ten-day tour. He and the others are traveling with an empty 4,000-gallon water tanker truck to symbolize the need for water donations to the dying Colorado River delta, and donations to parched rivers everywhere.

"We hope the City will help us keep some of the water in the San Juan, and let the water's life-giving forces reach all the way to the delta and the sea," says Thomas Morris, Jr., President of the Diné Medicinemens Association, who will be traveling with the Tour to Albuquerque. "We must learn to meet our needs without being so wasteful and disrespectful of our rivers and our mother earth."

According to the most recent US Geological Survey figures, New Mexico's domestic water use is more 86% higher than the national average of 101 gallons per person per day. That's an additional 7.8 water tank trucks per year for every person in New Mexico. Water conservation and recycling programs are available now that can could bring this consumption down considerably, saving more water annually than the combined amount being asked of all Colorado river water users to help restore the delta.

"If the City of Albuquerque, the Middle Rio Grande Conservancy District and other San Juan-Chama contractors did a better job of conserving water and devoting it to ecosystem purposes we wouldn't be in our current dire straits--in both the Rio Grande and Colorado river basins," says John Horning, with Forests Guardians of Santa Fe, a co-sponsor of Wednesday's rally.

"As we sit here upstream, it's easy to forget the damage our water use may be doing to critical environments hundreds or thousands of miles away. The Colorado River delta is dying, the Rio Grande's too. It's time to get serious about water conservation," adds Weisheit.

Among the others joining Morris, Horning and Weisheit at the rally will be Sage Remington, of the Native American Environmental Justice Advocacy Fund, and Peace and Dignity Journey from the Chemehuevi Nation of the Lower Colorado who will perform traditional music.

The tour is being organized in conjunction with the 4th International Day of Action Against Dams and for River Water and Life, March 14, 2001. From Albuquerque, the tour will head to Phoenix, across Hoover Dam to Las Vegas, to Blythe California and concluding in Los Angeles on March 14.

Glen Canyon Action Network, based in Moab, Utah, is a nonprofit advocacy group dedicated to the protection and restoration of the Colorado River watershed.

Forest Guardians, based in Santa Fe, New Mexico, works to protect and restore the native biological diversity and watersheds of the American Southwest and Northern Mexico.

LR Press Release 03/02/01

Utah Environmental Leaders Launch Roadshow for River Restoration

CONTACT: Owen Lammers, 435-259-1063, mobile 435-260-2590 Denise Boggs
801-466-4055

Monday, March 5, 2001, 12:00 Noon US Bureau of Reclamation Regional Office
Federal Building 125 South State Street Salt Lake City

On the occasion of the 4th International Day of Action Against Dams and for River, Water and Life, Salt Lake City will host the kick-off event for the "Sustainable Water Project Tour," with a rally at the Regional Offices of the US Bureau of Reclamation at Noon.

Utah environmental leaders are inviting the public to join in calling on all federal, state and private agencies responsible for river management here in Utah to get serious about water conservation to enable river restoration. Water conservation donations will be sought for the Tour's empty tanker truck, which will then begin an 1,800-mile, restoration journey for dried-up rivers in the Southwest.

The Salt Lake rally is being sponsored by: Glen Canyon Action Network, Green Party of Utah, Sierra Club Glen Canyon Group, Southern Utah Wilderness Alliance, Sustainable Salt Lake, Terra Firma, Utah Animal Rights Coalition, Utah Environmental Congress, Utah Rivers Council, Western Wildlife Conservancy, Wild Utah Project and Willow Creek Ecology.

"We're starting at BuRec's regional headquarters because they, more than any other agency, dominate river destruction in the Southwest." says Glen Canyon Action Network President John Weisheit. "We and the ninety plus other environmental and social justice organizations from throughout the Southwest and Mexico supporting this tour want to see the Bureau of Reclamation transformed into the Bureau of Restoration."

Weisheit and his team will travel with their truck down the Colorado River watershed to a series of other events in New Mexico, Arizona and California. They will ultimately arrive at the US border with Mexico, where the drained-off Colorado River trickles into the sand. The environmental advocates will hold rallies at water agencies along the way. They will be presenting the agencies with letters asking them to voluntarily give back one percent of their Colorado River water, so that the river can once again replenish the dried-up delta.

Ken Sheehan, of the Utah Rivers Council says, "Whether it's the Colorado River Delta in Mexico, or the Bear River here in Utah, water needs to stay in our rivers. We don't need more dams, diversion or pipelines; a solid commitment toward water conservation will allow us to meet both human and environmental needs."

Utah is one of the most wasteful states when it comes to water consumption. According to the US Geological Survey, Utah uses 80% more water per capita than the national average. That's 7.5 more truck tankfulls of water per year for every Utahn above the

national average consumption rates. By implementing effective, mandatory water conservation and recycling programs, Utah households could not only cut their water consumption in half, but also free-up enough water to meet the immediate needs of the Colorado River delta.

"Many of Utah's watersheds are being rapidly degraded by logging and grazing practices that clearly are not sustainable," adds Denise Boggs, director of the Utah Environmental Congress, a co-sponsor of Monday's event. "We must also take care of the land, if we are to preserve our rivers."

The largest percentage of the water the Bureau of Reclamation gives away from western rivers is used to grow cattle feed. Cattle feed is the most water wasteful crop under cultivation. "This is nothing more than another subsidy to the livestock industry, at the expense of endangered species up and down our watersheds," says Eric Ward of the Utah Animal Rights Coalition. "We can grow 15 pounds of protein for human consumption with the same amount of water it takes to grow one pound of cow."

"Our rivers are ecosystems, not plumbing systems," concludes Weisheit. "It's time to revamp the mission of our water agencies from infrastructure developers that encourage more water waste, to conservation agencies that promote river and ecosystem health."

LR in the News 03/01/01
Las Vegas CityLife

Too much town, not enough river Groups urge a rethink of the Colorado
By Heidi Walters

Uh oh, a little ice cream shop in Moab, Utah, is dishing out the dirt on us, telling people we're big fat water and power hogs.

Oh, that's not disturbing news?

Well, anyway, the Glen Canyon Action Network is a grassroots group who scoops out ice cream (it pays the rent) along with green propaganda to passing tourists (25,000 served last year), many who likely also visit Las Vegas. The Network formed a year ago to continue the decades-long fight to decommission Glen Canyon Dam, a "Bureau of Reclamation cash cow," the main useful function of which is lining the pockets of houseboat manufacturers, with minor functions of producing 3 percent of the Southwest's power and assisting a few private agribusinesses.

The Network also confronts the larger issue of the over-allocated Colorado River, which is diverted and dammed and polluted by the U.S. and only reaches its delta in Mexico, in the form of a toxic trickle, in flood years. So, the Network's spreading the news about greed- and growth-driven, river-sucking megaslops like us (and Phoenix and Tucson and Southern California etc.). They're telling the tourists that we've sent an ancient clam

in the Colorado River to possible extinction, that we drown rare birds, that we piss in our own drinking fountain, that we take water from small porpoises in Mexico, that we have huge evaporating fake lakes, subsidized water-wasting alfalfa fields, spouting fountains, lawns and gazillions of toilets and more, even though we're in a desert.

They're making us look bad, folks, evil. Oh, that's OK with you?

But here's the thing: They're not just sticking with the ice cream shop. They're bringing their act on the road. This month, the Sustainable Water Project Roadshow will haul an empty tanker truck, Native American drummers and environmentalists across the West, stopping along the way to enlighten citizens. They'll be in Las Vegas March 12, on the sidewalk by the Las Vegas Valley Water District at noon. (The district is not a sponsor of the tour.)

Oh, they'll keep it sweet, just like back home, but that's a sugar-sure tactic: People don't like to see dead porpoises and waterlogged wee birds, when it comes down to it. They'll sympathize. At least, that's the hope of the Action Network and the 37 other organizations in the United States and Mexico, representing eight million activists, who are sponsoring the tour.

"Politicians will ultimately react to what the public wants," says Action Network director, Owen Lammers. He notes, for example, that a number of Western politicians now agree that Glen Canyon Dam should come down.

Plus, the Network will tell people that to save these creatures is easy, a simple matter of water agencies in the Southwest donating 1 percent of the total Colorado River allocation, the minimal amount scientists say is needed to sustain the delta habitats.

It ain't much, says David Hogan of the Center for Biological Diversity, one of the groups involved. Hogan helped draft the groups' letter to river water users, which asks for a commitment to conserve enough water to send to the delta, and to forge a formal agreement with Mexico to assure that the water reaches the natural habitats (and is not, say, sucked up by agribusiness or municipalities across the border). The Center also is one of the litigants in a case in which they're seeking a ruling that the Endangered Species Act applies across the border in Mexico. Such a ruling, they hope, would result in mitigation that would entail an allocation of specific in-stream flows and flood flows for the delta. In the meantime, though, they've decided to try sweet talk to get the flows.

"I don't expect the water agencies will fall all over themselves to give the water," Hogan says. "But to ignore this reasonable plea would be at their expense. It makes them look like complete villains, to not commit to conservation."

Tracy Bower, of the Southern Nevada Water Authority which oversees local water districts, says her agency "has a pretty aggressive water conservation program" and does care about the environment. However, while the agency "recognizes [the delta is] an emerging issue," it won't commit to anything until the seven river basin states who rely on Colorado River water, and the Mexican governments, have sat down and talked about it. But what would actually prompt such a get together, she couldn't say.

The seven states have resisted recent attempts to help species in the Mexican delta, even trying to become interveners in the international ESA case (intervention was denied) and to stay the lawsuit (also denied, just a few weeks ago).

"Some of the river users are very nervous about any suggestion that they would relinquish a single drop of the water they're allocated," Orr says. "It goes against the tenet of Western water law: Use it or lose it. Western water law discourages conservation." What water they do conserve, he says, goes toward "fueling more development."

What the environmental groups are requesting—a change in the Law of the River—perhaps seems heretical to the states, who've had set (but mighty flexible) allocations since the 1922 Colorado River Compact, in which Arizona, California, New Mexico, Nevada, Utah, Wyoming and Colorado divvied up 15 million acre-feet (with Nevada, a small population back then, getting but 300,000 acre-feet). They tossed Mexico one-and-a-half MAF. The problem, which water users acknowledge today but treat as incidental, is that the total amount of water available was overestimated. The average annual flow is more like 13 MAF. That leaves 11 and-a-half MAF for the states, in reality, to divide. Subtract about two million more MAF of water that evaporates off Lake Mead and Lake Powell and seeps into reservoir sandstone, and the allocation is further reduced.

But that's just bad math on paper. On the ground, there's just lots of finagling. Some states have ended up using more than their allocation, and others have used only some. And they've been cutting deals to continue to move the water and imaginary water around. For instance, Nevada cut a deal where it can divert and store river water in aquifers in Arizona (long an under-user). The stored water becomes credit, which an entity can redeem later by using a portion of Arizona's river allocation while Arizona in turn feeds off the stored water. (One problem, Hogan says, is that Arizona doesn't store the water but instead pumps it, at taxpayers' expense, over 4,000-foot mountains to subsidize farmers...so will there be water to draw on later?) In another deal, last year seven states agreed to let California (long an over-user) reduce its river consumption by 1 MAF over 15 years, to bring it down to its allocation of 4.4 MAF. During this time, it can store water.

"The problem," says Orr, "is that they're going to draw down Lake Mead, which will allow them to catch floods. This is serious for the delta, because the only time water has gotten to the delta has been during floods. They call it 'administrative waste,' but there's been enough of it over the last 30 years that total ecological collapse has been avoided. And Bruce Babbitt just signed off on this, calling it a 'win-win' agreement, and the six states are just standing there with a lot of blue sky in their pockets."

The most egregious aspect of all of this water witchery, Orr says, is that the states pride themselves on conservation, but in fact they are only conserving water in order to fuel development, not to sustain ecosystems.

"Maybe we need to reexamine the whole Colorado River Compact," Orr says. "This is not a golden tablet. It's a law, and laws can be changed. Now it's a system that depends

on unsustainable growth and development" and agriculture (50 percent of the river water is used to grow alfalfa for cattle feed, even though these days much of our beef comes from South America).

Las Vegas, Orr says, ought to be concerned.

"At some point, growth and development in the Las Vegas Valley becomes similar to the biology of the cancer cell; you can only grow so far until you crater out." Las Vegas is particularly vulnerable, he says, because it "has really hitched its wagon to a global growth machine, and its fortunes will rise and fall based on the world's perception of Las Vegas...and also on whether people can afford to come stay there."

Although this tour is non-confrontational, Orr says the groups are considering "the possibility of taking the federal government to court" over the delta.

Who wants ice cream?

03/01/01

The Sustainable Water Project Tour:

March 5 - 14, 2001 Salt Lake City, Albuquerque, Phoenix, Las Vegas, Blythe, Los Angeles, and many stops in between.

* Itinerary as of March 2, 2001 * Letter to Bureau of Reclamation * Tour Day 1 * Tour Day 2 * Tour Day 3 * Tour Day 4 * Tour Day 8 * Tour Day 9 * Tour Day 10 * Tour Day 11 * Salt Lake Tribune--3/6 * Grist Magazine--3/5 * ENN: Greens want Colorado River ecosystem restored--3/8 * UNLV: Roadshow tours to revive delta * AZ Rep: Truckin' for the Environment--3/10 * LV CityLife: Too much town, not enough river--3/1 * Tour Media Advisory * Media Advisory for Salt Lake Launch--3/5 * Media Advisory for Albuquerque Stop--3/7 * Media Advisory for Phoenix Stop--3/8 * Media Advisory for Las Vegas Stop--3/12 * Media Advisory for Los Angeles Stop--3/14 * Major Event schedule * Map of the Colorado River Basin. Includes tributaries, reservoirs and diversions * List of supporters

Festivals and Rallies for Water Conservation and River Restoration

The mighty Colorado River no longer reaches the sea. Stretches of the Rio Grande are dry for months at a time; its terminus is a toxic soup. International treasures like the Grand Canyon National Park, Dinosaur National Monument and Colorado River delta are starving for natural river flows.

Politics and concrete are killing these rivers, and the agencies responsible want you to believe that there's no water to spare. Yet billions of gallons of subsidized water flow off industrial hay fields, tumble over desert fountains, or evaporate off water ski parks. Water agency policies of consumption and waste, revenue and profits, have perpetuated a mythical water crisis that must now come to end.

Much of this water can stay in our rivers. Dams can come down. Habitats can be revived. And still, human needs for water can be met now, and for generations to come. Water conservation leads to river restoration. Lend your voice to make this happen.

Rally in support of a living Colorado, Rio Grande and other rivers everywhere. Call for an end to polluting, wasteful and subsidized irrigation practices. Support calls for water efficient, organic farming. Demand municipal water and land use policies that mandate conservation, native landscaping and urban biodiversity. Tell these water agencies that their missions are to meet human needs by taking progressively less, not more, water from our rivers. Let the river flow to the sea!

Join Vaquita Rescue, the Tour's water truck, as it takes collections to deliver fresh water to the endangered vaquita porpoises in the Gulf of California, and to the endangered species of the Colorado River delta. This rolling water tank also symbolizes the hundreds of millions of similar-sized tanks of water wasted by municipal and agricultural water agencies; water that never reaches the Colorado's dry and dying delta, and estuary.

Join us as we stop at the headquarters of the major water abusers in the seven-state Basin and ask them to institute conservation programs and "Giveback Less than 1%" of their total allocation to restore the Colorado Delta.

Partial List of Events - Check regularly for updates

Monday, March 5, Salt Lake City, UT, 12:00 Noon Kick-off Rally for the Bureau of Restoration US Bureau of Reclamation Regional Office Federal Building, downtown Salt Lake City

- * Call for federally mandated conservation measures for Colorado River water agencies
- * End water abuse by the Central Utah Project
- * Protest the proposed St. George pipeline from Lake Powell

Wednesday, March 7, Albuquerque, NM, 12:00 Noon Re-water the Rio Grande & Colorado rivers Albuquerque City Hall

- * Demand that the City of Albuquerque protect instream flows of the Rio Grande River
- * Demand a watershed study for radioactive contaminants from Los Alamos
- * Save the silvery minnow

Friday, March 9, Phoenix, AZ, 10:30 a.m. Arizona State Department of Agriculture 1688 W. Washington (NE corner of Washington and 17th Ave.) Simple lunch fare will be provided

- * Ask Central Arizona Project to "Giveback Just 1%" of its water allocation to restore the Colorado Delta.
- * Protest the needless diversion of Colorado River water for wasteful desert irrigation.
- * Oppose proposed pipeline from Lake Powell to Flagstaff
- * Tell CAP Tucson doesn't want its polluted sprawl-enabling water

Monday, March 12, Las Vegas, NV, 12:00 Noon Stop Gambling with the Colorado River Rally outside the Southern Nevada Water Authority & Las Vegas Valley Water District Headquarters

* Mandate xeriscape gardening for Nevada * No more fountains and artificial lakes in desert * Ante-up for delta preservation

Tuesday, March 13, Blythe, CA, 4:30 p.m. Appropriate Agriculture and Energy Policy for the Colorado Todd Park, near City Hall

* Protest corporate welfare and agricultural waste of the Colorado River * Support farmworker rights, organic farmers and family farms * Protest plans for the Palo Verde power plant Wednesday, March 14, Los Angeles, CA, 12:00 Noon 4th International Day of Action Against Dams and for Rivers Water and Life The Old Plaza across from Metropolitan Water District Headquarters

* Demand conservation policies for the regions 17 million Colorado River water recipients * Support natural flows for the restoration of the Colorado River delta and Gulf of California * Stop the Eastside Reservoir boondoggle

Living Rivers Currents 02/01/01

Volume 1, Number 2

PDF Version

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LR in the News 01/27/01

Moab Times Independent

Enthusiastic crowd supports group whose mission it is to drain lake Participants gear toward March 14 rally

By Kathryn Wilder, Guest Writer

The Glen Canyon Action Network, which officially came into being on Jan.1, hosted its first public event on Monday, Jan. 24: River Revival Night and Hot Fudge Monday Feed.

Despite being a sleepy little town in the depths of the winter lull, Moab and Castle Valley turned out nearly 150 residents to pack the hall. They were joined by visitors from the Salt Lake area; Monticello; Durango, Colo.; and as far away as Prescott, Ariz.

Susette Weisheit, campaign committee chair for the group, was master of ceremonies. She introduced the Glen Canyon Action Network to the Moab community, talked about the upcoming Day of Action rally at Glen Canyon Dam March 14, and introduced each of the evening's speakers.

GCAN's executive director Owen Lammers spoke of the efforts and accomplishments of the international river advocacy movement, highlighted by the annual world-wide Day of Action Against Dams and for Rivers, Water, and Life. The March Restoration Celebration and Rendezvous at Glen Canyon Dam will be a leader in this 3rd annual event. Lammers' slide presentation pictured other dams in other countries where people are fighting to free the rivers.

The featured speaker of the night, longtime river runner and outfitter Ken Sleight, told tales of the Glen Canyon that he and other early river runners knew so well. He spoke of watching side canyons fill and tributaries fall mute, of watching lizards float by on pieces of driftwood, as the water level rose with the closing of the gates of Glen Canyon Dam in 1963.

"It made an environmentalist out of me," Sleight said.

He told numerous stories of his protests against the dam and the varieties of resistance he met from law officers and park officials. Despite the many obstacles thrown in his path, for nearly 40 years Sleight has persevered in his efforts to restore Glen Canyon.

Another old-time river runner made an appearance at GCAN's River Revival Night. Kent Frost, who first floated the Colorado River through Glen Canyon in the 1930s, donated a box of his books, *My Canyonlands*, and was available to sign them. Back of Beyond Bookstore also came out to support GCAN's efforts through book sales.

When asked by a member of the standing-room-only crowd what activists for the cause can do now, Sleight mentioned other organizations that are working to restore Glen Canyon, such as the Sierra Club and Glen Canyon Institute. "Hop on," Sleight said, "and, most importantly, show up at the Dam on March 14th!"

Media Advisory 01/24/01

17th annual Fordham Debate considers Glen Canyon Dam decommissioning

- M E D I A A D V I S O R Y -
GLEN CANYON ACTION NETWORK

January 24, 2001

CONTACT: David Orr 435-259-1063 Owen Lammers 435-259-1063

17th Annual Fordham Debate considers Glen Canyon Dam Decommissioning

The prestigious 17th Annual Jefferson B. Fordham Debate at the University of Utah Law School will be the setting for a debate over the proposal to restore a free-flowing river through Glen Canyon on the Colorado.

River restoration advocates from Glen Canyon Action Network in Moab, and Glen Canyon Institute in Flagstaff, Arizona, will debate representatives from the United States

Bureau of Reclamation and the Upper Colorado River Basin Commission. The event will take place at 6:30 PM, Thursday, January 25, in the Law School's Moot Courtroom.

"It's not a matter of if Lake Powell will be drained, but when," said David Orr, Director of Field Programs at Glen Canyon Action Network (GCAN) in Moab, and a participant in Thursday's debate. "It's sheer economics: do we pay to clean up the mess now or pay more to do it later?"

Glen Canyon Action Network is challenging the Bureau of Reclamation over its Colorado River management practices. GCAN will launch its "Sustainable Water Project" tour of the Southwest from Salt Lake City on March 5, to call attention to the desperate need for water to restore the Colorado River's dying delta in Mexico. [For further information, consult GCAN's website at www.drainit.org.]

In recent months, GCAN has called for a dam decommissioning study to be conducted at Flaming Gorge Dam to address endangered species concerns there.

In concert with Native Americans and other environmental groups, GCAN is challenging on environmental and cultural grounds a proposal by the National Park Service to construct a major new marina project on Lake Powell reservoir at Antelope Point.

GCAN and other groups are demonstrating that sediment problems at the reservoir are already impacting recreational boating, a problem that will only worsen until the dam is eventually decommissioned.

On its tour in March, GCAN will be visiting major users of Colorado River water, asking for voluntary donations of "One Percent for the Delta," a reference to scientists' calls for assured flows to the river's parched estuarine region, where several species are currently threatened with extinction. GCAN and other groups are supporting proposals for binational talks between the US and Mexico to reach agreement on delta restoration.

Orr noted that draining Lake Powell and restoring a free-flowing river through Glen Canyon, will save huge amounts of water--enough to supply the City of Los Angeles for a year--water that currently evaporate into the desert skies over southern Utah.

"A gallon saved from Lake Powell is a gallon earned for the delta downstream," said Orr. "Ignoring the problems we are seeing--sediment, endangered species, water pollution, and evaporation--will not make them go away; the remedy just becomes more expensive the longer we wait."

- # # # -

LR Letter 01/14/02

To GCNRA/BuRec: Sediment management for Lake Powell reservoir

Superintendent Kitty Roberts
Glen Canyon National Recreation Area
P.O. Box 1507
691 Scenic View Road
Page, AZ 86040-1507

Re: Development Concept Plan (DCP) for Hite Marina and Sediment Management Plan for Glen Canyon National Recreation Area (GCNRA)

Dear Ms. Roberts:

Living Rivers and the eight undersigned groups submit the following comments pertaining to the DCP at Hite Marina. Our concerns with the proposed Plan are threefold.

- 1) The Plan must give sufficient consideration to impacts of sediment on the continued operations and future development in and around Hite Marina.
- 2) Because sediment accumulation is a growing concern, not only at Hite Marina but elsewhere on the reservoir, and at Glen Canyon Dam, GCNRA, in conjunction with other management agencies, should first complete a comprehensive sediment management plan for the reservoir. Such a study must assess the operational life span of GCNRA's reservoir activities as dictated by sediment impacts on the operation of Glen Canyon Dam.
- 3) The prioritization by GCNRA to move forward on the Hite Marina DCP demonstrates a bias toward further accommodation of one form of recreation, namely those employing motorized reservoir watercraft, while continuing to ignore the concerns being raised by those utilizing GCNRA river corridors.

INTRODUCTION

It is encouraging that the outline for the DCP makes reference to sediment mitigation at Hite Marina. For this to be properly addressed GCNRA must first ensure that all potential inflows, not just the Colorado's main stem but the Dirty Devil, Escalante, and San Juan rivers, are evaluated. This includes the numerous, ephemeral side-canyons of the reservoir too. It is also critical that GCNRA work with the Bureau of Reclamation (BuRec) to incorporate potential changes in dam operations that will affect sediment mobilization and the impacts they will have at Hite Bay. This should include dam operations affected by climate, as well as those associated with other management plans such as the Interim Surplus Criteria (ISC).

Sediment mitigation is not solely an issue at Hite Marina, but an unavoidable problem throughout the NRA. Sediment in Lake Powell reservoir was anticipated when Glen Canyon Dam was built and when the NRA became operational. Now that sediment impacts are becoming more commonplace, it's critical that GCNRA coordinate with other agencies within the Department the Interior (DOI) to prepare a comprehensive Sediment Management Plan and associated EIS for its implementation. This must be completed prior to any further work on the Hite Marina DCP, as its findings will directly inform development options for the area.

In the past, concerns with regard to sediment management have been raised by Living Rivers and others in the context of impaired access for river users at GCNRA, especially along the San Juan arm. Although staff from GCNRA has participated in several meetings, GCNRA has made no commitment to address this matter of growing public safety, health and access. GCNRA, however, is investing significant resources in moving forward on the DCP for Hite Marina, principally to benefit motorized recreation on Lake Powell reservoir. GCNRA should be working to ensure maintaining access for all existing users first. It should not be investing in expansion plans for one group of users, while ignoring those issues that are impeding access for others. Work on the DCP for Hite Marina should be suspended until GCNRA has mitigated the sediment problem along the San Juan arm of the reservoir.

BACKGROUND

The construction of Glen Canyon Dam began in 1957 and the impoundment of Colorado River water at Glen Canyon began in 1963. The reservoir reached an appropriate elevation to generate electricity in 1964. The Bureau of Reclamation (BuRec) manages the operation of the dam, power plant and reservoir. In 1972 Congress created GCNRA to manage the recreation and natural resources in the Glen Canyon region, including Rainbow Bridge National Monument. The Navajo Nation manages the resources south of the San Juan River and the Corps of Engineers regulates the waterways (Section 404 of the Clean Water Act).

The Colorado River is famous for its suspended sediment load. In 1925 testimony was presented before a Senate committee stating that the "Colorado has a silt content three times that of the Ganges and ten times that of the Nile. With the possible exception of the Tigris, it is the greatest silt-bearing stream in the world (*The Boulder Canyon Project* by Paul L. Kleinsorge)." This quantity of sediment is one of the two reasons why Hoover Dam was built. The other was to store water for consumptive use by agriculture interests downstream.

According to the *Weymouth Report* of 1929 (Senate Document #186, 70th Congress), the total suspended sediment load for Lake Mead reservoir created by the Boulder Canyon Project would amount to 137,000 acre-feet per year. Weymouth predicted that a sediment plug would ultimately form before the dam face that would compromise the dam's generator penstocks after 50 years (1985) of impounding the Colorado River. Such sediment mitigation has now been pre-empted and transferred upstream to Glen Canyon Dam.

A report published in 1961 by Ernest R. Schultz of BuRec titled *Design Features of Glen Canyon*, states that sediment mitigation at Glen Canyon Dam would need to be underway within 100 years of impoundment (2063), as sediment levels would reach the four bypass tubes necessary for emergency releases. Once sediment exceeds this level the dam and reservoir will need to be decommissioned to avoid compromising public safety. Despite this inevitability, and the impact it would have on recreation at GCNRA, no sediment management plan has been conducted for the reservoir area or dam operations. As noted below, sediment management is already becoming a major problem in the San Juan arm of the reservoir.

The only substantive work done to date by BuRec for sedimentation was conducted 15 years ago, *The 1986 Lake Powell Survey*. Although the data for this report is instructive, its conclusions are meaningless. The report states that the reservoir would completely fill with sediment by the year 2663 (700 years). As Weymouth stated for Hoover Dam, and Schultz for Glen Canyon Dam, accumulate sediment will eventually compromise the function and safety of the dams long before there is any chance that their reservoirs could actually fill with sediment. It's imperative that BuRec first determine when sediment accumulation will compromise the operation of Glen Canyon Dam so that other managing agencies, such as GCNRA, can better implement their own management plans, such as that for Hite Marina.

A technical memorandum was provided by Mussetter Engineering, Inc., on May 21, 2001 concerning sediment aggradation specific to the DCP for Hite Marina. The collection of data was completed in March of 2000 and included a reach on the Colorado River arm from ten miles upstream of the Dirty Devil River to .8 miles below North Wash, and a reach on the Dirty Devil arm ten miles above its confluence with the Colorado River arm. The data does not include a sediment study of North Wash Bay, which was also not collected during the BuRec 1986 sediment survey.

The memo states that the delta foreset slope will pass the boat ramp at Hite Marina by the year 2003. It also states the top of the delta builds up at a much slower rate and suggested that sediment would not impact access to the boat ramp for 35 to 40 years. However, the authors of the memo acknowledged that the results of their study did not include such variables as high volume freshets (for example, the freshets of 1983 and 1984), nor the mobilization of upstream sediments due to a lower reservoir pool as experienced between July 1990 and April 1993.

The authors calculated that by year 2003, the bottom of the bay before the Hite boat ramp would be 3630 feet. As of this writing the reservoir's elevation is currently 3660 feet. In April of 1993, the reservoir's elevation was 3610 feet. If such a scenario were to repeat itself, access to the boat ramp at Hite Marina would be completely cut-off in as little as two years.

HITE MARINA

BuRec's 1986 sediment survey provides some useful, though somewhat out of date, data to quantitatively evaluate the current rate in which the reservoir's deltas expand and encroach upon recreational infrastructure. The survey data would indicate that the

Colorado River delta has now progressed into the bay at Hite Marina and that the Dirty Devil River arm is completely filled. Recent observations confirm that the tributary streams above Hite Marina, such as Gypsum, Dark and Clearwater canyons are also completely filled.

Unfortunately the report's data for sediment content in North Wash Bay is incomplete and should be gathered prior to any management decisions are taken for Hite Marina. This area drains a large area of soft Mesozoic host rocks that are allowing a sediment plug to form and encroach on the area just below Hite Marina. Over time, or in the case of one significant dump, sediment from North Wash will cause access to Hite Marine to be cut off by impeding the flows of sediment coming in from upstream. A similar problem at Hite would occur when the Dirty Devil River arm, completely full of sediment, ultimately deposits its contents into the reservoir.

A more immediate challenge is that the existing sediment plug from the Dirty Devil will cut off access to the existing camp developments in the area, as dam operations force the reservoir to drop. Lower reservoir pools are likely to become commonplace, especially over the medium term, with the implementation of the Interim Surplus Criteria. To meet ISC guidelines, Lake Powell reservoir will be drawn down more frequently to assist California with its off-stream storage plans. This is likely to be exacerbated by lower than expected precipitation patterns, and higher water utilization in the Lower Basin as is predicted by the Global Change Research Program.

Lower reservoir pools will significantly aggravate existing problems for river runners, which have historical precedence in the use of the recreational resources at Hite. It is already difficult to locate safe camps below Rapid #26 (Ten Cent). Popular hikes such as those conducted at Gypsum, Clearwater and Dark canyons on the Colorado River arm are very problematic because unconsolidated sediment restricts safe access, especially when liquefied. When the river incises the sediment at depth, such as what occurred in lower Cataract Canyon in 1992, hiking access is restricted due to unstable slopes of about 30 degrees. These impacts degrade the full value of the river trip experience and the associated financial commitment necessary to engage in such activities.

Such reservoir operations and sediment (mis) management issues have caused significant problems for Colorado River users at Pearce's Ferry on Lake Mead National Recreation Area (LMNRA). The low reservoir levels at Lake Mead, accompanied by the buildup of silt from the Colorado River above, made boating activities increasingly dangerous there this past season and forced the LMNRA to implement an emergency closure of the launch ramp.

Located near the top of the reservoir, Hite Bay will be one of the reservoir's first facilities to be inundated with sediment. How this will be managed, and how long before sediment will force its permanent closure must be addressed by the DCP to evaluate the merits of any additional capital expenditures. Furthermore, the DCP cannot strictly focus on the marina facility itself, but must develop plans to assure access for river

runners, hikers and other users of the river corridors and side canyons in GCNRA's jurisdiction above the bay at Hite.

CLAY HILLS

Another immediate and ongoing sediment management problem for GCNRA exists along the reservoir's San Juan arm. The San Juan River is the greatest single contributor of sediment to the Colorado River system. Historically, the San Juan River provided 15 percent of the Colorado River's annual flow and 35 percent of the sediment. The 1986 sediment survey indicates that the San Juan delta in Lake Powell reservoir is progressing at a rate of about 10% less than that from the Colorado River. Since the 1986 survey, the access at Piute Farms has been completely eliminated and has disenfranchised the Navajo Nation from generating revenue at that locality.

The access problem at Clay Hills Crossing is especially acute. When the San Juan River is low, access to the take-out is dependent on where the river channel is. Sometimes the river flows directly to the access ramp and sometimes it does not. River channels naturally migrate and abrade over sediment fill. When the channel migrates to the opposing side of the take-out, conditions mandate that the boaters physically carry gear and boats across the sediment. Such a task is unsafe due to the quicksand-like consistency. Senior citizens and disabled people especially experience difficulties with such a circumstance.

Another sediment-related problem occurs below Clay Hills Crossing when the reservoir is at low pool. Specifically, a waterfall emerges impeding further passage downstream. In 1992 the vertical drop at this waterfall was approximately 35 feet. The waterfall is a safety consideration to boaters and needs to be addressed in a more substantive way than a warning sign or educational brochure.

The eventual desiccation of the perched delta will cause the elimination of access to the boat ramp at Clay Hills. When the river channel at the waterfall migrates down the bedrock slope, it will excavate down into the delta and the river's gradient upstream will increase. When this occurs a deep, canyon-like slope of sediment will result at the boat ramp and extensive mitigation will be required. This will be costly and likely involves management decisions in consultation with the Army Corps of Engineers.

Gene Stevenson, a consulting geologist, outlined this problem to GCNRA staff in November of 2000 in Monticello, Utah, and in January 2001 in Page, Arizona. Mr. Stevenson also informed attendees that the San Juan delta was mobilized in 1983 and 1984, and deposited sediment as pulses into Zahn's Bay (40 miles from the confluence). The floods of 1983 and 1984 too contributed generous, fresh sediment in to the San Juan delta system.

At the Page meeting of January, 2001, GCNRA staff also heard from Dr. John Dohrenwend, a retired USGS surficial geologist. He displayed satellite image maps and explained that sediment has been accumulating in the arroyos and tributary stream channels of the San Juan River basin since the early 1940s. He explained that this is a natural occurring process for rivers in arid and semi-arid areas. For southern Colorado

Plateau streams, this period of aggradation is very likely the result of a decrease in peak-flood discharge from these tributaries. At some point in the future, a regional climatic shift to more intense and frequent flood events will very likely occur. When intense storms return to the San Juan basin, the sediment deposits stored in the aggraded stream channels will be mobilized and carried into the main stem river system. Such a climatic shift could dump more sediment into the reservoir than what has occurred since Glen Canyon began filling in 1963.

Lake Powell reservoir inundates a total of 71 miles of the San Juan River canyon and its delta may soon reach its confluence with the Colorado. Because of San Juan sediment, mitigation pertaining to dam operations may be required prior to the period projected by Schultz in 1961. When the San Juan River sediment reaches the Colorado River confluence, it will effectively divide the main stem reservoir in half. During times of progressive down draw, this sediment plug will effectively leave the upstream half of the reservoir perched. Once formed, a breach of this plug would jeopardize GCNRA and BuRec infrastructures and could result in loss of life.

OTHER GCNRA DEVELOPMENTS

Another anticipated problem concerning sediment in the reservoir will occur for the facilities at **Bullfrog Bay**. Hall's and Bullfrog creeks have extensive watersheds in soft Mesozoic host rocks that have the potential to send massive sediment pulses into their respective bays after a significant meteorological event(s). The access road (531) that crosses Bullfrog Creek is underwater when the reservoir is at full pool. Sediment deposition from Bullfrog Creek will impact this access road in the coming years. This area has camp facilities at the head of the bay where Bullfrog Creek drains into the reservoir. Access to these facilities will also be impacted by reservoir sediment filling. The sediment plug will also eventually reach the marina and the ferry terminus.

Access to **Rainbow Bridge** National Monument (RBNM) will also be compromised when a sediment pulse occurs at Bridge and/or Aztec canyons. These watersheds originate in the Navajo Mountain watershed. More importantly, as Rainbow Bridge is a sacred site of the Navajo people, it would also be appropriate to include their spiritual elders in the processing of a sediment management plan. According to Executive Order 13007, the mandate for national agencies to do so is actually quite specific.

Though **Antelope Point** and **Wahweap Marina** are distanced from the Colorado and San Juan deltas, these boat launches too will be affected by sediment deposition from local tributary streams, compounded by the underwater turbidity flows that are currently building before the face of Glen Canyon Dam. The depth of Wahweap Bay averages about 230 feet and Wahweap Creek is an extensive watershed that drains soft Mesozoic strata from the Kaiparowits Plateau.

Antelope Point is located next to the original Glen Canyon gorge, which is about 530 feet deep when the reservoir is at full pool. However, the reservoir is quite narrow at this location and does not have an abundant storage capacity for sediment. Antelope Point lies between two drainages, Navajo Creek and Antelope Canyon, which drain large areas of soft Mesozoic rocks. These drainages already have progressive deltas building

within their respective gorges. In 1997 a sediment pulse killed eleven visitors hiking in Antelope Canyon.

SEDIMENT MANAGEMENT PLAN

In conjunction with their General Management Plan, NPS entities often prepare more specialized management plans for issues specific to the natural environment and uses in a particular park, monument, or recreation area. As sediment is a major issue affecting present access in GCNRA, and ultimately the life span of much of its operations, it's vital that the agency undertake the preparation of a Sediment Management Plan as a component to its General Management Plan.

The study should be undertaken in partnership with BuRec, which itself has been delinquent in preparing a plan for addressing the impact of sediment on Glen Canyon Dam operations. The chief concerns in this regard are, one, that sediment storage displaces water storage capacity, and two, turbidity flows transports sediment before the dam's face. Displacement of water storage will stress the emergency spill criteria of the dam and turbidity flows will stress the mechanics of the emergency bypass tubes and power generation penstocks. Studies to date have not addressed how these problems are to be mitigated, despite representing a significant risks to dam operations. BuRec, should determine when and how such mitigation plans are to be implemented so that other management agencies, such as GCNRA, can develop their own management criteria.

In undertaking this work, it is vital that management agencies not focus merely on short-term trends. During the past 10,000 years, river valleys on the Colorado Plateau have experienced cycles of erosion and deposition having periods of decades to centuries. These pulses of cutting and filling are considered by most researchers to be closely related to the frequency and magnitude of large storms (100 year to 500 year flood events). Therefore the 40 to 50 year record of sedimentation in reservoirs, such as Lake Powell, are not necessarily an adequate basis for calculations of the rates and magnitude of sedimentation within these reservoirs, and for estimating the remaining useful lives of these reservoirs. Moreover, significant climate change is anticipated to occur during the next 100 years, and it is unresolved whether this climate change will bring larger and more frequent large storms (major floods) to the Colorado Plateau.

To this end, the plan must:

- 1) Determine the present distribution and thickness of sediment in Lake Powell and quantitatively compare these deposits with the 1986 sediment survey.
- 2) Contain detailed and consistent surficial geologic and geomorphic mapping and analysis of all Holocene deposits within the major watersheds tributary to Lake Powell.
- 3) Provide an updated analyses of sediment delivery to the reservoir via the main stem Colorado upstream of Hite and the San Juan River..
- 4) Estimate near term climate change on the Colorado Plateau (with special emphasis on the probabilities of significant changes in the frequency and magnitude of large

storms; and estimate the potential impact of such changes on the possible mobilization of sediment deposits presently stored on the hillslopes, piedmonts, floodplains and river channels of the region.

5) Synthesize (and evaluate) all of the above with respect to potential sediment delivery to and deposition within Lake Powell.

Additionally, the plan must address water quality issues. When the river begins to cut into the sediment, it mobilizes heavy metals and toxins that originate from upstream industrial and agricultural activities. This includes toxins, which erode naturally from the host rocks upstream, such as uranium and selenium. Currently GCNRA does not have a management plan to address such potential human and animal health problems.

CONCLUSION

Lake Powell reservoir is a trap for sediment transported by the Green, Colorado, Dirty Devil, Escalante, and San Juan rivers (including numerous local side canyons). Hite Marina's future will be significantly impacted by ongoing sediment deposition, as will most of the development and recreational opportunities within GCNRA. Ultimately, as Schultz alluded to, increasing sediment accumulation in the reservoir will eventually force BuRec to make management decisions to address public safety problems associated with Glen Canyon Dam operations. These decisions will have a profound affect on the recreational infrastructures at GCNRA. It's critical that GCNRA address these issue directly, and prepare a management plan to guide its planning decisions as the reservoir continues to fill with sediment. We believe that the preparation of such a plan should take precedence over the completion of the Hite DCP, as the findings will inform future management challenges in the bay of Hite.

GCNRA should also direct immediate resources to address the existing sediment induced access problems at Clay Hills and elsewhere. This matter has been brought to your agency's attention in the past, yet no action has been taken. GCNRA is, however, proceeding with a variety of studies, such as the Hite DCP, Antelope Point EA and Wahweap DCP principally to benefit motorized users of the reservoir. The San Juan and Colorado River arms of the reservoir are also in the GCNRA's jurisdiction, and are used extensively by river runners.

We are concerned that GCNRA is displaying a culture of general avoidance to address the geologic processes concerning the public lands within its jurisdiction, as well as a preference for expanding services for high-speed recreation as opposed to river users.

We look forward to working with you to remedy this situation, and to ensure equitable and safe access for all visitors to the NRA.

Sincerely yours,

/ signed

John Weisheit

Conservation Director

And on behalf of the following organizations:

Colorado Outward Bound School
Colorado Plateau Rivers Guides
Four Corners School of Outdoor Education
Glen Canyon Institute
Grand Canyon Private Boaters Association
Sierra Club Glen Canyon Group
Utah Rivers Council
Utah Whitewater Club

CC:

Hon. Gale Norton, Secretary, Department of the Interior
Hon. Fran Mainella, Director, National Park Service
Hon. John Keys, Commissioner, Bureau of Reclamation
Hon. Kathleen Burton Clarke, Director, Bureau of Land Management
Hon. Kelsey Begaye, President, Navajo Nation
Elouise Chicharello, Regional Director, Bureau of Indian Affairs
Rick Gold, Director, Upper Colorado Region, Bureau of Reclamation
Carol DeAngelis, Grand Junction Area Manager, Bureau of Reclamation
Pat Schumacher, Durango Area Manager, Bureau of Reclamation
Karen Wade, Regional Director, National Park Service
Jerry Banta, Superintendent, Canyonlands National Park
Joe Alston, Superintendent, Grand Canyon National Park
Sally Wisely, Utah State Director, Bureau of Land Management
Nick Sandberg, San Juan Area Manager, Bureau of Land Management
Bob Hart, Research Associate, United States Geological Survey
Barry Gold, Director, Grand Canyon Monitoring and Research Center
Colonel Michael J. Conrad, Sacramento District, Corps of Engineers, US Army

LR Press Release 01/14/02

Sediment Problems: Beginning of the End for Lake Powell

CONTACT:

John Weisheit, 435-260-2590 (mobile)
Owen Lammers, 435-259-1063

**Park Service, BuRec fail to address Lake Powell's growing sediment problems;
Rafting industry and environmentalists issue urgent call for action**

**World-famous Cataract Canyon and San Juan River trips threatened; Hite Marina
will be rendered useless**

MOAB, UTAH (Jan. 14) -- It's official: Lake Powell Reservoir is filling with sediment. And the government had better start dealing with it.

So says a [letter](#) sent today by LIVING RIVERS and eight other river protection and recreation organizations, to the National Park Service (NPS), calling for federal action to address the growing problem of river mud that is interfering with boating activities in the upper reaches of the nation's second-largest artificial lake. The Utah Guides & Outfitters Association, a recreational industry trade group, made the same points in a concurring letter.

"This is the beginning of the end for Lake Powell," said John Weisheit, LIVING RIVERS conservation director and a professional river guide with 17 years experience. "People talk about Lake Powell filling with silt sometime in the future, but the future is now."

Of immediate concern is the slimy muck that threatens the environment and the Colorado Plateau's multimillion-dollar recreational river rafting industry. Similar impacts are being felt today in the Grand Canyon far downstream, where in summer 2001 the Pearce's Ferry take-out was closed indefinitely due to thick layers of oozing sediment clogging the upper reach of Lake Mead Reservoir.

The groups' letters were sent in response to a NPS redevelopment proposal for Hite Marina, a commercial concession within Glen Canyon National Recreation Area (GCNRA), located in San Juan County, Utah. The coalition of groups and businesses is asking for the marina project to be put on hold pending a study of sediment-caused access problems, not only for boaters on the reservoir but also for rafters using the Colorado River's Cataract Canyon and the lower canyons of the San Juan River. Whitewater trips through both canyons terminate on Lake Powell Reservoir.

This is the first serious indication of problems that will inevitably worsen in the coming years. Prudent management compels the Park Service to undertake a comprehensive sediment study prior to investing more public funds on infrastructure that sediment deposition will ultimately render useless. The agency has a legal duty to prevent impairment of park resources and provide high-quality recreational opportunities, yet the Park Service emphasizes reservoir-based, flat water recreation to the detriment of maintaining a world-renowned rafting experience. An industry that not only predates the reservoir's existence but also employs hundreds of people is dependent on maintaining an open channel from the mouth of Cataract to the take-out at Hite Marina, and from the lower San Juan to Clay Hills Crossing on the reservoir's San Juan arm.

"People have been using these rivers for recreation since the 1920s," said Bob Jones, owner of Tag-A-Long Expeditions, the oldest river outfitting company in Moab. Jones is a member of Utah Guides & Outfitters Association. "Something has to be done about this access problem at Clay Hills, and now I am very worried that my business will be impacted by the problems I see coming for Hite Marina. Our customers come from all over the world, and I sure would hate to disappoint them."

LIVING RIVERS' letter warns that access problems already exist at Clay Hills Crossing, and that access to Hite Marina could begin to be curtailed by sediment in as little as two

years. Colorado River sediments are quickly filling the bay at Hite and may soon inhibit access to the marina, the terminus for all Cataract Canyon trips.

"We're losing two of the country's most spectacular whitewater boating experiences," stated Annie Payne, President of Colorado Plateau River Guides. "The Park Service and Bureau of Reclamation have ignored the situation in the past, but it won't go away; it just gets worse each passing year."

The Park Service, in its 1979 General Management Plan for GCNRA, estimated that Hite Marina would have to be abandoned "within thirty years" because of sediment accumulation. The silt arrived ahead of schedule. But despite this predicted event, the agency is moving forward with plans to redevelop the existing marina at its current site.

Sedimentation occurs in all reservoirs, but the problem at Powell is particularly acute, say the groups. The extraordinarily high silt loads carried by the San Juan and Colorado Rivers are the result of the region's unique geology. Geologists consider the soils to be among the fastest eroding in the world. Flash floods, common occurrences during the desert's hot summers, carry huge quantities of silt and debris into surging streams. When these sediment-laden waters reach the still waters of Lake Powell Reservoir, the particles settle out and form unsightly mudflats that at lower water levels can make boat travel impossible.

Today's letter requests the Park Service to work with the Bureau of Reclamation to develop the requested plan and an environmental impact statement. Both agencies have responsibility for managing public resources and facilities safely and economically, and for encouraging public participation in addressing any problems. Yet they have failed to inform the public of the inevitable--and worsening--conflicts and damage that will occur.

According to a recent [NPS-sponsored study](#) [20k PDF File], the sediment deposit is quickly advancing toward Hite, and will make the launch ramp there inaccessible within two years whenever the reservoir surface level falls to 3630 feet above sea level. In 1992, the reservoir dropped to about 3610 feet above sea level. The current level is 3660 feet above sea level.

Sediment at Clay Hills Crossing is already impacting recreational usage. Boaters must often lift and carry their boats and equipment across quicksand-like mud flats to the take-out, creating unsafe conditions for recreationists.

"There's nothing much they can do but attempt to manage this problem in the near term, but in the long term, decommissioning Glen Canyon Dam is inevitable," said Weisheit.

[View Living Rivers Letter to the National Park Service](#)

[May 2001 Sediment Study for Hite Marina](#) [20k PDF File]

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On the Net:

[LIVING RIVERS](#)

[Colorado Outward Bound School](#)

[Colorado Plateau River Guides](#)

[Four Corners School of Outdoor Education](#)

[Glen Canyon Institute](#)

[Grand Canyon Private Boaters Association](#)

[Sierra Club](#)

[Utah Guides and Outfitters Association](#)

[Utah Rivers Council](#)

[Utah Whitewater Club](#)

NOTE: Many Interior Department websites are temporarily offline as a result of a court order. The following links may become functional at any time.

National Park Service

[GCNRA Planning Page](#)

Bureau of Reclamation

[Upper Colorado Region](#)

LR in the News 01/15/02

Silt threatens Lake Powell, lucrative rafting industry

By MICHAEL C. BENDER The Daily Sentinel

Lake Powell is filling with sediment and soon will have to be decommissioned, according to a letter sent Monday from nine river protection and recreation groups to the National Park Service.

"This is the beginning of the end for Lake Powell," said John Weisheit, Living Rivers conservation director. "People talk about Lake Powell filling with silt sometime in the future, but the future is now."

The river groups' letter was sent in response to a National Park Service redevelopment proposal for Hite Marina. The groups are asking for the marina project to be put on hold pending a study of sediment-caused access problems.

A spokeswoman for the Glen Canyon National Recreation Area did not return phone calls.

The river groups point to a "slimy muck that threatens the environment and the Colorado Plateau's multimillion-dollar recreation river-rafting industry."

The letter says that access problems already exist at Clay Hills Crossing and that access to Hite Marina could begin to be curtailed by sediment in two years.

The letter also says that the park service is ignoring its 1979 General Management Plan for Glen Canyon National Recreation Area.

That plan, the group says, "estimated that Hite Marina would have to be abandoned within 30 years because of sediment accumulation."

The silt, the groups say, has arrived ahead of schedule.

The groups say silt impacts are being felt downstream in the Grand Canyon, where in summer 2001 the Pearce's Ferry take-out was closed indefinitely "due to thick layers of oozing sediment clogging the upper reach of Lake Mead Reservoir."

"Prudent management compels the park service to undertake a comprehensive study prior to investing more public funds on infrastructure that sediment deposition will ultimately render useless," Weisheit said.

The groups point out that they represent an industry that predates the reservoir and one that employs hundreds of people dependent on maintaining an open channel from the mouth of Cataract to the take-out at Hite Marina and from the lower San Juan to Clay Hills Crossing on the reservoir's San Juan arm.

"People have been using these rivers for recreation since the 1920s," said Bob Jones, owner of Tag-A-Long Expeditions, the oldest outfitting company in Moab.

"Something has to be done about this access problem at Clay Hills and now I am very worried that my business will be impacted by the problems I see coming for Hite Marina."

Sedimentation occurs in all reservoirs, but the problem at Lake Powell is particularly acute, the groups say.

"There's nothing much they can do but attempt to manage this problem in the near term," Weisheit said. "But in the long term, decommissioning Glen Canyon Dam is inevitable."

LR in the News 01/16/02

Canyon changes are crucial by Lisa Force

Arizona Republic

This week, government officials, scientists and others will gather in Phoenix to flutter and fuss around the sickbed of Adaptive Management, the program implemented in 1996 that was supposed to save the Grand Canyon.

The program turned 5 years old last October, but no one celebrated because despite infusions of nearly \$40 million, the program is failing, leaving the Grand Canyon ecosystem on the brink of collapse.

The Grand Canyon plays a critical role in Arizona's economic and cultural life. But few of our elected leaders have addressed the river's decline, or the consequences this will have on our state.

As the Legislature convenes this week, Arizona citizens should insist that our elected officials speak up for the state's grandest natural treasure.

Scientists first began noticing disturbing changes in the Canyon in the 1970s. The wide diversity of native fish, birds and wildlife began to disappear. River runners arrived at familiar camping spots only to find the formerly lush white-sand beaches turned to narrow strips of mud and the cottonwoods washed away. The Grand Canyon was becoming sterile, and understandably so.

Even small dams disrupt natural river ecological processes, and the Grand Canyon's lifeblood - the Colorado River - is imprisoned between two of North America's largest dams: Glen Canyon and Hoover.

Glen Canyon Dam holds back tons of nutrient-rich sediment that used to feed native fish, form beaches and nourish native plants. The dam also severely drops water temperature in the Grand Canyon Colorado River, eliminates the river's life-giving flooding regimes, and paves the way for the insidious march of damaging non-native species.

In 1992, in response to the alarming degradation of the Grand Canyon ecosystems, Congress passed the Grand Canyon Protection Act and later established the Adaptive Management Program.

The management program was to recommend modifications to Glen Canyon Dam operations to help mitigate adverse impacts caused by the dam to Grand Canyon natural and cultural resources. An advisory committee of representatives from state and federal agencies, Indian tribes, water and power interests, and environmental groups governs the management program.

The impact of this program? Good science is being done, but that's where the good news ends. Three of the five native Grand Canyon fish have disappeared from the Canyon. A fourth species is in serious trouble and now, the only self-sustaining population of endangered Humpback Chub in the Canyon - relatively healthy until this year - is in steep decline.

While fish may be of little interest to the general public, the plight of native fish is the most visible evidence of a complex web of life coming unraveled.

Adaptive Management has been extremely effective, not in restoring the Grand Canyon, but in demonstrating that change is overdue. Among the urgently needed changes are dam operations that mimic natural, seasonal fluctuations in river flows, removal of non-native fish, and restoration of habitats that support native species.

Those changes may mean occasionally producing less power from Glen Canyon dam, reducing the number of trout available for recreational fishing or leaving more water in the river. The commercial power producers, fishing groups and irrigation districts are sure to object.

But many more of us should object to our leaders allowing the Grand Canyon's ecosystems to slowly collapse. This is our Canyon, our culture, our collective identity and if that is too esoteric, our primary draw for tourism and all the attendant economic benefits. What kind of tourism will the "Grand Ditch" attract?

Arizona in 2002 is still a state of great natural beauty, with the Grand Canyon at center stage. Although the state faces a challenging year, we can't let our elected officials ignore the dying elephant in the middle of the room.

###

Lisa Force is program director of Living Rivers, an organization with offices in Scottsdale and Moab, Utah, that seeks to protect and restore the integrity of rivers and watersheds.

Living Rivers Currents 01/17/02

Volume 2, Number 1 (Special Issue: Grand Canyon in Crisis)

On January 17-18, 2002 Phoenix will host a meeting of the Glen Canyon Dam Adaptive Management Group--the stakeholder group responsible for managing the impacts of Glen Canyon Dam on Grand Canyon National Park. This group is clearly failing, as native species in Grand Canyon are worse off since the program began in 1996.

The Articles

- [Electroshock in the Grand Canyon](#)
- [Grand Canyon: LR Calls for Immediate Action](#)
- [Native Fish: Recovery or Rhetoric?](#)

- [Silt Happens: LR Forcing Agencies to Respond](#)
- [Take Action for the Grand Canyon](#)
- [Colorado River Water Users Meeting: Environment Gains Recognition](#)

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- [LRC V2, N1, January 2002](#)
-

Living Rivers Currents 01/17/02

Taking Action for the Grand Canyon

[LRC V2, N1, January 2002](#)

I want to hear from you about the declining health of the Grand Canyon ecosystem.

Should I:

- prepare a supplemental EIS for Glen Canyon Dam
- operate the dam to mimic natural river flows and temperatures
- support removal of non-native fish that prey on native species
- make endangered fish recovery a top priority for managers, and
- make hydropower production subservient to ecosystem management?

Write to me, Gale Norton Secretary of the Interior 1849 C St., NW, Washington, DC 20240

Living Rivers Currents 01/17/02

Silt Happens: LR Forcing Agencies to Respond

[LRC V2, N1, January 2002](#)

The National Park Service is currently preparing a Development Concept Plan for Hite Marina on Lake Powell reservoir, despite the fact that sediment is about to fill the marina's bay.

LIVING RIVERS is leading a coalition of environmental, river recreation and outfitter interests demanding that NPS immediately prepare a sediment management plan and associated environmental impact statement for the entire reservoir.

There's no doubt this reservoir is filling with sediment, said Annie Payne, president of Colorado Plateau River Guides. It's amazing that the government wants to pretend that it's not happening. Payne and other commercial river runners must deal with an

increasing amount of sediment each year, as thousands of multi-day river trips on the San Juan River and Colorado River terminate at Lake Powell reservoir. Most people think of this artificial lake as deep and clear, but for us river guides, it means travelling through miles of exposed sediment, mud, exotic weeds, and dust. This makes for a very unpleasant and sometimes dangerous experience for our customers.

The sediment problem is already affecting Hite Marina, as it will the entire reservoir and dam eventually. In the coalition's nine-page submission to the National Park Service, LIVING RIVERS demanded that no more public funds be expended for infrastructure planning until, one, the public knows how long it will be before sediment renders existing and planned infrastructure useless, and two, immediate work is undertaken to improve access in the river corridors' prior to spending more money on temporary marina facilities.

A brief sediment study for the area surrounding the marina in question, revealed the reservoir's sediment delta will advance up to and beyond the marina in 2003. This will immediately render the marina useless in low water years, with access continuing to decline over time as the delta continues to expand.

Estimates for how long it will take sediment flows to reach the intake infrastructure for Glen Canyon Dam forcing the dam's decommissioning range from 50 to 150 years. But as noted in the submission, geologists point out that any number of factors could cause the large amounts of sediment building-up in the upper part of the watershed to mobilize and rapidly flow into Lake Powell, thus greatly accelerating the rate of siltation and hastening the arrival of the day when Lake Powell reservoir must be drained.

Living Rivers Currents 01/17/02

Native Fish: Recovery or Rhetoric?

[LRC V2, N1, January 2002](#)

The freshwater fishes of the Colorado River watershed are among the most imperiled animals in the United States. In response to mandates of the Endangered Species Act, three endangered fish recovery programs have been implemented in the Colorado basin since 1988. Despite more than \$100 million invested so far, these programs have generated few results. So this fall, the US Fish & Wildlife Service (USFWS) released a draft set of recovery goals which, if approved, would lower the federal standard by which these fish could be removed from the endangered species list.

LIVING RIVERS and several other groups were outraged, and submitted comments opposing the adoption of these weaker, and ecologically dangerous standards. The USFWS proposed to emphasize the use of hatchery fish to be dumped in depleted habitats. Success will be proclaimed by merely continuously restocking the area with a

given number of hatchery fish to maintain an arbitrary population count. Emphasis will not be placed on habitat restoration to allow for self-reproducing populations.

“Species cannot be perpetuated without appropriate habitats, and an aquatic habitat cannot persist without some ecosystem order in its surroundings,” said Dr. Joseph Shannon, an aquatic ecologist at Northern Arizona University. “The water and power interests control the flow of the Colorado River; ecosystem restoration and native fish recovery are not their priorities. I question if this is the sentiment of the majority of the public.”

The state of Colorado is leading the charge to advance the weaker standards. Kent Holsinger, Assistant Director for Colorado’s Division of Water Resources has stated that Colorado is committed to maximizing power generation to finance irrigation, and to diverting more water for development and industrial use. He has declared his state’s intent to fight any federal regulations that may infringe on these objectives.

The prestigious Desert Fishes Council is also concerned, especially over the limited scientific input sought in the preparation of these new guidelines. This international society of academic, government and private organizations, adopted a resolution in November 2001, asking that the USFWS redraft the recovery goals based upon the results of a rigorous, independent, scientific review process.

But if Holsinger and others have their way, it may not be long before visitors to the Grand Canyon will see truckloads of hatchery-raised fish emptied into the Colorado river because agencies were unwilling to work to restore their habitat. Should this trend continue, the same approach could become commonplace with other endangered species—birds, mammals, reptiles—born in captivity and placed in unsuitable habitats to meet the objectives of the government’s bean counters.

Living Rivers Currents 01/17/02

Grand Canyon: LR Calls for Immediate Action

[LRC V2, N1, January 2002](#)

Ecologists have known for years that the operation of Glen Canyon Dam is causing negative impacts on the Colorado River ecosystem in Grand Canyon National Park. The Grand Canyon Protection Act was passed a decade ago to force action to reduce environmental damage downstream of the dam. Yet scientific data show the situation is worsening.

LIVING RIVERS and other groups are calling for an immediate overhaul of the dam management program set up by the Act. The program was established in 1996 following completion of an environmental impact statement on dam operations. A stakeholders group known as the Adaptive Management Work Group (AMWG) guides scientific research and management activities. According to Randy Peterson, Director of Adaptive

Management Programs for the Bureau of Reclamation (BuRec), the AMWG has operated since 1997 with an annual budget of roughly \$8 million. But many wonder if the AMWG is capable of making the necessary changes required to protect and restore the native ecosystem.

The science shows that the program is failing, said David Haskell, retired Science Director of Grand Canyon National Park, and former AMWG representative for the Park Service. The program has been extremely successful and effective, not in complying with the Grand Canyon Protection Act, but in demonstrating that as long as the dam continues to be operated for water and power needs, the ecosystem will continue to be degraded. Five years and forty million dollars have bought us the knowledge that nothing's improving.

In a letter delivered to the AMWG at its January meeting, LIVING RIVERS was joined by a number of groups in demanding action. Among the key concerns is the structure of the process that has accorded hydropower production equal importance to restoration of native habitat.

Protecting native fish and other species is a higher priority than generating cheap hydropower, said David Sherman, a Sierra Club representative in Flagstaff. Changes are needed now to get the adaptive management program on track and in compliance with the law.

LIVING RIVERS is seeking a supplemental environmental impact statement on dam operations to address the rapid decline of the river's ecosystem. The Grand Canyon Protection Act and other laws require agencies to protect the park's riverine environment, but the responsible federal agencies have failed to make progress toward this goal. Management has not benefited the endangered humpback chub. Non-native trout, on the other hand, thrive despite scientists warnings that trout prey on native fish and compete for a limited food supply.

Science shows that changes are needed, but those changes have not been implemented, said Dr. Robert Witzeman, of Maricopa Audubon Society in Phoenix. There is resistance to doing what needs to be done.

LIVING RIVERS is also calling on the AMWG to recommend changes in dam operations to mimic natural, seasonal fluctuations in river flows, remove non-native fish, and reintroduce and recover endangered native fish. Scientists now openly wonder whether it is possible to adequately mitigate the impacts of Glen Canyon Dam. Decommissioning may prove to be the only option. Time is running out for the Grand Canyon, and hard choices must be made. LIVING RIVERS will continue to press for doing what's right for the river.

Electroshock in the Grand Canyon

[LRC V2, N1, January 2002](#)

Along with every watt of power extracted from the Colorado River at Glen Canyon Dam goes another piece of Grand Canyon's natural heritage. The hourly, daily and seasonal regulation of flows at the dam to accommodate variations in energy demand is one of the major variables causing habitat degradation in the nation's premier national park. Although scientists have been pushing for releases that mimic more the river's natural flow condition, those representing electrical utilities remain unconvinced. According to some, power interests are using their influence to impede efforts to reverse the decline of the Grand Canyon ecosystem.

From the beginning, power users have had to be dragged into this kicking and screaming, said Dave Wegner, who headed up Glen Canyon Environmental Studies, forerunner of the Grand Canyon Monitoring and Research Center. We lost two years alone navigating the hoops and hurdles they put in our way just to run our first test back in 1996.

Others working with the Adaptive Management Program now concur, citing a general pattern of objections to most proposals, dragging out decisions and delaying action whenever possible.

Meanwhile, the situation in the Canyon worsens, stated Nikolai Ramsey of the Grand Canyon Trust. The latest studies show that humpback chub, an endangered fish, are in substantial decline.

It's categorically untrue that power interests are obfuscating or impeding this process, said Clayton Palmer, with the Western Area Power Administration, the federal agency responsible for marketing power from Glen Canyon Dam. Palmer cited several examples where other agencies were unwilling to support proposals advanced by power interests. One, advocating large releases which might aid with preserving sediment in the Canyon, was opposed by the US Fish and Wildlife Service concerned about impacts on an endangered invertebrate, the Kanab ambersnail.

Palmer and other power proponents are quick to point out that they are indeed full partners, as nearly all the money used for Glen Canyon Dam Adaptive Management comes from hydropower revenues. It's ludicrous that other government agencies and private foundations aren't helping us out, said Leslie James of Colorado River Energy Distributors Association. Such mitigation funds are, however, routinely tied to hydropower revenues.

James also argues that there is not yet enough science to determine if dam operations are the major problem. But a new report out for review this month by Grand Canyon Monitoring and Research Center indicated that dam operations are affecting not only

native fish, but also the food web of the entire Canyon. Native biodiversity of the Grand Canyon's river ecosystem is on a downward spiral, largely the result of Glen Canyon Dam. The report recommends that dam operations mimic seasonal flows, not fluctuating flows. Utilities are concerned because this would cause a price increase for power from Glen Canyon Dam of about 21 percent, to about \$21 per megawatt. This is still a bargain, costing only about half the price these utilities would pay should they choose to obtain power from other sources.

Living Rivers Currents 01/17/02

Colorado River Water Users Meeting: Environment Gains Recognition

[LRC V2, N1, January 2002](#)

Just a few short years ago the ecological and social values of the Colorado River delta were barely acknowledged. At this year's Colorado River Water Users Association (CRWUA) annual conference, nearly every speaker addressed the environmental issues of the delta, even though no advocacy group was invited to speak on its behalf. But we were there nonetheless. In the halls, business meetings and press briefing, LIVING RIVERS took every opportunity to advance the cause of the delta and other critical environmental and social issues not being addressed by agencies using and managing the Colorado River.

Gilbert Sanchez of Tribal Environmental Watch Alliance told journalists during the LIVING RIVERS press briefing that the cultural heritage of Indian people is threatened by water development projects. All this damage, and for what? Much of this water is stored just to evaporate into the sky. Ancestral gravesites should not be sacrificed for more golf courses, backyard swimming pools and hayfields in the desert.

Yamilett Carrillo-Guerrero, of ProNatura Sonora, a Mexican environmental protection group, echoed these concerns. Local communities in the delta are ready to contribute with land and water to help restore the delta. For them, a river with water means life. In no way do they consider water nurturing the Colorado River delta wetlands and the Upper Gulf of California as wasted, said Ms. Carrillo-Guerrero.

LIVING RIVERS presented a letter to CRWUA's board on behalf of the binational coalition working for delta restoration, seeking a partnership with the association in working to move more water to the Colorado River delta. Although some members expressed opposition, the board did invite a formal presentation on the proposal for its spring meeting. Pat Mulroy, Director of the Southern Nevada Water Authority, noted that water agencies indeed need to start paying attention. Environmental responsibility is the job of every water manager, she said. Those who are demanding to have their voices heard are not our traditional customers.

LR Letter 01/18/02

To department of Interior demanding action on restoration of Grand Canyon

Mr. Michael Gabaldon
Deputy Director of Operations
U.S. Bureau of Reclamation
Department of Interior
1849 'C' Street, NW
Washington, DC 20240
January 18, 2002

RE: Comments on Adaptive Management Working Group and proposed Strategic Plan

Dear Mr. Gabaldon,

The eight undersigned non-governmental organizations, including LIVING RIVERS, Center for Biological Diversity, Colorado Plateau River Guides, Flagstaff Activist Network, Forest Conservation Council, Glen Canyon Institute, John Muir Project (Earth Island Institute), Maricopa Audubon Society, and Sierra Club write to submit comments on the proposed Strategic Plan of the Adaptive Management Work Group (AMWG).

We recognize the large amount work that has been done on this plan, and we commend the scientists and others who have labored to produce that document. In the short period of its existence, the Program has made a significant contribution to expanding the scientific knowledge and understanding of the Grand Canyon ecosystem. However, despite its accomplishments the Program can and must be more effective. It is failing in its primary goal of protecting and mitigating the adverse impacts of Glen Canyon Dam on the river ecosystem of Grand Canyon National Park.

Our comments address a number of shortcomings of the Program and its Strategic Plan document as well as makes recommendations for addressing these shortcomings.

I. SUMMARY OF ADAPTIVE MANAGEMENT PROGRAM CONCERNS

A. The Program has failed to establish a new population of the endangered humpback chub, as required by the Record of Decision. This should be a top priority.

B. The Program has not made measurable progress toward recovery of endangered species, including the humpback chub and razorback sucker, or towards reintroducing extirpated species, including the endangered Colorado pikeminnow and bonytail chub.

C. The Program has failed to provide suitable aquatic habitat conditions and water temperatures necessary for native fish reproduction and survival in accordance with the biological opinion on endangered fish.

D. The Program has not attempted to remove non-native fish including trout and catfish that are known to prey on or compete with humpback chub.

E. The Program has not undertaken necessary management activities, including dam operation changes, to significantly increase sediment deposition (including silts, sands, clays and detritus) into the riverine ecosystem which would increase the number and extent of beaches, backwaters, eddies and sand bars throughout the canyon ecosystem, provide wildlife and fish habitat and benefit recreational users, and protect from erosion damage irreplaceable archeological resources and cultural and sacred sites;

F. The Program has failed to demonstrate compliance with the directive in the Record of Decision, to "find an alternative dam operating plan that would permit recovery and long-term sustainability of downstream resources while limiting hydropower capability and flexibility only to the extent necessary to achieve recovery and long-term sustainability."

G. The Program has failed to encourage public involvement and participation in Program work.

H. The Program has not prioritized goals and management activities, to emphasize protecting and mitigating the adverse impacts to park resources from Glen Canyon Dam, over hydropower generation and trout production.

I. The Program has failed to publish and distribute an annual report on the review of monitoring data required by the Program's Charter, together with recommendations for management actions and modifications to the Record of Decision. Neither has the Program provided input to the Secretary for her required annual report to Congress and the States, pursuant to the Grand Canyon Protection Act, Section 1804(c)(2).

J. The Program has failed to consult regularly with the US Fish & Wildlife Service on progress toward meeting reasonable and prudent alternatives, as required in the December 1994 biological opinion on endangered fish.

K. The Program has failed to implement seasonally adjusted steady flows from Glen Canyon Dam as required by the December 1994 biological opinion on endangered fish.

These concerns will be addressed in more detail below.

II. CONSULTATIVE GROUPS, ADAPTIVE MANAGEMENT, AND THE SCIENTIFIC PROCESS

The shortcomings identified above result in part from the structure and function of the Adaptive Management Program. Despite the focus on science as a guiding principle for informing the process, decisions are made mostly by governmental officials and representatives of political and economic interest groups appointed to the Adaptive Management Work Group (AMWG). Science plays only an advisory role in the process.

The Grand Canyon Protection Act, Section 1805 requires consultation with various stakeholder interests on long-term monitoring programs and activities. Creation of the AMWG is authorized by the Record of Decision, Section VI(1), Environmental Commitments and Monitoring, in accordance with the Federal Advisory Committees Act

(FACA). Specific direction for Program management and operations is found in the updated AMWG Charter, dated January 10, 2001, and the AMWG Operating Procedures, dated June 18, 1998.

The AMWG delegates authority to the Technical Work Group (TWG) to supervise the scientific and management work of the Grand Canyon Monitoring & Research Center (GCMRC), a federally funded agency affiliated with Reclamation and the US Geological Survey. The TWG makes recommendations to the AMWG about scientific priorities, protocols, and research needs. The AMWG takes those recommendations into consideration when making Program recommendations to the Secretary.

The Program is structured so that a diverse group of stakeholder interests (AMWG) makes recommendations to the Secretary on a consensus basis (or nearly so), on a wide range of complex scientific and technical issues that are often highly contentious. Economic interests within this framework have significant influence over the decision making process, including the scientific monitoring and research agenda.

Program scientific work is of high caliber and is making an important contribution to the body of knowledge of river ecosystem function in Grand Canyon National Park. However, managers are ignoring much of this science. Program decisions, dominated by water and power interests, often limit scientific effectiveness. Restoration objectives are subservient to water and power objectives. Hydropower revenues fund the vast majority of Program activities, and it is not surprising that hydropower interests have blocked some efforts to run experimental high flows that bypass the dam's turbines. Water users insist that all experimental flow regimes be consistent with, and subordinate to Law of the River delivery criteria, even when this limits the effectiveness of the scientific research agenda.

The Program has been extremely successful and effective in demonstrating that as long as the dam is operated for water and power needs, the ecosystem continues to be degraded. The science may conclusively confirm that the dam's impacts cannot be adequately mitigated or overcome, yet there exists no provision in the Program for addressing such an eventuality.

III. DAM OPERATING CONSTRAINTS LIMIT SCIENTIFIC FLEXIBILITY AND OPPORTUNITIES

Glen Canyon Dam is currently managed under operating constraints that limit flexibility for scientific inquiry and experimentation. Dam operations--including meeting water delivery criteria and hydropower generation demands--are sometimes in direct conflict with scientific experimentation objectives. Constraints on dam operations can infringe upon experimental flow regimes that may offer significant benefits. The Record of Decision mandates that high experimental flows that bypass the dam's turbine generators may only occur in conjunction with "dam safety" releases--i.e. high-water events that require the reservoir to be drawn down quickly. The pre-dam Colorado River in Grand Canyon reached its peak flow in late spring and early summer, and scientists argued for conducting high flows tests to coincide with the natural high flow season. However, "dam safety release" conditions tend to occur in early spring. It is therefore

not possible under existing operating criteria to fully mimic the river's natural hydrograph, which may be necessary to ensure recovery.

To realize the full benefits of adaptive management for dam-controlled river ecosystems, scientists need freedom to design and conduct a range of experimental flows and other management actions. Legal constraints, including mandated water delivery schedules under the Law of the River, are probably not possible to change. However, hydropower generation needs do not have the same level of legal protection that water delivery does. Program managers should consider potential changes to dam operating criteria that would permit greater flexibility for scientists, even if hydropower production may be reduced.

IV. COMMENTS ON STRATEGIC PLAN

The Strategic Plan proposed for adoption contains a "Vision and Mission" statement, a set of nine Principles, a list of twelve Goals, a matrix of Management Objectives tiered to each of the Goals, and a detailed set of Research and Information Needs identified to address the Management Objectives. We appreciate the extensive effort that has gone into producing this complex document, and we applaud the high caliber of scientific work and analysis that underlies this plan. However, here are several areas where the plan is deficient and in need of changes or refinement.

A. Vision and Mission.

The statement notes the Program's obligation to follow applicable laws and mentions the "Law of the River" by name, but lacks an explicit reference to the Grand Canyon Protection Act. Since the Program owes its existence to the Act, it is appropriate to note that. The statement also refers to protecting, mitigating, and improving the "Colorado River ecosystem affected by Glen Canyon Dam." This is useful language, but should be strengthened by adding specific reference to Grand Canyon National Park.

The Secretary has a substantial legal mandate, embodied in numerous laws, that requires protection of the natural ecosystem of Grand Canyon National Park. This body of law has been made subservient to the body of law that supports the interests of water and power users. When conflicts occur, the weight is usually in favor of water and power. The Program vision and mission statement must recognize that the two bodies of law have equal force, and note that these are in substantial, direct conflict.

B. Principles and Goals.

Funding Concerns: Principle One states, "Some of the objectives and actions that fall under these goals may not be the responsibility of the ... Program, and may be funded by other sources, but are included here for completeness." Given the growing and urgent problems affecting the Grand Canyon, it is critical to indicate in the Plan, which objectives and actions are not considered to be the responsibility of the Program. There is an expressed need for additional funding for scientific monitoring and research. The Secretary and the public need to know which activities are funded, and through what sources, and those activities where other sources must be secured.

C. Managing for Endangered and Native Species.

Principle Two states, "The construction of Glen Canyon Dam and the introduction of non-native species have irreversibly changed the Colorado River ecosystem." While some ecosystem changes may be irreversible, others are susceptible to change. This statement should be modified to read "... non-native species have led to many changes to the Colorado River ecosystem, some of which may be irreversible."

Principle Three states, "Much remains unknown about the Colorado River ecosystem below Glen Canyon Dam and how to achieve the Adaptive Management Program goals." There is much about the ecosystem that is known, and this statement could be interpreted so as to mean that too little is known for management actions to be taken at this time. The Principle should be reworded to avoid giving the Secretary a misleading impression. Suggested change: "Much remains unknown about the Colorado River ecosystem below Glen Canyon Dam but enough is known to guide the implementation of the Adaptive Management Program goals."

Principle Four states, "Management efforts will prevent any further human-induced extirpation or extinction of native species." This statement should be strengthened to make the Principle consistent with the National Park Organic Act and the recovery standard of the Endangered Species Act. Suggested addition: "...and will strive to recover endangered species and reintroduce extirpated species."

Goal One states, "Protect or improve the aquatic foodbase so that it will support viable populations of desired species at higher trophic levels." Non-native species generally constitute a threat to native species' survival. This Goal should be clarified to emphasize viable populations of desired native species.

Goal Two states, "Maintain or attain viable populations of existing native fish, remove jeopardy from humpback chub and razorback sucker, and prevent adverse modification to their critical habitat." Federal agencies are required to contribute to endangered species recovery. This Goal should be amended to read: "Maintain or attain viable populations of existing native fish, remove jeopardy from humpback chub and razorback sucker and contribute to their recovery, and prevent adverse modification to their critical habitat."

Goal Three states, "Restore populations of extirpated species, as feasible and advisable." This Goal may be inconsistent with National Park Service regulations that require the agency to reintroduce all native species, wherever it is ecologically feasible to do so. Use of the term "advisable" in the context of this Goal implies that the National Park Service has discretion to reintroduce species on the basis of "advice," but such is not the case. Also, use of the term "feasible," without qualification, may be interpreted as economic feasibility, implying that extirpated species may be restored only if funding is readily available. Finally, as noted above, agencies are required to contribute to recovery of listed species. The Goal should be amended to read, "Restore populations of extirpated native species, wherever ecologically feasible, and contribute to their recovery."

D. Rainbow Trout Management

Goal Four states, "Maintain a naturally reproducing population of rainbow trout above the Paria River, to the extent practicable and consistent with the maintenance of viable populations of native fish." This Goal is not supported by law, and is known to be in direct conflict with native fish recovery efforts. Trout are known predators of endangered humpback chub and other fish, and the cold water temperatures needed to support trout are known to hamper humpback chub reproduction. Maintaining a reproducing population of rainbow trout requires maintaining a year-round, cold-water regime. Low water temperature in summer is one of the primary known contributing factors of native fish endangerment. This Goal should be deleted because it is in direct conflict with achieving the goal of the Grand Canyon Protection Act and the Endangered Species Act.

E. Kanab Ambersnail

Goal Five states, "Maintain or attain viable populations of Kanab ambersnail." The Vasey's Paradise population of Kanab ambersnail, by virtue of its primary habitat location below the pre-dam high water line, is considered to be at risk in the event of future high experimental flows. To emphasize the need for protecting this population, this Goal should be qualified by adding a phrase such as, "...including one or more populations located above the old (pre-dam) high water line."

F. Experimental Approaches

Principle Six states, "Dam operations and management actions will be tried that attempt to return ecosystem patterns and processes to their range of natural variability. When this is not appropriate, experiments will be conducted to test other approaches." The Principle does not explain what circumstances might make restoration of natural processes inappropriate, nor does it suggest what other approaches would be appropriate that accomplish something other than restoring ecosystem patterns and processes. The first sentence of the Principle stands on its own, and the second sentence should be deleted.

G. Prioritizing Competing Management Actions

Principle Seven reflects the intent to maximize benefits across the board wherever possible, while minimizing negative impacts on individual goals where conflicts arise. This approach assumes that all Program goals are (more or less) equally worthy. However, the goals that promote non-native fish reproduction and seek to increase hydropower generation should be considered of lower priority than those that improve native habitat and contribute to species recovery. The Principle should be rewritten to clarify this distinction.

H. Hydropower Generation

Goal Ten states, "Maintain power production capacity and energy generation, and increase where feasible and advisable, within the framework of the Adaptive Management ecosystem goals." As noted above, power generation is a lower priority

relative to Program priorities and is often in conflict or potential conflict with ecosystem restoration objectives. The intended meaning of the phrase "increase where feasible and advisable" is unclear. This Goal should be modified with language like the following: "Allow for power production capacity and energy generation, where not in conflict within the framework of the Adaptive Management ecosystem restoration goals."

V. RECOMMENDED PROGRAM CHANGES AND IMPROVEMENTS

A. Annual Report. According to the AMWG Operating Procedures, Item #11, "Records and Record Keeping."

AMWG is required to prepare an annual report pursuant to the Grand Canyon Protection Act, Section 1804(c)(2). This report should include the State of the Natural and Cultural Resources in the Colorado River Ecosystem, as well as recommendations to the Secretary on future dam operations.

B. Establish a New Population of Humpback Chub.

The Record of Decision, Section VI(5), states, "New Population of Humpback Chub: In consultation with the U.S. Fish and Wildlife Service (FWS), National Park Service, and Arizona Game and Fish Department (AGFD), [Bureau of] Reclamation will make every effort (through funding, facilitating, and technical support) to ensure that a new population of humpback chub is established in the mainstem or one or more of the tributaries within Grand Canyon." This language makes clear that the Secretary intended that every effort should be made to establish a new population of chub, yet there is no evidence that the agency has undertaken this task. This is a major concern that must be addressed immediately by Reclamation and by the Program.

C. New Information on Chub Requires a Supplemental EIS.

Preliminary data recently released by the Grand Canyon Monitoring & Research Center (GCMRC) indicate a precipitous decline in the number of adult humpback chub of reproducing age. This decline, while not surprising given lack of management activities on behalf of the chub, was not anticipated when the Record of Decision was signed. The population has been considered to be fairly stable over the last decade or more. Therefore, under National Environmental Policy Act (NEPA) regulations found at 40 CFR 1502.9(c)(1)(ii), these new data represent "significant new circumstances or information relevant to environmental concerns," triggering a requirement to prepare a Supplemental EIS (SEIS) to the 1996 Glen Canyon Dam EIS. The Bureau of Reclamation, the National Park Service, and other agencies may be in violation of the Endangered Species Act and the Grand Canyon Protection Act for failing to ensure protection and recovery of the humpback chub population in Grand Canyon National Park.

D. Trout and Non-Native Fish Management

Eliminate from the Plan the Goal and Management Objectives for encouraging trout production, and pursue an aggressive effort to reduce the population of brown trout,

rainbow trout, and the various species of catfish, carp and other non-native fish that prey on or compete with the native fish species.

E. Recover and Reintroduce Endangered Species

Make measurable progress toward endangered species recovery. Reintroduce razorback sucker, Colorado pikeminnow, bonytail chub, and other extirpated native species. In accordance with the biological opinion on endangered fish, prevent adverse modification of critical habitat, and provide suitable aquatic habitat conditions and water temperatures necessary for native fish reproduction and survival. Assess and report on the status of flannel-mouth suckers and other native species that are not yet listed but which may require special management assistance to prevent listing in the future.

F. Establish an Independent Review Panel to Study the Program and Make Recommendations

The Record of Decision provides for independent scientific review panels to monitor and provide oversight of Program research activities. An independent review panel should be convened to analyze and evaluate the effectiveness of the Program as a whole, and make annual recommendations on ways of making the Program more effective, including changing the structure of the Program.

G. Establish a Public Communications and Outreach Program

The Program should undertake an outreach effort to inform the public and encourage public participation in the adaptive management process. Information about the Program is not readily accessible to a lay audience, and few people are well informed of the important yet complex issues. Holding public meetings in different cities would help to raise the profile of the issues. Making creative use of the Program's Internet site as an access point for information could be a particularly helpful strategy. Combining efforts with the Grand Canyon Monitoring & Research Center, Grand Canyon National Park, and other entities could result in dramatically increasing public understanding of the issues before the Program.

H. Seek Additional Program Funding Sources

The Program must have sufficient funding to conduct science activities and take authorized management actions. Additional funding from hydropower revenues, as well as appropriated funds and grants from non-governmental sources should be sought to ensure that all necessary scientific and management activities are conducted in a timely fashion.

I. Increase the Role and Visibility of the National Park Service

The U.S. Bureau of Reclamation is designated as the lead agency for logistical coordination of Program work. However the focus of the Program is protecting and restoring the riverine ecosystem of Grand Canyon National Park. As the agency charged with protecting the park, the National Park Service should play a prominent role

in public outreach as well as in the Program's decision making process and scientific research efforts.

J. Comply with the USFWS Reasonable & Prudent Alternative

The USFWS December 1994 biological opinion, under "Elements of the Reasonable and Prudent Alternative [RPA]," page 34 states, "Those elements [of the RPA] that can be accomplished without further verification of NEPA compliance should be implemented without delay... Reclamation and the Service will meet at least annually to coordinate reasonable and prudent alternative activities."

The document goes on to prescribe, on page 35, "high steady flows in the spring and low steady flows in summer and fall during low water years (releases of approximately 8.23 maf) to verify an effective flow regime" and specifies that the "research design and hypotheses to be tested will be based on a flow pattern that resembles the natural hydrograph, as described for those seasons in the SASF [seasonally adjusted steady flow regime]." The RPA requires these flows to be implemented by 1998 at latest, and provides for re-initiation of consultation with Reclamation in the event that study design does not provide information necessary to support removal of jeopardy to the endangered fish. Reclamation must demonstrate that it is making every effort to comply with RPA requirements and remove jeopardy, including managing Glen Canyon Dam releases in accord with the SASF regime and experimenting with beach habitat building flows in spring in conformance with RPA specifications. Should it be necessary, Reclamation should reinitiate consultation with USFWS at the earliest opportunity.

K. Tribal relationships

The Program should make every effort to include the Indian tribes in the decision making process and ensure that their concerns and their funding needs are addressed . In particular, the protection of archeological and cultural resources, as well as sacred sites in the Grand Canyon should be a high priority. The Program should consider the tribes as sovereign nations and coordinate administrative and programmatic work with them in recognition of their sovereign status.

VI. CONCLUSION

The importance of the Adaptive Management Program to ensuring the future health and vitality of the globally significant Grand Canyon ecosystem cannot be overstated. Much good work has been done to illuminate the opportunities for addressing threats to ecosystem function, and this work must continue. However, growing evidence indicates an ongoing decline in many key indicators. At the same time, there exist numerous inefficiencies and impediments to solving the difficult problems caused by Glen Canyon Dam, and these threaten the integrity of the Program over the long term.

Our organizations seek a cooperative and constructive approach that maximizes the effectiveness of management actions and makes full use of the scientific data being collected. We look to the agencies and other entities involved in the Program to provide

leadership and expertise to make progress, before more species go extinct or are added to the endangered list.

We seek evidence of forward momentum, in particular, from the agencies with statutory responsibility to protect the Grand Canyon ecosystem. As noted above, the new population data on humpback chub appears to require a Supplemental EIS for dam operations. This would provide an opportunity to address a range of scientific and management issues that have been informed by five years of Program monitoring and research activities. We look forward to working with you on these issues. Please let us know how we can be of assistance. We look forward to hearing from you at your earliest convenience.

Sincerely,

Lisa Force, Program Director
LIVING RIVERS
Scottsdale, Arizona

and the following organizations:

Center for Biological Diversity
Daniel Patterson, Ecologist
Idyllwild, California

Colorado Plateau River Guides
Annie Payne, President
Salt Lake City, Utah

Flagstaff Activist Network
Roxane George, Director
Flagstaff, Arizona

Forest Conservation Council
John Talbert, Executive Director
Santa Fe, New Mexico

Glen Canyon Institute Jeri Ledbetter, Executive Director Flagstaff, Arizona

John Muir Project (Earth Island Institute)
Chad Hanson, Executive Director
Washington, DC

Maricopa Audubon Society
Robert Witzeman, M.D., Conservation Chair
Phoenix, Arizona

Sierra Club (Plateau Group)
David Sherman, Chair
Flagstaff, Arizona

cc: Hon. Gale Norton, Secretary of the Interior Hon. John Keys, Commissioner, U.S. Bureau of Reclamation
Mr. Rick Gold, Director, Upper Colorado Region, U.S. Bureau of Reclamation
Mr. Robert Johnston, Director, Lower Colorado Region, U.S. Bureau of Reclamation
Mr. Joseph Alston, Superintendent, Grand Canyon National Park
Ms. Kitty Rogers, Superintendent, Glen Canyon National Recreation Area
Mr. Barry Gold, Director, Grand Canyon Monitoring & Research Center

LR Press Release 01/18/02

Groups Call for Action to Save Colorado River in Grand Canyon National Park

CONTACT:

John Weisheit or David Orr 435-260-2590

Lisa Force 480-990-7839

PHOENIX, Jan. 18 -- The environmental and social justice organization LIVING RIVERS led a rally in downtown Phoenix today to demand immediate action to save the ecosystem in Grand Canyon, the nation's premier national park.

LIVING RIVERS was joined by the Center for Biological Diversity, Sierra Club, Audubon Society and other groups in calling on the Department of the Interior to start following the laws that require mitigation of the Glen Canyon Dam's adverse impacts to the Colorado River ecosystem--the heart of the Grand Canyon National Park.

"Several native fish species have already been lost, and one more numbers in only the thousands," David Orr of LIVING RIVERS told the crowd of about 60. "Add to this the changes in the food web that form the foundation for the Canyon's ecology and the picture is clear, the Grand Canyon is becoming the Grand Ditch."

Interior officials and other stakeholders interested in Glen Canyon Dam and the Grand Canyon wrapped-up a two-day meeting today at the site of the rally. They were attempting to salvage a five-year old federal program that was supposed to reverse the dam's negative impact on Grand Canyon.

"The environment of Grand Canyon is being sacrificed," said Michelle Harrington of the Center for Biological Diversity. "Americans are outraged to learn that, despite five years and forty million dollars this program has made so little progress."

In advance of the rally the groups formally presented their demands in a [ten-page letter](#) to Mr. Michael Gabaldon, deputy Interior Secretary and chair of the government program known as Glen Canyon Dam Adaptive Management. The groups seek

remedies where the program stands in violation of laws governing the Grand Canyon ecosystem, including the Grand Canyon Protection Act and National Park Organic Act. Specifically, the program fails to:

- * develop a dam operating plan that would permit recovery and long-term sustainability of downstream resources.
- * provide suitable aquatic habitat conditions and water temperatures necessary for native fish reproduction generally, and the establishment of a new population of the federally endangered humpback chub.
- * address the removal of alien fish, such as trout and catfish that compete with natives.
- * to increase sediment deposition for habitat mitigation and river recreation.
- * to produce mandated annual reports or to properly consult with the public and key federal agencies including the US Fish & Wildlife Service.

"It's a travesty that those involved in this program have been so negligent in fulfilling their mandate to reverse the habitat decline of this international treasure," added Mr. Orr. "Although we hope they will quickly address our concerns, we trust litigation may ultimately be required to force this body into action."

The groups are demanding that a new environmental impact statement on Glen Canyon Dam operations be undertaken in light of new science data that demonstrate declines in key ecological indicators, including native fish, invertebrates, and sediment.

#

For additional information:

[LIVING RIVERS](#)

[Center for Biological Diversity](#)

[Maricopa Audubon Society](#)

[Sierra Club](#)

[Grand Canyon Monitoring & Research Center](#)

[Arizona Game & Fish Department](#)

[Western Area Power Administration Colorado River Storage Project Management Center](#)

[NOTE: The following Interior Department websites are temporarily unavailable as a result of a court order. Service may be restored at any time.]

[U.S. Bureau of Reclamation: Glen Canyon Dam Adaptive Management Program](#)

[National Park Service: Grand Canyon National Park](#)

Take Action 01/20/02

Save Grand Canyon from Glen Canyon Dam

Join LIVING RIVERS, Maricopa Audubon Society, the Sierra Club, Glen Canyon Institute, Forest Conservation Council, and others to send a message to the Department of Interior to stop killing the Grand Canyon. Several native fish species have already been lost, and one more numbers only in the thousands. Add to this the changes in the food web that forms the foundation for the Canyon's ecology and the picture is clear, the Grand Canyon is becoming the Grand Ditch.

The federal program established five years ago to mitigate these problems, caused by the operation of Glen Canyon Dam, is clearly failing. On January 18, 2002 these groups presented a letter to the Glen Canyon Adaptive Management Program outlining the program's flaws, violations of law and remedies that must be pursued to reverse the decline of the Colorado River ecosystem through Grand Canyon National Park. The major concerns include:

- Failing to develop a dam operating plan that would permit recovery and long-term sustainability of the Grand Canyon's riverine resources.
- Failing to establish suitable aquatic habitat conditions and water temperatures necessary for native fish reproduction generally, and the establishment of a new population of the federally endangered humpback chub.
- Failing to address the removal of alien fish, such as trout and catfish that compete with natives.
- Failing to increase sediment deposition for habitat restoration and river recreation.
- Failing to produce mandated annual reports or to properly consult with the public and key federal agencies including the US Fish & Wildlife Service.

But hearing from us is not enough. Let Gale Norton hear from you!.

It's critical that the public let her know that the time for action is NOW!



"I want to hear from you about the declining health of the Grand Canyon ecosystem."

Should I:

- Prepare a supplemental EIS for Glen Canyon Dam?
- Operate the dam to mimic natural river flows and temperatures?
- Support removal of non-native fish that prey on native species?
- Make endangered fish recovery a top priority for managers, and
- Make hydropower production subservient to ecosystem management?

Write to me:

Honorable Gale Norton
Secretary, Department of Interior
1849 C St., NW
Washington, DC 20240

Fax: (202) 208-6950

email: gale_norton@ios.doi.gov

Note: my email may not be functioning due to restricted access the courts placed on DOI's electronic information services--check [DOI's website](#) for updates. If it's not, please fax it or use snail mail. Thank you.

Information on Living Rivers efforts to restore Grand Canyon, part of our [Canyon's of the Colorado Campaign](#).

[Living Rivers Coalition demands action by the Glen Canyon Dam Adaptive Management Working Group to follow the law and restore Grand Canyon.](#)

Living Rivers letter to Michael Gabaldon, Deputy Director of Operations U.S. Bureau of Reclamation, January 18, 2002

[Minority opinion of Glen Canyon Dam Adaptive Management Working Group on censorship of Living Rivers coalition's comments of January 18, 2002.](#)

Letter from Southwest Rivers et.al. to Michael Gabaldon, Deputy Director of Operations U.S. Bureau of Reclamation, January 28, 2002

[Groups Call for Action to Save Colorado River in Grand Canyon National Park](#)

Living Rivers Press Release, July 18, 2002

[Canyon Changes are Crucial](#)

Arizona Republic: January 16, 2002

[Grand Canyon: Living Rivers Calls for Immediate Action](#)

Living Rivers Currents, January 2002

[Electroshock in the Grand Canyon](#)

Living Rivers Currents, January 2002

[Native Fish: Recovery or Rhetoric?](#)

Living Rivers Currents, January 2002

[Grand Canyon Native Fish: Going, Going, Gone?](#)

Living Rivers Currents, December 2001

[Grand Canyon Fish at Risk of Extinction](#) Living Rivers Press Release, December 10, 2001

[Living Rivers Comment Letter on Endangered Colorado River Fish to US Fish and Wildlife Service, December 10, 2001](#)

[Environmental groups criticize plan to rescue endangered fish](#)

Associated Press, December 11, 2001

[Download PDF of January 18, 2002 Save the Grand Canyon" Rally Flyer](#)

[Flap over Endangered Fish](#)

Rocky Mountain News, December 11, 2001

[Resolution of the Desert Fishes Council on Colorado River Endangered Fish Recovery, November 18, 2001](#)

[Decline of the aquatic food base in the Grand Canyon](#) Northern Arizona Aquatic Ecology Research Laboratory

River News 01/28/02

Groups voice concern about censor of public comments on Grand Canyon Restoration.

Mr. Michael Gabaldon, W-6000
Director of Policy, Management, and Technical Services
Bureau of Reclamation
Main Interior Building
Room 760-MIB
1849 C Street, NW
Washington, D.C. 20240-0001
Dear Mr. Gabaldon;

At the Adaptive Management Work Group meeting on 18 January 2002, a presentation was made by Mr. David Orr regarding [concerns that Living Rivers and other organizations have about the AMWG and its strategic plan.](#)

Following Mr. Orr's presentation, Rick Johnson moved to have the letter outlining these concerns remanded to the Strategic Plan ad hoc committee to review and make recommendations as appropriate. This motion resulted in considerable heated discussion and was ultimately rejected. This letter is to convey the views of the minority group to you, members of the AMWG, and the Secretary of Interior.

We feel strongly that the AMWG, which makes recommendations to the Secretary of Interior about the management of public resources, not only would benefit from public input, but also has a responsibility to consider comments from the public. Although the AMWG represents diverse interests, it clearly does not represent all interests. To meet the program's vision of providing a "stewardship worthy of the Grand Canyon," the AMWG must be open to considering how to improve the process and the management of these resources.

The responsibility to consider comments from the public is derived from the AMWG Operating Procedures and the Grand Canyon Protection Act. The Operating Procedures state that the AMWG was formed to comply with the consultation requirement of the Grand Canyon Protection Act. The consultation section of the Act states that monitoring and other activities shall be established and implemented in consultation with the general public. It seems clear that Congress did not intend for the AMWG to make recommendations in isolation from the general public.

In addition to our concerns about the AMWG rejecting an opportunity to consider public comments, we are also disturbed about the speculative and untrue remarks about motives and credibility that were made during the discussion. These remarks were deeply offensive and inappropriate. We request that in the future, the chair take active steps to discourage such remarks and refocus discussion on the motion at hand. We regret that the AMWG refused to review comments from a member of the public and that the discussion was so acrimonious. It is our fervent hope that this does not happen

again, and that the AMWG will develop a mechanism to gracefully consider the views of those who are not appointed stakeholders.

Sincerely,

Rick Johnson
Southwest Rivers

And the other members of the minority group,

Andre Potochnik
Grand Canyon River Guides

Geoffrey Barnard
Grand Canyon Trust

River News 01/29/02

One Step Closer to Taking Down Fossil Creek Dams

After the historic agreement between Arizona Public Service Company (APS) and a contingent of environmental groups to remove two hydroelectric plants on Fossil Creek was reached in November 2000, the Federal Energy Commission (FERC) slammed on the brakes. FERC was simply unsure how to proceed with the unprecedented request of an electric utility, positioned to receive a renewed 50-year license, to surrender their license.

The first complication was that APS refused to apply for license surrender until it had confirmation from FERC that it could continue operate under annual licenses until 2004. To complicate matters, APS requested that FERC issue a Declaratory Order seeking confirmation that FERC would not allow other utilities to compete for future operation of the plants, if for some reason FERC did not accept APS's surrender.

Intervening environmental groups, including Living Rivers, asked that FERC issue an order which would allow us to proceed with the terms of the settlement agreement, including decommissioning of both plants and return of full flows to Fossil Creek by 2004. The agreement also included removal of most plant facilities and restoration the damaged areas by 2009, by APS at APS's cost.

In a huge victory for decommissioning efforts everywhere, FERC issued a Declaratory Order in December 2000 that supports our decommissioning agreement with APS. In response to APS concerns about competition for operating the plants, FERC stated, "We conclude that there is no compelling reason for allowing another round of relicensing competition. We do not believe it would be in the public interest to initiate a new relicensing procedure when the existing licensee has attempted to resolve matters by seeking a settlement, even if that settlement might lead to surrender of the license and removal of project works, including any associated dams."

In response to APS's foot-dragging on applying for license surrender, FERC responded, "Delay of a license surrender, rather than being precluded by our regulations, is actually required by them. There is nothing in the FPA or our regulations prohibiting continued generation beyond the time at which we issue a surrender order."

FERC followed up its Declaratory Order with a letter just last week to APS stating that since FERC has resolved the procedural issues, it now needs to know APS plan and schedule for filing its application to surrender the license to operate the hydro plants. Once the surrender application is filed, the next step will be convince FERC to accept it as written under the terms of the decommissioning agreement. Any substantial changes imposed by FERC would give either party the option to withdraw. Stay tuned to this website for further updates.

Living Rivers Currents 02/01/02

Volume 2, Number 2 (Special Issue: Colorado River Compact)

From January 30 through February 1, the 2002 Colorado River Symposium took place at historic Bishop's Lodge—site of the 1922 negotiations for the Colorado River Compact. While various management challenges for the once-mighty Colorado were on the agenda, this issue of LIVING RIVERS Currents was circulated to promote efforts to bring about fundamental changes in the Compact itself, so that Colorado River laws are up to date with present concerns.

The Articles

[Bishop's Lodge: Return to the Scent of the Crime](#)

[Colorado River Compact in the Way of Delta Restoration](#)

[Ten Reasons for Renegotiating the Colorado River Compact](#)

[Dam Reoperations: Avoiding the Inevitable](#)

[Fossil Creek: One Step Closer to Dam Removal](#)

[Grand Canyon: Phoenix Takes Action](#)

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[LRC V2, N1, February 2002](#)

Ten Reasons for Renegotiating the Colorado River Compact

LIVING RIVERS is calling for renegotiating the Colorado River Compact. This would make possible a number of needed changes and innovations, including the following:

1. Indian tribes participating as sovereign nations, protecting and defending their own rights and interests in the river;
 2. Making protection of the environment and the river's ecosystem top priorities in management decisions;
 3. Equitably apportioning among all the basin's stakeholders, including the environment, the actual amount of water in the river—to ensure that even in drought years stakeholders receive a proportional allocation;
 4. Applying the public trust doctrine in apportionment and river management decisions, in recognition that the waters of the Colorado River and its tributaries are to be held in trust for the enjoyment, benefit and welfare of all the basin's inhabitants;
 5. Creating a basin-wide water trust fund to accept and protect from appropriation donations of voluntarily conserved water to benefit the environment;
 6. Establishing and enforcing mandatory water conservation measures, and providing incentives for implementation and penalties for wasteful use;
 7. Harmonizing state water laws basin-wide, and removing legal barriers to ecologically sound river management;
 8. Encouraging appropriate (sustainable) agricultural practices by imposing reasonable restrictions on irrigation technologies and cropping patterns;
 9. Establishing strict limits on interbasin transfers including prohibition of new out-of-basin diversions; and
 10. Providing mechanisms for ongoing dialogue and negotiation among the interested parties to address new information and changing circumstances.
-

Living Rivers Currents 02/01/02

One Step Closer To Removing Two Dams on Fossil Creek

In a huge victory for decommissioning efforts everywhere, the Federal Energy Regulatory Commission (FERC) issued a Declaratory Order that supports movement toward the removal of two dams on Fossil Creek in central Arizona. LIVING RIVERS and other groups have been protesting efforts by Arizona Public Service (APS) to renege on an agreement to surrender its operating license for the dams—a critical step toward decommissioning.

APS claimed that, should it surrender its operating license, FERC might then choose to grant the license to a competitor. However, in late December FERC wrote, “We conclude that there is no compelling reason for allowing another round of relicensing competition. We do not believe it would be in the public interest to initiate a new relicensing procedure when the existing licensee has attempted to resolve matters by seeking a settlement, even if that settlement might lead to surrender of the license and removal of project works, including any associated dams.”

FERC followed up its Declaratory Order with a letter to APS in January stating that, since FERC has resolved the procedural issues, FERC now needs to know APS’ plan and schedule for filing its application to surrender the license to operate the hydro plants. Once surrendered, and approved by FERC, decommissioning can commence.

Living Rivers Currents 02/01/02

Grand Canyon: Phoenix Takes Action

Last month, while bureaucrats and scientists convened in Phoenix’s premier downtown office tower to discuss the disintegrating health of the Grand Canyon, activists led by LIVING RIVERS gathered outside to demand results.

The Glen Canyon Dam Adaptive Management Work Group (AMWG) gathered January 17-18, five years and \$40 million dollars into a process that so far has not yet put in place a plan for pulling the Grand Canyon ecosystem back from the brink of collapse, where it teeters today.

Although AMWG is mandated to provide a mechanism for public input, it rejected such input when offered by LIVING RIVERS, Sierra Club and other groups who collectively submitted a ten-page letter demanding immediate action. The organizations pointed out that in spite of Grand Canyon Protection Act requirements, the impacts of Glen Canyon Dam on Grand Canyon are not being adequately addressed.

The dam holds back nutrient-rich river sediments vital to many Grand Canyon native species, keeps water temperature unnaturally cold in the canyon and eliminates the

river's life-giving flooding regimes. The result: a Grand Canyon that is slowly becoming sterilized of its native life forms.

More than forty Phoenix-area activists responded to LIVING RIVERS' call for support for action on behalf of the Grand Canyon. Michelle Harrington with the Center for Biological Diversity spoke of the plight of native fish in the Grand Canyon. "Three of the canyon's native fish species have disappeared, a fourth is in serious trouble, and a fifth should probably be listed," she said. "Worse, the only population of endangered humpback chub in Grand Canyon is now experiencing a sharp decline."

Dr. Robert Witzeman of Maricopa Audubon Society and dean of Arizona's conservation community, spoke of the complex web of life in the Grand Canyon ecosystem and the evidence that it is becoming unraveled, beginning with the very base of the food chain. He ended his speech with advice for forcing action from the powers-that-be: "Constant pressure, constantly applied." When the AMWG convenes again this summer, LIVING RIVERS will be there again, with an even larger coalition.

Living Rivers Currents 02/01/02

Dam Re-operations: Avoiding the Inevitable

As citizens lament the failings of ongoing federal efforts to protect Grand Canyon from the impacts of Glen Canyon Dam, they should recognize that these problems won't readily go away.

Instead of addressing the inevitable need to decommission the dam to restore native habitat for endangered fish, the Department of the Interior is spending millions of dollars tinkering with minor changes in dam operations, while the riverine environments that these programs are designed to improve, only worsen.

The Glen Canyon Dam re-operation program is a flagship—for a fleet of dam re-operation programs that are sinking the possibility of habitat restoration for critical environments downstream. The Bureau of Reclamation is at least a year behind in releasing its draft plan for changing Flaming Gorge Dam operations, to mitigate impacts on endangered fish in the Green River through Dinosaur National Monument. The agency is perhaps even farther behind in publishing its re-operation plan for Navajo Dam on the San Juan River. A plan for the Gunnison River dams, expected in 2001, has never yet materialized.

One reason for the failure of these efforts is the raft of antiquated laws and the overweening political interference from user groups that unnecessarily impair managers' best efforts to apply a full range of adaptive management techniques. If these newer programs were intended to benefit from what's being learned with Glen Canyon, there should be little wonder that they all seem to be faltering.

Dam re-operation will be one of the topics at the 2002 Colorado River Symposium in Santa Fe, however, the topic on the agenda should instead be dam decommissioning.

Federal programs have yet to demonstrate any results in their hypothesis that these facilities can be operated in such a way to reverse, or even halt, the extensive habitat decline they've already caused.

This is why the movement toward decommissioning federal hydropower facilities is building rapidly. "The federal government requires private dam owners to evaluate decommissioning alternatives when their projects come under review," said Dr. Patrick Diehl with the Sierra Club's Glen Canyon Group. "Yet the politicians fight against decommissioning studies when their own sacred-cow projects like Glen Canyon and Flaming Gorge are put under the microscope."

Living Rivers Currents 02/01/02

Colorado River Compact In the Way of Delta Restoration

The Colorado River Compact of 1922 was negotiated by the seven basin states without input from Mexico or Indian tribes. When the river flows were parceled out, only about ten percent was allocated to Mexico, a quantity formalized by treaty 22 years later. Mexico currently uses its entire share for agricultural and urban needs. This has had a profound effect on the Colorado River delta. With so little water moving across the border, and Mexico's growing demand for it, the delta today receives no water.

"It should not be Mexico's sole responsibility to fix the delta when the US takes so much of the river's flow from them," said LIVING RIVERS' Lisa Force, who is leading efforts to get water users throughout the Colorado to donate one percent of their water to delta restoration. "The delta's native Cucupá communities, along with all Indian tribes were excluded from this allocation process; it's time to renegotiate."

The plight of the delta also illustrates another major flaw in the Compact: no allocation provisions were made for flows and river management strategies to protect the environment. The Compact pre-dated such concerns, but today, critical habitat—from the river's headwaters to its delta—suffers from lack of water.

While interest in delta restoration grows, and water agencies express interest in assisting, the Compact and other laws governing the Colorado River make such support difficult, if not impossible. Water conserved and left in the river by one agency may be freely diverted by another user downstream. Moreover, if it is proven that a user routinely leaves water in the river, that user's rights to the water may be lost altogether by not putting the water to "beneficial" use.

LIVING RIVERS has requested on behalf of the Delta Restoration Coalition—a group of 133 organizations representing more than 12 million people—that the Secretary of the

Interior examine the Compact and other laws governing the Colorado to identify opportunities to deliver water to the delta. The Secretary, as the arbiter of water allocations in the lower basin, has great discretion to interpret the Law of the River.

As an initial step, reforms should recognize in-stream flows as a beneficial use throughout the basin and across borders. Effective mechanisms are needed to offer water users assurances that conserved water will be protected from appropriation by other users, and allowed to become part of a dedicated, basin-wide system of in-stream flows that would replenish the delta.

In his December 2001 address to the Colorado River Water Users' Association, Assistant Secretary of the Interior Bennett Raley stated that Colorado River delta issues are among his Department's "top priorities" for the coming year. The Interior Department must join with those seeking new and innovative ways to address today's pressing environmental and social needs of stakeholders, not continue perpetuating the mistakes of the past.

Living Rivers Currents 02/01/02

Bishop's Lodge: Return to the Scene of the Crime

Water lawyers, politicians, representatives from Indian tribes and environmental interests will be gathering in Santa Fe, New Mexico early this month for the 2002 Colorado River Symposium at historic Bishop's Lodge—site of the 1922 negotiations for the Colorado River Compact. While various management challenges for the once-mighty Colorado will be on the agenda, LIVING RIVERS will be promoting fundamental changes in the Compact itself, to bring Colorado River laws up to date with present concerns.

From the exclusion of Indian nations, Mexico and the environment as equal stakeholders in the river's water, to apportioning more water to the states than actually exists in the river most years, the Compact's shortcomings are so significant that one wonders why it was not revisited sooner.

"The Compact was flawed from the beginning," said University of Kansas environmental historian and western water expert Dr. Donald Worster. "All kinds of laws dating to the 1920s have been reassessed—including Prohibition and civil rights—so why not western water laws?"

But to many, the Compact has acquired sacrosanct status. Added Worster, "An agreement like this is thought by some to have come from the hand of God; there is an enormous cultural resistance, particularly if someone is going to lose some money in the deal."

Despite such obstacles, attempts have been made over the years to find solutions, and the discussion seems to come back to Santa Fe and the Compact. In 1983 a group gathered at Bishop's Lodge to debate many of the same issues on the table at this year's meeting. "The underlying thrust was a revisionist effort," said University of California, Santa Barbara environmental ethicist Dr. Roderick Nash, a 1983 participant. "Coming together was evidence of dissatisfaction." Yet despite a list of suggested improvements—including amending the Compact—little has been done to address the fundamental problems.

In addition to environmental problems, serious concerns about representation have been in the forefront of discussions about amending the Compact. Compact negotiators simply ignored the issue of reserved rights for Indian tribes, recognized by the U.S. Supreme Court in 1908. Only one reference to Indian rights appears in the document, stating that the agreement does not affect federal obligations to Indian tribes. "Herbert Hoover called that clause the 'wild Indian article,'" said historian Dr. Norris Hundley of the University of California, Los Angeles, an expert on southwest water history and law. "They didn't pay any attention to Indian rights."

Indians today see water that rightfully belongs to their people being delivered to corporate farms and cities hundreds of miles away, while many on the reservation still must haul their drinking water in buckets. Some scholars believe the Navajo Nation alone has rights to several million acre-feet. While some Indian nations have pursued negotiated settlements to obtain water, the usual result has been that the tribes are forced to make significant concessions to obtain water deliveries.

Dr. Helen Ingram, of the University of California, Irvine, presented a paper at the 1983 conference calling for equitable re-allocation of Colorado River water. Today she expresses concern that the momentum for change is hampered by differing strategies within the environmental movement itself. "Some groups think that the best way to protect environmental values is by privatizing water rights and using markets but this won't work for Indian tribes," she said. "It's been an enormous disappointment that environmental groups have walked away from water battles. Before we change the Compact we have to change the environmental movement."

River News 02/04/02

BuRec invitation to 100th anniversary celebrations

United States Department of the Interior
BUREAU OF RECLAMATION
Washington, D.C. 20240

IN REPLY REFER TO: W-1540

Dear Friend:

It is with great pride that I announce the Bureau of Reclamation's upcoming Centennial Anniversary on June 17, 2002. From that date through June 17, 2003, we will be celebrating 100 years as a Federal bureau dedicated to supplying the Western United States with vital water and hydroelectricity supplies.

Congress established the Bureau of Reclamation on June 17, 1902, to provide for the irrigation, storage, diversion, and development of water that ultimately made settlement of the West possible. Today, Reclamation has more than 180 projects located throughout the 17 Western States. Our facilities provide agricultural, municipal, and industrial water to about 33 percent of the West's population; hydroelectricity for more than 4 million households; and recreational opportunities at over 300 sites. We also have a wide variety of partnerships with other Federal, State, and local government entities; Native American Tribes; stakeholders; customers; and other interest groups to address the often-competing needs for the West's limited water supplies through water conservation, reuse, marketing, and other innovative methods. As a contemporary water resources management agency, we believe that, by collaborating and cooperating with all water users, Reclamation can successfully continue to serve in our role as a steward of the West's valuable water resources.

I would like to extend a personal invitation to you to join Reclamation employees in celebrating this occasion. With events being planned by our regional and area offices throughout the 17 Western States during our Centennial, numerous opportunities will exist for you to participate. For more information, please contact one of our offices in your local area. A contact listing is enclosed.

I look forward to your participation at one or more of our upcoming events.

Sincerely,

/signed

John W. Keys, III Commissioner

Enclosure

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Living Rivers Currents 03/10/02

Volume 2, Number 3

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[LRC V2, N3, March 2002](#)

Living Rivers Currents 03/10/02

Undamming National Parks

Vol. 2, No. 3, March 2002

A primary motive for decommissioning several dams on the Colorado River system is to restore habitat in some of the country's national parks and monuments. While concentrating on just a few of these dams, LIVING RIVERS has learned that there are a total of 742 dams affecting our parks, 482 inside Park Service boundaries and another 260 outside.

I'm not sure the public is fully aware of the number of dams in what are supposed to be protected natural areas," says LIVING RIVERS conservation director, John Weisheit. "The idea of dams is wholly inconsistent with the legislation which created our parks."

Few people see these dams, many of which are located away from the parking lots and paved roads. They are for the most part small and quite old, originally built for water supply or flood management purposes. which are no longer critical. Many pose safety risks or are otherwise in disrepair. However, their removal could significantly improve the parks' natural integrity.

With the growing nationwide awareness of opportunities for river restoration through dam decommissioning, it is somewhat surprising that with the exception of a few high profile campaigns, many of these small dams that are ripe for removal have yet to be targeted. "We probably have 150 dams in the park system that we could take out right now, but there is no money available to remove them," says Charles Karpowicz with the National Park Service Maintenance and Operations Safety of Dams Program. The program does remove about four to five dams a year for safety reasons.

Even those dams that are arguably providing benefits, such as the sixty or so generating hydroelectricity, could be decommissioned as their output is relatively negligible. Such is the case on the Elwha River in Olympia National Park. Friends of the Earth is nearing the end of an 18-year effort to remove two dams. They've succeeded in getting the Park Service to purchase the dams for \$30 million, and within three years expect to see endangered salmon again thriving in natural habitat conditions.

"This is how our parks should be," says Shawn Cantrell who has spearheaded Friends of the Earth's Elwha campaign. "We should be eliminating dams like these that do not make sense." Cantrell would like to see the Park Service establish an objective of removing 25 percent of its dams within the next four to five years.

Greg Adair of Friends of Yosemite Valley agrees. "In 1923, the public suffered a major loss with the submergence of Hetch Hetchy Valley in Yosemite National Park, but this damage is not permanent and must be corrected," says Adair. Yosemite's O'Shaughnessy Dam is the most politically challenging facility to remove from the national park system. It is the largest, and like the dams on the Elwha, it is not owned by the Park Service. San Francisco operates it for water storage and generating \$30 million of hydropower revenue annually. "But this is public land, what John Muir described as "More beautiful than Yosemite itself," and the public and the ecosystem deserves to have it back," adds Adair. Adair points out that San Francisco can store its water in neighboring reservoirs, and the power revenues represents a federal subsidy from the Park Service to San Francisco.

"Whether restoring Hetch Hetchy or a tributary stream on the Yellowstone, dams aren't needed and certainly don't belong in our National Parks. It's time we organized to bring this about," concludes Weisheit.

River Guides for the Colorado River

Vol. 2, No. 3, March 2002

In 1996 Colorado Plateau River Guides (CPRG) became one of the first organizations to publicly call for the decommissioning of Glen Canyon Dam. A fairly straightforward action most would assume, but in the complex realm of the river recreation industry, the action so far is unique.

In early days of river running, the river outfitting business was a small-scale seat-of-the-pants business. When dams were proposed, opposition was fierce, albeit not always successful. Lost revenue was certainly a concern, but there was clearly a passion for maintaining wild rivers. As the industry has matured, and the number of new dam proposals ground to near zero, advocacy in the river business has shifted more toward perceiving business opportunities, than for the river itself.

For example, in the 1950s a task force of Western River Guides Association endeavored to stop construction of Glen Canyon Dam. That organization has since evolved into American Outdoors, the nation's leading trade association for outfitters. But despite nearly 100 organizations already on board with the decommissioning of Glen Canyon Dam, American Outdoors has yet to join on.

"The guides, too, are often caught up in the business side of the culture. Guides are generally so happy to be employed as river runners, they are often reluctant to become involved in advocating something their employers are not yet willing to support," says Annie Tueller-Payne, president of CPRG.

Nowhere is this better reflected than amongst the guides in Grand Canyon, whose ecosystem is being destroyed by Glen Canyon Dam. Now, six years after CPRG called for decommissioning, only 34 percent of the Grand Canyon guides believe there is enough information to support such a position.

Payne continues, "They've lost their beaches, the native fish are dying, and the rapids never change. Flows that once fluctuated from 4,000 to 90,000 cfs now fluctuate little beyond 8,000 to 20,000 cfs. Where is their environmental ethic? I guess more of our education needs to be directed down there."

"Such advocacy work is now unprecedented in the guiding community. No river industry group has ever provided such leadership in putting river resources first," says David Focardi, vice-president of CPRG. "We want to walk the talk. River guides have a captive audience of people who vote and guides need to capitalize on this. No other group has the ability to advance this campaign forward than do river guides. The guides need to know the issues about river ecosystems and how to protect them. They also must be

able to answer the questions about ecosystem restoration and CPRG will be there to provide them with that information.”

In May, LIVING RIVERS will be welcoming CPRG as one of our sponsored projects.

You will be able to find information about their programs at www.riverguides.org.

LIVING RIVERS will also be welcoming the formation of [River Runners for Wilderness](#), whose mission is to promote wilderness river corridors within the Colorado watershed. We're pleased to be supporting increased river advocacy within the river recreation industry and look forward to further partnerships like these that strengthen the movement to bring about the Colorado River's protection.

Living Rivers Currents 03/10/02

Reclaim the Bureau

Vol. 2, No. 3, March 2002

While activists begin organizing for the upcoming centennial celebration of the Bureau of Reclamation, on June 17, the agency itself has finally begun circulating information on its own plans. A letter circulated by Commissioner John Keys near the end of February did not elaborate on the details, but stated that events are being planned by regional and area offices throughout the 17 Western states that will span the twelve months between June 17, 2002 and June 17, 2003. According to the letter, the public is invited to participate.

For information contact: Mr. Brit Storey, Reclamation Wide Centennial Committee, (303)445-2912, . Although not noted in the letter, a coalition of water and power interests has been working to secure \$900,000 to aid in a major celebration at Hoover Dam on June 17, 2002. The event is to include “high-ranking” representatives of the Bush administration. It is unclear whether the public is invited to attend.

LIVING RIVERS is promoting a region-wide day of action for June 17, to ensure that the media and the general public are aware of the true impacts associated with the BuRec 100-year dismantling of the West's river corridors. Rallies, river memorials and candlelight vigils are some of the events being contemplated.

For additional information contact LIVING RIVERS' Moab office.

Making the Green River Wild & Free

Vol. 2, No. 3, March 2002

Nearly fifty years ago, one of the most celebrated campaigns in the history of river advocacy began. The Sierra Club, Wilderness Society and the Izaak Walton League successfully fought to protect Dinosaur National Monument on the Green River from inundation by the proposed Echo Park and Split Mountain dams. Despite that victory two other dams were constructed above Dinosaur. This summer LIVING RIVERS will be ramping up efforts to eliminate these two dams to bring about one of the longest dam-free rivers in the continental United States.

As reported on previously in LIVING RIVERS Currents, the Bureau of Reclamation (BuRec) plans to release a draft environmental impact statement for its plans to alter the operations of the 502-foot-high Flaming Gorge Dam in an effort to correct the dam's impacts on endangered fish habitat in Dinosaur National Monument downstream. We've recently learned that this document will be published in late summer, and despite the demands of LIVING RIVERS and the sixty environmental organizations which supported us, BuRec will not evaluate the decommissioning of this dam as one of its alternatives to achieve the necessary mitigation.

The Bureau is violating the spirit of the National Environmental Policy Act," says Brian Dunkiel, staff attorney with Friends of the Earth. "Dam decommissioning is being supported by the Army Corps of Engineers, the Federal Energy Regulatory Commission, and a number of state agencies as a means to recover endangered species. The Bureau has a legal obligation to consider this as a reasonable and scientifically defensible alternative for endangered fish recovery on the Green River."

Unfortunately, this was not a surprise. LIVING RIVERS had anticipated the need to be prepared to mobilize the legal resources to ensure this matter be properly addressed by the courts. Removing Flaming Gorge Dam alone, however, will not be enough to reestablish native fish habitat in Dinosaur National Monument, because a much smaller dam upstream of Flaming Gorge duplicates the problem. The 139-foot-high Fontenelle Dam must also be decommissioned. Its 29-mile reservoir stores only 1.3 percent the amount of water of the reservoirs behind Glen Canyon or Hoover dams, and its 10MW power generation represents slightly more than half that of the two dams currently being slated for decommissioning in Olympia National Park. Moreover, its earthen structure has been plagued with leaks since its completion. Therefore, advocating Fontenelle's removal will generate negligible controversy relative to Flaming Gorge upstream.

The Sierra Club et.al. succeeded in protecting Dinosaur National Monument from inundation a half century ago, but failed to prevent the slow death of its riverine habitat by dams upstream, says LIVING RIVERS executive director, Owen Lammers. "We hope, however, that the same nationwide enthusiasm and passion can again be mobilized on Dinosaur's behalf, leading to further success."

Lasting protection for Dinosaur National Monument is critical, but the removal of these two dams will also pave the way for re-opening discussions for a Green River National Park. This nearly 500-mile-long river corridor was proposed for protection prior to BuRec's interests in the Green River. Nearly all the land remains in the public trust; thus, establishing the nation's longest park would indeed be viable and a fitting testament to the work and vision of the environmental leaders of the past.

Living Rivers Currents 03/10/02

1% Campaign Turns One

Vol. 2, No. 3, March 2002

At just one year old, LIVING RIVERS' 1% for the Delta campaign has grown some serious teeth. The campaign is now backed by a coalition of 133 groups representing 12 million people and has been the subject of over thirty television, radio and newspaper stories including the nationally broadcast News Hour with Jim Lehrer. The simplicity of the 1% voluntary contribution from major Colorado River water users, equaling one percent of the river's flow to begin reviving the delta region, is what has made it so attractive.

At the prestigious Water Education Foundation meeting, held outside Santa Fe, New Mexico, the 1% campaign was referenced repeatedly by speakers from across the country. All this interest has helped draw the attention of the Department of the Interior, which deemed the delta a top priority, yet is moving cautiously. It does support using U.S. technical assistance, but not the necessary contribution of U.S. water of even the tiniest proportion.

During the conference, Bennett Raley, Assistant Secretary of the Interior, met with LIVING RIVERS' Lisa Force and other environmental activists about reviving the dying delta. No agreements have been reached, but further discussions are planned when Raley and Force meet in Eugene, Oregon this month at the Land, Air and Water Conference sponsored by the University of Oregon Law School.

LR Letter 03/14/02

To Utah Governor Mike Leavitt on State of Utah's Rivers

Governor Michael Leavitt 210 State Capitol Salt Lake City, Utah 84114

Dear Governor Leavitt,

Attached please find a copy of LIVING RIVERS' 2002 State of Utah's Rivers report. As river stewards gather around the world on this, the 5th International Day of Action Against Dams and for Rivers, Water and Life, we are heartened that the Utah legislature is exercising increased caution with regard to unnecessary water projects, such as the Bear River dams. It is also encouraging to see mounting public interest in restoration efforts to repair the damage past projects have caused.

What is most promising, however, is the evolving dialogue concerning water conservation. As you noted last summer, even if Utah focused exclusively on developing all available water supplies, not enough water exists to service projected future demand. Managing the state's water consumption is the only way to buffer against shortages like those anticipated this year. Water conservation policies are also the most cost effective means to bolster supplies for both the short and long term. Utah's per capita water consumption is the second highest in the country after Nevada, indicating significant opportunities for improved water use efficiency should appropriate incentives be offered.

Sustained progress in water conservation will also allow for the preservation and restoration of key elements of Utah's natural heritage—its rivers. As a leader within the Colorado River watershed, you are undoubtedly aware of the increasing strain the basin's water consumption practices place on river habitat. Arizona has sacrificed nearly the entire Salt and Gila river system to diversions. Water seldom reaches the Colorado River delta and the Gulf of California. Riparian habitat throughout the watershed is suffering, and Utah is not immune. More diversions planned for the San Juan River and Green River tributaries signal dry streams ahead. Reduced water consumption must become a priority if these rivers are to be sustained.

LIVING RIVERS is committed to river protection through water conservation. Increased water efficiency will eliminate the perceived need for many projects, such as the St. George Pipeline or the Narrows Dam. Energy efficiency, too, can help to replace destructive hydroelectric projects, such as on the Bear River, American Fork and Boulder Creek, not to mention help to revive critical habitat in Dinosaur National Monument from the impacts of Flaming Gorge Dam.

Greater balance can be achieved in meeting ecological needs, as well as our own, from what rivers have to offer. That is the theme of the enclosed report as it highlights issues affecting river management across the state. We look forward to your feedback.

Sincerely,

Owen Lammers
Executive Director

cc: Utah Congressional delegation
Utah State Legislature

[Download: State of Utah's Rivers](#) [PDF File]

LR Press Release 03/14/02

Rally for Utah's Rivers

State of Utah's Rivers Report Released at State Capital on Day of Action Against Dams

CONTACT: Owen Lammers 435-259-1063



As river advocates from around the world gathered for the [5th Annual International Day of Action Against Dams and for Rivers, Water & Life](#), Utah environmental leaders from across the state joined Living Rivers in the release of a report on the [State of Utah's Rivers](#) [272k PDF File].

With the theme of adapting lifestyles to rivers, not rivers to lifestyles, the report laid out the good and the bad happening to the rivers in Utah.

"We're quite pleased that efforts are underway to kill two dams proposed for the Bear River Valley, and that water conservation is now on the tongues of elected officials," said Living Rivers executive director Owen Lammers. "But Utah's quest to continue consuming water at a per capita rate higher than 48 other states, will soon cause our rivers to run dry.

Among the report's highlight:

Bill passed and ready for Governor Leavitt's signature to cancel plans for two dams in the Bear River Valley.

Media coverage of the need for water conservation, and Governor Leavitt's support for the role water conservation must play in Utah's present and future water management strategies.

Momentum to move a radioactive waste pile from the banks of the Colorado River in Moab to a less environmentally vulnerable location.

River restoration projects on the Provo and Jordan rivers, and Moab's Mill Creek. Habitat degradation on the Green River through Dinosaur National Monument as a result of Flaming Gorge Dam.

A proposed pipeline from Lake Powell reservoir to St. George.

The dewatering of the San Juan River.

Sediment build-up impeding river access at the top of Lake Powell reservoir.

The decline of East Canyon Creek's premiere trout fishery around Park City.

The destruction of southern Utah's only natural hot spring.

Small hydroelectric dam re-licensing impeding river restoration.

Protecting rivers on national forest lands, and ensuring the management of rivers as wilderness in designated and proposed wilderness areas.

Two awards were presented. The 2002 "Utah River Stewardship" was presented to reporters Jenny Brundin and Vince Pearson of KUER public radio for their three-part documentary ["Soaking The Desert, the Story of Water in Utah."](#)

The 2002 "Rivers be Dammed Award" went to Ron Thompson, director of the Washington County Water Conservancy District, for promoting the yet funded 200-mile pipeline from Lake Powell reservoir to St. George Utah to maintain per capita water consumption in Southwest Utah as the highest in the U.S., 335 gallons per person per day.

The report was sent to [Governor Leavitt](#) with copies to the Utah Congressional delegation and state house and senate members.

In addition to Living Rivers, other organizations participating include: Colorado Plateau River Guides, Escalante Wilderness Project, Great Salt Lake Audubon, Rim-to-Rim Restoration, Sierra Club Glen Canyon Group, Trout Unlimited, Utah Environmental Congress, Utah Green Party, and Utah Waters.

LR in the News 03/15/02

SL Tribune: San Juan River Choking On Sediment, Groups Say

THE ASSOCIATED PRESS

Water diversions have left the San Juan River choking on its own sediment, say conservation groups that issued a report Thursday on the state of Utah's rivers.

Thirty water diversions along the San Juan River have slowed its flow, but it still carries a heavy load of sediment. The silt sometimes blocks the river where it empties into an upper arm of Lake Powell reservoir, said John Weisheit, conservation director for Living Rivers.

Conservationists say the San Juan River will only get worse as more water is taken from it for irrigation and for Albuquerque, N.M.

Native fish are dying off, hatchery fish aren't taking hold and rural towns like Bluff, Utah, that depend on revenue from whitewater rafting could see their economy decline, they said.

The river groups also listed as threatened East Canyon Creek, which springs from the Wasatch Mountains around Park City. Government officials have known for 20 years that development in the Snyderville basin would degrade the trout stream.

Officials were right -- but they didn't do anything to stop shrinking flows and phosphorous pollution. Conservationists say state and federal governments have failed to enforce laws that would have protected East Canyon Creek. The river groups are considering filing suit to force governments to take action.

The inaugural annual report on the state of Utah rivers also came with a "River Steward" award for Jenny Brundin and Vince Pearson, reporters for KUER radio who produced a three-part documentary, "Soaking the Desert: The Story of Water in Utah."

Living Rivers also bestowed a "Rivers Be Dammed" award on Ron Thompson, director of Washington County Water Conservancy District, who was not on hand to receive his plaque. Thompson was razed for promoting a pipeline that would take water from Lake Powell to St. George, Utah.

LR in the News 03/15/02

Ogden Standard Examiner: Leavitt pressured to sign dam bill Group commends Legislature for river resolution

By CHARLES F. TRENTELMAN Standard-Examiner staff

SALT LAKE CITY -- Hoping to encourage the governor to support what the Legislature approved, Living Rivers is praising lawmakers for their decision to block two proposed dam sites on the Bear River.

Thursday in the Capitol Rotunda, the Moab-based river advocacy group urged Gov. Mike Leavitt to sign Senate Bill 92, which was passed by the Legislature in its last session.

The bill removes Honeyville, in Box Elder County, and the Barrens, in Cache County, from a list of potential river dam projects on the Bear River. As of Thursday Leavitt had not signed it.

The state already decided not to pursue building dams in those areas because of public opposition. Opponents said the dams would flood valuable agricultural and wildlife areas as well as Native American and pioneer historical sites.

Owen Lammers, executive director of Living Rivers, said the Bear River proposal is one of several things the group felt Utah was doing right. "Hopefully this is the piece of legislation that will bring about the end of the Bear River dams," which have been a subject of debate for years.

Improved water conservation would also negate the need for more water.

"Utah does not need to bring in more water. There's plenty of water here, it's just a matter of how you use what they have," he said.

Lammers was joined by Green Party Candidate Craig Axford, who hopes to capture Rep. Jim Hansen's seat in Congress.

Axford said stopping the Bear River dams are only a start if Utah hopes to live within its existing supply of water.

"Utah has to realize that, as Edward Abbey said, growth for its own sake is the philosophy of the cancer cell," he said.

He said Utah needs to begin serious water conservation measures now, including metering and charging for all water used.

*** Ogden Standard Examiner 3/15/02

LR in the News 03/15/02

**Deseret News: Rally backs rivers in West
But we can do better, group at Capitol says**



By Donna Kemp Spangler Deseret News staff writer

It may be a first for Utah environmentalists — showering kudos on lawmakers for pulling the plug on two proposed dams on the Bear River. Environmentalists gather at the Utah Capitol in a rally calling for improved care of Western rivers. Peter Chudleigh, Deseret News But it wasn't all that warm and fuzzy at a rally environmental leaders held Thursday at the Capitol.

"We have to stop adapting rivers to our lifestyle," said Owen Lammers, executive director of the Moab environmental group Living Rivers. "We hope decision-makers will heed that message."

The rally was held to mark the fifth International Day of Action Against Dams. It drew about 30 people from different environmental groups around the state who highlighted the good and bad things that are being done to manage Utah's rivers and watersheds.

Lawmakers were praised for passing a bill that would prevent the construction of two dams in the Bear River Valley. And Gov. Mike Leavitt was lauded for calling on Utahns to conserve water during last summer's drought.

But more needs to be done, environmentalists said. "Utah is the No. 2 most wasteful consumer of water, second to Nevada," Lammers said. "We can do better."

Craig Axford of Utah Environmental Congress and Green Party candidate for the 1st Congressional District seat proposed doing away with the current water pricing system that relies heavily on taxes. "Utah has to begin billing according to consumption," he said.

Alfalfa farmers were blamed for much of the water use. "The amount of water used to grow alfalfa is stupid," added Denise Boggs, executive director of Utah Environmental Congress. "There's no reason to grow that crop in the arid West."

She also criticized federal land managers for not doing enough to protect watersheds. "All of the headwaters to municipal drinking water are found in the six national forests in Utah. Yet they are all threatened by logging and oil and gas drilling."

On the bad side of things, environmentalists pointed to:

- A long-standing but unfunded plan to construct a water pipeline from Lake Powell reservoir to provide water to a growing St. George area. Environmentalists lambasted Ron Thompson, director of the Washington County Water Conservancy District, for promoting the \$250 million project by presenting him with the "Rivers Be Dammed Award." Thompson, who wasn't at the rally, did not return press calls.
 - Too much sediment in the San Juan River causing a problem for river runners who get stuck in the mud, according to John Weisheit of Living Rivers. Some 30 diversions of water upstream have lowered the San Juan River, a threat to the reproduction of endangered fish.
 - Water releases from Flaming Gorge Dam causing problems for native plants and animals that live in Dinosaur National Monument on the Green River. Later this year, the Bureau of Reclamation will be proposing changes in the dam's operations. But de-commissioning Flaming Gorge Dam was not an option studied, environmentalists argued.
 - Too much pollution in East Canyon Creek in the Snyderville Basin around Park City. Darrell Mensel, coordinator of the relatively new group Utah Waters, blames it on overdevelopment. "I find no other place that's been more disgraceful of a river than East Canyon Creek," he said. He encouraged the governor and lawmakers to make sure environmental laws are followed to protect the creek, once known for its prime trout fishing.
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Take Action 04/05/02

Arizona Game & Fish Commission Approves Cougar Slaughter

Arizona's cougars are under attack by a state Game and Fish Commission and Department which are more interested in helping hunters and wealthy ranchers to kill predators than they are in protecting wildlife. Even in deficit budget years, such as 2002 and 2003, when the legislature must cut spending by \$200 million and \$1 billion respectively, the subsidy for killing wildlife remains firmly in place.

36 COUGARS TO BE KILLED

The AGFD is now planning to kill seventy-five percent of the cougars - up to thirty-six individuals - in the Four Peaks Wilderness Area on the Tonto National Forest over the next three years. To trap the animals, AGFD will use snaring, a brutal technique that will result in the death of dependent kittens through starvation, exposure or predation while the trapped mother looks on.

The AGFD claims the experiment is necessary to determine the role of cougars on a declining bighorn sheep population. The AGFD's own data, however, show that the population is actually increasing and that the primary causes of bighorn deaths are disease introduced by domestic sheep and drought.

More than eighty percent of the individuals and groups commenting on the Draft Environmental Assessment opposed the project. The former chief of the AGFD's research division along with other qualified scientists condemned the experiment as "ill-concieved, unnecessary, wasteful and bad science."

PROJECT PROPOSED BY TROPHY HUNTERS

Hunters speak louder than scientists to the Commission, however. The project was first proposed by the Arizona Desert Bighorn Sheep Society which hunts bighorns for trophies. The group contributed \$150,000 to pay for the project, obviously designed to increase the number of bighorn sheep available to be killed by trophy hunters. The snaring and killing may begin at any time, as approval to implement the plan was given in January, though the public wasn't notified until March. The Game and Fish Commissioners originally approved the plan in 1999.

TAKE ACTION

There's still time to stop this outrageous attack. Please call, or send a letter or fax expressing your opposition to:

Michael Golightly, Chairman AGFC c/o Director Wayne Shrouffe 2221 W. Greenway Ave. Phoenix, AZ 85023-4399; 602-942-3000 Phone 602-789-3299 Fax

If you would like to volunteer for this or other campaigns in defense of Arizona predators, or if you have information which may help in the campaign to end rancher subsidies for predator control, please contact Living Rivers at 480-990-7839.

River News 04/11/02

APS Announces Intent to Surrender Childs-Irving Power License

In a letter dated March 29, 2002, Arizona Public Service (APS) announced its intention to submit to the Federal Energy Regulatory Commission (FERC) a Surrender Application for the Childs-Irving Hydropower Plants at Fossil Creek. The Surrender Application will supercede the current application that APS has before FERC, which is a request to continue operating the plants, thus devastating the ecosystem, for another 30 years

The written intention to surrender is a milestone in a process which began more than five years ago when a coalition of environmental groups began putting pressure on APS to abandon its effort to relicense the plants. The plants produce a miniscule amount of power in comparison to the major damage they wreak on Fossil Creek, a perennial stream in the central Arizona desert.

After years of negotiations, public pressure and grassroots action, APS signed an agreement to decommission the plants in September 2000. However, with FERC unsure about how to proceed in the unprecedented situation and with California's energy "crisis" heating up, some parties to the agreement began to waiver. It was suggested that decommissioning Childs-Irving may not be in the public interest, and APS's request to continue operating Childs-Irving remained on FERC's desk.

Following a declaratory order in which FERC resolved many of APS's concerns, FERC asked APS to submit a plan for surrendering the license. APS responded that it was unwilling to do so at the time. (See previous Fossil Creek update.) FERC responded with a request for a conference call with APS and other interested parties.

Living Rivers and the Yavapai-Apache Nation, formal Intervenor in the process, as well as a number of other environmental groups joined the call to assure APS that we are all still involved and highly motivated to see the decommissioning through. APS responded with a letter which included the following vital statement:

"As discussed during the March 6, 2002 teleconference between Arizona Public Service (APS), the Federal Energy Regulatory Commission (FERC) and interested parties, APS hereby informs FERC that it plans to submit the surrender application on or before April 30, 2002. The Surrender Application will support the Offer of Settlement and Settlement Agreement submitted by APS to FERC on September 15, 2000. The Surrender

Application will also contain a schedule for the submission of additional required information."

Potential roadblocks remain. FERC could deny the surrender request; FERC could require substantial changes to the Agreement, giving the parties the option of backing out; the U.S. Fish & Wildlife Department could require substantial investments in environmental studies putting an unreasonable burden on APS. But with each baby step forward, Fossil Creek is that much closer to freedom after being entrapped in metal flumes, concrete tunnels, holding ponds, reservoirs and man's icy grip for over 100 years.

LR Letter 04/14/02

Comments on proposed Antelope Point Marina Resort at Lake Powell reservoir

April 14, 2002
Ms. Kitty Roberts
Superintendent
Glen Canyon National Recreation Area
National Park Service
PO Box 1507
Page, AZ 86040

Via Fax: 928-608-6212

RE: Antelope Point Marina Resort Development Project Environmental Assessment

Dear Ms. Roberts:

Living Rivers, on behalf of American Canoe Association, Bluewater Network, Center for Biological Diversity, Colorado Plateau River Guides, Diné Bidziil Coalition (representing 17 grassroots Navajo groups), Diné Medicinemens Association, Flagstaff Activist Network, Forest Conservation Council, Forest Guardians, Friends of Arizona's Rivers, Glen Canyon Institute, Grand Canyon Private Boaters Association, Great Salt Lake Audubon Society, Sierra Club, Utah Environmental Congress, Utah Rivers Council, and Utah Whitewater Club, submit the following comments on the *Antelope Point Marina Resort Development Project Environmental Assessment* dated March 20, 2002.

At the outset, we must stress our dissatisfaction with the public notification and comment periods established for review of this Environmental Assessment (EA), and project evaluation process as a whole. The publication was made available for distribution one week in advance of the public workshop and not received until four days prior to that scheduled public workshop. Similarly, short notification was granted for the scoping workshop. Less than 20 workdays has been available for public comment on this document. This is wholly inconsistent with the spirit of public participation as defined

by the National Environmental Protection Act (NEPA) and the Council on Environmental Quality (CEQ) guidelines.

Summary

Significant procedural issues exist with respect to compliance with sound planning objectives and the requirements of NEPA that have not been adequately addressed in the EA.

Overall, we find the National Park Service (NPS) negligent in promoting the Antelope Point project at this time, as it should first update the Park's outdated General Management Plan (GMP), addressing current and future recreational and resource protection needs at Glen Canyon National Recreation Area (GCNRA). This document is out of date and out of step with declining trends in flat water recreation, concerns with regard to water quality, and the increasing role sediment accumulation is playing in reducing the reservoir's operating life span. The agency should also complete, prior to moving forward on Antelope Point, the Environmental Impact Statement (EIS) currently in preparation on personal watercraft (PWC) management at Glen Canyon. Approval of this project by the Park Service would mark a setback for the Park's efforts to protect water quality in the reservoir, ultimately a drinking water source for more than twenty million people downstream.

Living Rivers and seven other non-governmental organizations requested, in a letter (attached) to then Acting Superintendent Kathryn Cook, and dated November 30, 2000, that an EIS be prepared for this project. Citing several examples of environmentally damaging actions, which would result from NPS approval of the marina and resort, we pointed out that an EIS would be required under the NEPA statute and its implementing regulations by the CEQ. We find the EA, as presently prepared, inadequate, addressing few of the issues raised in our previous letter on this matter. We again request that a full EIS be undertaken prior to any further contemplation of this project. Contrary to the EA's findings, the proposed alternative would cause significant environmental impacts and potential impacts, and these must be properly analyzed and evaluated in an EIS.

What follows are the procedural and substantive issues we have with the EA, as well as the Park Service's approach to evaluating the project:

- Coordination with other park planning efforts
- Protection of park resources
- Purpose and need for the project
- Alternatives analysis
- Economic development and social impacts on Navajo people
- Ethnographic resources & sacred sites impacts.
- Cumulative impacts and reasonably foreseeable consequences

- Site constraints and visitor safety issues
- Water quality impacts
- Air quality impacts
- Recreation and noise impacts
- Antelope Island management concerns
- Endangered native Colorado River fish species
- Environmental Impact Statement required
- Public participation concerns

- 1) **Coordination with other park planning efforts** The GMP for GCNRA is more than two decades old (the undated GMP was published in 1979), and does not reflect numerous unanticipated, undocumented visitor use and recreational trends or problems in resource management that have developed since the document's publication. The GMP is the primary document to which both the current Antelope Point planning effort and the 1986 Antelope Point Development Concept Plan/ Environmental Assessment (DCP/EA) were tiered. Park officials have stated in private communications that a new GMP is unlikely in the near future due to lack of funds.
- 2) The GMP lacks substantive, relevant data and analysis of the purpose, and need for a marina at Antelope Point. Because the GMP lacks important, basic information that would inform current planning efforts for Antelope Point, the NPS must address these missing elements in detail within the Antelope Point NEPA process. The situation with personal watercraft is an excellent example.

The proliferation of such machinery was never contemplated in the 1979 plan and now a full EIS is being undertaken to determine how, and if, PWCs should continue to operate on the reservoir. Waiting until this EIS is complete, before moving forward on Antelope Point, would provide an opportunity to incorporate the findings of the PWC study in to the Antelope Point alternatives analysis. One alternative NPS is reportedly considering, in the PWC EIS, is to restrict jet skis from designated areas of the reservoir-to provide "jet ski-free" quiet zones. The narrow, old river channel at Antelope Point, on the south side of Antelope Island, would be an ideal area for such restricted uses. In its alternatives analysis, NPS should consider the value of the Antelope Point area to non-motorized recreation use.

2) Protection of park resources

The laws, regulations and policies that govern management of national parklands, including GCNRA, require the NPS to make protection of park resources a top priority. The Organic Act of 1916 and the Redwood Park Amendments Act of 1978, in particular, require NPS to manage park resources to a "non-impairment" or "non-derogation"

standard. Contrary to the EA's conclusions, a major development project, such as the Antelope Point marina, risks degrading water quality and air quality, significantly increasing noise and visitor crowding, and decreasing opportunities for solitude and low-impact, non-motorized recreation. The need to provide such areas was not fully contemplated when the GMP was developed, but is a critical factor that must now be addressed prior to potentially exacerbating these problems by approving the Antelope Point Marina Resort Development project.

NPS has no legal justification or authority to favor motorized recreation over non-motorized. Given the growing impairment of park resources caused by motorboats, the burden is on NPS to explain how each recreational alternative considered in the broader sense, Antelope Point, Hite Marina expansion and etc., complies with the non-impairment standard. This should be a key component of the revised GMP and which must be addressed prior to any decision on Antelope Point.

Furthermore, as noted in our scoping comments dated January 14, 2002 (attached) related to Hite Marina DCP/EA, GCNRA planners are demonstrating a bias toward further development of park resources for motorized flat water recreation, while ignoring its obligation to maintain access for other users, such as river rafters.

3) Purpose and need for the project

As stated above, the purpose and need for new development in national parks should be justified by, and tied to, the Park's GMP. However, the Park's outdated GMP lacks important information. The Antelope Point EA is addressing a perceived need that is nearly 25 years old. Demand for any new marina development at GCNRA, in close proximity to the existing Wahweap Marina in particular, must be well documented. NPS must show: why existing facilities at Wahweap cannot meet that demand; why a new facility is needed so close to Wahweap Marina when so many public services and facilities would have to be duplicated and; why constructing a new facility would be preferable to expanding existing facilities, especially at a time when visitation is on the decline. As regards to addressing Navajo Nation economic development needs, there are a variety of other, more environmentally and economically sustainable means for GCNRA to accommodate this, as outlined in our letter of November 30, 2000 and noted below.

4) Alternatives analysis

Because of the outdated GMP, the Antelope Point EA failed to analyze possible alternative uses for the site (other than the marina). Given water quality concerns, demand for quiet areas, potential changes in watercraft usage and any demonstrated need for the proliferation of more marina facilities at this time, it is imprudent to restrict such a unique area as Antelope Point to the findings of an outdated GMP. An updated GMP may reveal that management alternatives for serving marina demand through (expanded) existing facilities is not only feasible, but desirable, and that alternative uses for the Antelope Point site other than a resort marina development would be a better fit for present and future trends.

The Diné Medicinemens Association, Inc. (DMAI) has proposed that NPS study the possibility of establishing a traditional healing center for Navajo people and others, rather than a marina, on the Antelope Point project site. NPS must consider this proposal in detail. The DMAI represents the interests of traditional religious healers and cultural practitioners, whose interests must also be protected and respected under Executive Order 13007, Indian Sacred Sites (May 24, 1996). The DMAI, and other Navajo groups, could contribute significantly to a new GMP, whereas such voices were absent 23 years ago. This would seem particularly important in the case of Antelope Point. The alternatives some Navajo interests have proposed were never contemplated by the 1979 GMP, and not inconsistent with NRA goals. Such uses might include traditional healing centers, retreat/conference center and educational facilities for both local Navajo, and tourists alike.

In addressing NPS' interest in aiding the Navajo Nation, the Park Service should not restrict its evaluation to Antelope Point. NPS should consider the possibility of the tribal government taking over management and operation of existing GCNRA marinas including Wahweap. This would meet the economic development criteria without additional environmental impacts.

5) Economic development and social impacts on Navajo people

The proposed marina is being promoted in part as a means of providing economic development opportunities for members of the Navajo Nation, and of the nearby LeChee Chapter in particular. While no one would dispute the need for additional opportunities for tribal members, the EA has not demonstrated how the Navajo Nation's desires for a revenue stream from a project that would negatively impact the Park's shoreline and waters, against NPS' legal duty to protect park resources from impairment. Navajo Nation economic development goals may not always be consistent with park management objectives. If NPS determines that the purpose and need for the project include providing economic development opportunities for the Navajo people, then NPS must demonstrate that legal authority exists for the agency to undertake development projects or other management activities on that basis. NPS must also explain how such projects are consistent with the agency's legal mandates to ensure non-impairment of park resources.

6) Ethnographic resources & sacred sites impacts

The EA asserts that only two ceremonial sites have been identified, and that both do not qualify for National Register of Historical Places, as they were not used prior the inundation of Glen Canyon. Further, the EA states "Despite this determination, an attempt was made to accommodate the needs of the Diné Medicineman's [sic] Association, Inc. and further consultation identified an acceptable alternative to the original ceremonial location."

The Diné Medicinemens Association, Inc. has identified numerous ceremonial and sacred sites in and around the project area. The Association's president, Mr. Thomas Morris, is unaware of any contact with Antelope Point planning officials regarding the

applicability of these or any other sites to the National Register of Historic Places, nor discussions regarding "suitable" alternatives.

NPS must consult with all appropriate traditional practitioners, including the DMAI to address these issues. NPS must explain how it intends to comply with Executive Order 13007, Indian Sacred Sites (May 24, 1996), that requires agencies including NPS to "...accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and ... avoid adversely affecting the physical integrity of such sacred sites." By dramatically increasing visitation to the area, it will become very difficult for NPS to accomplish the objectives of the Executive Order. NPS must avoid damaging any such sites and provide a range of alternatives for ensuring the sites' protection under a range of alternative development scenarios for the project. NPS should publish a full accounting of the consultation efforts and mitigation plans for the archeological, cultural and sacred sites.

Furthermore, it is the position of the DMAI that the Antelope Point Marina Resort Development not be built, but that a traditional healing center be established at that location should NPS be interested in assisting with sustainable economic development on the Navajo reservation.

7) Cumulative impacts and reasonably foreseeable consequences

NEPA requires analysis of reasonably foreseeable consequences of projects and the cumulative effects of specific impacts over time. Development of a new marina would likely lead to additional construction of tourist-oriented business and industry in the vicinity of Antelope Point. For example, the act of providing utility services to Antelope Point—an area that is currently not served by utilities—will create opportunities for additional development and land use changes outside the project boundary, changes that would be very unlikely to occur without the project. The Navajo Nation and LeChee Chapter are reportedly studying the feasibility of building a casino and shopping center along the Antelope Point access road. Such construction, if undertaken, would likely be feasible only if the marina were built.

The EA has not addressed these cumulative impacts, despite noting that the proposed project will increase the area's employment by upwards of eight percent. The EA has not identified the land-use control and regulatory mechanisms that may exist, if any, to limit sprawling strip development in the vicinity of Antelope Point. By approving this project, NPS would be effectively facilitating the development of many additional acres of land on the approach to Antelope Point. NPS must investigate and evaluate these reasonably foreseeable consequences of the Antelope Point project. Issues such as water supplies, power supplies and sewage disposal (that NPS must study for the marina proper) must also be considered in light of likely adjacent development. Basic services such as police and fire protection must have facilities appropriate to the anticipated need over time. NPS must address these infrastructure questions in a quantitative way.

8) Site constraints and visitor safety issues

The EA gave no consideration to the unique geography associated with Antelope Point, as it may affect public safety. Antelope Point is located on the south shoreline of a narrow bend in the old river channel, with the undeveloped Antelope Island on the opposite shore. There is limited space for large watercraft such as tour boats to maneuver in the narrow channel, especially in the presence of other boats. Site constraints make the area prone to potential user conflicts. Because Antelope Point is on a sweeping bend in the channel, line of sight and visibility are reduced. During heavy use periods, any combination of large tour boats, powerboats, houseboats, high-performance "cigarette" boats and jet skis could be in the immediate vicinity, negotiating the narrow, bending channel, on the way to or from the marina. Swimmers, wake-boarders and water-skiers may be in the water. Anglers may stand on the shoreline or fish from boats. Antelope Island's shoreline provides camping and picnicking opportunities, and boats are often tied along the shore. With the establishment of a marina, it is likely that such use will only increase. The potential for serious visitor safety conflicts and boating accidents at Antelope Point appears to be great. The ready availability of alcoholic beverages for sale from the nearby marina would only exacerbate the risk of serious accidents. Vessel fires, a fairly common occurrence at GCNRA, can significantly increase risk of injury to bystanders and boaters, especially in a constricted channel environment with heavy traffic.

NPS must assess the expected near-term and long-term (cumulative) impacts on visitor safety and public health, resulting from funneling a large number of disparately-sized motor vessels into a narrow channel that is frequently used by families and children for water contact sports.

9) Water quality impacts

The reservoir at GCNRA is an artificial feature that is part of the Colorado River, which is in turn a primary source of drinking water for millions of people downstream in Arizona, California, Nevada and Mexico. In addition to its obligation to protect park resources, including water bodies from non-impairment, NPS has an obligation to ensure the protection of water quality at GCNRA for downstream users. This issue was not given sufficient consideration in the EA.

NPS must consider the cumulative downstream impacts resulting from polluted runoff from streets, parking lots and lawn areas entering the reservoir and which may percolate directly into groundwater. Contamination of groundwater supplies at Antelope Point could be potentially disastrous, since NPS is considering onsite wells as the sole source of the marina's water supply system. Combined, the potential for local and downstream impacts associated with water quality warrant a much more comprehensive examination than offered in the EA.

The US Environmental Protection Agency (EPA) has estimated that roughly 25 percent, on average, of the fuel mixture that drives two-cycle motors is emitted through the vehicle's exhaust system, unburned. Two-cycle motors are commonly used at GCNRA in powerboats as well as in PWCs. NPS should be concerned about petroleum pollution

from all powerboats, but especially that from PWCs, where the oily exhaust is essentially injected (mixed) directly into a stream of water (the "jet"), and thence into the reservoir. While open-water areas may offer some advantage in terms of diluting petroleum pollution, the narrow channel at Antelope Point and the anticipated high traffic volume may lead to significant accumulations of petroleum on or in the water, which may be less likely to disperse than more open areas. If such impacts are sufficient to warrant an EIS on PWCs, then certainly a similar level of analysis should be conducted for a major marina development as proposed for Antelope Point.

10) Air quality impacts

The Antelope Point project area is in close proximity to Navajo Generating Station (NGS), one of the largest sources of carbon dioxide and oxides of nitrogen in the Southwest. Data published by the Public Interest Research Group in 2000 indicate that more than 700 pounds of mercury were emitted from NGS in one year. The EA did not sufficiently address the long-term human health impacts of prolonged exposure to NGS power plant emissions on visitors and marina employees; especially those who work a significant portion of their time outdoors, where they would be considered to be at higher risk from long-term exposure.

11) Recreation and noise impacts

The EA discounts the noise impacts as they relate to the objective of a marina resort operation, but as noted earlier, a revised GMP reflecting contemporary issues would generate a greater range of alternatives to be investigated in and around Antelope Point. In particular, GCNRA currently provides no designated "quiet zones" on or near the water for non-motorized recreation activities (e.g., "sea" kayaking, canoeing, swimming or camping). There are virtually no places on the reservoir with more than 1900 miles of shoreline where families and others may enjoy water sports and other recreation activities free from the sights, sounds, and intrusions of houseboats, powerboats, high-performance "cigarette" boats and jet skis. Despite the growing popularity of non-motorized recreation, a legislative mandate to provide for a broad spectrum of recreation opportunities and the generally benign environmental impact of non-motorized recreation activities, NPS has mostly ignored the interests and needs of those who prefer human-powered water sports at GCNRA.

In the case of Antelope Point, the narrow, bending river channel offers ideal conditions for such low-impact, non-motorized recreation. There are few places on the reservoir's shoreline with easy auto access that could easily accommodate these recreational activities with few conflicts with motorboat users. Antelope Point's new launch ramp and close proximity to the town of Page make it perhaps the best choice for a facility that would cater to non-motorized users. Antelope Island, on the opposite side of the channel from the launch ramp at Antelope Point, provides readily accessible camping and shoreline hiking opportunities, while the island's hilly landform offers effective screening from the noise of motorized watercraft traffic traveling uplake around the north side of the island. But just as a "quiet zone" in the Antelope Point channel reach would be protected by the topographic screening afforded by the island, the channel

would likely be subjected to near-constant noise levels if Antelope Point marina were built. The island's topography would tend to reflect noise back to the water and the south shore, virtually guaranteeing that the passing motorboats and tour boats would make camping and non-motorized water sports unpleasant at the very least.

Through a revision of the GMP, NPS should identify and characterize the range of alternatives available within the NRA to provide accessible and adequate quiet zones, such as may be available around Antelope Point. Additionally, noise is a major issue being addressed by the PWC EIS. Noise should receive no less consideration for a major marina development, yet here again NPS has relegated the issue and the entire analysis to EA status.

12) Antelope Island management concerns

In the GMP for GCNRA, Antelope Island is zoned for "wilderness," i.e., non-motorized use. NPS has not analyzed expected impacts that the Antelope Point marina would have on naturalness, wildlife, and primitive camping at Antelope Island. NPS must explain the management rationale that justifies placing a marina in such close proximity to an area that is to be managed in an undeveloped state. NPS must also describe how it intends to ensure that Antelope Island will remain a low-impact, protected environment in light of the heavy boat traffic that will bring additional noise, air and water quality degradation, and people to the area, especially during heavy use periods.

13) Endangered native Colorado River fish species

NPS has an obligation to support recovery of endangered species that are native to the parklands under NPS jurisdiction. In the context of an updated GMP, NPS could consider utilizing the Antelope Point channel zone as a protected rearing area for some or all of the four listed, Colorado River native endangered fish (bonytail chub, Colorado pikeminnow, humpback chub and razorback sucker). Few endangered fish are known to currently inhabit Lake Powell reservoir. The only referenced in the EA was the razorback sucker. These native fish have had their habitat dramatically altered and invaded by striped bass, carp, and other introduced game fish species. While GCNRA has done little to reintroduce listed endangered fish into the reservoir, there are indications that under protected conditions, a limited number of individuals could survive. The razorback sucker in particular survives in low numbers in several lower basin reservoirs, mainly in response to ongoing U.S. Fish & Wildlife Service (USFWS) hatchery rearing efforts. A major challenge in ensuring these fish reach reproducing age is predation by and competition with introduced non-native fish including trout, catfish, bass and carp. In at least one Colorado River reservoir, a screen or curtain has been put in place to separate the endangered native fish from the game fish, and initial reports indicate that the system is working.

NPS should investigate, in collaboration with USFWS, the possibility of creating a similar type of curtain that could be employed at GCNRA (perhaps in a number of locations) to create protected rearing zones for endangered native fish. NPS should give serious consideration to experimenting with the Antelope Point channel area for this purpose. The narrow, deep channel could afford a unique opportunity for providing

at relatively low cost a controlled, easily monitored, predator-free environment. A curtain or screen dropped across the channel on both ends of Antelope Island would provide a very deep area in the old, river channel, as well as extensive, shallower habitat in the Antelope Creek bay.

Pursuing a more detailed study of the potential benefits of such an experiment would require consultation with fish biologists and with the two USFWS-sponsored endangered fish recovery implementation programs in the Upper Colorado River and San Juan River watersheds. NPS should give this consideration in conjunction with future management plans and not unnecessarily compromise potentially suitable habitat like Antelope Point prior to completion of such an evaluation.

14) Environmental Impact Statement required

Given the extensive and controversial nature of the project impacts expressed herein, NPS is required by CEQ guidelines to abandon the EA process and conduct an EIS on the Antelope Point Marina Resort Development Project. There is clear, current precedent for doing so. As noted above, GCNRA is currently preparing an EIS for PWC management. It is difficult to imagine a rationale that would justify an EIS for jet skis while preparing only an EA for a large marina complex. A decision by NPS to move forward with an EA and a Finding of No Significant Impact, without preparing an EIS for this complex project would appear to be an arbitrary and capricious act by the agency.

15) Public participation concerns

Public involvement in planning by federal agencies is a key element of the NEPA process. NPS should endeavor to improve its outreach and public involvement efforts related to the Antelope Point project. In particular, NPS should conduct public hearings on the project in diverse communities throughout the region. NPS must avoid the appearance that it is interested in receiving input from only a narrow demographic audience. The NEPA process requires federal agencies to promote public involvement in project planning. We were therefore profoundly disappointed to learn that, despite our requests for multiple scoping meetings, NPS chose to hold only one such public meeting for Antelope Point and now only one public workshop on the EA, both in Page, AZ. In both instances there was less than two weeks advance notice, which does not typify the sort of public participation effort envisioned by NEPA.

In contrast to what appears to be NPS' intent to restrict the audience for its Antelope Point project, NPS recently held scoping meetings for the PWC EIS in the Salt Lake City and Phoenix metropolitan areas, as well as in Page. There is a growing perception and concern that NPS may be using scoping meetings in an arbitrary and capricious manner. At the very least, there is an apparent lack of consistency in the agency's selection of communities for public involvement activities. NPS should hold future public meetings on Antelope Point in the following locations at least, to ensure a well-informed public: Page AZ, Salt Lake City UT, Phoenix AZ and Flagstaff AZ. Consideration should be given to also conducting meetings in Gallup NM, Moab UT, Durango CO and Las Vegas NV, to ensure broad geographic coverage.

Finally, the quantity and quality of materials and information about the project provided by NPS to attendees to the scoping meeting, through the EA process and the EA itself has been disappointing. There has been precious little useful information in the materials to explain the controversial nature of the environmental, social and economic impacts of this project. Part of the public involvement process is informing the public well in advance of the issues that have been raised, to encourage additional public response and understanding. NPS should dramatically improve the information provided the public in future communications, on the Internet, via the US Mail, and especially in public meetings.

Thank you for your consideration of our concerns, and we look forward to your reply.

Sincerely,

Owen Lammers
Executive Director

On behalf of:

American Canoe Association
Bluewater Network
Center for Biological Diversity
Colorado Plateau River Guides
Diné Bidziil Coalition (representing 17 grassroots Navajo groups)
Diné Medicinemens Association
Flagstaff Activist Network
Forest Conservation Council
Forest Guardians
Friends of Arizona's Rivers
Glen Canyon Institute
Grand Canyon Private Boaters Association
Great Salt Lake Audubon Society
Sierra Club
Utah Environmental Congress
Utah Rivers Council
Utah Whitewater Club

cc: Edward S. Richards, Navajo Nation Division of Economic Development

Media Advisory 04/14/02

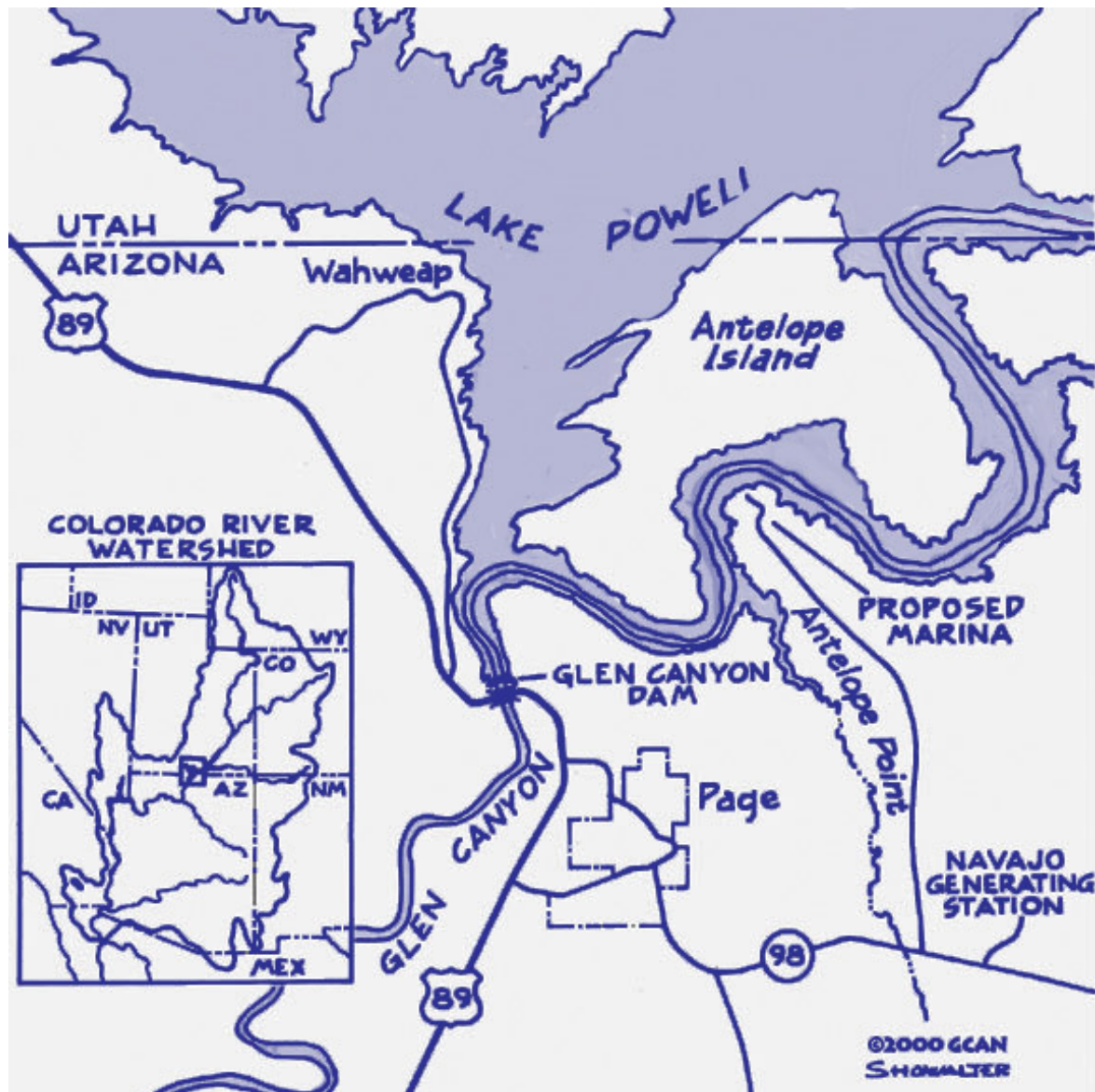
Arizona and Utah environmental groups support Navajo activists in blasting National Park Service for promoting Lake Powell marina complex on Navajo land.

Contact:
Owen Lammers, Living Rivers (435) 259-1063/206-2590

Hazel James, Diné Bidziil Coalition (928) 779-9322
Mr. Thomas Morris, Diné Medicinemens Association (928) 871-5133
Dave Sherman, Sierra Club Plateau Group (928) 773-1064

In an [eleven-page letter](#) sent today to superintendent Kitty Roberts of Glen Canyon National Recreation Area (GCNRA), Living Rivers and 17 other environmental and social justice organizations demanded suspension of the planning process for the proposed Antelope Point Marina project on Lake Powell reservoir.

Citing numerous violations of the National Environmental Protection Act (NEPA), utilization of outdated planning guidelines, a bias toward servicing motorized flat water recreation, and failure to consult with Navajo interests, the groups called for a revision to the Recreation Area's General Management Plan prior to any further work on the Antelope Point Marina proposal.



At issue is GCNRA's proposal to construct a 410-slip marina, 225-room hotel complex, 150-site campground, restaurants, fuel dock, convenience store and related infrastructure over a 950-acre site, 710 owned by the Navajo Nation and 240 administered by the National Park Service. Of major concern is that the project evolved from a 23 year-old planning document which has little relevance to the reservoir's current operation. An Environmental Assessment for the project was released three weeks ago, and today is the final day for the public to submit comments on the document.

The Diné Bidziil Coalition, representing 17 grassroots Navajo groups, and the Diné Medicinemens Association have been in opposition to the project, as it would impact ceremonial and sacred sites, and promote inappropriate development on the Navajo Reservation.

"Their document claims that they consulted with us about the impact on sacred sites, but no consultation ever occurred," said Thomas Morris Jr., president of the Diné Medicinemens Association. Federal regulations require the National Park Service to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and to avoid adversely affecting the physical integrity of such sites.

"Our people will derive virtually no benefits from this project, only a few low wage jobs and some lease payments. The bulk of the money flows off the reservation to a non-Indian company in Scottsdale AZ," says Hazel James, with Diné Bidziil Coalition. "Most families on the reservation live near or below the poverty line; we don't have houseboats and jet skis to take to Lake Powell reservoir."

"If anything is to be built out at Antelope Point, it should be a building that is dedicated to traditional healing, not for a building that is dedicated to such vices as drinking, gambling and environmental degradation," says Philmer Bluehouse, of the Bluehouse Peacemaking Institute, and member of Diné Bidziil Coalition. Antelope Point will be the first place alcoholic beverages will be allowed on the Navajo Reservation, and it is anticipated that once the project is underway a casino will be constructed as well.

Despite this proposal being the most substantial development initiative at Lake Powell reservoir in decades, the Park Service has done only cursory environmental analysis, hoping to avoid undertaking a more rigorous Environmental Impact Statement. In contrast, the Park Service is presently conducting a full-scale Environmental Impact Statement on the use of personal watercraft within its jurisdiction.

"The likely impact on water, air, noise, public health, not to mention the cumulative development impacts on the surrounding community compels the Park Service to undertake an Environmental Impact Statement," says Owen Lammers, director of Living Rivers. "But more importantly, the Park Service must reassess the perceived need for this new resort marina in light of declining visitation and other unanticipated management issues not addressed in 1979 when Antelope Point marina was first contemplated."

Indeed, visitation in 2000 and 2001 is off 11 percent at Lake Powell reservoir. There is now demand for non-motorized quiet zones on the reservoir unanticipated in 1979, and Antelope Point affords one of the best locations for such an area. Sediment accumulation is now a major management problem at the top of the reservoir, especially for private and commercial river rafting trips which conclude there. The Park Service is ignoring the need to maintain access for these users, or to address the fact that sediment accumulation is an increasing problem that will eventually force the decommissioning of Lake Powell reservoir. The Park Service should be addressing the sediment problem first, prior to proposing investments in new infrastructure.

"This is merely the latest round of the commercialization of our National Parks," says Dave Sherman, co-chairman of the Sierra Club's Plateau Group in Flagstaff, Arizona. "If the Park Service was serious about promoting economic development for Navajo people, it would work with the Navajo Nation to enable them to operate existing GCNRA concessions, such as those at Wahweap Marina, instead of building Antelope Point, which is wholly unnecessary."

#####

The groups signing today's letter include: American Canoe Association, Bluewater Network, Center for Biological Diversity, Colorado Plateau River Guides, Diné Bidziil Coalition (representing 17 grassroots Navajo groups), Diné Medicinemens Association, Flagstaff Activist Network, Forest Conservation Council, Forest Guardians, Friends of Arizona's Rivers, Glen Canyon Institute, Grand Canyon Private Boaters Association, Great Salt Lake Audubon Society, Living Rivers, Sierra Club, Utah Environmental Congress, Utah Rivers Council, and Utah Whitewater Club.

Additional Information

[April 14, 2002 to Ms. Kitty Roberts, Superintendent, Glen Canyon National Recreation Area from Living Rivers and 17 other environmental and social justice organizations commenting on Antelope Point Marina Resort Development Project Environmental Assessment.](#)

[November 29, 2000 letter to Mr. Kelsey Begaye President, Navajo Nation from Diné Medicinemens Association on the matter of Antelope Point marina proposal.](#)

[November 30, 2000 letter to Kathryn Cook, Acting Superintendent, Glen Canyon National Recreation Area, from Living Rivers \(then Glen Canyon Action Network\) and seven other environmental and social justice organizations commenting on the proposed Antelope Point Marina project.](#)

[January 14, 2002 letter to Ms. Kitty Roberts Superintendent, Glen Canyon National Recreation Area from Living Rivers and eight other organizations on sediment issues at Lake Powell reservoir and the proposal to expand Hite Marina.](#)

[Glen Canyon National Recreation Area information on Antelope Point Marina Resort Development Project.](#)

Event 04/15/02

Sedimental Journey -- Reclaim the Bureau/Reclaim Our Canyons, June 13 - 17

Canyonlands National Park • Glen Canyon Dam • Lee's Ferry • Grand Canyon National Park • Hoover Dam



June 17, 2002 marks the centennial of the Bureau of Reclamation. As public officials, large-scale irrigators, and power interests gather to celebrate a century of river devastation at Hoover Dam, Living Rivers and others will be there too, but with a different message. "100 years–600 dams is too much" will be the rallying cry that will conclude a five-day road show aimed at drawing public attention to the extensive environmental damage that is BuRec's legacy.

Nowhere are the problems with BuRec's exploits more apparent than in one of the world's premier national parks, [Grand Canyon](#). Sandwiched between BuRec's two largest dams, Hoover and Glen Canyon, the mighty Colorado, which carved this one of seven natural wonders of the world, has been transformed into the Grand Ditch.

Glen Canyon Dam has changed: the Colorado's natural flows; its seasonal variations in water temperature; sediment and nutrients deposition and fish migration into and out of Grand Canyon. The artery feeding this unique ecosystem is near death. The Canyon's entire food web is being dramatically altered. Three of eight native fish species are gone and two more are on their way. Native vegetation is disappearing at an alarming rate, as are the beaches so revered by the Canyon's river runners—all thanks to BuRec.

On our way to BuRec's official celebration at Hoover Dam, Living Rivers will be launching the first mission of the Bureau of Restoration. Vital sediment not able to reach Grand Canyon will be transported by truck from the upper Colorado watershed around Glen Canyon Dam and deposited at several locations in and around Grand Canyon.

Rallies, press conferences and outreach activities will take place throughout the five-day journey, including its final stop at Hoover Dam on June 17th. Riverside music, cookouts and camping will round out the festivities as we promote the need for BuRec to reverse its policy of shaping rivers to meet non-essential human needs, to shaping BuRec to meet the needs of our dying rivers.

Join the caravan for one or all the events!



Thursday, June 13, Moab, Utah

6:00 - 10:00 pm

Sediment Loading and Kick-Off Rally

Gold Bar Campground along the banks of the Colorado

Friday, June 14, Lake Powell Reservoir (near Page, Arizona)

12:00 - 1:30 pm

Sacred Sediment/Sacred Rivers

Antelope Point Shore

Saturday, June 15, Lee's Ferry, Arizona

9:00 am - 5:00 pm

Boating for the Canyon

Boating for Wilderness

Lee's Ferry Campground

Sunday, June 16, South Rim, Grand Canyon National Park, Arizona

12:00 - 2:00 pm

Save Grand Canyon from Glen Canyon Dam

Ampitheater at Grand Canyon Village

Monday, June 17, Hoover Dam, Arizona/Nevada border

11:00 - 1:00 pm

Reclaim the Bureau Rally

100 Years is Enough
Arizona-side parking lot

For information on BuRec's plans:

[Plans for Hoover Dam](#)

[General invitation from BuRec Commissioner John Keys](#)

River News 04/15/02

BuRec plans for private celebration at Hoover Dam 6/17/02

A \$400,000 private gala is being organized by BuRec for its centennial celebration at Hoover Dam.

2,400 invitations have been sent to acting and retired BuRec employees, elected officials, and leaders within Western water and power interests. The public is not allowed to attend.

Participants will be bussed by BuRec from Las Vegas hotels to the Dam for the evening festivities. The highway servicing Hoover Dam will be closed from 3:00 - 11:00pm.

The event will take place in the Dam on the generator floor, including buffet, speeches, concluding with a fireworks display.

Interior Secretary Gale Norton, and BuRec Commissioner John Keys are the senior-most administration officials confirmed for the event, though both President Bush and Vice President Cheney have been invited.

June 17th itinerary

3:00 pm: Highways to the dam are closed

4:15 pm: Shuttle buses leave the Las Vegas hotels

6:00 pm: Dinner buffet at the floor of the generator gallery

6:30 pm: Thunderbirds air show

8:00 pm: Speakers on the transformer deck (outside)

9:15 pm: Fireworks and laser light show

9:45 pm: Shuttle buses roll
11:00 pm: Highways reopened

BuRec on site contact:
Robert Walsh
Boulder City, NV
702-293-8420; rwalsh@lc.usbr.gov

LR in the News 04/21/02

Profiting from Powell: Planned 'Antelope' marina splits Navajos; pits environmentalists against Park Service

By Peter Corbett
The Arizona Republic

A planned \$70 million Lake Powell marina and resort at the mouth of one of the world's most photographed canyons has divided Navajos and pitted federal park officials and developers against environmentalists.

National Park Service officials contend that the new marina at Antelope Point is needed to relieve overcrowding at existing marinas within the 1.3 million-acre Glen Canyon National Recreation Area, and they are prepared to approve the project this summer.

The marina is supported by boat enthusiasts, business interests in nearby Page and by the Navajo Nation.

"The facilities at Wahweap (Marina) have been developed to their maximum potential and more services are needed," said Steve Ward, Lake Powell Resorts & Marinas spokesman. Wahweap has a long waiting list for slips, he said.

But a coalition of environmentalists and Navajo groups contend that the marina is not needed, would encourage more noisy motorized boating, do little to help the tribe and could be expanded to include casino gaming.

"This is a good place for canoeing and a quieter recreational experience, and the marina would ruin that," said Randy Rasmussen, acting Southwest regional director of the National Parks Conservation Association.

Proponents say the Antelope Point project would create badly needed jobs for area residents, including tribal members, and would boost tourism.

For environmentalists, a marina at Antelope Point would be yet another nail in the coffin for Glen Canyon and the area's environment. They say they want to protect Antelope Canyon from the buzz of powerboats and personal watercraft.

Visitation at the park last year, 2.3 million, was the lowest in a decade, and 35 percent below the 1992 peak of 3.6 million. Park Service officials said part of the drop is because of a 1995 change in how records are tallied, but they have no explanation for the flatness of the visits since then.

The marina would border part of Antelope Canyon, a deep and narrow maze of finely eroded and twisting sandstone that explodes into a rainbow of colors at midday.

Widely photographed and used in numerous commercials, the canyon made international news in 1997 when 11 people, including several European tourists, drowned during a flash flood.

The decision by the Park Service to develop the marina could have long-term consequences for the management of Lake Powell.

The area has been an environmental battleground since before 1963, when Glen Canyon Dam plugged the Colorado River near the Arizona-Utah line and flooded picturesque Glen Canyon.

By the time it filled in 1980, Lake Powell - the second-largest man-made lake in America - extended 186 miles into Utah in a spider web of 96 canyons, following 1,960 miles of shoreline, longer than the West Coast.

Glen Canyon was first mapped in 1869 by Maj. John Wesley Powell, who during a pioneering journey described it as "a curious ensemble of wonderful features - carved walls, royal arches, glens, alcove gulches, mounds and monuments. From which of these features shall we select a name? We decide to call it Glen Canyon."

Today, nearly 2.5 million people visit the lake annually, with most boats launched from Wahweap and State Line marinas.

In launch mode

The Park Service and Navajo Nation are poised to approve the marina, which would be developed by Paradise Valley-based Antelope Holdings.

The public comment period ended last week and federal park officials say they see no reason not to proceed.

"We're hoping to have signed documents by the end of July," which would allow the developer to start construction as early as this fall, said Kathy Fleming, the park's chief of concessions.

If approved, developer Antelope Holdings would, over five years, build 300 private slips and a fuel dock within the federal park.

A 225-room hotel, campground, store and storage area for boats would follow on adjacent land that the Navajo Nation has sought to develop for 30 years.

Antelope Holdings is headed by David Maule-Ffinch and Jerry Moyes, CEO of Swift Transportation, a Phoenix-based trucking company.

The two men also were partners in an \$18 million marina project at Lake Pleasant and \$23 million marina at Roosevelt Lake.

Building a casino at the site is not something the developers have considered, Maule-Ffinch said.

The Navajo Nation authorized a casino in New Mexico last year, but the tribe does not have a gaming pact in Arizona.

"If it were legal, we would maybe consider it," said Maule-Ffinch, who insists the project will not harm the environment. "I don't know what their (environmentalists') concerns are."

Point of contention

Owen Lammers, director of Living Rivers and head of the coalition fighting the new marina, said that the National Park Service "is demonstrating a massive bias for motorized, flat-water recreation, and pimping for that."

The coalition complains that park officials are skirting federal regulations by not conducting a formal Environmental Impact Statement to study in full the marina's potential harm.

In 1993, a Del Webb Corp. subsidiary paid a \$1 million fine - at the time the largest ever in Arizona for an environmental crime - for the systematic dumping of as many as 100 truckloads of batteries and other debris into Lake Powell.

In addition, ARA Leisure Services, which took over the marina boat-renting concessions from Del Webb's Marina Operation Corp. in 1988, agreed to pay a \$225,000 fine.

Suzy Schulman, the park's environmental specialist, said that a full environmental study is not needed for the new marina because it would not have significant environmental impacts on Lake Powell.

The Park Service is looking at limiting motorized boats, including personal watercraft, in some canyons, she said.

The coalition wants Antelope Point to be one of those areas.

Kayakers explore steep-walled Antelope Canyon where it enters Lake Powell. Hikers trek into the serpentine maze past fossilized dinosaur tracks in a canyon the Navajos consider sacred.

A small boat launch was built at Antelope Point in 1999, but is not used for speed boats now because the lake level is so low, said Steve Cassens, owner of Twin Finn Scuba and Kayaks, a Page outfitter, who supports the proposed marina.

The coalition, which includes the Sierra Club, Diné Medicinemens Association and other boating and environmental groups, questions the need for the new marina, especially since visits have declined.

Instead of building a new marina, the coalition suggests that the Navajo Nation take over the concession contract to operate Wahweap.

"Our people will derive virtually no benefits from this project, only a few low-wage jobs and some lease payments," said Hazel James of Diné Bidzil, a Navajo group in the coalition.

"The bulk of the money flows off the reservation to a non-Indian company."

Thomas Boyd, a project manager in the Navajo Nation's tourism office, said that the marina would create nearly 250 jobs, most during construction and some during ongoing operations.

Unemployment in the area is nearly 44 percent.

Antelope Holdings will be required to follow the tribe's preference laws in hiring contractors and marina workers. The company will have a 20-year lease with a 25-year option, Boyd said.

Reach the reporter at
peter.corbett@arizonarepublic.com or (602) 444-4815.

Media Advisory 04/24/02

BuRec and Interior Move One Step Closer to Killing the Grand Canyon with Glen Canyon Dam

Activists plan "Sediment-al Journey" to encourage Grand Canyon restoration

Contact:

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Lisa Force (480) 990-7839

The Department of the Interior's Adaptive Management Working Group (AMWG) will convene today in Phoenix to discuss yet another proposal to prop up the collapsing Grand Canyon ecosystems. It is the contention of a growing number of environmental groups and scientists that the proposed plan will succeed only in perpetuating the illusion that the Grand Canyon's destruction, brought about by the operation of Glen Canyon Dam, is being addressed.

With the stated goal of helping the Grand Canyon's endangered native humpback chub, water, power and environmental interests will be debating a proposal to implement special water releases from Glen Canyon Dam. The releases are intended to improve the fish's spawning and rearing habitat lost since the dam began operation in 1963.

"Interior's been at this process for twenty years, has spent more than a \$100 million and has nothing but a further degraded Grand Canyon to show for it," says Owen Lammers, executive director of Living Rivers. "They're letting the water and power interests drive habitat destruction and override the public's growing desire for the preservation and restoration of native habitat in Grand Canyon National Park."

The proposed flow regime would be the fourth planned experimental release since 1996. All have failed, as demonstrated by the collapse of Grand Canyon native plant and fish populations and continually eroding beaches. The Canyon's humpback chub population has declined 75% in seven years. In 1992, Congress mandated that dam operations be changed to establish a second population of humpback chub. Yet, management manipulations so far have not even sustained the one current population.

"There's no more time. Minor tinkering of the dam's operation won't help the chub and can't compensate for its overall impact on Grand Canyon's ecosystem," says Roxanne George with the Sierra Club's Plateau Group in Flagstaff, AZ. "Up to ninety five percent of the sediment and nutrients critical for nourishing Grand Canyon's artery are blocked by Glen Canyon Dam."

Lack of sediment has eliminated beaches, changed the carbon base and caused the near disappearance of the Canyon's natural food web. Cladophora (green algae) has replaced wood as the primary carbon-based nutrient for the system. This means that the macroinvertebrate assemblage (insects) is disrupted; that the historic food source for this fish has vanished. Of the 50 to 100 insects native to the Canyon, none remain. Riparian vegetation struggles in the sterile soil. Non-native species have firmly established themselves in this artificial environment, gradually forcing out native vegetation and animal life.

"Manipulating the dam's operations can't change this, nor will it change the chilly water temperatures that have further contributed to the chub's demise and extinction of three of the seven other fish species native to the Grand Canyon," says Michelle Harrington of the Center for Biological Diversity.

Water released into the Grand Canyon from Glen Canyon Dam is a constant 46 degrees F., causing the river temperature to seldom exceed 55 degrees. Native fish require warmer water with temperatures reaching 80 degrees, the natural pre-dam temperature of the water. Moreover, cooler temperatures have allowed cold water fish, especially brown trout, to flourish and prey on young native fish such as the humpback chub.

"The three key things this ecosystem needs are warmer water, sediment and annual high flows to distribute sediment into the system," says Dave Haskell, former science director for Grand Canyon National Park. "The current guidelines and funding do not allow scientists to address these three fundamental elements."

"The Working Group is running out of time to undertake more useless experimentation. A world renowned resource is at stake," adds Lammers. "That's why a growing coalition

of groups will be taking the issue on the road in mid-June to mobilize public support for immediate attention to the Grand Canyon's ecosystem."

The timing of these events will coincide with the centennial celebration planned for the Bureau of Reclamation at Hoover Dam on June 17. The Bureau of Reclamation is principally responsible for the collapse of the Grand Canyon's ecosystem, by first inundating 40 miles of Grand Canyon behind Hoover Dam and then by delivering slower, but nonetheless lethal impacts to the remainder of the canyon through the operation of Glen Canyon Dam.

Embarking on the first "Sediment-al Journey," participants will be transporting sediment via a dump truck from the upper reaches of the Colorado River watershed for deposit into the Colorado River in Grand Canyon. Events will be taking place on the Colorado River near Moab UT, Glen Canyon Dam, Glen Canyon National Recreation Area, Grand Canyon National Park and Hoover Dam.

###

For more information:

[LIVING RIVERS](#)

[Sierra Club](#)

[Center for Biological Diversity](#)

[U.S. Bureau of Reclamation: Glen Canyon Dam Adaptive Management Program](#)

[National Park Service: Grand Canyon National Park](#)

[Arizona Game & Fish Department](#)

River News 05/01/02

Motorized Rafting – An Illegitimate Industry?

The 35 Year Wilderness War for Grand Canyon

by Byron Hayes

Published here with permission of the author.

"As long as the commercial passenger gets easier and more preferential treatment than the non-commercial user, you can be absolutely certain that the struggle will never end."
Joe Munroe - June 16, 1980[1]

The Frustrating Reality (1998 - Commercial Revenues \$27 Million; Non-commercial Passengers Wait 20 years)

A 20 year wait to take your own raft down a river, penalties that selectively send you to the end of the line if you go earlier, motorized rafts with helicopter exchanges on America's premier wilderness river, and commercial river operators emphatically insisting that everything is fine and should stay the way it is. Ever wonder how things got to this point and how not just one, but two virtually final non-motorized wilderness decisions somehow evaporated into the described scenario?

This article brings together a unique historical examination of the behind the scene activities that delivered this seemingly incredible outcome into current day reality. It provides a true story of how familial ties and political maneuvering succeeded in facilitating National Park access to those Americans most able to contribute to the Grand Canyon river concessionaires' bottom line. Ignored were existing laws, the public process, and the independent boating public who are now waiting 20 years for river access in the crown jewel of America's National Parks, the Colorado River through the Grand Canyon.

The Park and Public Involvement (1975 - Commercial Revenues \$6 million; Private Wait 0 years)

With the passage of the Wilderness Act of 1964, Congress directed the National Park Service (NPS) to conduct an inventory to determine which of its lands were suitable for Wilderness classification. Multiple segments of the Canyon were under threat of inundation by proposed reservoirs and Glen Canyon Dam was filling up. In 1967 only 2,099 people visited the river, but reportedly "Passengers and boatmen were still scuttling beer cans in the river ('Open them at both ends to make them sink.'), squatting behind big rocks or tall bushes, and burying garbage wherever the sand was soft." [2] Under these virtually unregulated conditions visitation rapidly increased to 16,432 visitors annually by 1972, facilitated by the existence of 22 commercial river companies, many of which operated motorized rafts. [3] It was becoming readily evident that the Canyon was coming under a real and severe threat of damage from haphazard use.

In 1970 the Grand Canyon National Park (GCNP, or the "Park") commenced its Wilderness inventory process with the release of its Preliminary Wilderness Study for Grand Canyon National Park, Marble Canyon National Monument, and Grand Canyon National Monument. [4] In 1969 Congress had already passed the National Environmental Policy Act (NEPA) which required that significant environmental decisions must be considered with the input of those affected. Consequently, public hearings on this Wilderness issue began in May 1971 at Grand Canyon and in Phoenix, Arizona. Additionally, public comments were solicited in newspapers in Williams and Flagstaff, Arizona and in Kanab, Utah. [5] Management of the river corridor was recognized to be an important issue during these hearings. [6] The Colorado River Outfitters Association (CROA) was established to lobby the outfitter's perspective and became an important participant in these hearings.

After compiling the public's overall input, the Hearing Officer explicitly reported, "The desired river experience is felt to be a slow float trip in small parties." However, after recognizing that the existing NPS management directives were to allow continued use of motorized rafts, the hearing officer concluded that "The plan for continued use of motors precludes wilderness classification for the river itself." [7] As a result, the Colorado River was excluded from consideration for inclusion in the Canyon's NPS Wilderness Recommendation despite public opinion otherwise. [8] The Wilderness Recommendation was then forwarded on September 14, 1972 to then President Nixon who officially communicated the plan to Congress on September 21, 1972. [9]

Meanwhile, the Park was continuing to be plagued with the problems caused by the River's rapidly increasing popularity. On December 5, 1972, after soliciting broad and varied public comment, the Park announced adoption of a plan to control the use of the River and the adjacent lands. This Colorado River Management Plan (CRMP) provided for the freezing of commercial user days at the existing level (89,000) and for the complete phase out of motors by 1977. This action functionally removed the basis for the prior exclusion of the river from Wilderness consideration.

On March 20, 1973 Senator Barry Goldwater (R-AZ) introduced (93) Senate Bill 1296 that provided for the enlargement of the Grand Canyon National Park. [10] Included in this bill was a section that provided for Wilderness in the expanded Park that was consistent with the NPS and President Nixon's earlier recommendation which failed to include the river. While introducing the bill, Goldwater acknowledged the new December 5th regulations that removed motorized rafts from the River by stating, ".... I believe it is unnecessary to legislate on this (motorized rafting) matter while it is being resolved administratively." [11] Consequently, under Goldwater's interpretation, the administrative track to phase out motorized rafts by 1977 could continue, but the river corridor would remain outside of consideration for Wilderness protection.

Outfitters Enraged

Needless to say, the recommendation to phase over to non-motorized trips was not greeted with much enthusiasm by the solidly established motorized outfitters. One approach that was pursued by the motorized outfitters was to oppose the NPS decision on the legal front. Western River Expeditions itself brought a suit in Salt Lake City, Utah against the Park Service alleging the decision to eliminate motors was "arbitrary" and that no data had been acquired to support the decision. [12]

Although he generally supported the Western lawsuit, Fred Burke, owner/operator of Arizona River Runners, a motorized outfitter then located at Marble Canyon, took on a political tact in dealing with the motor controversy. Burke had been fighting Canyon Wilderness designation individually, as President of Arizona River Runners, and with the Colorado River Outfitters Association (CROA). Besides political experience derived directly from river issues, Burke had developed significant additional experience by running for a seat on the Arizona state legislature. At that time U.S. Congressman Sam

Steiger (R-AZ) was one of the most prominent supporters of Bridge Canyon Dam, a project that, if implemented, would have put almost a third of the Canyon's river miles under a water.[13] Burke and Steiger each saw any Wilderness designation of the Canyon, and especially the river itself as their mutual enemy. Consequently, they became good friends.

In the course of Burke's unsuccessful November 1972 attempt at a seat in the Arizona State Senate, Barry Goldwater had helped Burke, a fellow Republican, with his commercial campaign spots.[14] Once Burke became aware of Goldwater's bill and his statements in Congress, he contacted Goldwater imploring him to listen to his perspective and those of fellow outfitter Jerry Sanderson and Gay Staveley, the owner/operator of Canyoneers, a completely motorized rafting company located in Flagstaff. Fred requested Goldwater change the wording of his bill to provide for the ongoing use of both motors and oars. He went on to claim that he was opposed to fast trips and that "There is no monetary gain under my plan if motors were left on." [15]

NPS Wants River As "Potential Wilderness"

When hearings on Goldwater's S. 1296 commenced on June 20, 1973, both the Interior Secretary and NPS, the originators of the 1972 Wilderness Recommendation, jointly requested the river corridor itself now be included as an additional 4500 acres of "Potential Wilderness" since motorized rafts were now officially being phased out.[16] NPS Director Ronald Walker stated during the hearings that these new provisions were necessary because the NPS had been allowed "no input" into Goldwater's bill.[17]

Upon hearing the NPS proposal to include the river, the Utah Congressional delegation, which had numerous river company interests at stake, immediately blasted the Park Service for their proposition to phase out motors. Utah Congressman Gunn McKay said that the presence of motors did not shatter the sanctity of a wilderness experience and that the noise they created was only a "technical problem" that would be solved in the future. He also inferred that motors were necessary to safely navigate the difficult rapids and that the larger size motorized rafts provide for the removal of human waste and trash that would otherwise be left on the beaches.[18]

Utah Senator Frank Moss joined the attack on the NPS proposal stating that the absence of motorized trips would effectively remove access to both children and the elderly. Sen. Moss repeated Gunn's accusation that small boats are less safe and promote garbage. Moss discounted NPS Regional Director Howard Chapman's report that a recent hearing in the Salt Lake Western suit had disclosed that motorized river craft produce significant numbers of injuries, especially from the propeller. Although active at the time, this suit against the Park's decision to eliminate motorized rafts would eventually be dismissed. Chapman continued by explaining to Moss that the NPS was trying to manage a total system and in the Canyon and their objective was to provide an experience different from the numerous motorized options available on other rivers. If people wanted a motorized experience, they had available many options elsewhere.

Moss appeared to gain the upper hand in the argument when he discovered that Park

action was based only on unscientific observations and that no formal studies had been undertaken to justify the elimination of motors or a reduction of use. Citing this administrative deficiency, Moss proposed that both motors and user days be maintained at current use levels until sufficient scientific studies were completed sometime in the future.[19]

Due to the controversy it had generated with the Utah delegation, by the time the Committee Report for S 1296 was filed on September 21, 1973, the wilderness provision of Goldwater's bill had been completely dropped. At least in part due to this controversy and in part due to the still pending Western lawsuit, implementation of the CRMP became sufficiently delayed that on October 31, 1973 NPS Regional Director Howard Chapman announced deferment of the decision to eliminate motors. Current use and allocations would be maintained until newly commissioned studies on the impact of motor use levels were complete.

Restarting the Public Process Since the Grand Canyon Enlargement Act's Wilderness component had been dropped, a provision was added that called for the Secretary of the Interior to report within two years all areas suitable for preservation as Wilderness. [20] Once the Grand Canyon Enlargement Act finally became law in 1975, an exhaustive public input process commenced in an effort to determine the public's feelings regarding Wilderness status for the Canyon. A series of meetings were held in September and October of 1975[21].

In July of 1976, following the release of the Preliminary Wilderness Proposal (DES 76-28), an additional series of meetings were held in St. George, Utah and in Flagstaff, Grand Canyon, and Phoenix, Arizona. Comments were acquired from a total of 23 Federal agencies, 17 state agencies, 3 Indian tribes, 39 organizations, 24 companies, and 501 individuals.[22] The five-year series of meetings consistently showed public sentiment strongly favored Wilderness designation for the Canyon below the rim and for the river itself, including the elimination of motorized river travel[23].

The conclusion of the wilderness study process resulted in the February 1977 Final Wilderness Recommendation that was signed by the NPS Director and called for immediate Wilderness designation of over one million acres within the Canyon, including the river corridor. Instead of promptly forwarding this now fully approved Recommendation to then President Carter, the NPS Legislative Counsel effectively stalled its Congressional approval by recommending that it be held until completion of the Colorado River Management Plan (CRMP).[24] Instead of using the approved Final Wilderness Recommendation as the driving force for setting management policies for the river, its presentation to the President was instead postponed until the final outcome of the CRMP became known and compatible. As you will find, this critical two-year delay based on somewhat questionable reasoning at least partially contributed to altering the environment on the river for well over 20 years into the future.

The 1975 Enlargement Act also had a direct effect on the CRMP itself. Indexed off the Wilderness pre-planning meetings held in the Fall of 1975, six river management

workshops were held in March of 1976 in Phoenix, Los Angeles, San Francisco, Salt Lake City, and Denver, as well as at the Grand Canyon. Comments of 365 participants and over 100 organizations were acquired, including those of the Hualapai Tribe, the Sierra Club, Western River Guides, and independent river runners from across the country.[25] As a result, in January of 1978 the Draft Environmental Statement - Proposed Colorado River Management Plan was released for public consideration.

In February of the same year, six more public meetings were held in the same cities and in March an additional meeting was held in Washington D.C. In all, 2,716 comments were received with 1476 respondents, or 54% favoring the elimination of motorized trips.[26] It is notable that only four people expressed opposition to Wilderness designation for the river corridor.[27]

In July of 1979 the final Environmental Impact Statement (EIS) which provided for the phase out of motor powered trips over a five-year period was released. Some of the specific conclusions of the plan were that the transition to all oar powered trips would cause no significant increase in trip costs, that oar powered trips were recognized to be a better buy for consumers, that commercial guides would benefit from a longer commercial running season and increased guide to passenger ratios, and that there would be no significant impact on the local or regional economies.[28]

One of the primary features of the ensuing 1980 Colorado River Management Plan was to limit river use by the number of launches, rather than by user days as in the past. This approach was intended to minimize the on-river congestion and inter-group contact problems produced by the user day system and unlimited launches. The 497 commercial launches of 1979 were thus reduced to 443 launches while the 89,000 commercial user days of 1979 were increased to 115,500. Total commercial passengers would remain at approximately 11,500 per year. This action was intended to both reduce congestion and accommodate the longer duration oar-powered trips, while delivering an increased "economic base" to smaller concessionaires.[29]

Of particular interest was a statement by the Park that the 70% commercial/30% non-commercial user day allocation ratio presented in the 1980 plan was only an estimate and would need to be adjusted in the future. More specifically, the 1980 CRMP states: "The allocation ratio is, because of the above factors, a best estimate based on the experience and interpretation of the above data. This ratio will be reviewed and adjusted as more reliable information becomes available." [30] From this statement it is readily apparent that, at the time, the Park wanted to avoid situations like the present where some Americans are being required to wait 20 years while others freely access the River almost on demand.

The 1980 Colorado River Management Plan

Implementing the provisions of the final EIS was signed on December 20, 1979 by Park Superintendent Merle Stitt, NPS Western Regional Director Howard Chapman, and NPS Director William J. Whalen. This action commenced what should have been a five-

year process of slowly eliminating motorized raft trips from the Canyon by the end of December, 1984.

Dam & Motors Anyone? (1979)

In 1979 in an effort to expand their clout with Congress, Fred Burke and Gaylord Staveley, together, reincarnated the earlier CROA into what was now called PROA, the Professional River Outfitters Association, (not to be confused with the contemporary PRO, Professional River Outfitters, a private trip outfitting and equipment company, ed.) chaired by Staveley. PROA purported to present a unified voice for the river outfitters who had historically been factional on a variety of issues.

Second term Congressman Robert Lee "Bob" Stump (R-AZ) had taken up the cause of Grand Canyon dam building from the efforts of his predecessor Sam Steiger. Stump, a Phoenix area farmer wanted more water for valley farming. Stump introduced a bill in March 1979, which, if passed, would have eliminated the motors vs. oars question, and possibly that of Wilderness altogether. Stump's proposal, House Bill (96) H.R. 3034, was to license construction of Hualapai Dam (also known as Bridge Canyon Dam) and would have cut a third of the river miles under dispute by drowning them under a proposed reservoir. Steiger had unsuccessfully sponsored a similar effort during 1975 with his introduction of (94) H.R. 6745. Stump had futilely attempted to revive Steiger's project during his first term as (95) H.R. 6906, and would again during in his third term as (97) H.R. 3167. To this day Stump reportedly continues to support construction of Bridge Canyon dam.[31]

Despite his ongoing efforts to drown the Canyon, the outfitters turned to Stump after the July 1979 release of the final CRMP EIS. Paying no attention to nearly a decade of NPS gathered public input urging the elimination of motorized trips, Stump fully subscribed to the outfitters position. In October of 1979, Stump introduced a bill to prohibit the Park Service from reducing the number of commercialized motorized trip user days to less than 1978 levels (96 H.R. 5712 - Oct 25, 79). The bill was officially summarized as follows:

"Prohibits the United States Park Service, for any calendar year beginning after the date of enactment of this Act, from reducing the number of user days of commercial motorized water craft travel permitted on the Colorado River in the Grand Canyon National Park to less than the number of such days permitted during calendar year 1978."

Stump's bill was referred to the House Committee on Interior and Insular Affairs, then chaired by the late Mo Udall (D -AZ), where it never received a hearing and was allowed to die. No public review or discussion of the bill's provisions was ever held. Despite the fact that Stump's proposals for both motors and the dam had floundered in committee, the foundation was being laid for both the elimination of Wilderness management and the generation of the 20 year wait that non-commercial Canyon rafters now face.

Enter James Watt, the Mountain States Legal Foundation, and Beer (1980)

Burke, Staveley, and PROA were not content to limit their efforts to throw out the NPS Wilderness recommendations only to Stump's obscure and poorly received bill. Staveley and Burke soon turned to the Mountain States Legal Foundation (MSLF).

The MSLF was established by and has been continuously funded by Adolph Coors, the famous western beer magnate. At that time, the fledging organization's chief legal officer and President was James Watt, an outspoken fellow who would later become Secretary of the Interior under the yet to be elected Ronald Reagan. James Watt, a Wyoming native, joined the U.S. Chamber of Commerce in 1966 where he directed the natural resources section.[32] He began his federal career in 1969, appointed by President Nixon to the Interior Department as Deputy Assistant Secretary for Water and Power Resources. In 1972 he became Director of the Bureau of Outdoor Recreation. At that time he spoke of that job, "I am a manager by profession. I could be managing widgets. I happen just now to be managing recreation." [33] In 1975 Watt became vice chairman of the Federal Power Commission until he resigned in 1977 when the Democratic Carter administration made him a persona non-gratis. In July of 1977, Watt became President and Chief Legal Officer of the Mountain States Legal Foundation (MSLF).

On March 27, 1980, the MSLF, still headed by Watt, filed suit on behalf of Canyoneers, Arizona River Runners, Hatch River Expeditions, and other motorized outfitters against NPS Director William J. Whalen in an effort to halt the elimination of motorized raft trips (MSLF vs. Whalen, et al).[34] Assisting PROA, Staveley, Burke, and the Mountain States Legal Foundation was a lawyer by the name of Jon Kyl, who at that time worked for the Phoenix law firm Jennings, Strouss & Salmon.[35] Unknown to anyone at that time, Jon Kyl would be elected in 1986 to his first of four terms in the U.S. House of Representatives and, in 1994, would become the freshman and current Republican U.S. Senator from Arizona.

Park Politically Pressure Cooked 1980 - Industry Gross \$7 Million Private Wait 6 Years
Consistent with their expanded political efforts, PROA and the outfitters persistently complained to the Arizona Congressional delegation about the provisions of the 1980 plan. These political efforts first became publicly evident during an Interior Appropriations hearing in May of 1980. At that time Senator Dennis DeConcini (D-AZ) acknowledged that he had received "complaints" about the 1980 CRMP plan during a meeting between the Park Service and outfitters in his Washington office.

At the request of Senator DeConcini, the Park granted the outfitters a meeting on June 5, 1980 allowing them an opportunity to suggest adjustments to the 1980 river plan. The Park emphasized no direct discussion of the decision to phase out motors would be allowed. Without any doubt, the efforts of the PROA consortium were starting to get results.

Staveley, Burke, and their wives attended the meeting along with Park officials and representatives from the offices of Senators DeConcini and Goldwater, and

Congressmen Stump, Rhodes (R-AZ), and Rudd (R-AZ). The subject matter primarily focused around determining the number of passengers accommodated in 1979 (11,665) and then giving motorized companies additional passengers to offset potential profit losses from their conversion to rowing. This provided for an annual "economic increase" of 1400 additional passengers, a 12% increase to the motorized outfitters over 1979 levels. Since the new rowing trips were inherently longer, this would effectively deliver well over 15,000 new user days and annually millions of dollars of new revenues to the motor companies. At the same time non-motorized outfitters consequently would receive less market share and non-commercial users would continue to increase their wait. Staveley later, in a press release, would describe the meeting simply as "very solid and productive" and that it resolved the scheduling issues related to the phase out of motors.[36]

A summary of the meeting was sent by the NPS to all river concessionaires that did not attend the meeting and to others who would be affected by modifications to the 1980 plan. After receiving extensive responses from other outfitters and interested parties, Regional Director Howard Chapman reported to Gaylord Staveley in an August 13, 1980 letter that at least a third of the river concessionaires disagreed with the Staveley and Burke's proposed modifications to the 1980 plan. Chapman also informed Staveley that, according to the Department of Interior Solicitor's (administrative law) Office, any implementation of their suggestions without a full public review would violate the provisions of the National Environmental Policy Act. Effectively, Chapman, with the concurrence of Interior Secretary Cecil Andrus, was rejecting the provisions of the June 5th meeting and upheld continuation of the 1980 CRMP and its provision to eliminate motors.

Staveley, stung by the Regional Director's rebuke, wrote to Stump on August 19th stating that all the arguments provided by the "ecopeople" who disagreed with him were generated by the Park. He suggested that his "opponents" were being manipulated and "... they are just saying what they are told to say." He went on to claim "untrue and unreal" comments and "lies" were being delivered by his opponents. Staveley charged as false the argument that increasing concessionaire allocations would in any way diminish opportunities for private, non-commercial boating. He described the argument as: "The lie that private (non-concessionaire) use is threatened by giving concessionaires the 1979 passenger levels." [37] In a subsequent letter dated August 21, 1980 to NPS Western Regional Director Chapman, Staveley continued attacking the "fabrications" of those in the "ecobizness"(sic).

Just a Concerned Taxpayer

After PROA's embarrassing summer defeat, it became apparent that a new approach would be needed. Congressman Eldon Rudd (R-AZ) had already requested details on GCNP river expenditures from then Acting NPS Director Ira Hutchison. Rudd, in an August 29 letter to C. J. Ross, forwarded Hutchison's August 19, 1980 response and invited the outfitters to any input they deemed appropriate.[38] One person responding to Rudd's expenditure inquiries was Pamela Manning, then Executive Vice President for

Burke's Arizona River Runners business. Without disclosing her affiliation with ARR, Manning alleged that the GCNP had significantly increased their operational costs by hiring five permanent river staff and an extra patrol crew to accommodate the new management plan. She further alleged that the Park had incurred significant expense and "bureaucratic waste" in purchasing a trailer to accommodate the non-commercial permittees. Manning went on to state that one motorized patrol crew could perform as much work as two oar crews, and inferred that oar trips were popular with Park personnel simply because they had to do less work.[39] Manning concluded by stating that she was concerned about the waste of tax dollars, and that did not wish her name to be attached to the letter's contents since she was known in the river community.

Rudd responded to Manning with a letter stating he was confident that Bob Stump's previously ignored proposed legislation would be reintroduced to combat "the unfair CRMP" and thereby protect the rights of river runners.[40] That same day Rudd sent another letter to Hutchison paraphrasing Manning's allegations of misuse of funds and demanded a detailed budget for the GCNP River Management Unit. Hutchison compiled the requested information and, in his November 28, 1980 response, explained to Rudd that the trailer under dispute was surplus property given to the GCNP by Glen Canyon National Recreation Area, and that permanent GCNP river personnel had increased not by the alleged five, but only by a single person since 1973.[41] Although the information previously provided to the Congressman by Manning was proven to be incorrect, by the end of November it really didn't matter; something else had already happened that would change the whole river horizon for decades to come.

The Hatch (River Expeditions) Amendment

In 1980 first term Senator Orrin Hatch (R-Utah) was in his fourth year in office. Orrin is the great grandson of Jeremiah Hatch, the founder of Vernal, Utah. Orrin's father, Jesse, was cousin to Bus Hatch, the founder of Hatch River Expeditions, who was also a grandson of Jeremiah. Bus' son Ted Hatch, like Orrin, was a great grandson of Jeremiah. Ted was then, and currently still is the owner of Hatch River Expeditions, the oldest and, at that time, the largest motorized raft company in the Grand Canyon. Hatch maintains a warehouse in Marble Canyon where ARR was located at the time.

Fred and Carol Burke along with Pam Manning telegraphed Senator Hatch on November 4, 1980 stating that motor elimination would deliver a negative economic impact on Southern Utah and Northern Arizona. They also stated, "We urgently support your amendment to the Appropriation bill." [42] By this communication, it was now evident that the outfitters were very aware that Hatch was preparing to introduce legislation in their behalf.

On Nov. 14, 1980, Sen. Orrin Hatch hastily introduced from the Senate floor Amendment SU175 to the 1981 Interior Appropriations Bill (96 H.R. 7724). This Interior Appropriations Bill provided the crucial annual funding necessary to maintain the operations of the Department of the Interior for the fiscal year ending September 30,

1981. It was common knowledge to the Senate that any appropriations amendment would be effective only for the single year the bill provided funds to run the Department of Interior.

SU175, which would later become known as the "Hatch Amendment," was first considered by the Senate on the Friday just prior to its Tuesday, November 17th final approval. Neither the amendment nor its content ever received public review, even in the form of a committee hearing. The Amendment was cosponsored by Senator Barry Goldwater (R-AZ) and Jake Garn (R-UT)[43] and consisted of the following words:

(a) None of the funds appropriated in this Act shall be used for the implementation of any management plan for the Colorado River within the Grand Canyon National Park which reduces the number of user days or passenger-launches for commercial motorized watercraft excursions, for the preferred use period, from all current launch points below that which was available for the same period of use in the calendar year 1978.

(b) For the purposes of this section "preferred use period" denotes the period May 1, through Sept. 30, inclusive.

Hatch's and others' presentations in support of the Amendment, spanning four pages of the Congressional Record, was in no way subtle. Throughout the testimony process, Hatch made no public mention of his familial relationship to the companies his action would ultimately benefit. Hatch commenced by echoing the same safety and access issues that his predecessor, Frank Moss, had voiced 8 years earlier. He indisputably demonized the Park Service for even offering the CRMP, stating that they were "jeopardizing the availability" of the Canyon. He extolled the virtues of motorized rafts as the most cost-effective way to get the greatest numbers of people into the Canyon. He continued by stating that the Park Service was inflicting its non-motorized oar provisions on an "unwilling and often unknowing public without regards to cost. And, I might add under more dangerous circumstances.[44]"

Hatch's cost arguments were flawed, completely ignoring the fact that non-commercials were dramatically less expensive than any commercial trip, motorized or not. He never mentioned to the Senate that the CRMP he opposed was part of a 10 year NEPA compliant public decision process. He never acknowledged that continuation of motorized rafts would enhance public demand for a resource already outstripped in its ability to handle it. Hatch never acknowledged that his amendment would provide his relatives and the motorized outfitters dramatically increased profits.

An Ambivalent Passage

Some Senators expressed concern that the amendment was inappropriate for this appropriations bill and that no hearings were ever held on this specific matter. In particular, Senator Huddleston moved that the Hatch Amendment should not be allowed since it should have been more fully considered in the appropriate committee[45]. In

effect Huddleston recognized that the Senate was unable to vote on this subject from a position of knowledge.

Retrospectively, Hatch was probably aware that if he forthrightly introduced a bill opposing NPS actions, it would spur debate and the subsequent analysis would expose the extensive history behind the NPS actions. Such an effort to defeat the issue on its merits would be certain to fail, as had Stump's earlier attempt. Cleverly, Hatch opted for the much easier alternate and apparently successful approach of legislatively defunding his NPS opponents.

Since it was attached to a one year appropriations bill, it was obvious to the Senate that the provisions of the Hatch Amendment were not permanent and could only affect management policy for one year. Rather than waste precious time in this late stage of the legislative session and after senators on the Energy and Natural Resources Committee promised hearings on the issue during the following year, the Senate accepted the amendment on a voice vote.

As a result SU 1754 was quietly absorbed into the appropriations bill which eventually evolved into public law 96-514.

Reveling in his apparent success, Burke wrote to Lisa Jackson of Rep. Stump's office with his recommendations for implementation of the Hatch Amendment. In a November 29th letter, Burke recommended an increase in launches so that the motorized outfitters could be able to accommodate the 150 people per day maximum historical use provided for in the Amendment. In his letter, Burke additionally asked for Congressional hearings early in 1981 so that as soon as possible a determination could be made as to the scheduling of motor trips and whether motors would be allowed during the 1982 season. [46] Burke's correspondence shows that both he and the outfitters were aware that Hatch's Amendment, as passed, was only temporary and that the phase out of motors might begin anew the following season.

Introducing - Secretary of the Interior James Watt (Watt's Senate Confirmation Hearings)

Staveley, Burke, and the other motorized outfitters were probably delighted by the good fortune that had befallen them as a result of the November 1980 election of Ronald Reagan as President. When Senator Clifford Hansen (R - WY) declined Reagan's offer of Secretary of Interior, on December 22nd, 1980 the position was then offered to the same James Watt, President of the Mountain States Legal Foundation, who was already helping the motorized outfitters by suing the Park to retain motorized rafts.[47] As virtually everyone in the country would soon know, Watt, who had already described environmentalists as "the greatest threat to the ecology of the West,"[48] accepted the position as Secretary of Interior, the trustee of America's public lands.

Reagan's election to the presidency became official on January 6, 1981 when a joint session of Congress counted the votes of the Electoral College.[49] The following day Watt's confirmation hearing in the Committee on Senate Energy and Natural Resources began. The Committee was particularly interested in Watt's potential for conflict of interest since, as President of the MSLF, he had sponsored numerous suits against the

Department of Interior. The committee's interest was justified. During questioning about the MSLF, Watt made the surprising claim that he didn't even know who the contributors to the MSLF were. Senator John Seiberling (D-Ohio), Chairman of the Interior Subcommittee on Public Lands informed Watt with the specifics of who the financial supporters of the MSLF were and then concluded with the following observation. "These are people whose primary interest in public lands is to exploit them for their own profit. Their idea of multiple land use is to have everything with any conceivable value developed, even if its primary value is Wilderness." [50]

Watt had been asked to submit to the committee a summary of those MSLF cases that involved the agency. Watt's prepared summary incorrectly cited his Arizona suit to retain motorized rafts in the Canyon. Instead of describing the MSLF v. Whalen case as filed, the description supplied to the committee was "MSLF v. Dickenson," the NPS Director that succeeded Whalen. In Watt's statement, the suit was summarized as follows: "MSLF seeks to protect the right of the public to reasonable, environmentally sound access to the Grand Canyon for recreation by challenging the Park Service's decision to ban all motorized raft trips on the Colorado River through the Grand Canyon." [51]

During the hearing segment questioning Watt's involvement with motorized rafting, Senator Dale Bumpers (D-AR) explicitly stated that the Senate (against his [Bumpers] own vigorous protest) had adopted only a one-year postponement of the Park Service river management plan. [52] Bumpers even directly asked Watt, "Do you favor the Wilderness Act." Watt's response: "Absolutely."

Before the hearings had begun, Watt had generated a recusal statement wherein he consented only to refrain from assisting the MSLF in any further prosecution of the Interior cases. Watt submitted his statement to the Committee after having already discussed its content with the chairman of the Committee, Senator James McClure (R. Idaho).

Curiously absent from Watt's commitment was any promise to, as Secretary of the Interior, refrain from involving himself in the issues surrounding the MSLF's Interior Department litigations. The statement successfully made it through the hearing without any mention of this deficiency. Time would prove that Watt would utilize this oversight to MSLF's fullest advantage.

More Concessions, Motors, and the Brave New World of Watt

Once Watt was confirmed and sworn in there soon became little doubt that he had an agenda and that he would do whatever it took to get it through. A main feature of the Watt plan for the parks was a significantly larger role for the concessionaires, displaying an almost zealous drive to involve them in park operations wherever possible. In a March 9, 1981 appearance before the Conference of National Park Concessionaires, Watt pledged, "It is time for a new beginning and the private enterprise system must be looked to for rejuvenation and enthusiasm as we try to make the parks more accessible and usable for the people.... You folks (the concessionaires) are going to play a

tremendously important role and a growing role in the administration of our National Parks and we are going to reach out and involve you in some areas that you haven't been asked to be involved in before.”[53]

So zealous was Watt's desire to facilitate concessionaire involvement, he expressed a ready willingness to remove anyone who might be in his path. “If we need to change personnel under Russ (Dickenson – NPS Director) to accomplish a more aggressive concessionaires program, we will change the people.”[54] Watt continued, “If a personality is giving you (the concessionaires) a problem, we are going to get rid of the problem or the personality, whichever is faster.”[55]

Besides his overt enthusiasm for more privatization of the parks, Watt felt no need to withhold his opinion supporting motorized rafting in the Canyon. “I don't like to paddle and I don't like to walk.” James Watt would say, almost with a touch of pride.[56] Watt himself saw little value for extended river trips. Relating about his own Grand Canyon motorized raft trip, “The first day was spectacular.... The second day started to get a little tedious, but the third day I wanted bigger motors to move that raft out. There is no way you could get me on an oar-powered raft on that river – I'll guarantee you that. On the fourth day we were praying for helicopters and they came.”[57]

The country now had a Secretary of Interior that thought the motor trips were too long and the motorized Wilderness was still much too tedious.

On the Monday following Watt's confirmation hearing, January 12, 1981, a press release came from NPS Western Regional Director Howard Chapman announcing “... the public will have the option of motor or oar trips in the future.” Chapman also disclosed that he would be using the Hatch Amendment as a guide to future river management.

The next day, GCNP Superintendent Dick Marks both called and wrote Fred Burke with the good news that the commercial “preferred use season” allocation would be for 105,500 user days. Use would be based upon user days, rather for the “total number of people” method provided in the 1979 plan.[58] This single provision emphasizing user days handed to the outfitters the economic motivation to supply the public with the shorter motorized trips that deliver the most profit, rather than to provide the longer oar powered trips which cost patrons less per day. This same increased frequency of short trips set the stage for the current use of helicopters, which now service more than 50% of the commercial river passengers.

On February 10, 1981, the MSLF wrote to Fred Burke advising him that the MSLF would be putting their suit on inactive status as they waited for the Park, now officially under the supervision of their former leader, to take the “appropriate action” to fulfill their new promises[59]

1981 Draft Alternatives – Motors, Motors, or Motors?

Other than Watt's intermittent comments in support of motorized rafts, little was conveyed to the public about the status of the river until that summer. On June 8, 1981 ignoring ten years of public input calling for the elimination of motors, a new set of fully motorized management alternatives emerged for public comment with release of "Draft Alternatives for the Colorado River Management Plan." This completely new set of four separate motor-oar combination alternatives, each of which provided for continuation of motor use throughout the summer season, was announced by NPS Western Regional Director Howard Chapman who now claimed that the 1979 plan had been "vetoed by Congress." [60] These new alternatives did not allow the historical public preference for the elimination of motors to even be considered.

This draft document stated that the new set of presented alternatives were needed because "The (Hatch) Amendment prohibited a reduction of user days or passenger launches for commercial motorized craft below 1978 levels during the summer season. The commercial use level in 1978 was 89,000 user days." [61] The press release accompanying the draft plan further echoed Chapman's erroneous conclusion that "... the plan adopted by the Park Service in 1979 was subsequently vetoed by Congress last year." [62] A two-month public comment period was provided and closed on August 12, 1981.

With the release of this new plan the Senate's vote for a single year postponement of the implementation of the 1980 CRMP had somehow been transformed into a full purge of the motor phase-out concept. Also, conveniently forgotten were the Senate hearings that were promised to have occurred in early 1981 that would have more thoroughly examined the facts Orrin Hatch abruptly introduced on the Senate floor on November 14, 1980. Completely forgotten was the Park's plan to revise the user day allocations. Using the same misinterpretation of Congressional directives, the 1980 plan's temporary 70% commercial user day ratio spontaneously, in the 1981 Plan, became inflexible at 115,500 user days for the commercials and 54,450 for the privates. [63] The die was now being cast for the twenty-year wait currently confronting those Americans who choose to access the Canyon non-commercially.

Quite happy with the completely motorized horizon the 1981 draft provided, Watt's Mountain States Legal Foundation abandoned their lawsuit on July 16, 1981.

1981 CRMP – The Incredible End to the Decade of Public Input

In December of 1981 came the issuance of the final 1981 CRMP that provided continuation of motors and the foundation upon which the river is managed today. This 1981 document also repeated and further codified the earlier draft version's dubious interpretation of the Hatch Amendment with the statement, "The amendment prohibited a reduction of user days or passenger launches for commercial motorized craft below 1978 levels during the summer season." Without ever mentioning that the only alternatives presented for public comment in the June of 1981 Draft were combinations of motor and oar use, the plan justifies its final conclusion with the statement, "The

preponderance of these (public) comments favored some combination of oars and motors, while voicing interest to have a period of oar only use."[64]

This 1981 CRMP contained no mention of any consideration of the non-motorized options consistently requested and preferred by the public. The preceding 1980 CRMP had been developed through processes that complied with the National Environmental Policy Act. Such NEPA processes, which require that "all reasonable alternatives be considered," form legal, binding decisions that require implementation by the administering agency. A decision arrived at via the NEPA process cannot be withdrawn or a new decision made without going through a similar NEPA compliant process. Clearly, the publicly preferred no motor option was a "reasonable" alternative that was never considered in the 1981 plan. The failure to include those "no motor" options in the development of the 1981 plan would seem to be in violation of the NEPA process. The temporary defunding of a project had been magically transformed into an illegal "veto" of a decade of public input.

Of particular note is the 1981 CRMP document that was signed by Superintendent Richard "Dick" Marks on 11/25/81, Western Regional Director Howard Chapman on 12/8/1981, and by NPS Director Russell Dickenson on 12/13/1981. Significantly, at the time of each of their 1981 CRMP authorization signatures, the federal government had already entered into the 1982 fiscal year. Since the provisions of both public law 96-514 and its Hatch Amendment had already expired with the September 30th end of the 1981 fiscal year (94 Stat. 2957), the very basis for the provisions of the 1981 plan no longer existed.

At that time of its signing there weren't any grounds for deviation from the elimination of motors provided in the publicly reviewed 1979 Final EIS and 1980 CRMP. That fact was apparently forgotten despite numerous references on the Senate floor and during Watt's Confirmation hearing that the Hatch Amendment was "solely a one year postponement of the 1979 decision." [65] As stated earlier, even the outfitters had recognized that the Amendment provided only for a single year postponement and "that motors may not be allowed in 1982." [66] Somehow, all this was forgotten by the National Park Service while it was under the supervision of James Watt.

1999 Have Your Cake And Eat It Too (Commercial Outfitters Gross over \$27,000,000 - Privates Wait 20+Years)

The 1981 plan provided for 1979 commercial use levels of 89,000 user days to be increased by 26,500, a 30% increase. This increase resulted in the current total commercial allocation of 115,000 user days, none of which includes the 30,000 user days allocated to crew members that accompany the commercial passengers. This commercial user day level was originally provided in the 1980 plan as an "economic base" to effectively compensate the outfitters for reduced total revenues created by conversion to the longer oar powered trips. Now, under the 1981 CRMP, the motorized outfitters were able to keep their motors while still being compensated as if they had

converted to oars. For Ted Hatch of Hatch River Expeditions alone, the increased user days indirectly provided for by his distant cousin's Amendment translated to almost 1,000 more user days per year, or 17,000 more user days over the last seventeen years.[67] Since Orrin Hatch had failed to disclose his family's benefit from the outcome of his amendment, the Senate could not have been aware that they would be providing the Hatch family with more than \$4,250,000[68] in cumulative gross revenues over the next 17 years. In fact the "economic increase" by itself delivered the group of motorized outfitters additional gross revenues of \$78,800,000 between 1981 and 1998 once the 1980 CRMP was aborted.[69]

No matter how you look at it, the monetary returns from Staveley and Burke's one-year effort were excellent. The motorized raft industry in the Canyon is now approximately a \$20 million dollar a year industry. Staveley's Canyoneers business alone now grosses more than \$1,000,000 per year. Arizona River Runners, no longer owned by Burke, similarly grossed over \$3 million in 1998. Today motors prevail in America's foremost river Wilderness while non-commercial river runners are now waiting 20 years for access.

All this, while the river flows and the outfitters continue to insist, everything is fine; don't change it.

[1] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, handwritten correspondence to Supt. Richard Marks from Joe Munroe, Wilderness Public Rights Fund, June 16, 1980.

[2] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, November 13, 1972 correspondence to The Honorable Barry Goldwater from Carol Burke.

[3] "Final Environmental Statement, Proposed Colorado River Management Plan" (FES 79-30), finalized July 31, 1979, pg. I-1.

[4] "Draft Wilderness Management Plan, Grand Canyon National Park", April 1998, pg. C-1.

[5] Revised Draft Environmental Statement, Proposed Wilderness Classification, Grand Canyon Complex, Arizona, pg. 22, included in Additions to the National Wilderness System, Communication from the President to Congress, Part 5, Grand Canyon Complex, Arizona, House Document 92-357, September 21, 1972.

[6] "Final Environmental Statement, Proposed Colorado River Management Plan" (FES 79-30), finalized July 31, 1979, pg. IX-1.

[7] Wilderness Recommendation, Grand Canyon Complex, Arizona, pg. 20, included in Additions to the National Wilderness System, Communication from the President to

Congress, Part 5, Grand Canyon Complex, Arizona, House Document 92-357, September 21, 1972.

[8] Wilderness Recommendation, Grand Canyon Complex, Arizona, pg. 20, included in Additions to the National Wilderness System, Communication from the President to Congress, Part 5, Grand Canyon Complex, Arizona, House Document 92-357, September 21, 1972.

[9] Additions to the National Wilderness System, Communication from the President to Congress, Part 5, Grand Canyon Complex, Arizona, House Document 92-357, September 21, 1972.

[10] See (93) S. 1296 discussions Subcommittee on Parks and Recreation, Committee on Interior and Insular Affairs, June 20, 1973.

[11] Congressional Record, March 20, 1973, pg. 8691, col. 3.

[12] Western River Expeditions, Inc., et al, versus Roger C. B. Morton, et al.

[13] See House Report 93-1374, 9/25/74, pg. 4.

[14] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, November 13, 1972 correspondence to The Honorable Barry Goldwater from Carol Burke.

[15] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, April 4, 1973 correspondence to The Honorable Barry Goldwater from Fred Burke, President, Arizona River Runners.

[16] U.S. Senate Subcommittee on Parks and Recreation, 6/20/73.

[17] U.S. Senate Subcommittee on Parks and Recreation, 6/20/73, pg. 53.

[18] U.S. Senate Subcommittee on Parks and Recreation, 6/20/73, pp. 30-1.

[19] U.S. Senate Subcommittee on Parks and Recreation, 6/20/73, pp. 47-53.

[20] See House Report 93-1374, 9/25/74, pp. 35-6.

[21] "Final Environmental Statement, Proposed Colorado River Management Plan" (FES 79-30), finalized July 31, 1979, pg. IX-1.

[22] " Draft Wilderness Management Plan, Grand Canyon National Park," April 1998, pg. C-2.

[23] Final Environmental Statement FES 79-30 – Proposed Colorado River Management Plan, July 31, 1979, pg. IX-1.

[24] “ Draft Wilderness Management Plan, Grand Canyon National Park”, April 1998, pg. C-2.

[25] Final Environmental Statement FES 79-30 – Proposed Colorado River Management Plan, July 31, 1979, pg. IX-1.

[26] “ Final Environmental Statement, Proposed Colorado River Management Plan” (FES 79-30), finalized July 31, 1979, pg. IX-7,8.

[27] “ Final Environmental Statement, Proposed Colorado River Management Plan” (FES 79-30), finalized July 31, 1979, pg. IX-12.

[28] Final Environmental Statement FES 79-30 – Proposed Colorado River Management Plan, July 31, 1979, pg. III-23.

[29] Colorado River Management Plan, Grand Canyon National Park, 1980, see pp. 15-21.

[30] Colorado River Management Plan, Grand Canyon National Park, 1980, p. 21.

[31] Author’s conversation with Stump’s chief aide Lisa Jackson in March of 1998 affirmed that Stump still adheres to the belief that Bridge Canyon Dam remains a good idea for the Grand Canyon, even in light of the late Barry Goldwater’s expressed regret for voting for Glen Canyon dam.

[32] Congressional Quarterly, 12/27/80, pg. 3649.

[33] National Parks, September/October 1982, p 15.

[34] U.S. Court, Arizona District (Phoenix), Case: 2:CV-80-233PHX CLH, opened 03/27/80, closed 07/16/81.

[35] See Kyl biography entry present on personal Senate web site 2/26/99: “Lawyer with Jennings, Strouss & Salmon in Phoenix, Arizona 1966-1986.”

[36] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, PROA Press Release dated June 6, 1980.

[37] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, August 19, 1980 correspondence to Bob Stump from Professional River Outfitters Association, signed by Gaylord I. Staveley.

[38] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, August 29, 1980 correspondence to Miss C. J. Ross from Eldon Rudd, Member of Congress, signed by Eldon Rudd.

[39] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, October 16, 1980 correspondence to Eldon Rudd from Pamela Manning, signed by Pamela Manning.

[40] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, October 20, 1980 correspondence to Pamela Manning from Eldon Rudd, Member of Congress, signed by Eldon Rudd.

[41] 11/28/80 correspondence from acting NPS Director Ira Hutchison to Eldon Rudd.

[42] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, Western Union Mailgram confirmation dated 11/04/80, signed by Fred Burke, Carol Burke, Pam Manning, Allison Schmidt, and Judy Welch.

[43] Congressional Record, 11/14/80, p S14467, col. 2.

[44] Congressional Record, 11/14/80, p S14467, col. 1.

[45] Congressional Record, 11/14/80, p S14469, col. 1.

[46] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, Correspondence from Fred Burke to Congressman Bob Stump, dated November 29, 1980.

[47] Congressional Quarterly, December 27, 1980, pg. 3650.

[48] Wall Street Journal, May 18, 1979 (see Congressional Quarterly, 12/27/80, p 3649)

[49] Congressional Quarterly, January 10, 1981, pg. 52.

[50] "Reagan Names Five More Cabinet Members", Congressional Quarterly, Dec 27, 1980, pg. 3649.

[51] Senate Committee on Energy and Natural Resources, Proposed Nomination of James G. Watt to be Secretary of the Interior, Publication #97-1, January 7-8, 1981.

[52] Senate Committee on Energy and Natural Resources, Proposed Nomination of James G. Watt to be Secretary of the Interior, Publication #97-1, January 7-8, 1981, pg. 123.

[53] Statements made during March 9, 1981 meeting before the Conference of National Park Concessionaires, reported in Stealing The National Parks, Don Hummel, p 372. Also in National Parks, June 1981, p 16.

[54] March 9, 1981 meeting with the Conference of National Park Concessionaires.

[55] March 9, 1981 meeting with the Conference of National Park Concessionaires

[56] Sierra, July/August 1981, p. 7.

[57] Sierra, July/August 1981, p 7.; also National Parks, June 1981, p 18.

[58] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, January 13, 1981 correspondence from Richard Marks to Fred Burke, reply reference C3823-ARIZ.

[59] ARR Inc. Collection, Northern Arizona University, Cline Library Special Collections, Manuscript #30, February 10, 1981 correspondence from William Mellor (MSLF) to Fred Burke.

[60] Federal Register, 46:109, June 8, 1981, p 30397 [61] Draft Alternatives for the Colorado River Management Plan, June 1981, pg. 3. Note: no signatures were attached and no authors attested to its content.

[62] Draft Alternatives for the Colorado River Management Plan, June 1981, pg. 3.

[63] Colorado River Management Plan, December 1981, Grand Canyon National Park, Arizona, pp. 7-9.

[64] Colorado River Management Plan, December 1981, Grand Canyon National Park, Arizona, pg. 4.

[65] Senate Committee on Energy and Natural Resources, Proposed Nomination of James G. Watt to be Secretary of the Interior, Publication #97-1, January 7-8, 1981. Senator Bumpers statement to James Watt, pg. 123.

[66] 11/29/80 correspondence to Bob Stump (attn. Lisa Jackson) from Fred Burke, Arizona River Runners, Inc.

[67] As of 1979 Hatch River Expeditions had been allocated 10,080 user days/year. In 1989, after final assignment of all summer and winter dates, the Hatch allocation had

increased to 11,027 user days/year. Source: Colorado River Management Plan, 1989, Grand Canyon National Park, page C-14.

[68] In 1998 dollars, based upon the consideration that trip per day fares/value are the same from year to year, valued at the 1998 average per day fare of \$250.

[69] In 1998 dollars. Motor operators comprise 70% of commercial river running activities. They received 70% of the additional annual award of 26,500 more commercial user days granted in 1981 to concessionaires. That is a total of nearly 315,000 user days made available for motor trips since 1981.

River News 05/01/02

Mission and Goals of River Runners for Wilderness

Principals: Jo Johnson, Tom Martin

An organization for all river runners dedicated to the Wilderness Colorado River and its tributaries.

Guiding principles:

Champion Wilderness designation and protection for all suitable reaches of the Colorado River watershed, including the backcountry and Colorado River in Grand Canyon National Park.

Encourage allocation free management plans for all suitable reaches of the Colorado River watershed, including the Colorado River in Grand Canyon National Park.

Protect the WILDERNESS resources of the Colorado River Watershed.

Mission statement:

Promote the highest resource protection values through Wilderness management and stewardship activities on the Colorado River watershed.

Safeguard non-allocated access to the Colorado River watershed for all recreational river runners.

Goals:

Establish and safeguard a non-motorized Wilderness river corridor for the Colorado River through Grand Canyon National Park, including congressional wilderness designation for the backcountry and river in Grand Canyon National Park.

Establish and oversee a transparently fair state of the art access model that is not based on allocated set asides for any one user group on the Colorado River in Grand Canyon National Park.

Promote the highest resource protection values through stewardship activities on the Colorado River through Grand Canyon National Park, including service projects such as education of river runners, partnership with GCNP on data gathering and resource protection activities.

Letter to LR 05/01/02

Congressional Friends of Lake Powell

Dear Friend:

If you love Lake Powell, we need your help to protect it!

It may not be too apparent at first, but, ***Lake Powell is under assault by radical environmentalists***. They have engaged in a slow, deliberate effort to convince the public over time that Lake Powell must go and that we must "restore" Glen Canyon to its primitive state (even though that is impossible). Just ask anyone in the Phoenix media market if they've seen or heard the ads being aired right now by the Sierra Club that talk about restoring Glen Canyon. The ads don't say "Drain Lake Powell," but that is what they're advocating.

And while these extremist groups are subtle and try to stay under the radar of Lake Powell supporters, over the last few months, they have redoubled their efforts and raised nearly a million dollars, dedicated to one thing -- draining Lake Powell.

Here's a little history on the movement:

In November of 1996 the Board of Directors for **the Sierra Club** **voted unanimously to "drain the reservoir behind Glen Canyon Dam."** They didn't vote to study whether Lake Powell should be drained; they didn't vote to engage in conversations about decommissioning the dam; **they voted to drain Lake Powell -- end of discussion.**

Following that vote two organizations were formed: The Glen Canyon Institute and the Glen Canyon Action Network (now known as Living Rivers). These two organizations have one common goal -- to drain Lake Powell.

We wish we could say that advocates of draining the lake are just far-out fringe organizations with marginal support, but the truth is that their efforts are funded to the tune of almost a million dollars Per year and they have large staffs working every single day toward the single purpose of draining Lake Powell.

You may be thinking: "Well, they may have all this money and organization, and may blow a lot of hot air, but Lake Powell will never really be drained."

We must make one thing perfectly clear: ***If there were a vote on the floor of the U.S. House of Representatives tomorrow that called for the decommissioning of Glen Canyon Dam and the draining of Lake Powell, there is a chance that we would lose that vote!***

Environmental groups work to sway public opinion with emotional pleas and campaigns of misinformation. For example, the Executive Director of Living Rivers in a recent *Arizona Republic* opinion piece claimed that the Grand Canyon river corridor is now rapidly once lush and that it was now rapidly "becoming sterile".

And the President of the Glen Canyon Institute recently argued that because of Glen Canyon Dam:

Wildlife, plant life and whole communities are dying big dams, for all their water storage capability, are bad and whatever benefits they give to the world are immensely overshadowed by the destruction that they cause.

Species are endangered from the headwaters all the way to the Delta because of Glen Canyon Dam, (which) is silting in at an alarming rate and after only 40 years of life, the San Juan arm of Lake Powell is completely sedimented in.

Is the San Juan arm silted in? Of course not, it has over 50 miles of navigable water!

Was the Grand Canyon corridor once lush and only recently turned sterile? Not according to Helen Yard, a consulting ornithologist for the Grand Canyon Monitoring and Research Center:

The Colorado River corridor was a scour zone before the dam went in. There was little, if any, nutrient-rich sand on which trees could grow. There is probably a higher abundance of birds here now than there was before the dam because [now] there are trees. The newly created habitat might be a boon for bird populations that are crashing elsewhere. Riparian systems are declining in the Southwest. Perhaps this is somewhat of a refuge."

The truth is that Lake Powell provides over 40% of the water storage on the Colorado River - water storage that serves millions of Americans who depend on the Colorado for electricity generation, protection from drought, livelihood of communities and for recreation.

But when powerful "green" groups put out misinformation, the public and elected officials from the East and Midwest believe it, largely because those who understand the issues and the value of Lake Powell are not financially able to counter the lies being told.

While the numbers and dollars of groups who want to drain Lake Powell continue to rise, there is only one organization that is working every day to protect Lake Powell. It has one full-time staff member and a current budget of less than \$70,000 per year. It is the **Friends of Lake Powell, Inc.**

All of us who are Friends of Lake Powell recognize the huge educational task we face to protect the Lake, and we need your help to counter such outrageous claims before public opinion and political leaders are turned against Lake Powell.

Certainly you see the problem. *How likely are we to effectively protect and defend the lake that w, love with one person fighting these large and well-funded organizations?* The odds aren't good. At some point, unless we significantly strengthen our defense, those of us who love Lake Powell will get rolled. It may not happen this year or next, but if there is a lesson to be learned from other aggressive environmental efforts (like banning snowmobiles in Yellowstone), the lesson is that extreme changes in policy can be adopted and implemented so quickly that you don't have time to mount a defense.

Won't you become a Friend of Lake Powell, and encourage your friends and neighbors to add their names, dollars and collective strength to this important cause?

We must step up and do our part! Ask yourself where you could go to replace the Lake Powell experience..? Ask yourself what it is worth to protect a place so unique in all the world..?

Please fill out the enclosed card and send a tax-deductible contribution today! Your gift of \$1,000, \$500, \$ 100 or even \$35 will help the Friends of Lake Powell to mount a vigorous defense for our beautiful desert jewel.

We cannot emphasize enough, how important it is for you to get involved in protecting Lake Powell. Please act today, and help us preserve the many benefits of Lake Powell -- the water supply, power supply, recreation and wildlife habitat -- so that our children and grandchildren can enjoy Lake Powell in the future.

Thank you very much for supporting this important effort.

Sincerely,

Jim Hansen, U.S. Congressman, Utah's 1st District; John Shadegg, U.S. Congressman, Arizona's 4th District; Chris Cannon, U.S. Congressman, Utah's 3rd District; Jim Gibbons, U.S. Congressman, Nevada's 2nd District.

P.S. Your tax-deductible contribution of \$1,000, \$500, \$100 or even \$35 is critical to our continued efforts to protect Lake Powell. Please send a contribution today! Thanks!

Living Rivers Currents 05/10/02
Volume 2, Number 4 (Special Drainit Times Issue)

Update on the national campaign to drain Lake Powell reservoir and restore Glen and Grand Canyons.

The Articles

- [Sediment-al Journey, Roadshow for the Grand Canyon](#)
- [Sediment Problems: the Beginning of the End for Lake Powell](#)
- [Simulated Floods: No Help for the Grand Canyon](#)
- [Antelope Point: LR Coalition Fights New Marina](#)
- [Dam Risks: Interior Denies Public Right to Know](#)
- [Lake Powell Pipeline: Opposition Builds on Anti-Dam Day](#)

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- [LRC V2, N4, May 2002, Drainit Times No. 2](#)
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Living Rivers Currents 05/10/02

Simulated Floods: No Help for the Grand Canyon

Vol. 2, No. 4, May 2002

The Bureau of Reclamation (BuRec) is working on another public relations charade to combat mounting pressure that it is not doing enough to stop the decline of the Grand Canyon ecosystem caused by Glen Canyon Dam. As a result they are contemplating a two-year series of experimental flows from Glen Canyon Dam to improve habitat conditions for humpback chub, an endangered native fish. But like similar exercises conducted over the past five years, these too are doomed to fail.

According to Dave Haskell, retired science director for Grand Canyon National Park, "The three key things this ecosystem needs are warmer water, sediment, and annual high flows to distribute sediment into the system. These experiments will not provide this."

Ninety to ninety-five percent of the sediment Grand Canyon needs remains trapped behind Glen Canyon Dam. Lack of sediment and driftwood has eliminated beaches and changed the carbon base, which in turn has caused the near disappearance of the Canyon's natural food web. The historic food source for native fish has vanished; no insects native to the Canyon remain and riparian vegetation is struggling in the sterile soil.

At best these experimental flows will move a tiny fraction of the Canyon's remaining sediment. Moreover, since these flows are not designed to exceed 45,000 cubic feet per second, when pre-dam flows were routinely twice this, the overall benefit to native fish and plants will be further compromised.

Manipulating the dam won't change the chilly water temperatures either. Water released from Glen Canyon Dam is a constant 46° F., causing the river temperature to seldom exceed 55° F. Native fish require warmer water with temperatures reaching 80° F., the natural pre-dam summer temperature of the water.

In 1996 BuRec received a huge public relations boost for implementing simulated flood flows from the dam, but the native habitat gained nothing. "Here we are five years and

\$40 million later, ready to repeat history," says John Weisheit, LIVING RIVERS' Conservation Director. "That's why we are building a new Grand Canyon Restoration Coalition to mobilize widespread support for true restoration of the Grand Canyon."

Living Rivers Currents 05/10/02

Sediment-al Journey, Roadshow for the Grand Canyon

Vol. 2, No 4, May 2002 (Drainit Times No. 2)

Moving the Bureau of Reclamation (BuRec) to move sediment is the focus of LIVING RIVERS' upcoming "Sediment-al Journey." June 17, 2002 is the 100th anniversary of BuRec's founding, marking a century of river devastation. The victimization of the Colorado River through the Grand Canyon is a case study of the Bureau's exploits.

Caught between BuRec's two largest concrete dams, Hoover and Glen Canyon, the Grand Canyon is slowly becoming sterile. Glen Canyon Dam disrupts the food chain because it traps the nutrient-laden sediment. The dam also causes drastic water temperature changes, and tames the formerly life-giving seasonal flood flows. Five of eight Grand Canyon native fish species are either gone or on the verge of collapse, beaches are disappearing, and damaging exotics are choking out native vegetation. Public officials and others who have profited at the expense of the river will celebrate BuRec's anniversary at Hoover Dam. LIVING RIVERS and the Grand Canyon Restoration Coalition will be there too, but with a different message. The Sediment-al Journey, which will conclude its five-day road trip at Hoover Dam on June 17, will draw public attention to the extensive environmental damage that is BuRec's 600-dam legacy.

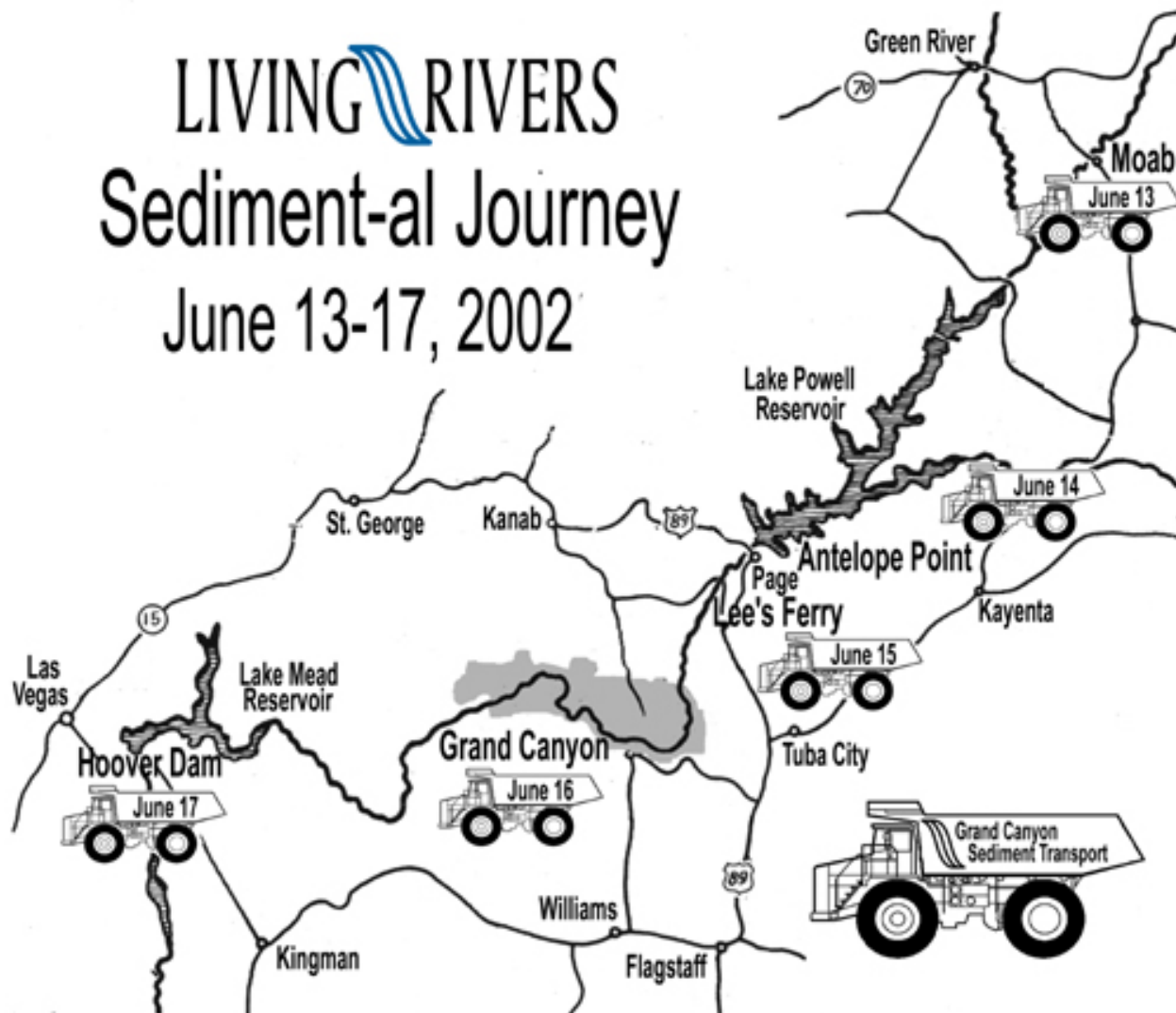
Our journey will begin with an evening rally and banquet on the banks of the Colorado near Canyonlands National Park. People will be bringing sediment from throughout the basin to load into a dump truck for transport to the Grand Canyon. Participants will then head to Antelope Point, on the edge of Lake Powell, to collect more sediment and to support Navajo activists in their opposition to a proposed marina (see back page). Then it's off to Glen Canyon Dam and the first ceremonial sediment dump below the dam. We'll then spend two nights along the river at Lee's Ferry, passing out sediment to those embarking on their Grand Canyon river trips, as well as taking a day-long trip ourselves from Glen Canyon Dam back to Lee's Ferry.

On the eve of arriving at Hoover Dam we will gather at Grand Canyon National Park to rally and inform visitors of the Park's dying ecosystem at the hands of BuRec. Riverside music, cookouts and camping will round out the festivities as we promote the need for BuRec to transform its mission from one of devastation to restoration. Please join us.

LIVING RIVERS

Sediment-al Journey

June 13-17, 2002



Sediment-al Journey

June 13-17, 2002

Moab, UT

June 13, 6:00pm - 10:00pm

Sediment Loading and Kick-off Rally

Gold Bar Campground

Lake Powell Reservoir, AZ

June 14, 12:00pm - 1:30pm

Sacred Sediment/Sacred Rivers

Antelope Point

Marble Canyon, AZ

June 15, 9:00am - 5:00pm

Boating for the Canyon

Boating for Wilderness
Leeís Ferry Campground

Grand Canyon National Park, AZ

June 16, 12:00pm - 2:00pm
Save Grand Canyon from Glen Canyon Dam
South Rim Concession Area

Hoover Dam, AZ/NV

June 17, 11:00am - 1:00pm
Reclaim the Bureau
100 Years is Enough
Arizona-side parking lot

Living Rivers Currents 05/10/02

Sediment Problems: the Beginning of the End for Lake Powell

Vol. 2, No 4, May 2002 (Drainit Times No. 2)



In late March LIVING RIVERS completed a reconnaissance of the upper Colorado River arm at Lake Powell reservoir to further ascertain the gravity of the sediment build-up and delta formation at the head of the reservoir. With the reservoir at its lowest level in

nine years, we were provided with a vivid picture of nature's progress toward forcing the decommissioning of the reservoir marinas, and ultimately Glen Canyon Dam.

As anticipated, there was extensive sediment accumulation in both the main stem and side canyons. In many places the Colorado is cutting channels 25-foot deep, with perched segments calving off like glacier slabs along the Alaska coastline. River travel is difficult, as a minefield of sandbars and mudflats significantly complicate navigation through much of the main channel as it enters the reservoir.

An examination of the Dirty Devil River, one of the major tributaries flowing into the reservoir, revealed a ticking time bomb. Its river channel is completely full of stored sediment, a situation we observed in many of the side canyons. This suggests that a significant amount of sediment will be dumped beyond the suspended pile and into Hite Bay when strong summer storms resume on the Colorado Plateau.

There was also evidence of the river remobilizing sediment for transport toward the dam. With the reservoir level down 54 feet, the Colorado River has regained 30 miles of current, which is churning up and reworking the sediment down-reservoir. Because of new operating guidelines to store more Colorado River water in California, and cumulative poor snow packs in the headwaters, it will be difficult to keep Lake Powell reservoir full. The low reservoir levels will restore a flowing river over sediment, which will mobilize and quickly advance the delta and associated turbidity flows towards Glen Canyon Dam. Turbidity flows are the suspended sediments that continue flowing along the bottom of the reservoir and pile up before the front of the dam.

Currently the main delta sits about 150 miles from the dam, and less than one mile from Hite Marina. The delta's advancement will soon force the closure of this marina, possibly as early as the end of this year. The sediment accumulation and reduced marina access will create problems for private and commercial river runners who end their Colorado River Cataract Canyon trips at Hite Marina. A similar situation already exists for river runners on the San Juan River arm of the reservoir. The San Juan delta is growing nearly as fast as the Colorado's, and has only about 100 miles to travel before reaching Glen Canyon Dam.

According to Dr. John Dohrenwend, a geomorphologist formerly with the US Geological Survey who took part in the expedition, reservoir and dam managers may be in for a shock. Similar to how BuRec planners misjudged the amount of water in the Colorado watershed, giving away 22% more water on paper than the river actually delivers, they may have misjudged the sedimentation rates too. Researchers have documented incredible cycles of erosion followed by deposition in the arroyos and rivers of the Colorado Plateau. In the 1880s, for example, a cycle of arroyo cutting and sediment movement began in the Southwest; this cycle ended in the early 1940s. Since then, there has been less erosion and more valley bottom deposition. "Thus," says Dohrenwend, "sedimentation in Lake Powell, from its creation to the present, occurred during a time of relatively slow landscape change that is not fully representative of historic times. Indeed, a return to the conditions that prevailed during the first half of the

twentieth century would significantly accelerate sedimentation in Lake Powell and would significantly affect future use and operation of this reservoir."

Living Rivers Currents 05/10/02

Lake Powell Pipeline: Opposition Builds on Anti-Dam Day

Vol. 2, No. 4, May 2002 (Drainit Times No. 2)

Water conservation and river restoration were the rallying cries outside Utah governor Mike Leavitt's office on the fifth International Day of Action Against Dams and for Rivers, Water and Life, March 14, 2002. LIVING RIVERS was joined by eleven other Utah river advocacy organizations in presenting the first annual "State of Utah's Rivers Report" which highlighted the rapidly declining health of the Green, San Juan and Colorado rivers, as a result of excessive water consumption.

Of major concern is a proposed pipeline from Lake Powell reservoir to St. George in Utah's Washington County. The proposed \$250-million project is designed to bring 70,000 acre-feet of water to southwest Utah, which is 150 percent more than the region is presently using. Washington County now wastes more water than practically any other community in the country; its per capita water use is 355 gallons per day. In contrast, the community of Tucson uses only half this amount of water: 170 gallons per person, per day.

If constructed, this pipeline would also represent the first major water diversion directly from Lake Powell reservoir. LIVING RIVERS is opposing any such infrastructure as it would be unnecessary and add to the costs associated with the eventual decommissioning of Glen Canyon Dam.

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Living Rivers Currents 05/10/02

Dam Risks Interior Denies Public Right to Know

Vol. 2, No. 4, (Drainit Times No. 2)

LIVING RIVERS' efforts to obtain information on the communities impacted, should Glen Canyon and Hoover dams fail, are headed for the courts. On April 2, the Department of Interior denied LIVING RIVERS' appeal of the BuRec's November 2001 decision to deny its Freedom of Information Act request for dam failure inundation maps.

At issue is BuRec's claim that this information should be withheld because it pertains solely to the internal operations of the agency. LIVING RIVERS contends that the tremendous risks associated with the failure of one or both of these dams should be made known to the public. BuRec documents obtained through other sources reveal that if Glen Canyon Dam failed, a 500-foot wall of water will scour much of the Grand Canyon. This will cause tremendous ecological damage, loss of sacred sites, and the certain death of any recreationists unable to escape to higher ground.

But of potentially greater concern are the impacts this torrent will have when it reaches Hoover Dam. It is estimated that a 75-foot wall of water will overtop Hoover Dam, posing significant threat to dams downstream, riverside communities such as Laughlin, Nevada and Blythe, California, as well as several Indian nations. Such a flood could also threaten the water supplies of tens of millions of people. If Hoover Dam failed in the process, the catastrophe would be monumental. BuRec, however, is withholding this information and keeping those who might be affected, in either scenario, in the dark.

In 1997, the US Court of Appeals forced the Department of Agriculture to release maps pertaining to spotted owl habitat to the Maricopa Audubon Society. At that time, the Federal government was asserting that such maps were germane solely to the internal operations of the agency and thus not releasable to the public. LIVING RIVERS hopes that the courts will find that inundation maps belong in the public domain too.

More Information:

[Glen Canyon Dam Failure Study](#)

Living Rivers Currents 05/10/02

Antelope Point: LR Coalition Fights New Marina

Vol. 2, No. 4, May 2002 (Drainit Times No. 2)

LIVING RIVERS was recently joined by 17 other organizations in demanding suspension of the planning process for the proposed Antelope Point Marina project on Lake Powell reservoir. In an eleven-page letter sent April 14 to Glen Canyon National Recreation Area officials, the coalition expressed concern regarding violations of environmental laws, utilization of outdated planning guidelines, a bias toward servicing motorized flatwater recreation, and failure to consult with Navajo interests. The coalition demanded a revision of the Recreation Area's General Management Plan prior to any further work on the proposed marina.

At issue is a proposal to construct a 410-slip marina, 225-room hotel complex, 150-site campground, fuel dock, convenience store, restaurants and related infrastructure over a 950-acre site; 710 of which are owned by the Navajo Nation, with the remaining 240 administered by the Park Service. Of major concern is that the project evolved from a planning document which is 23 years-old and has little relevance to the reservoir's current operation.

The Diné Bidziil Coalition, representing 17 grassroots Navajo groups, and the Diné Medicinemens Association are opposed to the project, as it would impact ceremonial and sacred sites, and promote inappropriate development on the Navajo Reservation. "Our people will derive virtually no benefits from this project, only a few low-wage jobs and some lease payments. The bulk of the money flows off the reservation to a non-Indian company in Scottsdale Arizona," says Hazel James, with the Diné Bidziil Coalition. "Most families on the reservation live near or below the poverty line; we don't have houseboats and jet skis to take on Lake Powell reservoir."

"Their documents claim that they consulted with us about sacred site impacts, but no consultation ever occurred," said Thomas Morris Jr., president of the Diné Medicinemens Association. Federal regulations require the National Park Service to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and to avoid adversely affecting the physical integrity of such sites.

Despite this proposal being the most substantial development initiative at Lake Powell reservoir in decades, the Park Service has done only cursory environmental analysis. The likely impact on water, air, noise, and public health, not to mention the cumulative development impacts on the surrounding community, compel the Park Service to undertake an Environmental Impact Statement. More importantly, the Park Service must reassess the perceived need for this new resort marina in light of declining visitation, which is down 11 percent since 2000 and 35 percent since 1992.

LIVING RIVERS is now mobilizing legal assistance to further support Navajo activists in their efforts to stop development at Antelope Point.

River News 05/16/02

Living Rivers announces the founding of River Runners for Wilderness

RRFW RIVER WIRE No. 1

New Organization to Launch Lee's Ferry, AZ

River Runners For Wilderness (RRFW), a new river resource protection organization, has formed as a direct response to the threats to the wilderness reaches of the Colorado River basin. RRFW will formally launch June 15, 2002, at the boat ramp at Lee's Ferry, Arizona.

"There's just no other multi-day wilderness white water river run like the Grand Canyon. As river runners, we want to do our utmost to preserve this wilderness resource, while maintaining fair and equitable river access for all river runners," said Jo Johnson, RRFW Grand Canyon coordinator, as she discussed reasons to launch a new group. "The National Wilderness Preservation system is missing a key resource in the Colorado River in Grand Canyon National Park. There's no other group dedicated to wilderness river running. Once you embrace wilderness management, many of the conflicting river issues we see today are resolved."

Longtime wilderness advocate Jeff Ingram, also with RRFW, is pleased to see this issue alive again. "The public, as it did every time it had a chance in the 1970's & 1990's, will support a motor-free Grand Canyon Wilderness. Lets not let the same Hatch-Watt-Marks back room ploy be used again. Let's work for an open, public, democratic process on wilderness and river management, starting with a comprehensive Park Service planning effort and ending with a Congressional establishment of a real, complete Grand Canyon Wilderness."

Among those excited to see the new organization get underway is Tom Martin, also a RRFW Grand Canyon coordinator. "The do-it-yourself, muscle-powered river runners wait in an almost 8000 river-trip-long backlog, while the park's river outfitters continue to make a mockery of the river wilderness. The 32 folks on an outfitted trip pay a king's ransom to see the canyon on motorized tour boats operated by unpaid or underpaid river guides, then end their trip boarding a waiting helicopter at the river's edge less than 2/3 of the way through the canyon. What kind of wilderness is that?"

The group will host a "launching" party at Lee's Ferry, Arizona, on Friday afternoon/evening, June 14, and Saturday, June 15, 2002, in concert with Living Rivers and the Grand Canyon Restoration Coalition. The launch will be part of Living Rivers 700 mile long "Sediment-al Journey," building support for the restoration of Grand Canyon and the reformation of the Bureau of Reclamation. Festivities will get underway with a cookout and program talk Friday evening, followed by river music, dance and good cheer. Saturday morning will begin with outreach at the boat ramp, then a ceremony commemorating the founding of RRFW. This will be followed by a float from Glen Canyon Dam back to Lee's Ferry where the festivities will continue into the evening. Among the participants include: Jeff Ingram, a longtime Grand Canyon wilderness activist; Kim Crumbo, a Colorado River guide, former wilderness coordinator for Grand Canyon National Park, and currently the Grand Canyon representative for Arizona Wilderness Coalition; John Weisheit, a Colorado River guide and conservation director for Living Rivers; Brent Blackwelder, president of Friends of the Earth and veteran of 400 successful dam fights over 32 years; musician and author Katie Lee; and additional riverside music from Peg Millet, Bill Oliver and Peter Neils. For more information stay tuned to our [website](#) (now under construction) or [Living Rivers](#)

For more information, you can contact River Runners For Wilderness
PO Box 466
Moab, UT 84532

Tel: 435-259-1063
Fax: 435-259-7612

email: info@rrfw.org

RRFW RIVER WIRE is a free service to the boating community from River Runners For Wilderness. Participation is FREE (and required!). Send your e-mail address to riverwire@rrfw.org and we'll add you to the RRFW RIVER WIRE e-mail list. RRFW is a project of Living Rivers

LR Press Release 05/17/02

No Cause for Celebration: Groups to Protest 100th Anniversary of Bureau of Reclamation

Launching "Sediment-al Journey" to Save the Colorado River in Grand Canyon National Park

Contact:

Owen Lammers (435) 259-1063
Lisa Force (480) 990-7839

One month from today, on June 17, the nation's leading dam building organization, the Bureau of Reclamation (BuRec), will be celebrating 100 years of river manipulation at Hoover Dam. Living Rivers, in conjunction with more than sixty other environmental and

social justice organizations, will also convene at Hoover Dam that day, but will be articulating a much different message.

"There's no cause for celebration; this should be a wake," says Owen Lammers, executive director of Living Rivers. "Thousands of river miles, critical habitat for endangered species and the cultural heritage of a number of indigenous tribes have all been devastated by the 600 dams BuRec has constructed in the western United States."

Nowhere is BuRec's damage more apparent than in the world-renowned Grand Canyon, just upstream of Hoover Dam. Twenty per cent of the Grand Canyon was inundated by Hoover Dam, while the remainder of the Canyon's river corridor is seeing its native ecosystem completely disappear as a result of BuRec's second largest dam, Glen Canyon, 370 miles upstream of Hoover.

Glen Canyon Dam has changed the Colorado's natural flows, its seasonal variations in water temperature, sediment and nutrient deposition and fish migration into and out of Grand Canyon. "The Canyon's entire food web is being dramatically altered. Three of eight native fish species are gone and two more are on their way. The beaches, so revered by the Canyon's river runners, are going as well and all at the hands of BuRec," says Michelle Harrington with the Center for Biological Diversity.

To highlight the damage BuRec has caused, especially to Grand Canyon, the groups will be conducting a five-day, 700-mile, six-stop road show, which will conclude June 17, at Hoover Dam. Known as the Sediment-al Journey, they will be traveling by caravan led by a dump truck which will be collecting, then delivering, sediment and nutrients to the Grand Canyon ecosystem. According to Grand Canyon National Park's retired science director, Dave Haskell, "Lack of sediment in the canyon is a huge problem that needs to be dealt with now. Glen Canyon Dam presents the most serious threat to the Park."

"It's time for BuRec to get on with the task of decommissioning Glen Canyon Dam," says Tori Woodard, conservation director of the Sierra Club's Glen Canyon Group, which is co-sponsoring the Journey's kick-off rally near Moab, Utah on June 13. "BuRec must take responsibility for the damage it has caused and get on with the task of reviving the Colorado River."

"BuRec has submerged so many of our sacred sites and destroyed this principle artery of mother earth and vital part of our people's culture," adds Thomas Morris, president of the DinÈ (Navajo) Medicinemens Association, which will be co-hosting the Journey's second stop adjacent to Lake Powell reservoir and at Glen Canyon Dam.

The Journey will then spend two days in Grand Canyon. The first will be at Lee's Ferry meeting with those preparing for launching their Grand Canyon river trips, then for a Grand Canyon gathering and folk concert at the amphitheater near the South Rim's concession area. Then it's off to Hoover Dam for the rally in advance of BuRec's official event.

"The situation at Grand Canyon and the Colorado River are merely a sampling of the destruction BuRec has caused," says Brent Blackwelder, president of Friends of the Earth and veteran of more than 400 successful dam fights across the US. "From the Columbia to the Rio Grande, BuRec has been wasting taxpayer money subsidizing low-value crop production for cattle feed. It's time to end this practice and bring these rivers back to life."

"It's bad enough that BuRec has dammed-up rivers here, but its destructive legacy extends to rivers all over the world. From the Amazon to the Yangtze, BuRec consultants have traveled the globe spreading their concrete message—something nobody should be celebrating," adds Juliette Majot, executive director from International Rivers Network.

For additional information please visit:

[Living Rivers Sediment-al Journey](#)

[Bureau of Reclamation's proposed itinerary for Hoover Dam celebration](#)

[Center for Biological Diversity](#)

[Friends of the Earth](#)

[International Rivers Network](#)

LR Press Release 06/13/02

Sedimental Journey Gets Underway

Groups Protesting 100 years of River Destruction by the Bureau of Reclamation Five Day Tour Begins Today to Save the Colorado River through Grand Canyon National Park

Contact: Owen Lammers (435) 259-1063, (435) 260-2590

Lisa Force (602) 321-1753

MOAB, UT From the banks of Colorado River near Canyonlands National Park, a caravan of activists departs today for Hoover Dam, site of the Bureau of Reclamation's (BuRec's) centennial festivities that take place next Monday, June 17th. With banners proclaiming "600 dams, 100 years is too much," and "Save Grand Canyon from Glen Canyon Dam" the group will host a series of events along the way to draw attention to negative environmental and cultural impacts caused by BuRec's dam-building legacy, especially to the world-renowned [Grand Canyon National Park](#).

Leaders from Living Rivers, the Sierra Club, Friends of the Earth and others, representing a network of more than eighty environmental and social justice organizations, will be demanding immediate action by BuRec to restore the river canyon through one of the world's most famous national parks. "This represents the largest grassroots movement assembled for Grand Canyon advocacy since BuRec's plans to inundate the Park with two major dams were defeated over forty years ago," says Owen Lammers, executive director of Living Rivers. "Stopping those dams clearly was not

enough, because the operation of BuRec's Glen Canyon Dam upstream has caused a slow, but nonetheless lethal blow to Grand Canyon's ecosystem."

- Grand Canyon's food web has been completely transformed, causing the loss of all native insect species.
- Four of eight native fish in Grand Canyon have disappeared, while two more are almost gone.
- Mammals such as muskrats and beavers are gone from the river corridor.
- Riparian vegetation in the Canyon's high water zones has disappeared.

This decline is occurring because: ninety five percent of the sediment and nutrients that once flowed into Grand Canyon is now trapped behind the dam; seasonal flow fluctuations critical for building beaches and spawning habitat no longer occurs, and water released from the dam is nearly a constant 46 degrees F, whereas the native system requires temperatures in excess of 80 degrees.

"We will be traveling to Hoover Dam to reinforce the growing public outcry to reverse the damage BuRec is causing in Grand Canyon, the Colorado River watershed and rivers across the Western United States, " says Brent Blackwelder, president of Friends of the Earth. "What's happening in Grand Canyon is emblematic of the problems we're now experiencing throughout BuRec's 600-dam plumbing system."

In a [three-page declaration](#) to be presented to the BuRec at Hoover Dam the 82 groups will be calling for:

- The restoration of essential sediment and nutrient flows from the main stem Colorado into Grand Canyon.
- The restoration of natural flow regimes to properly transport this sediment within Grand Canyon, when and where it belongs.
- The restoration of more natural seasonally variable water temperatures in the main stem Colorado through Grand Canyon.
- Development of a restoration and recovery program for the Colorado River corridor in Grand Canyon that includes the full recovery of all species known to be native to Grand Canyon prior to the operation of Glen Canyon Dam.

"BuRec's efforts to correct these problems with modification of the dam's operations will continue to fail because they only address a tiny part of the problem, modification of flows," adds Lammers. "No feasible plan exists to address the lack of sediment and nutrients, water temperature or elimination of non-native species."

"This is why we support decommissioning Glen Canyon Dam," says Sierra Club board member Ed Dobson, who lives along the San Juan River in Bluff Utah." We must get on with the task of reviving Grand Canyon's dying river ecosystem."

Grand Canyon's ecosystem also represents a critical part of the cultural heritage of a number of Native Nations, including the Navajo, Hopi, Zuni, Havasupai, and Halapai. "BuRec must restore the natural flow regime to the Canyon's artery," says Cal Seciwa, Zuni tribal member and director of academic affairs for the American Indian Institute at Arizona State University. "The ecosystem functioned for thousands of years without

intervention, and will thrive for thousands more once these shortsighted manipulations cease."

En route to Hoover Dam, the groups will host events at: Lake Powell Reservoir and Glen Canyon Dam; Lee's Ferry Campground, launch site for Grand Canyon river trips; and the amphitheater near Grand Canyon National Park's South Rim. Titled "Sediment-al Journey" the caravan will be led by a dump truck which will be transporting much needed sediment and nutrients to Grand Canyon's river corridor.

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LR in the News 06/14/02

Hoover Dam site of celebration, protests Monday

By Jace Radke

Las Vegas Sun

While the Bureau of Reclamation celebrates 100 years of existence with a gala at Hoover Dam Monday, environmental activists are planning to protest the effects that dams have on the ecosystem.

About 30 protesters are expected at Hoover Dam Monday morning, a few hours before Secretary of the Interior Gale Norton, Bureau of Reclamation Commissioner John Keys, Gov. Kenny Guinn and other dignitaries are scheduled to arrive.

Owen Lammers, executive director of Living Rivers, an organization dedicated to preserving natural ecosystems, said his group believes the celebration should be more like a wake.

"Thousands of river miles, critical habitat for endangered species and the cultural heritage of a number of indigenous tribes have all been devastated by the 600 dams that have been constructed in the Western United States," Lammers said.

Dams act as obstacles to the natural flow of rivers and sediment -- which has led to the deterioration of ecosystems in places such as the Grand Canyon, Lammers said.

Lammers plans to have about 30 people and a dump truck full of sediment at the protest to bring attention to what he calls the West's failing river ecosystems.

"Our main focus is on Glen Canyon Dam (a Utah facility that created Lake Powell)," Lammers said.

"It is restricting the flow of sediment into the Grand Canyon, while Hoover Dam is farther down river and not causing these types of problems in a national landmark.

"We'll always have the geology in the Grand Canyon, but the flora and fauna (are) disappearing, and all we'll be left with is a lunar landscape."

Bureau of Reclamation spokesman Barry Wirth acknowledged that dams can hurt ecosystems, but said that dams are very much needed.

"There are 25 million people in seven states that rely on the water that Glen Canyon Dam provides from a river that would otherwise serve only three million people," Wirth said.

The Bureau of Reclamation is experimenting with flow releases designed to replace sediment in the Grand Canyon and build up beaches and areas for plants and animals to thrive, Wirth said.

The protest will be held on the Arizona side of the dam in a parking area, which will be as close as protesters will be permitted because of security precautions.

About 2,000 invited guests are expected, and Bureau of Reclamation Police will work with Metro Police, Nevada Highway Patrol, Arizona Department of Public Safety and the FBI to ensure security at the event.

The portion of U.S. 93 that runs over the dam will be closed to vehicle traffic from noon until midnight Monday, Bureau of Reclamation spokesman Bob Walsh said. Travelers are advised that traffic will be detoured through Laughlin and Searchlight via U.S. 95 and State Route 163.

Norton is expected to give a keynote address at the event, which will also feature a flyover by the U.S. Air Force Thunderbirds, fireworks and a laser show on the face of the dam.

The event is not open to the public.

LR in the News 06/14/02

Hoover Dam centerpiece of Reclamation Bureau's celebration

Associated Press

LAS VEGAS (AP) - The Bureau of Reclamation's yearlong 100th birthday party begins Monday at Hoover Dam with dignitaries, a laser light show and the sound of protest.

"The Hoover Dam was chosen because it's a recognizable American icon," said bureau spokeswoman Dana Mishoe of the monument that draws 1.2 million tourists annually and is considered one of the nation's greatest engineering feats.

Some of the bureau's former employees and current partners are expected to be among the estimated 2,000 guests of the 8:30 p.m. program on the dam. Plans call for an Air Force fly over, fireworks and a sound and laser show.

Expected to participate are Interior Secretary Gale Norton, Reclamation Bureau commissioner John W. Keys III, Nevada Gov. Kenny Guinn, Arizona Gov. Jane Hull and U.S. Rep. Ken Calvert, R-Calif., chairman of the House subcommittee on water and power resources.

The celebration will close U.S. 93 - the main route from Las Vegas to Phoenix - south of Boulder City and north of Kingman, Ariz., from noon to midnight. Traffic will be rerouted to U.S. 95 and State Route 163 through Searchlight and Laughlin, authorities said.

Dam traffic has been closed to commercial trucks since Sept. 11 due to security concerns. Limited dam tours resumed in December after all access around the dam had been restricted.

The Hoover Dam, built some 30 miles southeast of Las Vegas in the 1930s, is among the Bureau of Reclamation's 180 water projects in 17 Western states. It provides drinking water, electricity and recreation to 23 million people in the Southwest.

President Theodore Roosevelt created the bureau with the Reclamation Act of 1902 to provide water to Western farmers. Today the bureau is faced with balancing endangered species against the needs of large-scale agriculture, industry, growing cities and Indian tribes - a task that some say it has failed.

Some 100 activists have a permit to gather at 11 a.m. on the dam's Arizona side parking lot to protest what they say are the negative impacts caused by bureau's dam-building legacy, specifically to the Grand Canyon National Park.

Leaders of groups including the Sierra Club and Friends of the Earth, representing a network of 82 environmental and social justice organizations, will demand that the bureau develop a restoration plan for the river canyon, said Owen Lammers, Living Rivers executive director.

"This is really the largest coalition that has come together since the 1960s when they fought the bureau's plans to inundate the (Grand Canyon) park with two major dams," he said.

The protest is expected to last an hour because of the road closure.

"Clearly we have a message that they don't want to get mixed up with theirs," Lammers said.

To address the debate about the bureau's responsibilities, a symposium of experts from federal agencies, universities and the private sector is scheduled Tuesday and Wednesday at UNLV.

LR in the News 06/15/02

Sedimental Journey' makes stop in Page

By Todd Glasenapp

Arizona Daily Sun

PAGE -- An environmentalist group that wants to see the end of Lake Powell made its first Arizona stop Friday on a five-day "Sedimental Journey."

Moab, Utah-based Living Rivers brought a dump truck, director Owen Lammers, three singers and the president of the Dine Medicinemen's Association.

The presentations at Antelope Point and Glen Canyon Dam were similar to the one conducted by Living Rivers' predecessor, Glen Canyon Action Network, at the dam in March 2000.

This time, Living Rivers primarily wants to call attention to sediment buildup above the dam, robbing the Grand Canyon of precious nutrients and altering the canyon ecosystem. The group is driving a dump truck, destined for the other side of the dam.

But the National Park Service said Living Rivers needed a permit to redeposit the three tons of sand, drawn from sand bars at a kickoff rally Thursday night in Moab.

The tour, to coincide with the 100th anniversary of the founding of the U.S. Bureau of Reclamation, continues today with a stop at Lees Ferry and tomorrow's program at the South Rim tomorrow. The 700-mile trip concludes with Monday's rally at Hoover Dam.

Criticism of the proposed \$75 million resort-marina was the main topic of the day's first stop, at Antelope Point, a few miles east of Page on Lake Powell.

Only half a dozen Living Rivers members and about 25 curious onlookers -- most of them law enforcement officers and reporters -- attended the shadeless program near the closed Antelope Point boat launch in 95-degree heat. Lammers expects much bigger turnouts as the tour progresses.

Lammers has said Living Rivers is considering a lawsuit about Antelope Point, citing an "only cursory environmental analysis" by the Park Service in the way of an environmental assessment.

The Park Service and Navajo Nation have retained URS Corp. of Phoenix to prepare an environmental assessment. The assessment is expected to be released this summer with construction beginning not long after. Development in the area began with a launch ramp three years ago. But dropping lake levels have rendered the ramp useless this summer.

Lammers suggested that the Navajo Nation take on nearby Wahweap Marina and abandon plans for the one at Antelope Point to avoid disrupting sacred sites.

Water lobbyist to the Navajo Nation Council Max Goldtooth attributed the drought to dams, saying that offerings are being blocked in their journey to the ocean. He cited traditional beliefs.

"White Shell Mother lives in the ocean," he said. "She's willing to bless us with rain. But the offering never comes. That's why we have a drought. "These places here, these sacred cliffs, you can hear the echoes of those people in them," Goldtooth said.

Thomas Morris, president of the Dine Medicinemens Association, said: "We have polluted the water and sky. Mother Earth has been damaged ... When are we going to learn the people are destroying the healthy sacredness?"

Friends of Lake Powell's Ostapuk said, "If Living Rivers really cared about the Navajo people, they would have come here today with water in their trucks and spent the day hauling water to drought-stricken Navajo water supply systems."

Watching from a distance was Thomas Boyd, acting director of the Navajo Nation Tourism Department. Boyd declined an invitation to take the microphone.

Projections supplied by Boyd indicate the resort-marina will provide 150 permanent jobs, 175 temporary positions, \$10 million in approximate annual payroll, \$30 million in annual community economic impact and other opportunities for Navajo-owned small businesses.

LR in the News 06/15/02

A 'Sedimental Journey' on the Colorado

By Brent Israelsen

Salt Lake Tribune

Hauling a dumptruck full of sand from the Colorado River near Canyonlands, an environmental group plans to ceremoniously throw the sand into the river today below Glen Canyon Dam.

It would be the first time in nearly 40 years that sediment from the upper Colorado River Basin has found its way into the Grand Canyon.

In the scheme of all things ecological, this modest transfer of earth does not amount to a hill of beans.

But Living Rivers, a group based in Moab, is hoping its "Sedimental Journey," which coincides with Monday's 100th anniversary celebration of the U.S. Bureau of Reclamation, will illustrate the plight of the sediment-starved lower Colorado River.

Before 1963, when the gates to the newly built Glen Canyon Dam were closed, sand and silt in the upper Colorado River Basin eventually swirled in the depths of the Grand Canyon, providing nutrients for plants, habitat for fish and beaches for river runners.

Those sediments, millions of tons per year, now wind up on the bottom of Lake Powell, the reservoir behind the dam.

By the 1980s, scientists began documenting dramatic changes in the river's ecosystem as a result of the dam, which was at that time operated primarily to produce hydropower. The dearth of sediment, the drop in water temperature and the unnatural flows below the dam contributed to the extinction of four fish species and the near-extinction of four others, which are now on the endangered list.

A coalition of environmentalists is calling for the river to be restored.

Ultimately, the best solution is "decommissioning" -- knocking down or bypassing -- Glen Canyon Dam, said Owen Lammers, Living Rivers director.

"If we are going to protect and restore the integrity of the Grand Canyon ecosystem, the decommissioning is the most viable option. It is inevitable anyway," he said.

The bureau is not considering such an option. Instead, it is concentrating on altering dam operations to take advantage of sediment deposits from tributaries below.

For example, last month, the bureau's Glen Canyon Dam Adaptive Management Work Group recommended to Interior Secretary Gale Norton that the dam's releases be reduced this fall to conserve sediment deposited by the Paria River during the monsoons of late summer. Releases would then be ramped up in January to force those deposits onto the shores and into the backwaters where they are beneficial to fish, flora and fauna.

Randy Peterson, who directs the adaptive management program, believes this experiment will be more effective than the much-publicized beach-building flows the agency released from the dam in 1996.

Lammers was less optimistic, noting that no change in dam operations can overcome the fact that 95 percent of the Grand Canyon's pre-dam sediments came from upstream of the dam.

The Sedimental Journey ends Monday at Hoover Dam, where Living Rivers plans to hold a rally and protest. Later that evening at the dam, the bureau will stage a \$400,000 celebration of its 100th anniversary.

LR in the News 06/16/02

Bureau's birthday celebration to be met with protest

By Luke Turf
Yuma Daily Sun

Protesters plan to crash the party before the U.S. Bureau of Reclamation can blow out the candles on its 100th birthday cake.

The protest, set for Monday, is directed at the bureau's control of the Colorado River.

Yuma Audubon Society Conservation Chairman Cary Meister said the bureau has done some good scientific studies recently, but that 100 years of dam construction without considering the environmental effects has taken a toll on the river's natural ecosystem.

"Unfortunately now we're paying some of the prices for that," Meister said. And though no one can argue the management of the river — or mismanagement, depending on who you talk to — allowed Yuma to blossom into an agricultural haven, that transformation had a price.

"What the agency is really celebrating is 100 years of environmental devastation and unsustainable human population growth in the arid West," said David Hogan, rivers' program coordinator for the Center for Biological Diversity. "This legacy continues with the agency's turning a blind eye to harm it's causing to the Colorado River Delta in Mexico, among many other issues."

The delta has been a concern for environmentalists because the Colorado River no longer reaches the Sea of Cortez. The delta's fragile ecosystem depends on water making it to the area, which is home to several species listed for protection under the Endangered Species Act. Now, since no Colorado River water makes it to the area, the delta is literally hanging on to life thanks to a small amount of agricultural runoff water from the Wellton-Mohawk Irrigation and Drainage District. However, with more Colorado River water, the delta would flourish.

Virtually the entire river is diverted before it reaches the sea. The United States is allocated 10 times as much water as Mexico, and environmental advocacy groups have filed lawsuits charging the bureau needs to consider the impacts its activities are having south of the border. They contend the bureau needs to focus on restoring the natural ecosystem in the next 100 years, since they destroyed it in the first 100 years.

But the bureau isn't going to focus on restoring the natural environment, said Colleen Dwyer, an agency spokeswoman. She said the bureau wants to work within the existing framework of river management to allow for wildlife to live in harmony with the current water delivery system.

The groups also are trying to get state and federal govern- mental bodies to allocate more water to cross the border and a promise from Mexico that any additional water allocations will make it to the delta, and not just be consumed between the border and the delta.

The environmental advocacy groups say getting that guarantee from Mexican officials likely will be the most difficult part of saving the delta. So they also want to work with Mexico to make its water use more efficient, allowing some of the water Mexico now receives to reach the delta, rather than being wasted by poor irrigation methods.

At the same time, they'd also like to see more efficiency north of the border.

"Other dams and diversions can be managed to leave more water in the river so as to better protect the natural river wildlife and vegetation," Hogan said.

The protestors are gathering at Hoover Dam Monday, where the bureau is also celebrating, to protest what they call the bureau's mismanagement of the river.

"The Bureau of Reclamation has 49 dams along the Colorado River, but there's only one Grand Canyon," said Steve Glazer, chairman of the Sierra Club's Colorado River Task Force, which is also protesting.

Many environmental groups advocate tearing down Glen Canyon Dam, or draining its reservoir to improve river flows and protect the Grand Canyon. The groups say enough water is tied up in the river's other dams and that the dam at Glen Canyon impounding Lake Powell is unnecessary.

The Grand Canyon, they say, is threatened because the lack of natural river flow creates a lack of nutrients which causes beach and native wildlife loss. Non-native sport fish also have crippled the native fish populations, they say.

"We're not saying remove all game fish from the area," Hogan said. "We're saying there needs to be a balance, and right now there is not a balance."

Living Rivers, another environmental advocacy group, is guiding the "Sediment-al Journey" along the river to show the negative effects the bureau allegedly has created in the Grand Canyon and along the rest of the Colorado.

The main problem lies in a buildup of sediment, the fine clay and course sand that is a natural result of weathering and the basis of the ecosystem's food chain — insects survive off the minerals in the water from the sediment and fish eat the insects. According to Living Rivers officials, 95 percent of sediment and nutrients that once flowed through the Grand Canyon are now trapped behind Glen Canyon Dam, crippling the river downstream.

"The river is no longer a natural river ecosystem, it is a highly managed conveyance system," Hogan said.

River News 06/17/02

Grand Canyon's Colorado River –The Facts

What is the Grand Canyon? The Grand Canyon and the region it defines includes thousands of square miles of incised canyons, mesas and volcanoes overlain by a web of drainages that feed into the Colorado River, which carved the canyon. The Colorado River in Grand Canyon National Park is 277 miles long, and the Canyon is about 18 miles wide near the south rim facilities and nearly a mile deep. It was made a national park in 1919.

Where is the Grand Canyon? In northwest Arizona, bordering Utah. The south rim of the canyon in Grand Canyon National Park is most often accessed from Hwy 180 out of Flagstaff, Arizona. The north rim is most often accessed from Hwy 89 out of southern Utah.

What is the cultural history of the Grand Canyon? Human habitation of the canyon goes back at least 10,000 years to the Clovis and Folsom cultures, who were sophisticated big-game hunters. When the climate changed to warmer and drier conditions, another culture called Desert Archaic existed from 6500 BC to 1 AD. The farming cultures, known as Basketmaker and Puebloan, inhabited the Grand Canyon until about 1275 AD. Many modern-day cultures trace their origins to the canyon, including 34 Hopi clans. The Havasupai still live in the canyon and consider themselves its guardians.

What impact has the US government had on the canyon and the Colorado River? The Bureau of Reclamation (BuRec), an agency of the US Department of the Interior, was formed in 1902 to build water projects in the West. In 1935, BuRec began filling the reservoir formed by Hoover Dam. The reservoir filled in 1941 and inundated twenty percent of the Grand Canyon. In 1963, upstream of Grand Canyon, the gates of Glen Canyon Dam were closed, initiating a potentially lethal blow to the Colorado through Grand Canyon.

How have the Colorado River dams impacted the Grand Canyon? The Grand Canyon ecosystems are collapsing because Glen Canyon Dam has prevented sediment and nutrients from flowing into the canyon, lowered the water temperature, and eliminated life-giving floods. What is sediment? Sediment comes from natural weathering processes, such as rain and ice, and is typically composed of fine clay and coarse sand. In natural systems, sediment is eventually transported by flowing water to the sea. The Colorado River drains an area of soft rocks and is one of the muddiest rivers in the world. The plants and animals that depend on the Colorado River evolved with this high-sediment system.

Why is sediment important? Organic materials are mixed into the sediment matrix and provide the carbon necessary for tissue growth. Organisms such as insects depend on these nutrients and provide the base for the ecosystem's food chain. Of the 50 + species of native insects that once formed the natural food base for the Grand Canyon, none remain. The unnatural water temperature is another reason why the native insects do not reproduce. Because the Colorado River runs clear, a green alga called *cladophora* grows abundantly. This is an unnatural food source for native fish and has replaced the natural food web. Sediment deposits also form the Canyon's beaches and sandbars, which in turn provide habitat for the plants, birds and mammals that evolved with this muddy river.

Doesn't any of the sediment get through the dam? Ninety-five percent of the sediment and nutrients that once flowed through Grand Canyon's riverine ecosystem are now trapped behind Glen Canyon Dam.

Why have water temperatures changed? Water is released through large pipes (penstocks) built into Glen Canyon Dam and turns large turbines that produce electricity. The water enters the penstocks at a depth of about 200 feet below the surface of Lake Powell, the reservoir formed by Glen Canyon Dam. Because the sun's rays cannot penetrate water at that depth, the water is very cold. When the water exits the dam's power plant and flows as a river once again, the temperature is about 47 ° F.

Previously, when the Colorado River flowed in its natural riverbed, water temperatures reached 80 ° F in the summer. It was these warm temperatures that triggered animal reproduction. Non-native fish, such as trout, thrive in the artificially cold water and compete with the native fish for available food. They also prey on the few native fish that manage to reproduce in the warmer waters of the Little Colorado River, a tributary of the Colorado 75 miles below Glen Canyon Dam.

Why are flood flows important? Natural flows in the Grand Canyon fluctuated seasonally from 3,000 to 90,000 cubic feet per second (cfs). A cubic foot is about eight gallons of water. Every spring the melting snows from the Rocky Mountains brought a rushing torrent of water into the Canyon. The floods moved the sediment around to form new beaches and sandbars (beaches naturally degrade due to water and wind erosion) and replenished the nutrients high on the shores of the river to be utilized by plants and animals. This process also triggered seed germination for trees such as the mesquite. Now, with dam-controlled flows, the Colorado fluctuates every day between 8,000 to 20,000 cfs, creating a near static flow regime for an ecosystem that is dependent upon a dynamic system of annual recharge.



What has happened to the native species of the Grand Canyon? River otters and muskrats are now gone from the canyon. Four of the eight native Colorado River fish are gone and two more are struggling for survival. Native vegetation is disappearing from the high water zone or is stunted due to the lack of nutrients and the invasion of competing non-native plants.

Has there been any impact on the cultural values of the Canyon? Erosion poses a threat to native burial and sacred sites near the riverbed. The loss of native species represents additional native cultural losses.

What can be done to reverse these impacts? These impacts represent a significant violation of the 1916 Organic Act (which created the National Park Service) and the Grand Canyon Protection Act of 1992. These acts require that the federal government ensure and enhance the natural integrity of Grand Canyon's resources for future generations. This is why a growing nationwide coalition is demanding that the government obey the law and immediately:

- Restore natural sediment and nutrients flows from the Colorado into Grand Canyon
- Restore natural flow regimes to properly transport this sediment within the Canyon
- Restore the natural water temperatures of the Colorado River

What would be the initial steps for accomplishing these restoration goals? The Bureau of Reclamation and National Park Service must develop a recovery program for the Colorado River corridor in Grand Canyon that includes all species known to be native prior to the operation of Glen Canyon Dam. They need to implement a non-native eradication program to rid the Grand Canyon river corridor of alien species with a priority on those that prey on, compete with, or otherwise impair the health of native plants and animals.

How will the other restoration goals be accomplished without removing the dams? It may not be possible to save the Grand Canyon without removing Glen Canyon Dam. Over \$100 million has been spent on science programs in the Grand Canyon, but no viable plan to restore the canyon has resulted. This is not due to faulty science as much as it is to the priority politics of water and power. We must initiate the necessary measures to preserve the Grand Canyon in accordance with our nation's laws before the ecosystem collapses.

<http://www.livingrivers2.org/NewsImages/GCimpactsWeb.jpg>

LR in the News 06/17/02

Dignitaries, protesters mark bureau's birthday at Hoover Dam

Associated Press

BOULDER CITY, Nev. (AP) - The Bureau of Reclamation began its 100th birthday Monday with a dazzling celebration to light up the Hoover Dam as protesters nearby sought to spoil the party.

Hours before the speeches and fireworks, a group of protesters representing 84 environmental and social justice organizations including Friends of the Earth and the Sierra Club gathered near the bureau's most recognizable icon, calling for repair of the damage they say was created by the Reclamation Act of 1902.

The 100-year-old act launched by President Theodore Roosevelt created the bureau and a federal effort to "reclaim" the Western desert.

"If Roosevelt was here today, I think he would be amazed at all that we've accomplished," said Reclamation Bureau Commissioner John W. Keys III. "Our mission is water management. We're the go-between to provide water where it's needed most."

If the bureau were to sum up its vision for the next 100 years, it would be to work to balance the needs of water users with the environment, Interior Secretary Gale Norton said.

"We're going to be engaged in long-term planning that will allow the bureau to manage its current resources and to find environmentally sensitive ways to obtain more water supplies," she said as she stood atop the dam, a popular tourist attraction 30 miles southeast of Las Vegas.

President Bush, who turned down an invitation to the celebration, congratulated the bureau on what he said was its commitment to environmental protection, access to affordable energy and economic growth.

Some 40 activists, some dressed as fish and carrying signs, gathered on the dam's Arizona-side parking lot in 100-degree heat for about an hour to protest what they say is the negative impact of the bureau's dam-building legacy.

A group of musicians played atop a dump truck filled with Colorado River sediment to symbolize how dams - like the Glen Canyon on the Utah-Arizona line - have reduced water supply and choked off nutrients that nourish downstream habitat.

Owen Lammers, executive director of Moab, Utah-based Living Rivers, said the groups' key message was that while the bureau invested about \$200,000 to mark a century of river management, environmentalists see no cause for celebration.

"We're not there to protest or complain about the work that was done in the early days of the bureau," he said. "The planners weren't interested in ecological impacts. But we would like to see the same ingenuity and spirit applied to the problems that have been created."

The U.S. Air Force Thunderbirds precision flying team of six F-16 Falcons flew over the dam at 6:20 p.m. to kick off the festivities, which included dinner in the power houses on either side of the dam and fireworks and laser shows.

Traffic over Hoover Dam was to be halted and detoured from noon to midnight for the celebration that was to include about 2,200 guests.

"Almost all of the bureau's former commissioners are coming," said spokeswoman Trudy Harlow. Other expected participants included Nevada Gov. Kenny Guinn, Arizona Gov. Jane Hull, and Wyoming Gov. Jim Geringer.

Security was expected to be tight with hundreds of law enforcement agents on hand, bureau spokeswoman Dana Mishoe said.

The Hoover Dam, built in the 1930s, draws 1.2 million tourists annually and is considered one of the nation's greatest engineering feats. It provides drinking water,

electricity and recreation to 23 million people in the Southwest, and is one of the Bureau of Reclamation's 180 water projects in 17 Western states.

Roosevelt created the bureau with the Reclamation Act of 1902 to provide water to Western farmers.

Today it is faced with balancing the needs of endangered species against those of large-scale agriculture, industry, growing cities and Indian tribes.

To address the debate about whether the bureau is meeting its responsibilities, a symposium of experts from federal agencies, universities and the private sector is scheduled Tuesday and Wednesday at the University of Nevada, Las Vegas.

Monday's privately funded party was cosponsored by Water for the West, a nonprofit organization created solely for celebrating the Reclamation Bureau's birthday, Harlow said.

To attend the celebration, individuals had to contribute \$5,000. A \$10,000 contribution allowed a company's logo to be projected on the dam during the program, according to Keith Ashdown, spokesman for Taxpayers for Common Sense.

River News 06/17/02

Declaration for the Restoration of the Colorado River through Grand Canyon

We gather here today atop Hoover Dam on June 17th 2002, the centennial of the founding of the Bureau of Reclamation (BuRec). One hundred years ago Congress passed the Reclamation Act of 1902, spawning an epoch of dam building and river diversion unsurpassed by any resource management agency in the developed world. More than 600 BuRec dams dot the landscape of the 17 western states, with their tallest concrete dam being the one beneath us. Just upstream lay the degraded remains of the once thriving Grand Canyon ecosystem. The demise of this Canyon, one of the seven natural wonders of the world, symbolizes the unnecessary impacts brought upon rivers throughout the West by BuRec's environmentally and culturally destructive policies designed to optimize water delivery.

Although BuRec's present mission states, "... protect water and related resources in an environmentally and economically sound manner in the interest of the American public," the agency has yet to demonstrate a significant commitment to environmental stewardship or to recognize the significant water scarcity problems that future generations will face. BuRec's day-to-day policies remain largely driven by the water and power industries, whose economic viability is largely dependent upon subsidies sponsored by the Federal government. Throughout its domain BuRec's promotion of wasteful water and energy practices has resulted in the loss of functioning rivers, the loss of critical habitat, and the loss of natural and cultural heritage.

Nowhere are these losses more pronounced than in the Colorado River through Grand Canyon National Park. In 1941, as Lake Mead reservoir filled, 20 percent of the Grand Canyon was inundated behind Hoover Dam. In 1963, upstream of Grand Canyon, the gates at Glen Canyon Dam closed, which initiated a slow, and left unchecked, potentially lethal blow to the remainder of the Colorado River through Grand Canyon.

The following impacts on the collapsing Grand Canyon ecosystem are now evident:

... Ninety-five percent of the sediment and nutrients that once flowed into Grand Canyon's riverine ecosystem are now trapped behind Glen Canyon Dam causing the beaches to erode away and the native vegetation to disappear, disrupting the historic food base.

... Seasonal water temperatures that previously fluctuated from freezing to 80 degrees Fahrenheit, now range from 43 to 55 degrees, blocking the warm water necessary to trigger native animal reproduction, and fostering non-native fish species at the expense of native species.

... Natural flows, which fluctuated seasonally from 3,000 to 90,000 cubic feet per second, now can fluctuate only from 8,000 to 20,000, cubic feet per second, creating a near static flow regime for an ecosystem that is adapted to and dependent upon the dynamic pre-dam flow. Public concern about these devastating impacts caused BuRec, in 1982, to establish the Glen Canyon Environmental Studies. In 1992 Congress passed the Grand Canyon Protection Act, and in 1996 new rules were established for altering the operation of Glen Canyon Dam. Unfortunately, a narrow interpretation of these laws has failed to halt the further decline of Grand Canyon's native habitat. Other impacts to the ecosystem include:

... A green non-native algae called cladophora has replaced the natural food mix of macroinvertebrates, such as insects.

... Of the 50 to 100 insect species that once formed the food base of the Grand Canyon, none remain. They have been replaced by 25 alien species.

... Of the eight native Colorado River fish, four are extirpated, and two are struggling for survival. Twenty alien species now thrive in the artificial environment.

... Otters and muskrats are now gone from the Canyon, in part due to loss of streamside wetlands.

... Native riparian vegetation is disappearing from the high water zone, or is stunted due to the lack of nutrients and the invasion of competing non-native plants.

... Erosion poses a threat to native burial and sacred sites near the riverbed, and the loss of native species represents additional native cultural losses.

These changes represent a significant violation of the National Park Service's Organic Act (1916), which requires that the Department of Interior ensure the protection of the natural integrity of Grand Canyon's resources for future generations. The Organic Act

and the establishment of Grand Canyon National Park pre-date the decision to construct Glen Canyon Dam. Whereas numerous alternatives exist to provide for the societal needs associated with Glen Canyon Dam, there are no alternatives to the unique ecosystem that is Grand Canyon National Park. Moreover, according to BuRec documents, safety concerns associated with the continued operation of Glen Canyon dam pose a significant risk to the ecology and to the native cultures throughout the Grand Canyon in the event of dam failure.

Grand Canyon's river corridor environment is also suffering due to the proliferation of motorized watercraft, in what otherwise would be designated wilderness area. Noise and effluent from motor boats are adding additional stress to an already overburdened ecosystem.

The construction and operation of BuRec facilities has brought about the near collapse of the Grand Canyon ecosystem. For over twenty years the public has been demanding action, but the decline has continued. As the Canyon's needs are self-evident, we call upon the BuRec to deliver the following:

- ... The restoration of essential sediment and nutrient flows from the main stem Colorado into Grand Canyon.

- ... The restoration of natural flow regimes to properly transport this sediment within Grand Canyon, when and where it belongs.

- ... The restoration of more natural seasonally variable water temperatures in the main stem Colorado through Grand Canyon.

BuRec and the National Park Service must also cooperate to:

- ... Develop a restoration and recovery program for the Colorado River corridor in Grand Canyon that includes the full recovery of all species known to be native to Grand Canyon prior to the operation of Glen Canyon Dam.

- ... Implement a non-native eradication program to minimize alien species in the Grand Canyon river corridor with a priority on those that prey on, compete with, or otherwise impair the health of native plants and animals.

To aid in the restoration effort and ensure equitable access to a restored Grand Canyon riverine ecosystem we further request management of the Colorado River through Grand Canyon as wilderness, as is currently the policy for the surrounding landscape, precluding the use of motorized watercraft.

The Grand Canyon is a world-renowned resource that demands restoration. It is, however, merely the most famous of river corridors devastated by BuRec projects and policies. We call upon BuRec, on this, its centennial day, to demonstrate to the public its commitment to reversing this damage by reviving the Grand Canyon ecosystem as its first significant step in an agency-wide effort to, as its mission states, "...protect water and related resources in an environmentally and economically sound manner in the interest of the American public."

Presented here at Hoover Dam on the 17th Day of June 2002, one hundred years after passage of the Reclamation Act, by the following undersigned advocates for Grand Canyon restoration.

Access for All
Alliance for Sustainable Communities
Alliance for the wild Rockies
American Lands Alliance
Bear Creek Farms
Blue Water Network
Bridgerland Audubon Society
Canoe Cruisers Association of Greater Washington, DC
Center for Biological Diversity
Central AZ Paddlers Club
Christions Caring for Creation
Citizens Progressive Alliance
Clearwater Biodiversity Project
Colorado Plateau River Guides
Colorado Rivers Alliance
Committee for Idaho's High Desert
Community Clean Water Institute
Copper River Watershed Project
Dine Medicinemens Association
Earth Island Institute
Electors Concerned About Animas
Endangered Habitats League
Escalante Wilderness Project
Eyak Preservation Council
Flagstaff Activist Network
Forest Conservation Council
Four Corners School of Outdoor Educations
Friends of AZ Rivers
Friends of the Earth
Friends of the Eel River
Friends of the Los Angeles River
Friends of the Santa Clara River
Friends of Yosemite Valley
Great Old Broads for Wilderness
Great Swamp Watershed Association
Green Delaware
Greenpeace
Hudspeth County Green Party
International Rivers Network
John Muir Project
Jumping Frog Research Institute
Kettle Range Conservation Group

Land Institute
Living Oregon Waters
Living Rivers
Mankato Area Environmentalists
Maricopa Audubon Society
Montana River Action
National Forest Protection Alliance
Northwest Rafter Association
Oil & Gas Accountability Project
Oregon Natural Desert Association
Oregon Toxics Alliance
Pequannock River Coalition
RangeBiome
River Runners for Wilderness
Riparian Improvement Organization
Sacramento River Preservation Trust
San Juan Audubon
San Juan Citizens Alliance
Save the Illinois River
Shark River Cleanup Coalition
Shundahai Network
Sierra Club
Sky Island Alliance
Solar Energy International
Souther Utah Wilderness Alliance
Southern Appalachian Biodiversity Proj.
Spirit of the Sage Council
Superior Wilderness Action Network
Taxpayers for the Animas River
These EXIT Times
Utah Animal Rights Coalition
Utah Environmental Congress
Utah Rivers Council
Wasatch Mountain Club
Western Watershed Partnership
Western Wildlife Conservancy
Wild Angels
Wild Utah Project
Wild Wilderness
Wilderness Watch

LR in the News 06/17/02

Dams' role in flux for urban West , Agency rethinks task at 100-year mark

By Shaun McKinnon

Arizona Republic

You can talk about the climate, the citrus, the copper. You can wax rhapsodic about the plentiful land and even air-conditioning. But the truth is, Phoenix would still be a dusty, sparsely populated cow town if it weren't for an unglamorous government agency dreamed up more than a century ago by a one-armed river runner.

The U.S. Bureau of Reclamation was born 100 years ago today with a narrowly defined mission: Water the arid West. Find a way to tame the wild rivers and make the deserts blossom. In other words: Just dam it.

And from the dams the bureau built sprang metropolitan Phoenix : Roosevelt Dam on the Salt River, one of the agency's first undertakings, gave the Valley its first sure water supply and a way to survive the region's unpredictable dry spells. Hoover and Glen Canyon dams on the Colorado River provided the expanding region a place to store even more water and the Central Arizona Project furnished the means to deliver it.

Yet as the bureau celebrates its centennial tonight at Hoover Dam, the agency faces serious questions about its role in the new, more urban West. Many of the original dams and canals were built to serve farmers and, critics charge, are now inefficient and wasteful. Environmentalists accuse the bureau of destroying ecosystems by damming rivers like the Colorado. Some groups want much of what the bureau did undone, beginning with the dismantling of Glen Canyon Dam.

Bureau officials insist they have kept up with changing needs, working with cities to adapt agricultural water projects. They also point to the drought that grips the intermountain West and say the network of reclamation projects is protecting many areas, including Phoenix, from severe water restrictions.

They acknowledge that their mission has evolved from simply building dams and canals to managing a valuable natural resource, a job that may now include knocking down a dam or two.

"It is a different world," said Robert Johnson, the bureau's Lower Colorado regional director. "We have to balance a lot of different interests. In many ways, it's probably as challenging as the historic role of building projects. It takes a different set of skills, but nonetheless it's a very important role." Phoenix was emerging from a disastrous drought when President Theodore Roosevelt signed the Newlands Reclamation Act on June 17, 1902. Many settlers left the Valley after suffering through several dry years that ruined crops and stripped the land of its topsoil. The rivers simply couldn't support traditional farming.

John Wesley Powell, the famed Colorado River explorer, foresaw such trouble and proposed a series of land management reforms that took into account the fickle waters of the West. The one idea that survived was the U.S. Reclamation Service, which was charged with building dams to store water for dry years and control flooding in wet ones.

Roosevelt among 1st

One of the first dams proposed was Roosevelt, about 70 miles northeast of central Phoenix on the Salt River. It created what was, for a while, the largest artificial reservoir in the country. It was also the first dam to serve so many purposes: storing water, controlling floods and generating power.

"I really think the seminal moment in the history of the Valley of the Sun is the building of Roosevelt Dam," said Grady Gammage Jr., a Phoenix attorney and author who sits on the board that manages the Central Arizona Project.

"There's been lots of stuff that's happened since then, a lot of other dams built, and the CAP, but if Roosevelt Dam hadn't been built as one of the very first of the federal reclamation projects, we wouldn't have a city like this. We wouldn't have the storage capacity to support this kind of a population."

Major milestones

Three other milestones in the bureau's history further influenced the development of the Valley and the West:

- Construction of Hoover Dam, which created storage space for nearly 30 million acre-feet of water, or about twice the annual flow of the Colorado River.
- Construction of Glen Canyon Dam, upstream from Hoover, which generates enormous amounts of power for the Southwest.
- Construction of the Central Arizona Project, the 336-mile canal that moves water from Parker Dam to Phoenix and Tucson. Without that water, the Valley would have reached its growth limits by now.

"It's hard to imagine the Phoenix metropolitan area without reclamation projects," said Larry Dozier, the CAP's deputy general manager and a 16-year bureau veteran. "Here we are in the midst of one of the worst droughts in history and central Arizona hardly notices."

Protesters to gather

But not everyone will be celebrating the agency's work tonight. Activists from more than 80 environmental groups have planned a counterevent to protest what they believe is a legacy of ecological neglect at best and wholesale destruction at worst.

The focus of the protest is Glen Canyon Dam, which conservationists say has wrecked the ecosystem of the lower Colorado River and the Grand Canyon. Most of the groups involved support a Sierra Club proposal to drain Lake Powell and decommission the dam.

"The Canyon is an Arizona icon, yet a lot of people don't realize its ecosystem is on the brink of collapse," said Lisa Force, Arizona program director for the group Living Rivers. "It's just so ironic that the bureau is spending tremendous time and money celebrating its own existence while the Grand Canyon and rivers all over the West are suffering from bureau mismanagement."

Construction of Glen Canyon Dam halted the natural flow of sediment down the river and lowered the water temperature significantly. As a result, environmentalists say, many wildlife species have been pushed toward extinction. Four of eight native fish species, for example, no longer live in the Canyon.

Force said dismantling Glen Canyon Dam is not as radical an idea as many people believe it is. The lost water storage could be made up in part by taking more water directly from the river, eliminating losses to evaporation from Lake Powell's surface. She and others also dispute the importance of Glen Canyon's power supply, insisting other sources could easily fill in the gaps.

"We do not expect or even want the bureau to go out and rip out all their dams," Force said. "We recognize some of those dams are vital for power and water. We're suggesting they put responsible management in place, and that begins with water conservation all over the basin."

Johnson, the bureau's regional director, said the changes sought by the environmental groups reflect increasing awareness of such issues throughout the West. But the bureau has to balance changes with the needs of those who hold legitimate water rights.

"Change will occur," he said, "but it will occur slowly and incrementally." For example, he said, both Salt River Project and the CAP are gradually shifting agricultural water to urban uses, while in California, officials are working with farmers to reduce waste.

Gammage doesn't believe the environmental groups will succeed in bringing down Glen Canyon Dam. "There is a legitimate need for that storage," he said. "It isn't just 'dam it because we can.' "

Even Force of Living Rivers admits that gaining widespread public support for the idea won't be easy. But the message she and others are trying to deliver isn't that far removed from the one John Wesley Powell preached when he proposed a reclamation agency in the first place.

"People have to learn that we live in a desert, that this is the arid West," Force said. "We have this false sense that the fed government has conquered nature and has drought and flooding under control. But no matter how many reservoirs we build, no matter how many dams we build, we can never make more water."

LR in the News 06/18/02

Dam hosts centennial celebration

By Keith Rogers

Las Vegas Review-Journal

With fireworks and a laser light show driven by technology that didn't exist 100 years ago, the Bureau of Reclamation celebrated its centennial birthday Monday at Hoover Dam, its proudest achievement.

Hundreds of police officers from numerous law enforcement agencies guarded the 6.6-million-ton concrete dam while 2,200 bureau employees, former employees and invited guests toured the 67-year-old structure and ate dinner below where turbines churn out hydroelectricity.

In an interview before she addressed the throng, Interior Secretary Gale Norton described the \$600,000-event as "a great celebration" of the work the bureau had done over the century.

"They have transformed so much of the West," she said.

The event "also signals the future," she said. "Water continues to be a major issue for the West. With more and more people, the pressure on the water supply keeps growing."

She defended the event's price tag, saying, "It's an unusual opportunity to have a centennial celebration. It's important to remind people about the necessity for water in the West."

Nevada Gov. Kenny Guinn, Arizona Gov. Jane Hull and Wyoming Gov. Jim Geringer were among the invited guests.

Guinn, too, acknowledged the need to mark the occasion, noting the sheer volume of water supplied by the bureau: 10 trillion gallons to more than 31 million people each year.

"Certainly any time you can last 100 years in any program, it's time to celebrate," Guinn said.

A short time later, at 6:20 p.m., the Air Force's aerial demonstration team, the Thunderbirds from Nellis Air Force Base, swooped down in formation, making two, low-altitude passes over the dam with smoke trailing from their red, white and blue F-16s.

Kathy Maybee, a six-year bureau employee, watched the planes pass as she stood atop the dam with family and friends.

"I was joyous that it's still here, that we can still do this. It's still the United States of America," she said.

The nonprofit Water for the West Foundation shouldered about two-thirds of the bill for the event. The foundation, a group of water providers, contractors and power organizations that deal with the bureau, spent more than \$400,000 on the fireworks, light show, transportation, the event program and dinner for 2,200 guests, said foundation President John Sullivan.

A bureau spokeswoman, Trudy Harlow, said the bureau spent about \$200,000 on the celebration, mostly for site preparation and security. The Sept. 11 terrorist attacks spurred the bureau to heighten security at Hoover Dam and officials, who had planned the event for a year, decided to close the dam to traffic for 12 hours beginning at noon.

Motorists heading southbound on U.S. Highway 93 were directed to take U.S. Highway 95 and state Route 168 through Laughlin to get into Arizona.

At the event, bureau Commissioner John Keys lauded the work done in the 100 years since the Reclamation Act was signed by President Theodore Roosevelt. The first project, he said, "Specification No. 1," was Derby Dam on Nevada's Truckee-Carson Irrigation district.

"These were never-before-imagined projects of colossal size, surpassing the technology of the day. Soon, reclamation engineers were pushing the limits of dam building technology. They built larger and higher structures than had ever been thought possible," he said.

Hoover Dam, originally called Boulder Dam, is one of the tallest in the world and it was finished only five years after construction began in 1931.

"Men worked under dangerous and extreme conditions. And they didn't have any of the advantages we have today in terms of machinery or technology," Keys said in his prepared remarks.

About six hours before the festivities began, some 25 environmental activists staged a protest to call attention to the impact of the construction of Hoover Dam and hundreds of others in the West.

The contingent had traveled 700 miles in five days hauling sediment in a 25-ton dump truck from the banks of the Colorado River near Utah's Canyonlands National Park to a parking lot on the Arizona side of Hoover Dam.

Owen Lammers, executive director of the nonprofit group, Living Rivers, based in Moab, said the rally was symbolic because the bureau's Glen Canyon Dam has prevented sediment and nutrients from flowing into the Grand Canyon, affecting the food chain for fish and wildlife.

President Bush weighed in on the celebration in a letter to bureau officials. "These efforts strengthen our nation's economy, ensure the efficient use of limited resources, benefit fish and wildlife and contribute to outdoor recreation opportunities," his message said.

LR in the News 06/18/02

Dam Builder Turns 100 Amid Praise, Criticism

By Brent Isrealsen

Salt Lake Tribune

HOOVER DAM, Nev. -- What do the lake-sized swimming pools on the Las Vegas Strip have in common with artichokes growing in California's Imperial Valley? Neither would be possible without the U.S. Bureau of Reclamation, which on Monday celebrated its 100th birthday.

In festivities marked by fireworks, F-16 flyovers and flowery speeches by top Bush administration officials, the bureau was honored Monday night at Hoover Dam on the lower Colorado River.

Formed in 1902 to store water and generate electricity, the bureau has had an extraordinary amount of influence on population growth and economic development in the arid West, including Salt Lake City, which relies heavily on Reclamation water diverted from the Uinta Mountains.

"Look at the great cities out here in the West -- Boise, Salt Lake City, Spokane, Phoenix, Las Vegas. All were built around Reclamation projects," said Bureau of Reclamation Commissioner John Keys, a Utah resident.

"It was Reclamation that turned the dust and sand to arable soil and the brown to green," said Interior Secretary Gale Norton.

More than 2,000 bureau employees, their families, representatives from Western states and officials from water and power agencies attended the \$500,000 gala, which took place at the bottom of the 67-year-old dam.

Norton thanked past and present bureau employees.

"You [provided] a long, cool drink of water to a parched land," she said. "For this we will be forever grateful."

She and Keys also paid tribute to Hoover Dam, which remains an icon of the bureau's engineering prowess. Impressive even by 21st century standards, Hoover was the first of a series of big dams that would tame all of the West's big rivers.

The bureau today manages 348 dams, which store 245 million acre feet of water. They provide drinking water to 25 million people in 17 states and irrigate farms that account for 60 percent of the nation's vegetables and 25 percent of its fruits and nuts.

The bureau also generates more than 42 billion kilowatt hours of electricity from 58 hydroelectric facilities -- enough power for more than 9 million people.

Keys said the bureau has accomplished the mission President Roosevelt gave it a century ago. "If only Teddy Roosevelt could see us now," Keys said. "He'd be amazed."

Roosevelt, a pioneer of natural resource conservation, also might be chagrined at the environmental devastation caused by the numerous dams, which have forever altered ecosystems, led to the extinction or near-extinction of dozens of fish and other species, and impounded hundreds of pristine places, including Glen Canyon in Utah and the western end of the Grand Canyon in Arizona.

"There's no cause for celebration. This should be a wake," said Owen Lammers, director of Living Rivers, a Moab-based environmental group that protested Monday's gala.

A coalition of environmental groups on Monday called for an overhaul of the Bureau of Reclamation, in particular its management of the Colorado River.

Environmentalists say the bureau should pay more attention to the Grand Canyon, which is losing its beaches and native riparian and fish species at a high rate.

"We're calling on the bureau to invest its next 100 years in protecting and restoring what's been lost," said Jim Wechsler, a Utah representative of the Sierra Club.

In an interview Monday evening, Keys responded, "Where have they [bureau critics] been for the past 10 years?"

Keys said the bureau already has made the shift from its era of dam-building to one of management and environmental restoration. He pointed to a bureau-sponsored "adaptive management" group that is working on solutions to ecosystem problems below Glen Canyon Dam.

But he promised the dam, which environmentalists ultimately want to see removed or bypassed, will be intact 100 years from now.

"People are going to look up there and say, 'What a grand facility that is.' "

LR in the News 06/18/02

Columnist Susan Synder: Dam these difficult questions Las Vegas Sun

This morning I drew water from the tap and poured it into the coffee maker.
I changed the water in the cat's dish, and then filled the watering can.
I watered the banana tree and African violets I inherited from a close friend who moved away. I watered the basil, cilantro and teeny forget-me-nots. I watered the pink geraniums in the guest room and a plant I cannot name, though it is my favorite because it refuses to let me kill it.

I started a load of wash and hopped into the shower.

When this is your daily routine, it's rather sticky to plop down at a computer terminal two hours later and bang out 475 words saying the Bureau of Reclamation's 100th anniversary is cause for a wake rather than the celebration conducted Monday at Hoover Dam.

President Theodore Roosevelt's Reclamation Act of 1902 created the bureau to provide water to the West's farmers. In 100 years it has built more than 180 projects in 17 states. The 67-year-old Hoover Dam alone provides drinking water and electricity to 23 million people.

But bureau adversaries say these projects are killing the West. About 400 miles upriver from Las Vegas is Glen Canyon Dam, which created Lake Powell on the Utah-Arizona border. Researchers were given barely three months to excavate and study Glen Canyon's more than 3,000 Indian cultural sites before the bureau flooded it with Colorado River water in 1962.

Downriver from Lake Powell, the Grand Canyon rewards those who sweat it out to the bottom with an ecosystem possessing beauty that defies description. Beaver, otter and muskrat once lived there. But we didn't get to see them.

Environmentalists say they have disappeared along with native flora and fish species because dams such as Glen Canyon trap nutrient-bearing sediments and ruin seasonal changes in water flow.

The Grand Canyon is dying.

But without the dams, reclamation bureau officials say we wouldn't have water for the irrigation and electricity that has allowed most of us to settle in the West.

Told you this was sticky. Do we want coffee and forget-me-nots in the kitchen every day or unparalleled beauty at the bottom of the Grand Canyon once in a lifetime?

We want both. But at what price?

"Thousands of river miles, critical habitat for endangered species and the cultural heritage of a number of indigenous tribes have all been devastated by the dams BuRec has constructed in the western United States," Owen Lammers, executive director of Living Rivers, has said.

Lammers and a group of Living Rivers supporters left Moab, Utah, on Thursday with a dump truck of sediment and stopped at Lake Powell, Lee's Ferry in Arizona and the Grand Canyon's South Rim before arriving at Hoover Dam Monday. They staged a demonstration a few hours before the bureau's laser light show and gala.

Living Rivers members say the bureau needs to overhaul its manner of doing business, including properly collecting water-delivery costs from corporate farmers and closing projects such as Glen Canyon Dam before it is too late.

It's a sticky spot. The ever-elusive "win-win" for which government officials strive doesn't seem to exist. Someone has to lose. But who?

LR in the News 06/18/02

Bureau has birthday bash at Hoover Dam

By Jace Radke

Las Vegas Sun

The workers who built Hoover Dam in the 1930s were used to the explosions that thundered through Boulder Canyon to make way for the dam.

On Monday night some of those same workers again heard the sound of explosions reverberating through Boulder Canyon, as the Bureau of Reclamation celebrated its centennial by lighting up the sky over Hoover Dam with fireworks.

Interior Secretary Gale Norton joined Gov. Kenny Guinn and a crowd of more than 2,000, including current and former Bureau of Reclamation employees, to celebrate the agency's role in bringing water and power to the Western United States.

Norton called the bureau's history "a century of progress, a century of making the arid west bloom."

"(The Bureau of Reclamation) has changed the course of rivers, filled irrigation ditches, enabled new communities and fed a hungry nation," Norton told the crowd assembled at the base of the dam, the agency's premier project.

Guinn said that the Bureau of Reclamation's legacy is seen in mammoth structures like the 726-foot Hoover Dam.

"Hoover Dam is often defined as one of the wonders of the world," Guinn said. "Before the Bureau of Reclamation built the dam Las Vegas was little more than a hot and dusty railroad stop between Los Angeles and Salt Lake City."

Carl Hoffman, a 94-year-old who helped design the dam, said Guinn was right with his characterization of Las Vegas in the early '30s.

"This is the thing that made the West," Hoffman said. "When I came in 1933, Las Vegas was just a whistle-stop."

Hoover Dam meets the domestic water and irrigation needs of more than 18 million people in Nevada, Arizona and California. The dam generates 4 billion kilowatt-hours of electricity a year, enough to serve 1.3 million people.

While Hoover is a major project, the Bureau of Reclamation operates a total of about 180 projects in 17 Western States, providing water to about 33 percent of the population

in the American West. Dams and Bureau of Reclamation power plants generate more than 34 billion kilowatt-hours of electricity a year.

While the electricity and water provided by reclamation projects is easily identifiable, protesters argued that the projects can harm ecosystems and destroy environments.

About 40 activists parked a dump truck full of Colorado River sediment on the Arizona side of the dam Monday morning.

Owen Lammers, executive director of Living Rivers, an organization dedicated to preserving natural environments, said that dams stop rich sediment needed by plants and animals from traveling down river.

Bureau of Reclamation Commissioner John Keys, said that he understood the concern and that the bureau is looking at ways to address the problem.

"The dams are here," Keys said. "We're not going to spend money to decommission dams, but we will spend money to find ways to adapt."

The Bureau of Reclamation has experimented with flow releases on the upper Colorado River designed to replace sediment in the Grand Canyon and build up beaches and areas for plants and animals to thrive. The last releases were in 1996, and they could again be used this winter, Keys said.

Although the protesters were allowed to set up in a parking lot on the Arizona side of the dam, security was tight at the event. U.S. 93 was shut down from noon Monday until after midnight this morning, and guests were bused down to the dam from a staging area about two miles away.

Although security concerns at Bureau of Reclamation projects have moved to the forefront since Sept. 11 the projects themselves continue to run in much the same way they have for most of the last century.

In July 1902, Interior Secretary Ethan Allen Hitchcock established the United States Reclamation Service within the U.S. Geological Survey, to study potential water development projects in Western states. In 1907 the service was separated from the Geological Survey, and an independent bureau was established under the Department of the Interior.

Congress authorized Hoover Dam, then known as Boulder Canyon Dam, to be built in 1928 marking the start of the heyday of reclamation construction of water facilities that occurred during the Depression and the 35 years after World War II.

The Bureau of Reclamation spent about \$200,000 for the event, and Water for the West, a non-profit organization of water users and businesses created for the celebration, spent \$400,000.

The Bureau of Reclamation's bill went mostly toward security and also included the loss in power caused by the need to shut down some generators Monday while guests ate a dinner of beef brisket and Caesar salad in the dam's two powerhouses.

Some of those in attendance were invited guests and others had contributed \$5,000 toward the celebration.

The Associated Press contributed to this story.

LR in the News 06/18/02

Bureau hailed for building West
By Donna Kemp Spangler

Deseret News

HOOVER DAM, Nev. — It's a cliché as old as cowboy boots, but water is and always has been the lifeblood of the West.

And with the help of engineering marvels that tamed the wild rivers with massive concrete dams holding back sprawling reservoirs it is now possible to quench the thirst of tens of millions of people who now call the desert home.

"Tonight we celebrate a milestone, a century of progress, a century of making the arid West bloom," said Secretary of Interior Gale Norton, who arrived here Monday evening to celebrate the 100-year anniversary of the Reclamation Act and its offspring, the Bureau of Reclamation.

Without the more than 600 dams built by the dam-building agency, "Would Las Vegas, Boise, Salt Lake City, Spokane and Phoenix be cities or simply trading posts?" she asked.

Hundreds of bureau supporters were on hand with a resounding endorsement of the obvious: The West would look nothing like it does today without the Bureau of Reclamation.

"The West has literally grown up around reclamation projects, the farms, the cities, the way of life; all were made possible with reclamation's help," said John W. Keys III, commissioner of the Bureau of Reclamation and a Moab resident. "Look at all the great cities out here in the West. All were built around reclamation projects."

Hoover Dam, built in the 1930s and considered one of the nation's greatest engineering feats, draws 1.2 million tourists annually and provides drinking water, electricity and recreation to 23 million people in the Southwest.

Monday's celebration was a chance for the agency — much maligned by its environmental critics — to pat itself on the back for a job well done.

Every year, the bureau delivers 10 trillion gallons of drinking water to 31 million homes, electrical power to 3.5 million homes. The historic problem of river flooding has become

almost nonexistent, 10 million acres of farmland is now irrigated and playground wonderlands have sprung up around reservoirs like Lake Powell.

"These efforts strengthen the nation's economy, ensure the effective use of limited resources, benefit fish and wildlife, and contribute to outdoor recreation opportunities," said President Bush in a message delivered to the Hoover Dam gathering attended by dignitaries from around the West.

But for the few conservationists protesting outside the event there was nothing to celebrate about the bureau's 100-year legacy of environmental degradation, extinct species and wild rivers stunted by concrete.

The flood control that benefits farmers has destroyed the natural ecosystem that thrives on the seasonal ups and downs of the rivers now blocked by concrete dams, they say. "We're not faulting the individuals who made decisions back then," said Owen Lammers, executive director of the Moab-based Living Rivers, which has an agenda to pull the plug on dams. "They did the best with what they knew at the time."

But it is time, he said, for the bureau to become one of restoration and healing.

Living Rivers is one of more than 80 environmental groups that pledged support for a series of protests along the Colorado River in Utah and Arizona leading up to Monday's event. Fewer than a dozen protesters were on hand at Hoover Dam.

Lammers believes the Bureau of Reclamation could apply the same creative genius that built Hoover Dam and Glen Canyon Dam toward correcting the problems created in the past 100 years. Only then it could achieve that elusive balance between the needs of humans and healthy river ecosystems.

The Sierra Club, meanwhile, is pledging to help the Bureau of Reclamation transform itself into agency that fixes the damage it has caused.

"The bureau must include among its primary goals the restoration of rivers, streams and riparian habitat to conditions that enable native fish and wildlife to flourish and thereby ensure that the needs of the natural environment and the human population will be served," the Sierra Club said in a prepared statement.

Department of Interior officials defended the bureau's environmental record, pointing out a series of cooperative projects to restore river corridors and riparian areas.

"The bureau has certainly become environmentally sensitive," Norton told the Deseret News. "There's lots of innovative things being done."

Norton and Keys both agreed the bureau's next 100 years will not be focused on building new dams but on using the water more efficiently, while developing new, environmentally sound water supplies in the process.

LR in the News 06/20/02

Officials party while the flannel-mouthed sucker dies

By David Hare

Las Vegas City Life

Depending on who you ask, the Bureau of Reclamation's June 17 centennial birthday party was either a celebration of man's taming of the Western water supply, or a gathering of inept, contemptible bureaucrats who threw themselves a \$600,000 shindig at the expense and inconvenience of the public.

As the bureaucrats partied, a caravan of protesters led by Living Rivers, a group of Phoenix-based environmentalists, gathered nearby on the Arizona side of the Hoover Dam. The group wanted to draw attention to what they claim is the bureau's 100-year track record of ruining what it was designed to protect: water supplies in the American West.

"[The Bureau of Reclamation] throws this hellacious, expensive party after 100 years of destroying rivers and habitats all through the Colorado River Basin," said Lisa Force, a spokeswoman for Living Rivers.

So that explains the roadblocks being set up on Hoover Dam in the middle of the day.

Force and other representatives of the 88 environmental groups at the demonstration are angry at BuRec officials for the "devastating" amount of damage done to ecosystems allegedly caused by the 600 dams the bureau has constructed in the West.

In particular, the protesters are up in arms over the Glen Canyon Dam, about 370 miles upstream of Hoover. Among BuRec's 600 dams, Glen Canyon is the worst, according to Living Rivers.

"The Glen Canyon Dam is causing the death of the Grand Canyon's ecosystem," said Owen Lammers, executive director of Living Rivers, who claimed that 95 percent of the sediments and nutrients the Grand Canyon ecosystem depends on are being choked off by the dam.

Since the 1960s, he said, the dam has changed the Colorado River's natural flows, its seasonal variations in water temperature, sediment and nutrient deposition, and fish migration into and out of the Grand Canyon.

For example, the dam releases water at a constant temperature of 48 degrees, where natural flow conditions at this time of year would be around 80 degrees. Fish can't spawn in such chilly waters and, thus, Lammers said at least four species of fish have already been lost.

And, according to Lammers, we're about to lose two more fish species - the humpback chub and the flannel-mouthed sucker. Populations of these two fish have decreased dramatically in the last few years, he said.

So that explains the two girls who were dancing in the parking lot while dressed in fish costumes.

Moreover, Lammers said the federal government mandated about 10 years ago that BuRec correct the damage caused to the Grand Canyon ecosystem, but to no avail.

Instead, he said BuRec has merely "tinkered" at fixing the river flow problems.

Not so, said Doug Hendrix, acting public affairs officer at the BuRec office in Salt Lake City.

"Our view is that we're working with our stake holders, such as the U.S. Fish and Wildlife Service, through a number of programs designed to recreate the rivers' natural flow as it goes through the Grand Canyon," he said.

Hendrix then admitted to being on the job for only four months and said he felt uncomfortable commenting any further.

His superior, Barry Wirth, was out of the office for several days.

On the other hand, Robert Walsh, external affairs officer at the Las Vegas BuRec office, was available to comment on the centennial celebration's hefty price tag: "Close to \$600,000," he said.

Of that amount, about \$400,000 was donated by the nonprofit Water for the West Foundation and was spent on fireworks, laser beams and other party favors, Walsh said. The rest of the money - used for "security costs for protection of the dam and its surrounding facilities," among other expenses, Walsh said - was billed to American taxpayers.

The public, however, was not invited to the gala celebration, as traffic was diverted from Hoover Dam for the duration of the ceremony, which lasted about 10 hours.

Among the invited guests were Interior Secretary Gale Norton, BuRec Commissioner John Keys and Nevada Gov. Kenny Guinn.

It's been reported that Norton and company thought the centennial celebration was neat.

Tell that to the humpback chub and the flannel-mouthed sucker.

LR in the News 06/20/02

From AP to NPR, Sedimental Journey's Message Gets Out

From June 13-17, Living Rivers led a caravan of activists in a [Sediment-al Journey](#) to Hoover Dam to protest the 100th anniversary of the Bureau of Reclamation (BuRec). Our objective was to raise public awareness of the problems caused by BuRec's

century of dam building, especially pertaining to [Grand Canyon National Park](#) just below Glen Canyon Dam. We succeeded. Wide-spread media coverage resulted, especially in Arizona, Nevada and Utah. John Keys, BuRec's commissioner, was forced to address the problems associated with Glen Canyon Dam as one of the major criticisms of his agency. Although Keys continued his efforts to mislead the public regarding Glen Canyon Dam's future, the growing public awareness aided by BuRec's centennial will soon force him to abandon such public relations foolishness.

The [network of groups](#) supporting the call for immediate BuRec action on Grand Canyon and Glen Canyon Dam now stands at 85, and will continue to grow. The events at Hoover Dam and along our five-day, 700-mile journey had widespread participation including former Grand Canyon National Park and Bureau of Reclamation employees, representatives of a number of Native American tribes, and a host of environmental groups including the Sierra Club and Friends of the Earth. Whereas the remote location of these events restricted turnout, the media coverage more than made up for it.

We also succeeded in transporting much-needed sediment to the Grand Canyon. Our dump truck, which was filled with sediment at the beginning of the journey near Moab, was unloaded into the Grand Canyon five days later. While our one-ton contribution may have been tiny in comparison to the 100 million tons Glen Canyon Dam takes from Grand Canyon annually, it was nonetheless representative of the commitment by a growing number of constituencies to get all this sediment back permanently.

Here's a sampling of the coverage:

- [Hoover Dam centerpiece of Reclamation Bureau's celebration](#), Associated Press, June 14, 2002
 - [Hoover Dam site of celebration, protests Monday](#), Las Vegas Sun, June 14, 2002
 - [A 'Sedimental Journey' on the Colorado](#), Salt Lake Tribune, June 15, 2002
 - ['Sedimental Journey' makes stop in Page, Arizona Daily Sun](#), June 15, 2002
 - [Bureau's birthday celebration to be met with protest](#), Yuma Daily Sun, Jun 16, 2002
 - [Dams' role in flux for urban West, Agency rethinks task at 100-year mark](#), The Arizona Republic, June 17, 2002
 - [Dignitaries, protesters mark bureau's birthday at Hoover Dam](#), Associated Press June 17, 2002
 - [Dam hosts centennial celebration, Las Vegas Review-Journal](#), June 18, 2002
 - [Dam Builder Turns 100 Amid Praise, Criticism](#), Salt Lake Tribune, June 18, 2002
 - [Bureau Has Birthday Party at Hoover Dam](#), Las Vegas Sun, June 18, 2002
 - [Difficult Dam Questions](#), Las Vegas Sun, June 18, 2002
 - [Bureau hailed for building West](#), Deseret News, June 18, 2002
 - [Officials party while the flannel-mouthed sucker dies](#), Las Vegas City Life, June 20, 2002
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LR in the News 06/30/02

Wildfire is only one face of Colorado drought

By ROBERT WELLER Associated Press Writer

CENTER, Colo.- With only seven inches of precipitation a year, the San Luis Valley is a desert, but it's a water-rich desert.

Experts at milking water from the earth, farmers can grow potatoes right next to the Great Sand Dunes National Monument.

After the driest nine months in a century, matched by unceasing high winds that dry what little moisture is left, even miserly water users may have met their equal.

"It's kind of a cruel trick of nature that our best efforts are getting shot down pretty hard this summer," said Ray Wright, who farms potatoes in the valley.

On Colorado's Great Plains, about 200 miles to the east, Brad Ivey is trying to raise winter wheat, sunflowers and milo in the same winds that have already blown across Wright's valley.

"The winds blow every day. We have not had a day all spring that the wind hasn't blown. It sucks the little bit of moisture you get right out of the ground," Ivey said.

At the end of May, not one of Colorado's 241 water monitoring stations had reached the average rainfall for the period. More than 200 had less than 70 percent and 107 less than 50 percent.

Colorado farmers have seen their winter wheat crop fail. Ranchers are slaughtering cattle because there is no hay. Cities are imposing mandatory water restrictions. And wildfires have already burned more than 346,000 acres.

Most years, the same 14,000-foot mountains that ring the 7,600-high San Luis Valley, about 150 miles southwest of Denver, trap the sand blowing across the valley floor and deliver plenty of water when the snow melts each spring and summer.

Water from snowmelt-charged rivers was diverted into irrigation ditches, the general practice in the West, to water fields. Much of it was lost to evaporation in the process.

Then the biggest valley farms switched to center-pivot sprinkler systems, drawing from wells that tapped into the valley's aquifer. Water coming down the steep mountainsides is trapped between volcanic sediment and clay in two aquifers, one only 50 feet below the surface at some points.

The well-drawn sprinklers, which circle the irrigated area on metal poles, use less than half the water of conventional irrigation.

Now the irrigation ditches are used to recharge the aquifer. Water is pumped into them and allowed to settle into the ground.

"If you can store water below ground, it doesn't evaporate," said Nolan Doesken, assistant state climatologist.

San Luis Valley folks know the value of the water below.

They rose up with bake sales, pie auctions and kiss-a-pig auctions to fight a developer who spent \$1 million trying to get a referendum passed that would allow him to sell aquifer water to Denver's booming suburbs.

But it's harder to fight Mother Nature. Doesken wrote a report in 1999 warning that after the wettest string of years since the Dust Bowl days, Colorado was due for a drought.

After all, much of the West is semiarid or desert. The first military expedition to the Rocky Mountains returned east to advise that it had encountered "The Great American Desert."

"Ninety-seven percent of the time it doesn't rain. You only have to change that to 97.5 percent and you have a drought," said Doesken.

"If you look at the meteorological activity over the last 100 years, scientists now believe what we once characterized as drought conditions are actually quite normal," said Owen Lammers, executive director of Living Rivers, a group critical of dam construction in arid areas.

"Civilizations for thousands of years have tried to farm in the West and failed," Lammers said.

"We are starting to see signs of that happening again," he said. "We don't believe you can't grow food out here, but not the way we are doing it. Alfalfa is one of the most water-intensive crops and it is used to feed cattle."

After the Civil War, the federal government gave away land for a transcontinental rail line and the railroads promoted the region as an agricultural paradise. The government created the Bureau of Reclamation in 1902 and promised settlers they would get the water they needed to farm.

Once settlers poured in, hundreds of dams were built to provide irrigation water, much of it generated from the streams fed by the mountains of Colorado.

This year water has been cut off to ranchers in Gunnison County for the first time since a string of dams was built in the 1960s. Water is distributed based on the age of claims, and other users, including a farming area, have held water rights longer than the ranchers.

Cities depend on their own reservoirs. Denver has enough water to get through at least this season, but neighboring Aurora and some other suburbs have already had to impose mandatory water rationing. Last week, Denver imposed mandatory water restrictions.

In the last two decades, Colorado's population increased by 50 percent. Many farmers and ranchers sold their water rights to cities, which may have prevented more water shortages in suburbs.

Clouding the water are agreements that share Colorado's water with 10 states and Mexico. Wildlife agencies also insist that streams be maintained in some areas to protect aquatic life.

"The last time the San Luis Valley aquifer was seriously depleted, after a 1977 drought, it took five years to replenish it," said Wright.

"Our aquifer is just another reservoir. You have to put more in than you take out. If you mine water there, it is only a matter of time until it is played out.

"I am concerned that by the end of the summer many areas of the valley will see seriously declining water tables. I know there are going to be areas where there isn't sufficient water to finish a crop," said Wright.

Stop the Death Sentence for the Colorado River in Grand Canyon National Park

COMMENTS NEEDED BY NOVEMBER 1, 2002!

Grand Canyon National Park is undertaking the development of a management plan for the Colorado River throughout its boundaries. This 240-mile wilderness caliber river corridor has been devastated by the [impacts of Glen Canyon Dam](#). All native insect species are gone, as are four of eight native fish, otters, muskrats, and the native vegetation in high water zones. Despite this decline, NPS claims it will only address issues of Glen Canyon Dam that affect recreation, giving little consideration to the river's ecology. So they need to hear from you.

Furthermore, this river wilderness has been transformed into a floating, motorized cash register for commercial river companies. Commercial operators are granted 80% of the access for those who can afford to pay, while the general public must wait twenty years to self-guide a trip through the Canyon.

Your input is urgently needed to remedy these and a number of other problems plaguing this artery of one of the world's most famous parks.

The National Park Service will be accepting written comments from the public through September 15, 2002, to help frame the scope of this new Colorado River Management Plan. They will also host public meetings in Salt Lake City, Denver, Phoenix, Flagstaff, and Las Vegas.

With these comments in hand, the Park Service will then spend the next 18 months developing a plan that will be presented in a draft environmental impact statement. However, without a strong voice from the public now, the Park Service will ignore these critical issues and embark on a pre-determined course to leave things much the way they are.

As Mr. Rob Elliott of American Outdoors and Arizona Rafting Adventures has stated to Congress, a regulated river experience is more important than Grand Canyon's native ecosystem. "Recreationally, the difference comes in the sediments and water temperature. Pre dam, or post draining Lake Powell, the water temperature in August would be 80 degrees and 10% of it would be mud. There would be lots of flies, no way to get clean, and no cold water to help perishable foods make it through the canyon for two weeks. Not a pretty picture. As an environmentalist and river runner who regards Grand Canyon as home, I and my customers rather like the river environment and species diversity which has evolved downstream from the dam the way it is today."

Such sentiment appears consistent with a new effort known as ["Firewalk."](#) By not challenging the significant problems caused by Glen Canyon Dam, by not fighting against the use of motors which violates the Wilderness Act, nor by demanding significant reductions in commercial permit allocations to accommodate those who desire a self-guided river running experiences, the Firewalk group is working to ensure

the Park Service promotes little change such that the commercialization of the river continues to flourish while its ecosystem continues to perish.

Your help is urgently needed now. There are three ways for you to participate:

1. Download the simple [questionnaire](#) from the National Park Service;
2. Craft your own letter, and
3. Attend one of the five public scoping meetings (dates & locations below).

Regardless of your chosen mode of participation, let the Park Service know that you want a Colorado River Management Plan that will:

1. Bring the Park in compliance with the National Park Service Organic Act by developing a plan to restore the ecological integrity lost to Grand Canyon as a result of the operations of Glen Canyon Dam including: restoration of flows, sediment and natural water temperature; a recovery program for all native species known to exist in the Canyon prior to the operation of Glen Canyon Dam, and the eradication of all alien species that are impacting natives.
2. Comply with the recommendations of the Park's 1977 Wilderness proposal, and manage the river corridor as outlined in the 1964 Wilderness Act. Ensure that all management decisions reflect "minimum requirement" in terms of Park Service and visitor impact as prescribed in the Wilderness Act.
3. Phase out the use of motorized river transport so that all travel occurs at river pace. Motorized transport is unnecessary and inconsistent with the mandate that the river corridor be managed as wilderness.
4. Provide for full partnership with Native American tribes affected by the Plan, including mechanisms to protect and restore sacred sites and opportunities for Tribes to operate any concession services still deemed necessary once the Plan is complete.
5. Provide for an equitable system for individuals to access the river corridor that does not bias against those who cannot afford to buy their way onto a commercial river trip. Encourage the establishment of a waiting list for all people. Once at the top of the list, the permittee can determine how they wish to travel down river, either self-guided or with the assistance of a commercial company.
6. Following its completion, require the development of a "Needs Assessment" for concessionaire services to determine at what level such services need to continue on the river. This assessment must be completed prior to renewing any concessionaire contracts beyond 2005.

You can mail your comments to:

Linda Jalbert

Colorado River Management Plan

Grand Canyon National Park

PO Box 129

Grand Canyon, AZ 86023

(928) 638-7909

email:gcra-crmp.nps.gov

Colorado River Management Plan Scoping Meetings

Thursday, August 1, 2002

Denver, Colorado

Community College of Denver Downtown Campus

Tivoli Student Union Conference Center

900 Aurora Parkway

Tuesday, August 6, 2002

Salt Lake City, Utah

Salt Lake Community College-Miller Campus

Miller Training & Conference Center

9750 South 300 West

Thursday, August 8, 2002

Flagstaff, Arizona

Coconino Community College Commons

2800 S. Lone Tree Road

Tuesday, August 13, 2002

Las Vegas, Nevada

University of Nevada Las Vegas

Moyer Student Union Building

4505 Maryland Parkway

Thursday, August 15, 2002

Mesa, Arizona

Mesa Community College

Kirk Center-Navajo Room

1833 W. Southern Ave.

All meetings will be held in an open house format and there will be no formal presentations. The public is encouraged to stop by any time from 4:00 p.m. to 8:00 p.m. for information and to provide input.

Click here for additional information on the [Colorado River Management Plan](#) from the National Park Service

Take Action 07/01/02

River Management Plan-Scoping Form Download

Click here to download a copy of the [scoping form](#) [36k PDF File]

River News 07/01/02

About Firewalk

The following is NOT SUPPORTED BY LIVING RIVERS. It is presented here so the public may be better informed on the weak river stewardship and wilderness ethics associated with some of the parties attempting to influence the River Management Plan now being developed for Grand Canyon National Park.

One members of Firewalk has submitted additional information about the group which he asked to be posted. This and Living Rivers response can be found below.

For more information on the Firewalk initiative contact Mark Grisham, Grand Canyon River Outfitters Association, mark@gcroa.org, (928) 556-0669.

Firewalk Guiding Principles

1. In accordance with existing law and policy, the fundamental requirement of the Colorado River Management Plan is the preservation of the Colorado River corridor within the Grand Canyon as an unimpaired natural and cultural area, to the extent possible given the downstream effects of Glen Canyon Dam.
2. The revised Colorado River Management Plan should strengthen and enhance the Grand Canyon river experience as one of North America's premier wild and primitive backcountry river journeys.
3. Because demand for recreational river use substantially exceeds the level necessary to protect the resource and river experience, visitation opportunities in the Colorado River corridor within the Grand Canyon must be rationed and distributed in a sustainable and equitable manner that awards all potential users with a sense of fair treatment in relation to each other.
4. Within resource protection and visitor experience quality parameters, Grand Canyon river trip visitation opportunities should be maximized and equitably distributed to the greatest number of unique participants as practicable, while maintaining a full and diverse range of available trip styles.
5. The Grand Canyon river experience exerts a tremendous draw on potential visitors of all types of backgrounds, from across America and from around the World, including highly proficient and committed outdoor and whitewater

recreationists, to those with no previous experience in the wild, primitive, backcountry environment. Colorado River corridor management and administration must acknowledge, respect, and respond to this wide spectrum of user interest, need, and expectation.

6. Qualifying areas within Grand Canyon National Park deserve wilderness designation. The President should immediately make his recommendation to Congress in this regard. Until Congress acts upon such a recommendation, the National Park Service remains obligated to protect the suitability of all identified qualifying lands. The Colorado River within the Grand Canyon is unique, and provides outstanding visitor opportunities to experience solitude, a primitive and unconfined type of recreation, and natural quiet; therefore, its management should preserve and enhance these opportunities. A reasonable level of motorized use on the river is compatible with the Wilderness Act of 1964 as an established use under Sec. 1133(d)(1), and can be a tool used to enhance visitation, dispersal, and expanded trip opportunities. As technology advancements allow, a transition to low noise or silent, non-polluting propulsion systems suitable for Grand Canyon river operations should be implemented.
7. The revised Colorado River Management Plan should identify present activities that are inconsistent with existing Grand Canyon National Park General Management Plan "Management Objectives" for the Colorado River and establish a strategy, as well as a pragmatic implementation schedule, to mitigate such activities in a manner consistent with other priorities. Creative problem-solving opportunities may exist through active and site specific management techniques, or through adaptive management processes.
8. The Colorado River Management Plan should impose comparable rules, regulations, and policies on all user sectors to the maximum practical extent, without compromising the essential characteristics of each sector.
9. The private permit distribution system should be distinguished by simplicity, practicality, ease of use, and equality of opportunity, so NPS administration is fair, and can provide responsive customer service economically. A multiple path private river trip permit distribution system may assist the goal of achieving the best possible access to the river experience.
10. The Temporal Recreation Opportunity Spectrum, which involves variable seasonal launch scheduling, should remain a part of Colorado River management, in order to provide a variety of visitor experience opportunities.

Comments asked to be posted by Firewalk members since Living Rivers posted this information.

[Living Rivers response to Earl Perry, July 12, 2002](#)

River News 07/03/02

RRFW Riverwire - GRAND CANYON NEEDS YOU

As you are now aware, the dates and locations for public scoping meetings have been announced. Here are a few issues we hope you will care to write about:

WHO GETS TO GO?

The CRMP revision will specify who gets to go on Grand Canyon river trips in the future. A common argument voiced by river concessionaires is they need the lion's share of river trips to serve America. The majority of concessions trips serve the top 25% of America's income earners. Don't you deserve to go regardless of your ability to pay?

HOW MUCH PUBLIC ACCESS?

This year, as for each of the past 15 years, about 19,000 commercial passengers, 3,000 commercial crew, and 3,000 general public boaters will enjoy the Grand Canyon river experience. Motor-free wilderness management alternatives now under consideration by the National Park Service can increase visitation to the river while adding fairness in access not seen in over 30 years.

HOW LONG IS YOUR VACATION?

Since the Wilderness Act of 1964, river concessionaires have continued to use large, polluting outboard motorized tour boats in mockery of all wilderness areas in our national parks. Today, 3 out of 4 commercial passengers are only offered a 5 night glimpse of 2/3rds of the canyon. A motor-free Colorado River will allow more Americans to experience the entire canyon in 11 to 12 days, at the river's pace. Rowing trips of 6 to 8 days will allow a more intimate experience with part of the canyon.

Look for additional information about the issue and the process coming from River Runners for Wilderness. Please take a few minutes to consider the issues and get involved.

Grand Canyon needs your help to protect it from self-serving commercial interests. Send comments or make them in person at one of the 4 scoping sessions. For more information on these sessions, visit www.nps.gov/grca/crmp

To comment by mail:

CRMP Team,

Grand Canyon National Park,

PO Box 129,

Grand Canyon, AZ 86023

or by email: grca_crmp@nps.com

RIVERWIRE is a free service to the boating community from River Runners For Wilderness. Participation is FREE (and required!). Send your e-mail address to riverwire@rrfw.org and we'll add you to the RRFW RIVERWIRE e-mail list. RRFW is a project of Living Rivers. Visit our website at www.rrfw.org

River News 07/05/02

RRFW Riverwire - DO WE NEED RIVER CONCESSIONAIRES?

Do we need river concessionaires in Grand Canyon National Park? Maybe not. What if the 16 concessionaires operating on the Colorado River in Grand Canyon National Park were changed into Incidental Business Permits (IBPs)? This flexible model allows for businesses to offer support services from food packs to consulting to guiding in a very competitive climate to meet the various needs of backcountry wilderness travelers from Boundary Waters to Grand Canyon.

The analogy is in hunting. Once the hunter draws a permit, they can hire a hunting guide. The same applies to GCNP backcountry, where once an individual receives a permit to backpack, they can seek out a guide to accompany them. The guide holds a National Park authorized IBP. GCNP can issue as many IBPs as there are companies thinking they would like to provide services to the market. Such open competition allows the greatest economic good to the regional economy.

WHAT ABOUT VISITORS IN NEED OF ASSISTANCE TO RUN THE RIVER?

Nearly all river travelers use support services, whether it is shuttle services for a non-commercial trip, or a gourmet guided trip on a tour boat. Wouldn't it make more sense to allow folks to contract just for the services they need whether it's a commercial-style trip for a family that is willing to provide and cook their own food, or a noncommercial group that needs only a cook or boatman? There would be an explosion of employment opportunities for experienced river staff and substantially more sales tax dollars in the coffers of northern Arizona.

River concessions have actively blocked park wilderness protection for the last 30 years. Wouldn't it be best to have businesses that support the park's wilderness resource instead of attempt to exclude the river from wilderness protection? The present river concessionaires use their financial and political might to change the course of river management and block much needed reform in the Grand Canyon.

A new river support services paradigm could be a reality with YOUR HELP. Please take a few minutes to consider the issues and get involved. Protect Grand Canyon from entrenched commercial interests. Send your comments by September 20, 2002 or make them in person at one of the 4 scoping sessions. To comment by mail, send your thoughts, along with your name and address, to:

CRMP Team
Grand Canyon National Park
PO Box 129
Grand Canyon, AZ 86023

or by email: grca_crmp@nps.gov

For more information on the scoping workshops, visit www.nps.gov/grca/crmp

Letter to LR 07/11/02

from Earl Perry of Firewalk

"Such sentiment is consistent with a new effort known as "Firewalk." By not challenging the significant problems caused by Glen Canyon Dam, by not fighting against the use of motors which violates the Wilderness Act, nor by demanding significant reductions in commercial permit allocations to accommodate those who desire a self-guided river running experiences, the Firewalk group is working with the Park Service to promote little change so that the commercialization of the river continues to flourish while its ecosystem continues to perish." [From: Living Rivers Action Alert, July 3, 2002"](#)

To: John Weisheit, Living Rivers

You have not gotten this right, and I expect you to promulgate the note which follows:

Firewalk convened to see if people of good will on all sides of the issue could agree on steps that would provide private boaters with more access to the Grand Canyon, while improving both ecological and sociological aspects of the river experience in Grand Canyon. Some members of the working group are outfitters, some members of Grand Canyon Private Boaters, some members of Grand Canyon River Guides, and some of us wear many hats.

1. As a group we are not taking a position on Glen Canyon Dam. As individuals, some of us have been working on the Glen Canyon Dam issue since long before you ran the first of your hundreds of 1-day sport-boat motor trips through Cataract and on Lake Powell. We will continue to do so, as individuals. I would also note that as a group we are not taking positions on freeing Tibet, world hunger, or Animal Rights. Increasing non-commercial access, bringing fairness to the system, without violating the preservation mandate of the Park Service, is the job we set ourselves.
2. You can certainly argue that the use of motors violates the spirit of a wilderness, but it does not violate the Wilderness Act. See section 4(A)1(d)(1) "Within wilderness areas designated by this Act the use of aircraft or motorboats, where these uses have already become established, may be permitted to continue

subject to such restrictions as the Secretary of Agriculture deems desirable." Why do you think the Middle Fork has so many lodges, the Selway airstrips, the Salmon jetboats? The law clearly provides that conflicting uses can be grandfathered in. Motor use in Grand Canyon predates the Wilderness Act. Congress will choose whether or not to continue motor use, if it acts on a wilderness designation. If you don't like it, bitch where it counts -- your Congressional delegation. You may win this one based on values, but you are not going to win it based on the law as it is currently written.

3. The working group is not "demanding significant reductions in commercial permit allocations to accommodate those who desire a self-guided river running experiences." It is evaluating a range of scenarios that we obtained by getting the ideas of outfitters, non-commercial boaters, and wilderness advocates. Some of these alternatives involve -- no motors
 - increasing private use at the expense of commercial use
 - increasing private and commercial use
 - equalizing private and commercial use

We are evaluating the effects of increasing/decreasing launches, user days, changing season structures, changing group sizes, and changing/creating alternative user sectors. We will expose fully the consequences of each alternative we examine.

4. We are not working with the Park Service; they are and will be working on their own to produce the plan required by settling the GCPBA lawsuit they asked for. They're aware of what we're doing, and they'll get a copy of anything we produce. At that point our ideas will stand or fall based on whether they embody sound planning and a spirit of temperate fairness. So will yours.

As a working group, we're not going to "demand" anything. We got together to manifest a spirit of reasoned cooperation and dispassionate examination of the widest range of alternatives we could find, to see if we can improve the situation for both sectors.

John, if you are going to function as a reporter, get your facts straight first. Then consider whether you advance a spirit of dialog by trumpeting factoids, falsehoods, and soundbytes.

Earl Perry

Boater 40 years, river guide 8, NPS recreation planner 2, NPS river manager 3, hydrologist 2.

[John's Response to Earl](#)

RRFW Riverwire – DOES ‘FIREWALK’ TALK FOR YOU?

You may be aware that the 16 river concessioners in Grand Canyon formed the Grand Canyon River Outfitters Association (GCROA) several years ago to represent commercial interests in the Colorado River Management Plan planning process. GCROA's paid Executive Director organized a group of selected representatives of interested parties to present an alternative access plan to Grand Canyon National Park Planners. This group is called "Firewalk".

Some of the proposed solutions of FireWalk are:

- Non-commercial boaters will agree to travel on a schedule.
- Trips of 18 to 21 days will be eliminated since they are seen as the cause of campsite crowding.
- A reasonable level of motorized use is compatible with the Wilderness Act.
- Concessions services will give up some user days during peak (summer) months.
- Concessions services will expand commercial use into the shoulder season (spring and fall) to retain their total allocation.

The Wilderness Act clearly states that motors are not allowed in wilderness except in very limited circumstances (i.e. transportation to reach private property), whether its category is "proposed/study", "recommended", "potential" or "designated". Stay tuned to future Riverwires for more on the Wilderness Act.

You might be interested in Firewalk's participant list. They are:

- Mark Grisham, Executive Director, Grand Canyon River Outfitters Association
- Les Hibbert, Wilderness River Adventures
- Richard Quartaroli, President, Grand Canyon River Guides
- Drifter Smith, Board of Directors, Grand Canyon River Guides
- Jason Robertson, Access Director American Whitewater & Board Member, Grand Canyon Private Boaters Association,
- Richard Martin, President, Grand Canyon Private Boaters Association
- Destry Jarvis, Retired National Park Service
- Tom Robison, Director of Government Affairs, Grand Canyon Trust
- Earl Perry, non-commercial boater, retired River Ranger
- Ben Harding, non-commercial boater, river activist
- Jeffery Cross, Science Center Director, Grand Canyon National Park
- Linda Jalbert, Recreation Planner, Grand Canyon National Park.

Is your voice represented here, or do you feel non-commercial boaters have given up too much access and wilderness protection already? Firewalk's scenario could be a reality without YOUR HELP. Please take a few minutes to consider the issues and get

involved. Grand Canyon needs your help to protect it from self-serving commercial interests seeking to hurry up your Grand Canyon experience. Your comments are accepted through September 20, 2002. You can send comments or make them in person at one of the 4 scoping sessions.

To comment by mail, send your thoughts, along with your name and address, to:
CRMP Team
Grand Canyon National Park
PO Box 129
Grand Canyon, AZ 86023
or by email: grca_crmp@nps.gov

or attend one of 4 public scoping meetings. For more information on these sessions, visit www.nps.gov/grca/crmp

RIVERWIRE is a free service to the boating community from River Runners For Wilderness. Participation is FREE (and required!). Send your e-mail address to riverwire@rrfw.org and we'll add you to the RRFW RIVERWIRE e-mail list. RRFW is a project of Living Rivers. Visit our website at www.rrfw.org

LR Letter 07/12/02

Response to Earl Perry

Hi Earl,

I appreciate your [letter](#). It was not our intent to anger you. Our intent is to advocate for ecological integrity of the Colorado River. Here is what the CRMP of 1989 states as its first goal.

"To preserve the natural resources and environmental processes of the Colorado River corridor and the associated riparian and river environment."

It is really too bad that the Park Service has decided to take a backward step in this regard. What I, and others, see is an RMP that is being driven by human recreation issues. It is fine for recreation to be a component of the RMP, but not when it excludes biological integrity.

I am involved with Colorado River issues because a world class ecosystem is about to collapse. I see the potential for the ecosystem to be destroyed by an upstream dam built in Navajo sandstone. I will not be accountable for the continuation of a river management scheme that dismisses biological impairment. Four of eight native fish are already gone and two more are on their way; native insects are gone...you know how bad it is. The Organic Act compels the Park Service to act. It's not and so I will. The river must come first, our recreation on it second. I'm pleased that a growing number of river runners are joining me in adopting such an ethic.

Furthermore, the dam does tie into recreation issues too. This pertains to the sediment problems related to the reservoir arms at San Juan and Cataract Canyons. It's a mess out there now, creating huge problems for private and commercials alike. Such problems won't be addressed by GCNP as they are in GCNRA's basket, but they should be part of a greater boating community voice for a natural and free flowing Colorado through Cataract, San Juan, Glen an Grand Canyons.

As regards to Dave Brower (during our phone conversation). His stamp on the betterment of this planet is sound regardless of the Glen Canyon fiasco. Hindsight is 20/20. This is no single-minded issue, other than those who choose to focus on trying to get the old pretty pictures back. It's about the restoration of the most developed river in the world. It's about the tremendous waste of water and energy resources. It's getting water back to Mexico, and yes, it's also about saving the Grand Canyon. I don't care if I take another Grand Canyon River trip, but I do care if we continue to lose its native ecosystem. Others here have never even been down it, and are fighting just as hard to put the ecosystem first. Glen Canyon Dam is a key part of this, and must be addressed by the management plan. I hope you will join us in the call.

John

LR in the News 07/14/02

In Drought-Parched Arizona, Some Areas Drink Deeply

By MICHAEL JANOFISKY for New York Times

PHOENIX, July 11 -- This should be the so-called monsoon season here, when moist Pacific air brings afternoon thundershowers. But only a trace of rain has fallen since Arizona's devastating wildfires were finally contained last week, providing little relief from a statewide drought now entering a fourth year.

The lack of rain and snow has depleted ponds and reservoirs, parched ground cover, killed herds of livestock and cost hundreds of millions of dollars in agricultural revenue. The Bush administration recently declared Arizona a drought disaster area, making many farmers and ranchers eligible for low-interest loans and other aid.

"People out in the fields and people in the high country all tell me the same thing," said Ken Evans, president of the Arizona Farm Bureau, an organization of 15,000 members. "This is the worst drought in Arizona since the white man came here," hundreds of years ago.

But in a desert state that relies on its federally mandated water allotment from the Colorado River to support its rapid growth, a drought does not mean water shortages everywhere.

While ranchers in many areas are selling thousands of animals to prevent death by dehydration and some rural counties are having water trucked in, residents of Phoenix and Tucson, the state's largest cities, are free to wash their cars, soak their lawns and fill their swimming pools.

Indeed, only a few communities, like Flagstaff and Pine, have any water restrictions. Most everywhere else, water parks are open and new residential and golf course developments are forging ahead on schedule. Irrigation flows uninterrupted to alfalfa, citrus, cotton and vegetable crops in Yuma County and elsewhere. In fact, these are boom times for alfalfa growers. With grazing lands parched, cattle ranchers have been forced to buy stockpiles of feed for their hungry animals.

The reason for such disparity is the way water is delivered. The largest source is the Colorado River, which supplies Phoenix and other communities as well as farmers. Other places draw from less reliable sources -- ground water, which is available everywhere in varying amounts, and lakes and reservoirs.

The steady flow of the Colorado, which also supplies water to six other states and Mexico through contracts first negotiated in 1922, virtually assures Phoenix and Tucson all the water they need. Those two cities get 53 percent of the Colorado River water flowing into the state.

Developers say abundant water in metropolitan Phoenix is a major reason Arizona has become one of the fastest-growing states.

"In the 1960's, 80 percent of water in the state was used for agriculture, and 20 percent for residents and businesses," said John Sullivan, a senior official with the Salt River Project, which manages water into the Phoenix area from the Salt and Verde Rivers. "Now, it's 80-20 the other way. Water is there for growth."

Environmentalists argue that such a strategy might only prolong droughts.

"The development industry is not inclined to educate citizens about water conservation because it actually doesn't use all the allotment it has and worries that if it doesn't use it now, it won't have it in the future," said David Hogan, spokesman for the Center for Biological Diversity, a Tucson environmental group.

For Mr. Hogan, and free-market conservatives, the subsidized water used by farmers is more offensive, especially for cotton, which he called "grossly water intensive, especially for a crop that receives massive subsidies in other parts of the country."

Stephen Moore, president of the Club for Growth, a pro-market political action committee in Washington, said removal of subsidies, allowing the price of water to rise, would eliminate shortages and be "the best way to encourage conservation."

In any case, conservationists say officials in drought-prone states are doing too little to prevent shortages. Lisa Force, program director for Living Rivers, a Western nonprofit group that works to restore waterways, said recent low-rainfall years in the Southwest may now be the norm, not aberrations, and states need to adapt. Arizona officials, she

said, "totally have their heads buried in the sand." In neighboring New Mexico, for example, which is entitled to only a small share of water from the Colorado River projects, water restrictions are widespread.

For now, Arizona officials say any argument over surplus and need cannot be resolved by the current water network. Don Lavelle, a spokesman for the State Department of Water Resources, said even if there were restrictions in Phoenix and other cities, the water saved could not be diverted to other arid areas, because no canals or pipelines have been built to reach them.

Droughts will always harm areas that depend more on ground water and runoff, he said. That is the case now, with rainfall at 10 percent of normal statewide and lakes and reservoirs well below 30-year averages.

"Some towns are always on the edge with water problems because of their location," Mr. Lavelle said, describing conditions that are even worse across the northern tier of Arizona, where underground geologic fractures make water tables less dependable even in the best of times.

Those areas have been affected the most by drought, the brunt of it borne by cattle ranchers, who make up about 40 percent of the state's annual \$6 billion to \$7 billion agriculture industry.

As grazing lands dry up, cattlemen are selling animals to out-of-state buyers or surrendering them to slaughterhouses at bargain prices. A recent survey by the Arizona Cattlemen's Association found that the drought depleted the cattle stock over all by about 20 percent since 1996, a loss of about 60,000 animals. State officials predict that an additional 47,000 animals will be lost this year.

As residents of northeast Arizona, Navajo Indians have also been hurt by the drought.

Alex DiNatale, the Navajo Nation hydrologist, said most of the reservation's 7,500 ponds have dried up, deep-water aquifers are empty and as many as 10,000 animals have died this year from dehydration, malnutrition and auto accidents that occur when animals eat roadside plants. Navajos have begun selling animals to auction houses.

One sheep, Mr. DiNatale said, might normally sell for \$85, but some herders are selling sheep now for \$7.50. "And that's a good option," he said.

Wildlife is suffering, too. Brian Wakeling, the big game management supervisor for the state Department of Game and Fish, said alarming numbers of wildlife are unable to survive the first few months of life. Survival rates for prong-horned antelope, normally up to 40 percent of those born, are under 10 percent in some parts of the state. The rate for elk, normally 40 to 50 percent, has fallen below 20 percent.

A land-management group, the Diablo Trust, has begun hauling hundreds of thousands of gallons of water into areas around Flagstaff to save as many animals as possible.

"We've never seen anything like this," said Mandy Metzger, the trust's director. "Every time we dump a load of water, 100 to 200 elk show up. It's a tinderbox out there."

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LR in the News 07/30/02

Watering down Valley's lifestyle

The Arizona Republic

Go to an Arizona Diamondbacks game this summer and you might spot D-Baxter, the team's mascot, tossing you a T-shirt emblazoned with messages about using water wisely.

If you have kids in school, chances are at least one will bring home a brochure or a door hanger that offers creative ways to save water around the house.

And don't be surprised if you're strolling through Gilbert and you find yourself face to face with a giant blue latex water drop handing out blue fortune cookies filled with exhortations like: "Be in the know, save H₂O."

What you won't find are the kind of mandatory water restrictions being imposed in other drought-stricken Western cities.

Even as runoff-starved reservoirs northeast of Phoenix fall to nearly record levels, triggering a Stage 1 drought based on a regional management plan adopted six years ago, Valley cities have decided not to require water conservation this year. Instead, they have opted to turn up the volume on informational programs already in place.

"We're in better positions to ride out a drought than most big cities," said Tom Babcock, chief water resource specialist for the city of Phoenix. "We're accustomed to not getting a lot of rainfall and the state has invested heavily in projects to impound water and then deliver it."

But while the Valley faces no immediate shortages - the canal importing water from the Colorado River is full and underground supplies are adequate for communities that rely on them - some people who monitor water use say cities need to consider the longer view, especially in a fast-growing desert prone to droughts.

"Major metropolitan areas don't think they need to worry about water," said David Bainbridge, coordinator of the environmental studies program at Alliant International University in San Diego. "They think there's plenty more they can take. But that does nothing to create a sustainable supply."

Lisa Force, Arizona program director for Living Rivers, said evidence is mounting that the region could be entering a prolonged dry spell, one that would leave the Southwest with less water for years to come.

The Colorado River, which offers metropolitan Phoenix a comfortable buffer from dry years, is running this summer at its second-lowest level on record.

If the drought persists through the fall and winter, some cities will face tough decisions next year. Salt River Project, whose reservoirs on the Salt and Verde rivers have been hard-hit by the lack of mountain snow, will decide in September whether to reduce allocations to its customers.

That could mean higher rates as providers turn to the more expensive water from the Central Arizona Project.

Meanwhile, Valley cities have adopted a nearly unanimous approach to water use: Preach conservation as a lifestyle, year in and year out and teach people to manage their water carefully whether there's a drought or a flood.

At the core is the "Water: Use It Wisely" advertising campaign, which started in Mesa and has expanded to include nearly a dozen communities.

"We were all sending out our own different messages before," said Karen Warner, a water conservation specialist for Scottsdale. "So we decided we need to send out the same message. It makes sense to unify."

Cities also develop their own programs. Among them:

- School programs, aimed at instilling a conservation ethic at an early age, one that kids can pass along to their parents. Avondale uses magic in its show to keep kids interested.
- Water audits, in which homeowners can learn how much water they use and how they can use it more efficiently. Scottsdale will attach a monitor to water meters if the residents ask and show them exactly where their water goes.
- Publicity campaigns, such as Gilbert's, which includes the giant water drop and the fortune cookies. The water drop, actually town employee Lisa Hemphill, has proved popular so far.
- Rebates for installing desert landscaping or low-water-use plumbing fixtures. Although many cities offer such rewards, Phoenix passed because they weren't cost-effective, Babcock said.

David Mansfield, Scottsdale's water resource manager, said his city and others have accomplished a lot without forcing residents to change their lifestyle. Raising awareness is an important first step.

"We've never had to go to a restricted- water-use environment," Mansfield said. "We don't see that as a necessity for our community. That doesn't mean we can't ever get there; this winter is an important winter for all of us."

Phoenix recently adopted a revised drought plan that would be triggered if conditions worsen and other cities are working to create similar plans. The goal, said Esmie Avila, a water resource analyst for Avondale, is to establish consistent drought measures so all of the cities can coordinate their response.

"We're not absolutely sure we need to do drought response," Babcock said, "but we want to be there so the city is leading instead of following. We're making all the preparations even while we're crossing our fingers we won't get there."

Republic writers Edythe Jensen and Yvonne Wingett contributed to this story.

Reach the reporter at shaun.mckinnon@arizonarepublic.com or (602) 444-8632.

Media Advisory 07/30/02

Grand Canyon native fish to launch Habitat Security Tour in Denver Demanding National Park Service action to restore Colorado River

Contact:

Lisa Force: Living Rivers Denver Office, 303-237-2269/602-321-1753 mobile

Owen Lammers: Living Rivers Utah Office, 435-259-1063/435-260-2590 mobile



Endangered fish frustrated with the devastation of Grand Canyon's native ecosystem will participate in a National Park Service-sponsored public meeting on Thursday, August 1, 2002, 4:00-8:00 p.m., Community College of Denver Downtown Campus, Tivoli Student Union Conference Center, 900 Auraria Parkway (see below for more information). They will be demanding that the new Colorado River Management Plan now being developed by the Park Service make the security of their habitat its primary objective.

It's appalling that the National Park Service has ignored its principle responsibility to protect the natural integrity of this world renowned river corridor," says Lisa Force, program director for Living Rivers in Denver. "The Park Service has allowed Grand Canyon's entire food base to be altered, causing the loss of all native insect species, elimination of half the native fish species and the disappearance of mammals such as otters and muskrats."

Force and representatives of other environmental groups will be dressed as Grand Canyon native fish during the Denver meeting, and speak on behalf of the habitat loss these fish have experienced. Living Rivers will then take this habitat security message on the road to four other Park Service meetings on Grand Canyon taking place in Salt Lake City, Flagstaff, Las Vegas and Phoenix later in the month.



Fish which have gone extinct in Grand Canyon include the razorback sucker, bonytail chub, roundtail chub and Colorado pikeminnow. The humpback chub and flannelmouth sucker are in serious decline, as may also be the case for the bluehead sucker. The only Grand Canyon native fish believed to be surviving with sufficient numbers is the speckled dace.

"The Park Service has forgotten its mission, concentrating primarily on managing people while the habitat and native species these people come to visit disappear," says Ed Dobson, a Sierra Club board member. "Ever since the operation of Glen Canyon Dam upstream of Grand Canyon, Grand Canyon's river habit has been experiencing a long, slow death."

This decline is occurring because

- ninety five percent of the sediment and nutrients that once flowed into Grand Canyon is now trapped behind Glen Canyon Dam;
- seasonal flow fluctuations critical for building beaches and spawning habitat no longer occurs, and
- water released from the dam is nearly a constant 46 degrees F, whereas the native system requires temperatures in excess of 80 degrees.

"Whether impacts to the Canyon's ecological integrity result from activities inside or outside Grand Canyon, the Park Service is obligated by law to address them," adds Dr. Brent Blackwelder, President of Friends of the Earth. "Glen Canyon Dam is the major threat to the health of Grand Canyon, and reversing its impacts must be the core objective of the new river management plan."

Living Rivers, the Sierra Club and Friends of the Earth are part of a growing nationwide network of environmental and social justice groups calling for immediate action by the National Park Service and the Bureau of Reclamation, which operates Glen Canyon Dam, to reverse the ecological decline in Grand Canyon. Specifically these 85 groups are calling for:

- The restoration of natural sediment and nutrient flows from the main stem Colorado into Grand Canyon.
- The restoration of natural flow regimes to properly transport this sediment within Grand Canyon, when and where it belongs.
- The restoration of natural seasonally variable water temperatures in the main stem Colorado through Grand Canyon.
- Development of a restoration and recovery program for the Colorado River corridor in Grand Canyon that includes the recovery of all species known to be native to Grand Canyon prior to the operation of Glen Canyon Dam.

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Directions to Community College of Denver in downtown Denver: From I-25 exit on Auraria Parkway. Auraria Campus is on your left. (Pepsi Sports Center is on your right.) From I-70, exit onto I-25 SOUTH, then exit on Auraria Parkway. Tivoli Student Union has a tall smokestack. Parking for Tivoli Student Union surrounds the building and is \$1.25 per half hour; however if you let them know you are there for the NPS meeting they should validate your parking. For additional information regarding location and parking, call (303) 556-2600. (For those coming from out of town, Aurora is an east suburb of Denver and has nothing to do with Auraria Campus.)

Other stops to include:

Tuesday, August 6, 2002, 4:00 p.m. - 8:00 p.m.

Salt Lake City, Utah

Salt Lake Community College-Miller Campus

Miller Training & Conference Center

9750 South 300 West

Thursday, August 8, 2002, 4:00 p.m. - 8:00 p.m.

Flagstaff, Arizona

Coconino Community College Commons

2800 S. Lone Tree Road

Tuesday, August 13, 2002, 4:00 p.m. - 8:00 p.m.

Las Vegas, Nevada

University of Nevada Las Vegas

Moyer Student Union Building

4505 Maryland Parkway

Thursday, August 15, 2002, 4:00 p.m. - 8:00 p.m.

Mesa, Arizona

Mesa Community College

Kirk Center-Navajo Room

1833 W. Southern Ave.

River News 07/30/02

Colorado River Management Plan Talking Points

Preserve and protect wilderness character of the Colorado River unimpaired for future use and enjoyment as wilderness.

The NPS asks "What would we choose to have the river be like in the future." Twenty two years ago the Park Service, with overwhelming public support, proposed the Colorado River in Grand Canyon for Wilderness designation. Until Congress acts on the proposal, the agency is required to provide the same level of protection for "proposed wilderness" as congressionally designated wilderness. What should the river be like in the future? *Tell the Park Service the river should be forever Wilderness!*

Park Values

The Park Service again asks, "will natural and cultural resources be in the same condition they are today or will they be different in the future?" Laws applicable to Grand Canyon National Park demand protection of natural and cultural resources. *The agency should protect all of the great Park's intact biological communities, natural process, and archeological treasures.*

The Experience

The Park Service wants to know what river trips should be like. Tell the agency to provide recreational opportunities consistent with the preservation of the river's natural and cultural resources and wilderness character. *Tell them to provide outstanding opportunities for solitude and a primitive recreational experience without the use of motorboats.*

The experience offered should reflect the unique character of the Grand Canyon - our country's longest whitewater wilderness. The roar of a rapid, the quiet trill of a canyon wren, and relaxed conversation, in concert with the river's flow are part and parcel of the wilderness experience. Such tranquility should not drown in clamor of crowds or the racket of an outboard motor.

Who Should Go?

Currently, the general public, citizens who don't need the corporate river outfitters, must wait up to 20 years to obtain a permit to run a river trip on their own. Profit obsessed concessionaires control over 70% of river access and offer expensive river tours generally costing more than Caribbean cruises of comparable length. These pricey trips remain beyond the reach of most Americans, including youth and educational groups.

Tell the National Park Service to reform its current concession services and provide fairer access and affordable trips to include a broader representation of citizens.

Distributing use throughout the seasons would reduce crowding and congestion along the wilderness river. Providing fair and affordable access would not decrease the number of river runners, but it would increase our opportunity to enjoy an experience only the Grand Canyon wilderness can provide. *Tell the Park Service to provide us with a qualitatively better experience, a wilderness experience.*

Motorboats

Motors are generally prohibited in wilderness, as they should be. Motorboats are not as safe as oar-powered craft, nor do they provide economical trips as claimed by some river concessionaires. They simply generate higher profits for the corporations by crowding more people on noisy boats rushing through the Canyon. *Tell the Park Service to remove motors from the river.*

Helicopters

The use of helicopters should be limited to life and health-threatening emergencies, or essential administrative imperatives. Each season over 10,000 recreational passengers fly on or off the river by helicopter, creating a noisy, potentially hazardous carnival atmosphere within the Canyon's wilderness. All of this activity occurs near the base of Whitmore Trail, a mile-long trail offering alternative hiking and mule access the rim. *Tell the Park Service to eliminate noisy, intrusive helicopter passenger exchanges.*

Dam Operation

Glen Canyon Dam, located upstream of Grand Canyon National Park, dramatically impacted the Park's river corridor. Flow release decisions made by the interdisciplinary Adaptive Management Workgroup, ultimately constrained by electric power interests, have not always protected Grand Canyon's natural and cultural values. For example, the populations of endangered species, such as the humpback chub, continue to precipitously decline. The National Park Service must assume greater involvement and responsibility for dam operations. *Tell the Park Service to not pass the buck to agencies with less preservation conscience "for their consideration."*

LR in the News 08/01/02

Glen Canyon Dam in spotlight as NPS revises Grand Canyon plan

The Land Letter

Dan Berman

Environmentalists are preparing to push for the restoration of the Colorado River as the National Park Service holds its first public meeting today in Denver on its effort to revamp the environmental impact statement for the Colorado River Management Plan for Grand Canyon National Park.

NPS must complete the EIS by the end of 2004, and environmentalists are hoping it will address the perilous state of the Colorado River, especially the impact of Glen Canyon Dam, which is blocking nearly 95 percent of sediment and nutrients that formerly flowed down the river into the Grand Canyon.

"They need to address the ecological integrity of the river, and what the river needs right now is its sediment back," said Owen Lammers, executive director of Living Rivers.

Environmentalists say the dam is devastating the river and the Grand Canyon. Aside from the sediment issue, the water from the dam is released at 46 degrees Fahrenheit and does not reach the 80 degree level needed to maintain the habitat. This means native fish species like the humpback chub are harmed in favor of non-native species, environmental groups say.

"The Park Service has forgotten its mission, concentrating primarily on managing people while the habitat and native species these people come to visit disappear," said Ed Dobson of the Sierra Club. "Ever since the operation of Glen Canyon Dam upstream of Grand Canyon, the Grand Canyon's river habitat has been experiencing a long, slow death."

"The first thing we're looking for is for the park service to realize it needs to take on these issues," Lammers said. As for solutions, Living Rivers supports decommissioning the dam, but Lammers said BuRec could construct a truck bridge to haul sediment out from behind the dam as well as increase water flows from the river on a permanent basis.

As it stands, the Glen Canyon Dam Adaptive Management Work Group, a 25-member consortium of state and federal government agencies, Native American tribes, environmental groups, recreation interests and power companies recommended at its April meeting a test flood from the dam similar to one attempted in 1996.

But Lammers calls the test flow "a waste of time," adding that it will not have any long-term impact on the Colorado River ecosystem. "They can go and introduce a natural flow regime right now," Lammers said. "Doing this for a few hours is not what the system needs. It needs to be done 24-7-365." Lammers added the test flow only serves to give BuRec good publicity. "At least they can say 'were trying,' but the data indicates they've done this before and nothing has happened." Restoring the water flow from the dam to match the water entering Lake Powell is "something they can do tomorrow," Lammers said.

The test flow is subject to approval by Interior Secretary Gale Norton, who is expected to make a decision by the end of August, according to BuRec Spokesman Doug Hendricks.

Over 70 environmental groups signed a petition in June asking BuRec and NPS to restore the Colorado River and the Grand Canyon. "The demise of this canyon, one of the seven natural wonders of the world, symbolizes the unnecessary impacts brought upon rivers throughout the West by BuRec's environmentally and culturally destructive policies designed to optimize water delivery," the declaration said.

The groups called upon the federal government to: restore sediment and nutrient flows into the Grand Canyon, natural flows within the canyon, and more naturally variable water temperatures; develop a restoration and recovery plan for all Grand Canyon species; eradicate alien species that compete or prey on native species in the canyon; and define the Colorado River through the canyon as wilderness, thereby ending the use of personal watercraft.

Additionally, Living Rivers and other environmental groups are "well underway" in preparing legal action against the federal government for failing to address the declining Colorado River ecosystem. "The fact that the scoping process is underway is in no way impeding us from pursuing legal action on this matter," Lammers said.

LR Letter 08/01/02

Colorado River Management Plan: LR Scoping Comments

August 1, 2002

Joseph F. Alston, Superintendent Grand Canyon National Park P.O. Box 129 Grand Canyon, AZ 86023

Dear Superintendent Alston:

Living Rivers appreciates the opportunity to provide scoping comments for the Colorado River Management Plan (CRMP). This is a critical time in the ecological history of Grand Canyon's river corridor. The corridor has experienced extensive changes over the past 40 years, largely as a result of operations at Glen Canyon Dam. Some of these changes are causing potentially irreversible damage to this world-renowned ecosystem. As the National Park Service is the agency with the sole responsibility to protect the river's natural integrity for present and future generations, it is vital that the new CRMP outline strategies to reverse the damage that has been occurring and to restore the river's native habitat, species and natural processes.

The current CRMP, completed in 1989, states as its first goal, "To preserve the natural resources and environmental processes of the Colorado River corridor and the associated riparian and river environment." The Park Service has clearly failed in its efforts to fulfill this goal. The natural resources in the river corridor are now much worse off than before CRMP was developed. The principle fish species the Park Service and other agencies have been working to protect, the humpback chub, has declined more than 75% to just 2000 adult fish. Nothing has been done to address the need to recover

the four native fish that have become extinct in the canyon: razorback sucker, bonytail chub, roundtail chub and Colorado pikeminnow. The Park Service has also been negligent in ensuring that two other species, the flannemouth sucker and bluehead sucker, are not suffering the same fate.

This decline in native fish populations is just one indicator of the extensive ecological damage taking place in Grand Canyon's river corridor which the Park Service is neglecting. The entire food base for the river ecosystem has been dramatically altered. A green alga (cladophora) has displaced the natural carbon food base. None of the river's indigenous aquatic insects exist in the Canyon any longer. Otters and muskrats are now gone from the canyon and native riparian vegetation is disappearing from the high water zones or is stunted due to the lack of nutrients and the invasion of competing non-native plants. Most, if not all, of these changes are a direct result of the operations of Glen Canyon Dam. These changes include:

- * Ninety-five percent of the sediment and nutrients that once flowed into Grand Canyon's riverine ecosystem are now trapped behind Glen Canyon Dam causing the beaches to erode away and the native vegetation to disappear, disrupting the historic food base.
- * Seasonal water temperatures that previously fluctuated from freezing to 80 degrees Fahrenheit, now range from 43 to 55 degrees, eliminating the warm water temperatures necessary to trigger native animal reproduction and fostering non-native fish species at the expense of native species.
- * Natural flows which fluctuated seasonally from 3,000 to 90,000 cubic feet per second now fluctuate only from 8,000 to 20,000, cubic feet per second, creating a near static flow regime for an ecosystem that is adapted to and dependent upon the dynamic pre-dam flow.

These changes represent a significant violation of the National Park Service's Organic Act (1916) which requires that the National Park Service preserve its lands unimpaired for the enjoyment of current and future generations. The lack of any substantive action of late also represents a violation of the intent of the 1992 Grand Canyon Protection Act.

The Organic Act and the establishment of Grand Canyon National Park pre-date the decision to construct Glen Canyon Dam. Whereas numerous alternatives exist to provide for the societal needs associated with Glen Canyon Dam, there are no alternatives to the unique ecosystem that is the river corridor through Grand Canyon National Park. Moreover, the Organic Act compels the Park Service to act even if impacts result from activities taking place outside its boundaries, as is the case with Glen Canyon Dam.

Grand Canyon National Park cannot abdicate to the Adaptive Management Work Group (AMWG) its responsibility for management decisions pertaining to the ecological integrity of the river corridor even when such decisions relate to Glen Canyon Dam outside park boundaries. It is the Park Service's responsibility to uphold the Organic Act, not the responsibility of the Bureau of Reclamation, Western Area Power Administration or any of the other AMWG participants. Furthermore, the AMWG has not demonstrated

an ability to provide any lasting benefits to the Grand Canyon ecosystem. As noted above, AMWG and the Park Service have failed in the principle mission to recover populations of humpback chub at the Little Colorado River. Populations in the Little Colorado River have declined 75% and no gains have been made in the establishment of a second population of humpback chub in the Colorado River mainstem. While the Park Service is fully within its rights to participate in the AMWG, the Park Service alone has the responsibility to ensure the future integrity of Grand Canyon's native river ecosystem.

As guardians of this critical component of world heritage, it is vital that the Park Service through the CRMP address all aspects of river management, especially the impacts to the integrity of the Park's native ecology caused by the operation of Glen Canyon Dam. Specifically, the CRMP must address mechanisms to:

- * Restore essential sediment and nutrient flows from the mainstem Colorado River into Grand Canyon.
- * Restore natural flow regimes to properly transport this sediment within Grand Canyon, when and where the sediment belongs.
- * Restore natural seasonally variable water temperatures in the mainstem Colorado River through Grand Canyon.
- * Develop a restoration and recovery program for the Colorado River corridor in Grand Canyon that includes the full recovery of all species known to be native to Grand Canyon prior to the operation of Glen Canyon Dam.
- * Implement a non-native eradication program to minimize alien species in the Grand Canyon River corridor with a priority on those that prey on, compete with or otherwise impair the health of native plants and animals.

We recognize that there are a variety of issues which the Park Service may be asked to address within the CRMP. However, none can be more important than those which relate directly to the Park Service's mandate as prescribed in the 1916 Organic Act. Without the natural ecological integrity of the river which carved it, Grand Canyon itself loses its integrity as does the Park Service. The principle objective of the new CRMP must be the restoration and recovery of the natural processes and native species to Grand Canyon's river corridor.

Thank you for the opportunity to submit these scoping comments.

Sincerely,

Owen Lammers Executive Director

LR in the News 08/04/02

Critics: Canyon river plan ignores dam

By GARY GHIOTO for Arizona Daily Sun

Opponents of Glen Canyon Dam and supporters of wilderness designation for Grand Canyon National Park are outraged that the National Park Service isn't considering the issues in the revised Colorado River Management Plan.

Sue Gunn of The Wilderness Society says the Park Service is mandated to manage the river as wilderness -- that translates to no outboard motors.

That's because park officials recommended to Congress more than two decades ago that the river and more than 950,000 acres of Grand Canyon National Park be considered a wilderness area.

Though the designation is in legislative limbo, Park Service regulations are clear that until Congress acts, the river must be considered wilderness, Gunn said.

Grand Canyon National Park Superintendent Joseph Alston said no action will be taken on the wilderness designation until Congress acts. He said the river corridor will be managed under current backcountry regulations that protect natural and cultural resources.

"We did agree to look at the issue of motors versus nonmotors and that's sort of central to the whole wilderness issue as it relates to the Colorado River corridor through Grand Canyon," Alston said. "So we will tackle that issue and the outcome of that will, in large part, direct how the river is viewed in terms of wilderness as it relates to the backcountry management plan."

Gunn said that's not enough.

"That's pretty myopic and I think it shortchanges the American people in terms of that experience of being on that river," Gunn responded. "I personally think there is a concerted effort inside the Park Service to eviscerate the wilderness program."

The Wilderness Society, the National Parks Conservation Association and the Arizona Wilderness Coalition were among a dozen conservation groups who recently wrote Park Service Director Fran Mainella and criticized the management plan process.

The groups said holding public meetings in five Southwestern cities is "unfair to the American public" and limits the range of discussion on the pending management plan. Meetings should be scheduled in Los Angeles, San Francisco, Washington, D.C., and New York City, Gunn said.

"The Grand Canyon is a national, an international icon. When you talk about parks ... the average American thinks of the Grand Canyon. I get the feeling this is a skewed setup," Gunn said.

Alston said there is plenty of opportunity for people on the East and West coasts to comment on the plan. Letters and e-mails are being accepted by the Park Service on a special Web site and an extensive mailing list also will solicit comments, he said.

Meanwhile, groups like Living Rivers, which wants Lake Powell drained, and the Flagstaff Activist Network are blasting the Park Service's decision not to consider the environmental impact of Glen Canyon Dam in the management plan.

Owen Lammers, executive director of Living Rivers, said ignoring the consequences of Glen Canyon Dam is a "death sentence" for the river and endangered species like the humpback chub. FAN and Living Rivers says the Park Service must "assume greater involvement and responsibility for dam operations."

Alston said the dam, which is run by the Bureau of Reclamation, is "outside the scope" of the Park Service and the management plan.

"They're choosing the wrong forum. We don't have the discretion to change the operation of the dam or the flow rate of the dam," he said.

On the Net:

The Wilderness Society: www.wilderness.org

Living Rivers: www.livingrivers.net

Flagstaff Activist Network: www.flagstaffactivist.org.

LR in the News 08/09/02

Hundreds Float River Ideas

Thursday's Colorado River Management Plan meeting draws a packed house over motors, permit, and wilderness.

By Gary Ghioto for Arizona Daily Sun

Hundreds of Flagstaff-area residents came to Coconino Community College Thursday to speak out on a pending National Park Service plan to manage the Colorado River for the next 20 years.

Grand Canyon National Park officials are trying to determine who should get access to the river, whether motorized rafts and boats should continue to ply the river, and how to divvy up trips between commercial and private boaters.

The crowd featured the full spectrum of the Colorado River community: owners and guides from commercial rafting and boating companies, do-it-yourself river runners, environmentalists and wilderness advocates.

Flagstaff is home to many of the commercial outfitters who carry rafters down the river, and they were out in force to defend their permit allocation and right to use motors. Public comments gathered in Flagstaff and from other sessions in Salt Lake City, Denver, Las Vegas and Mesa will be included in the National Park Service's environmental assessment that will be released in 2004.

"We had a reasonable turnout in Denver, a good turnout in Salt Lake City and this looks like another good turnout," said Joseph F. Alston, superintendent of Grand Canyon National Park, as he fielded questions from people attending the meeting.

Alston said the issues in the meetings have revolved around the allocation of permits for private and commercial boaters, the use of outboard motors on the river and the long waiting list for private permits.

"We've heard a lot and we're giving serious consideration to a lot of good ideas," he said.

National Park Service staff and posters provided detailed information about how permits are issued for the 23,000 private and commercial boaters each year. They also took comments from the public about the fate of motorized travel on the river and the use of helicopters to ferry river runners back and forth to Las Vegas.

19-Year Waiting List

Park officials say the average wait for a private trip is 19 years. The waiting list is an emotion-laden issue between commercial and private boaters. Currently commercial outfitters receive 70 percent of river permits granted by the Park Service.

"I registered in 1990 and my trip came up in 1999. I got on when I was a graduate student and I didn't get my trip until I was a tenured professor," said Willie Odem, past president and current board member of the Grand Canyon Private Boaters Association.

Now Odem, a NAU professor who teaches environmental engineering, is back on the list and faces a 20-year wait.

"Part of the problem I think is that the allocation has to be shifted. But also the Park is the only agency in the country that uses this waiting list system. It's a horrible system to distribute access. It's an abomination," said Odem.

The association favors a 50-50 split of permits with commercial operators and an end to the waiting list by using a reservation system that guarantees a launch date for permit holders.

Mark Grisham, executive director of Grand Canyon River Outfitters Association, which represents the 16 firms that run Colorado River trips, acknowledged that the waiting list is flawed and should be abolished.

But figuring out how to divvy up the percentage of river permits won't be easy, said Grisham.

"Our feeling is that the private boaters community has not developed a compelling case that the current allocation system is wrong or incorrect," he said.

"You should ask them what is the basis that the National Park Service should make this decision? What is the criteria that the Park Service should use to compute the outcome and how is that criteria measured in comparable terms? When you get into that, you learn very quickly that those are very difficult questions to answer," said Grisham.

The outfitters favor a reservation system that sets "reasonable" requirements for permit applicants to follow. River runners should select a date, detail the size of the group going, identify the people in the group and put down a refundable security deposit.

The system discourages people who apply for a permit and have no serious intention or resources of going down the river.

Regarding outboard motors on the river, Grisham said motorized trips provide a high level of public access because of their shorter duration than regular float trips that can take up to 18 days.

"There's just a whole lot of people in this country who are not going to do this experience without motorized trips. They're not going to have two weeks of vacation time to come down and there is also a lot of people who are not comfortable on row boats," he said.

The advent of quieter engines and continuation of non-motor months on the river should defuse complaints over motors, he said.

Odem said the Grand Canyon Private Boaters Association favors phasing out engines over five years to give commercial outfits time to recoup their capital investment.

River Ecosystem Off the Table

Meanwhile, off the table for discussion at the meeting, much to disappointment of environmental groups, is the impact of Glen Canyon Dam on the river's endangered fish species, beaches and wildlife habitat.

Protesting that decision in classic guerilla theatre was one Owen Lammers, executive director of the environmental group Living Rivers of Moab, Utah.

Wearing a realistic headpiece depicting the extirpated razorback sucker, Lammers greeted hundreds of people entering the spacious Coconino College administration building Thursday afternoon.

Lammers and two other colleagues, one wearing an endangered humpback chub hat and another walking around inside a rubber raft and wearing an outboard motor on his head, provided comic relief to the session.

But the message from Living Rivers, a group organized several years ago with a mission to restore the Colorado River and remove Glen Canyon Dam, had a serious edge.

"We're trying to ensure that people who come to these meetings are fully aware that there is a critical issue in terms of the ecological integrity of the river corridor. Given that this is a management plan it seems logical that they would address the ecological integrity because it's in such serious decline," said Lammers.

The Glen Canyon Dam has changed river flows, eroded beaches and chilled the Colorado River water, with the result that native fish, which evolved in sediment-rich, warm waters, are either extinct or declining rapidly, he said.

Alston said the Glen Canyon Dam is out of the scope of the management plan and that the Park Service has no authority to dictate its operation.

Lammers disagreed.

"They're trying to sidestep the issue. The Park Service is the number one agency responsible for the ecological integrity of the river. They're trying to shuffle it off to the Bureau of Reclamation. They can't do that," he said.

Also off limits for the plan is discussion of merging the Colorado River Management Plan with a proposal to declare the 277-mile river corridor through Grand Canyon National Park as wilderness.

The Park Service recommended the river and nearly 1 million acres of the park be classified as wilderness. But until Congress approves a wilderness bill, there will be no merging of the wilderness in the plan, said Alston.

Tom Martin, a member of River Runners for Wilderness, said the Park Service is mandated to manage the river as a wilderness and restrict motors and excessive use of natural resources.

"When I walk around this room, what I see missing is anything to show that the park has to manage the river for its wilderness values and character," he said.

Additional public comment sessions on the Colorado River Management Plan are being held in Las Vegas on Aug. 13 and in Mesa Aug. 15. Comments can also be left on the Colorado River Management Plan Web site: www.nps.gov/gcra.crmp.

LR in the News 08/16/02

Phoenix papers on final CRMP meeting

Colorado River enthusiasts voice concerns

By Mary Jo Pitzl for The Arizona Republic

MESA - They came in shorts and sandals, skirts and T-shirts, fish heads and sarongs. People with an interest in how the Colorado River should be managed through Grand Canyon National Park milled about a conference room at Mesa Community College on Thursday evening.

The fish heads were oversized hats worn by members of Living Rivers, a group that is pressuring park officials to take into account how Glen Canyon Dam has imperiled various fish species.

Others came to weigh in on how to best allocate trips along the Colorado's 250-mile path through the Canyon.

Gaylord Staveley, in his 45th year of river-running, said park officials should freeze the waiting list for private boaters and figure out a better way to get those people on trips.

Staveley, who runs Canyoneers, a rafting company, said the problem is not that commercial operators get too many of the river's "user days" but that the park has lost control of how to best handle go-it-alone boaters.

Private boaters complain that they face waits of 19 to 20 years for a river trip and are pushing for a more equitable split of the coveted user days.

The Arizona Wilderness Coalition wants park officials to phase out motorized watercraft, which commercial operators oppose.

The coalition's Don Hoffman predicted that the loss of motors wouldn't dry up demand for river trips. "The oar trips are fuller than the motorized trips," he said.

Private boaters call for more permits to raft Grand Canyon

Scott C. Seckel
East Valley Tribune

The struggle for a chance to raft the Colorado River through the Grand Canyon dominated a meeting in Mesa held by park officials Thursday.

The system now in place—which dates back to the late 1960s—favors commercial outfitters. Out of 120,000 river days available, outfitters get 115,500 and private boaters get 54,450.

To get a private rafting permit, boaters put their names on a waiting list which now takes about 20 years to climb.

Private boaters want more permits set aside for them. John Dole, a Mesa resident and partner in a river gear rental company called Riverproff Outfitters, said he doesn't think the permit system is fair. "it's still skewed mightily to the commercial boaters," Dole said.

Outfitters at the meeting said that they wanted to preserve their livelihood and ensure that people without the equipment and skill can enjoy what all sides say is the experience of a lifetime.

Rob Elliott owns Arizona Rafting Adventures, a Flagstaff-based outfitting company. He said he wasn't worried about his business being affected—he said he could retire if he wanted to—but he wants "a fair process that will serve all sectors of the public."

A host of other issues were raised by a crowd of about 250 who attended the four-hour meeting, such as motors or no motors on boats, wilderness or recreational area at the Canyon, and what about saving rapidly disappearing native fish?

The meeting was one of a series being held around the West this summer to gauge public opinion on river corridor management. Current policies will be changed in about two years by a regional National Park Service director after public input.

Environmentalists protested the recreational focus of the meetings. Four native fish are extinct in the stretch of the Colorado running through the Canyon, according to Owen Lammers, executive director of the Scottsdale-based environmental advocacy group.

"What good is a river trip if they've lost the ecological integrity that made it a national park in the first place?" Lammers said.

River News 08/22/02

RRFW Riverwire - GRAND CANYON SCOPING ADDS 2 CITIES

GRAND CANYON NATIONAL PARK EXTENDS PUBLIC MEETING SCHEDULE IN REVISION OF COLORADO RIVER MANAGEMENT PLAN

On the heels of five successful open house meetings in cities throughout the West, Grand Canyon National Park Superintendent, Joseph F. Alston, today announced the Park's intent to conduct two additional public meetings in the San Francisco/Oakland and the Washington, D.C./Baltimore areas. Meeting dates and locations are forthcoming and will be posted on the Colorado River Management Plan (CRMP) Web page www.nps.gov/grca/crmp

Meetings in Denver, Colo.; Salt Lake City, Utah; Flagstaff, Ariz.; Las Vegas, Nev.; and Mesa, Ariz. were held during the first two weeks in August and drew attendance from approximately 850 people. To date the Park has received more than 3,000 comments via various public involvement venues, including the Internet, mail, hand-delivered letters and the open houses. "We were very pleased with the attendance at the open house meetings," Alston said. "The format lent itself to helping everyone realize the complex issues we face as we prepare the draft environmental impact statement (EIS).

There was a lot of discussion we hadn't heard in the public involvement phase before." Alston said these meetings were added to give the public, interested organizations and agencies further opportunity to interface with Park staff, have their questions answered and submit comments. "Many other governmental agencies work with the Grand Canyon National Park," Alston said. "The final results of this EIS could affect their dealings with the Park, so there is a lot of interest there."

In June the Superintendent announced the initial meetings, the first stage in preparing an EIS to update the CRMP for Grand Canyon National Park. The National Park Service (NPS) is preparing the EIS for the Plan under the provisions of the National Environmental Policy Act (NEPA) of 1969.

The purpose of this EIS is to update management guidelines for the Colorado River corridor through Grand Canyon National Park. Current guidelines can be found in the 1989 CRMP. A copy of this plan, as well as background information and public comments received from past CRMP discussions, can be found on the Internet at [www.nps.gov.grca/crmp](http://www.nps.gov/grca/crmp).

In developing a draft CRMP/EIS, the NPS seeks public input to reaffirm previously identified agency and public issues, and to identify any new public issues and concerns. Scoping information will also be used to help narrow and define the significant environmental issues and management alternatives to be analyzed in the EIS. Public input will continue throughout the planning process. The NPS will actively seek out and consult with all interested members of the public.

During this process, the NPS will develop and evaluate alternatives to address resource protection issues, potential resource impacts, user capacities, and mitigation measures necessary or desirable to achieve the NPS mission. The NPS will review some key resource issues outside of the park's boundaries that affect the integrity of the Grand Canyon and will consider alternatives that include no-action (the status quo), no motorized use, and varying levels of motorized and non-motorized watercraft use.

Issues to be addressed in the EIS will include, but are not limited to:

- appropriate levels of visitor use consistent with natural and cultural resource protection and preservation mandates;
- allocation of use between commercial and non-commercial groups;
- non-commercial permitting system;
- level of motorized versus non-motorized raft use;
- the range of services and opportunities provided to the public; and,

- in consultation with the Hualapai Indian Tribe and other appropriate parties, the continued use
- of helicopters to transport river passengers from the Colorado River near Whitmore Wash.

Information about this planning effort and how the public can be involved throughout the process can be found in Soundings, a newsletter available on the Internet at www.nps.gov/grca/crmp. Due to the public interest in this planning process, the NPS has decided to extend the public comment period until November 1, 2002. Comments can be submitted by any one of the following ways:

- mail to CRMP Project, Grand Canyon National Park, P.O. Box 129, Grand Canyon, Arizona 86023;
- send by electronic mail to grca_crmp@nps.gov;
- hand-deliver to Grand Canyon National Park; or
- provide at one of the public scoping meetings to be announced.

Completion of the EIS process will fulfill an agreement reached through a negotiated settlement of recent litigation between several organizations and individuals and the federal government. The settlement requires the NPS to complete this EIS by December 31, 2004. The NPS plans to restart the process to review and revise the park's 1988 Backcountry Management Plan subsequent to the completion of the CRMP. For further information on this planning process, please contact Jeffrey Cross, Director, Grand Canyon Science Center at 928-638-7759.

To be placed on the park's CRMP Newsletter mailing list, please send your request along with your email address to: grca_crmp@nps.gov.

RIVERWIRE is a free service to the boating community from River Runners For Wilderness. Participation is FREE (and required!). Send your e-mail address to riverwire@rrfw.org and we'll add you to the RRFW RIVERWIRE e-mail list. RRFW is a project of Living Rivers. Visit our website at www.rrfw.org.

River News 08/28/02

RRFW Riverwire - GUNNISON GORGE MANAGEMENT PLAN UPDATE

August 29, 2002

This year, the Bureau of Land Management's Gunnison Gorge National Conservation Area has begun a new recreational management planning process. An on-river focus group was held August 19-20. Jo Johnson of River Runners for Wilderness also represented the Grand Canyon Private Boaters Association, Colorado Whitewater Association, and private boaters in general, on the trip and at a meeting in Montrose the following evening. Steve Christianson, GCPBA member from Utah, and

members of the Western Colorado Congress, an environmental & community group which has been very involved, also represented non-commercial interests. Local non-commercial boaters have not been heavily engaged in the planning process.

While the Gorge's 6 river outfitters, 2 walk-in fly fishing outfitters and the horse packing outfitter are good stewards of the Gorge, the river outfitters want to change current rules to get more launches, allow larger group sizes, and to limit private boater access.

In his keynote speech, noted author, teacher, and river runner Rod Nash urged participants to avoid the type of planning mistakes Grand Canyon National Park made 30 years ago and is still dealing with, and to remember that "Wilderness is a state of mind".

The outfitters suggested:

- A permit system for privates ostensibly for educational purposes, but not necessarily to limit private boater access. Currently, the fee demo form serves as a permit of sorts. Private boaters sign an agreement on the back to observe standard river rules (fire pan, toilet, etc.).
- A limit on private boater and fisher access, particularly during stone fly hatch/high water, with no decrease or possibly even an expansion in commercial launches. Currently, there is no limit on private boaters/fishers although BLM's target maximum is 75 people. During about 10 days in June the limit is exceeded, sometimes by quite a bit.
- 50 to 100% more launches for outfitted services. A large portion of commercial launches go unused, and outfitters say there is not enough flexibility in scheduling launches. Outfitters have a total of 2 launches per day, but are free to trade launches among themselves.
- Larger group sizes than the current 12 (which includes guides) (a number supported by the BLM's campsite survey) because commercial vans carry 15 passengers.
- To change their permit renewals to avoid the Chaffee/Gunnison County entertainment tax which is calculated on permit term.
- To keep outfitter permit renewals at 5 years so they don't have to go through a re-bidding process every year.

For those unfamiliar with the Gunnison Gorge, it is a 14 mile run through a small designated wilderness downstream of the Black Canyon of the Gunnison. The road stops 1 mile above the Gorge at Chukkar Trail, and gear is horse packed and backpacked in from there, which does limit access. Camps are reserved at the put in: first-come, first-served. While the camps do look very used, the corridor is clean and pristine, and the whitewater is technical (up to class III-IV). Boaters and hikers use different campsites.

Private boater representatives made these points in response to outfitter proposals:

- Rules should be applied evenly across sectors. For example, there should be no reserving of bigger camps for commercial use only as is now being done elsewhere, is not fair to non-commercial boaters.
- Permits have historically led to limits on access. Non-commercial boaters are, for the most part, acting responsibly, so why impose more restrictions on their access, especially in light of commercial use allocations presently going unused?
- Because demand cannot be measured, the only fair way to distribute access is by having all boaters stand in the same line to reserve space on the river. They chose how they go after making their reservation. A new paradigm for access is needed—it is unfair and unrealistic to limit non-commercial boating when 35% to 50% of commercial launches have gone unused in each of the last 9 years.

Karen Tucker, BLM Gunnison Gorge Manager, is spearheading a truly impressive effort to include all stakeholders and all points of view. If it is humanly possible, the result will be a finely crafted plan that protects the resource and truly reflects the public's wishes on recreational issues. The BLM has hired a planning contractor, Tetra Tech of Boulder, to assist with the effort.

To get more information or comment on the plan, please visit their website at www.gunnison-gorge-eis.com. Comments need to be made as soon as possible. To get more information about the area and see a great slide show of the gorge, visit www.co.blm.gov/ggnca.

You can also contact Jo Johnson at jo@rrfw.org for more information. RIVERWIRE is a free service to the boating community from River Runners For Wilderness. Participation is FREE (and required!).

Send your e-mail address to riverwire@rrfw.org and we'll add you to the RRFW RIVERWIRE e-mail list. RRFW is a project of Living Rivers. Visit our website at www.rrfw.org

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OAR TRIPS JUST AS SAFE AS POWERBOAT TRIPS IN GRAND CANYON

Reprinted from The Wilderness Society Fact Sheet, August 2002

For the past 50 years, concessionaires have dominated access to the Colorado River. By switching overwhelmingly to powerboat tours, they are pushing visitors down the canyon at an accelerated pace to improve their profits. However, racing through the canyon diminishes the wilderness experience of the river. Concessionaires currently hold 80% of the permits, and are responsible for increasing the congestion and noise. The National Park Service is starting a new Colorado River Management Plan. This process provides an opportunity to restore the wilderness qualities of the Colorado River.

MYTH - The concessionaires claim that a powerboat tour is the only safe way to experience the Colorado River.

REBUTTAL - This is simply not true; perpetuation of this myth helps concessionaires maintain their control over Colorado River management. Oar trips on the Colorado River are as safe, if not safer than powerboat tours. The fact is that “commercial motor trip fatality frequency is 2.7-fold higher than that on commercial oar-powered trips .” Scientific studies have proven that a motor does not protect you from injuries in the Grand Canyon. Rafting the Colorado River is safe; here are the facts on injury and mortality on Grand Canyon river trips.

- Overall, running the Colorado River is not a risky endeavor. The chance of injury during Colorado River trip is very low. Current risk is 2.36 injuries per thousand and mortality risk is 0.004 percent.(1)
- Studies indicate that the lower risk of fatality on oar-powered rafting trips may be influenced by the passenger:guide ratio. This ratio is much lower on oar-powered rafting trips than on powerboat tours. Therefore, the oar-powered trips are safer since a lower passenger:guide ratio results in better supervised passengers and less chance for injury.(2)
- The most deadly hazard in the Grand Canyon is heat illness. It can strike visitors anywhere in the canyon, but most cases of heat stroke occur in visitors hiking in the National Park backcountry and not on river trips.(3)
- Studies of injuries have found that there is no difference in injury rates between commercial (primarily powerboat) tours and self-guided (primarily oar) trips.(4)
- Injury frequency on Grand Canyon rafting trips is very low. A passenger has a greater overall injury risk playing golf than rafting the Grand Canyon.(5)
- The mean age of injured passengers was lower than the mean age of passengers. Therefore, elderly passengers are not at any greater risk of injury; no matter what type of rafting experience they choose.(6)
- The majority of reported injuries occur while the rafters are engaged in off- river activities. Therefore, playing, hiking, drinking alcohol, etc around camp is more dangerous than running the river on a commercial oar trip.(7)

References:

1. Myers, Thomas M.; Christopher C. Becker; and Lawrence E. Stevens. *Fateful Journey: Injury and Death on Colorado River Trips in Grand Canyon*. Flagstaff, AZ: Red Lake Books, 1999. p. 135.
 2. *Ibid.* p. 158.
 3. *Ibid.* p.135.
 4. *Ibid.* p. 39.
 5. *Ibid.* p. 113.
 6. *Ibid.* p. 58.
 7. *Ibid.* p. 137.
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WHO RAFTS THE COLORADO RIVER THROUGH THE GRAND CANYON?

Reprinted from The Wilderness Society Fact sheet, August 2002.

Proponents of powerboat tours through the Grand Canyon insist they are necessary to provide the majority of the American population access to the river. However, the facts show that all ages can enjoy self-guided rafting trips and that pricey powerboats tours are only available to the wealthy few.

Commercial passengers hire a rafting company to take them through the canyon. The company rows (or powers) the boat, takes care of navigation and trip preparation, cooks the meals, and is responsible for first aid. In contrast, self-guided trips generally are 'led' by a person with extensive rafting experience, often on the Colorado River, and the group shares responsibility for rowing, navigation, cooking, and first aid. The vast majority of self-guided trips are oar-powered.

The Park Service and Bureau of Reclamation have commissioned several studies to look at the differences between these user groups. The studies were then used for determining permit allocation on the river. Based on this information, here are some facts about the user groups:

The studies revealed:

- Forty seven percent of commercial passengers have a household income over \$100,000 while only 12% of the national population have a household income over \$100,000. The household income of self-guided boaters is very close to the national average (within 5%).(1)
- A motorboat tour of the Grand Canyon costs ~\$300/day, a steep price tag for the average American.(2)
- Currently, 24% of powerboat tour passengers, 74% of oar-powered commercial passengers, and 85% of self-guided boaters believe the canyon would be more of a wilderness if motors were phased out.(3)
- Age is not an impediment to enjoying an oar-powered journey. Both passengers on commercial tours and self-guided rafters range in age between 10 to 82 years old.(4)
- Most commercial passengers do not experience the full Grand Canyon, entering or leaving the river trip at Phantom Ranch or by helicopter at Whitmore Wash . In contrast, all self-guided boaters take the time to experience the entire canyon.(5)
- Self-guided paddlers and commercial oar passengers tend to experience more of the wilderness qualities of the Grand Canyon by staying longer at attractions and spending more time on the river.(6)

References:

1. Jonas, Lilian. "Historic Profile of Colorado River Users: An Overview and Integration of Existing Data." Submitted to Grand Canyon National Park, Grand Canyon Science Center – Research Office.
2. 1998 Shelby study
3. Ibid.
4. Myers, Thomas; Christopher Becker; and Lawrence Stevens. Fateful Journey: Injury and Death on Colorado River Trips in Grand Canyon. Flagstaff, AZ: Red Lake Books, 1999.
5. Jonas, Lilian. "Historic Profile of Colorado River Users: An Overview and Integration of Existing Data." Submitted to Grand Canyon National Park, Grand Canyon Science Center – Research Office.
6. Ibid.

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OUTFITTER MYTHS YOU SHOULD KNOW ABOUT

Myth: The new plan will reduce the number of people able to take a river trip.

Correction: The current plan was set up and has been run in such a way that tens of thousands of people have been prevented from running the river over the past 20 years. A plan based on wilderness principles and fair access for all could increase visitation.

Myth: The river environment is now being used to full capacity.

Correction: The Grand Canyon could handle more people if wilderness policy was enforced. Social contacts would be diminished if launches were no longer bunched on weekends.

Myth: The new plan will prevent old, young, and the disabled from taking trips.

Fact: The current plan grossly favors large motorized rafts that are more difficult to use by old, young, and disabled people. Rowing trips have a higher crew to passenger ratio, and utilize more accessible craft. Research shows that people of all ages and capabilities use, and prefer, rowing trips.

Myth: The river will be restricted to an elite few under new proposals.

Fact: Under the current plan, half of commercial passengers come from upper income brackets (over \$100,000 per year). Currently, motorized commercial trips are exorbitantly expensive. The new plan must emphasize visitation by a much broader spectrum of users.

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Sedimental Journey Challenges BuRec's Birthday

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As the last of the fireworks exploded over the Bureau of Reclamation's (BuRec) \$600,000 centennial party at Hoover Dam, a ceremony of a much different sort was underway 250 miles upstream. A river restoration crew labored well into the next morning to deliver three tons of sediment to Grand Canyon's suffering river ecosystem. With the last grains of sediment deposited, Living River's first Sedimental Journey was proclaimed a success.

Five nights earlier it all began at a rally on the banks of a free-flowing Colorado above Canyonlands National Park. Accompanied by music, dancing and calls for river restoration, a brigade of activists loaded 300 bags (25-pounds each) of sediment from a sandbar in the middle of the river. The bags were paddled ashore and loaded into a dump truck emblazoned with banners reading "Reclaim the Bureau," and "Return the Sediment, Return the Flow, Save Grand Canyon from Glen Canyon Dam."

The caravan then began its journey downstream supported by 85 environmental and social justice groups demanding immediate action by BuRec to correct the damage Glen Canyon Dam has caused to Grand Canyon's river ecosystem. More sediment was gathered at the Journey's second rally at Antelope Point, on the Navajo reservation adjacent to Lake Powell reservoir. Max Goldtooth, a Navajo medicineman and water activist stated, "We've not taken care of our rivers and that's why we're having these droughts. Our offerings are blocked in their journey to the ocean by these dams."

The next day road vehicles were abandoned for a flotilla of nine boats to float the 15 miles of the Colorado River below Glen Canyon Dam. Just as the native fish are no longer able to survive in Grand Canyon, we too shivered in the 46 degree water released from the dam. The lack of natural sediment was also fully evident in the crystal clear water. But amidst the 800-foot sheer walls of this, the un-inundated section of Glen Canyon, we made the first offering of sediment back to the river.

Sediment was scheduled to be deposited following the conclusion of a rally held early in the day at Lee's Ferry, the launch location for Grand Canyon river trips, but the National Park Service banned the release of any of our sediment. "It's obscure why they want to arrest me for attempting to comply with the Grand Canyon Protection Act, and for attempting to do my part to heal the river," said Dr. Brent Blackwelder, President of Friends of the Earth.

Following a rally in Grand Canyon National Park the next day, the Journey held its final event at Hoover Dam, a few hours in advance of the BuRec's centennial celebration. Visitors to the dam were treated to river restoration melodies, dancing fish and the truth about the impacts of BuRec's devastation of the Colorado. "It's time for BuRec to get on with the task of decommissioning Glen Canyon Dam," the Sierra Club's Marcia Hanscom told the crowd gathered at Hoover Dam. "Grand Canyon deserves better and so does the Colorado River."

That was the message picked-up by the media at each stop along the 700-mile journey. So although our truckload of sediment, which was finally delivered to the Grand Canyon later that evening represented just .000003% of the amount which it should naturally receive, it represented a significant step toward building public awareness and interest in the reform of the Bureau of Reclamation and restoration on the Colorado River.

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Navajo Dam: BuRec Says "No" to Decommissioning

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The Bureau of Reclamation (BuRec) has released its draft plan for the re-operation of Navajo Dam, the largest dam on the San Juan River. Under requirements of the Fish and Wildlife Service to take steps to reverse the decline of native Razorback Sucker and Colorado Pikeminnow habitat in the San Juan, BuRec is proposing flow recommendations to reduce the likelihood that the river will run dry, as it nearly has with increasing frequency.

In assessing the decommissioning alternative proposed by Living Rivers and others, BuRec states "It would result in the loss of reservoir storage needed to allow for contract

water deliveries to the San Juan-Chama Project, the NIIP [Navajo Indian Irrigation Project] and other contractors...”

The NIIP has yet to be fully completed, and has been a money loser from the start. The Navajo Nation could generate far more revenue were it to sell water to users downstream, than to continue with the NIIP. The San Juan-Chama water is primarily used to supplement Rio Grande instream flows for endangered Silvery Minnow. Rio Grande water users should get their own water budgets in line, not divert water from the San Juan, which has its own instream flow needs to protect endangered fish.

BuRec is recommending that flow levels out of Navajo Dam be as low as 250 cubic feet per second. With increasing diversions occurring over the 171-mile river corridor downstream of the dam, Living Rivers believes this will not be enough water to prevent stream dewatering.

Comments on the Draft EIS will be accepted until November 4, 2002. For additional information contact Living Rivers.

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Grand Canyon: LR Takes on New River Managment Plan

Volume 2, Number 5, September 2002

The National Park Service (NPS) is getting underway on rewriting its management plan for the Colorado River through Grand Canyon National Park. With four of the Canyon's eight native fish species extinct, two more headed in that direction and little action on behalf of the Park Service to uphold the Endangered Species Act against the impacts of Glen Canyon Dam, Living Rivers initiated an organizing effort to demand that this new plan address the declining ecological integrity of the river.

When first announced, NPS implied that this new river plan would principally focus on human recreation on the river and defer all comments pertaining to river ecology to the Bureau of Reclamation's Adaptive Management Program for Glen Canyon Dam. This runs counter to the first goal of its existing 1989 plan, "To preserve the natural resources and environmental processes of the Colorado River corridor and the associated riparian and river environment."

"The Park Service's failure to preserve natural process is rationale to elevate this objective to the highest priority, not to eliminate it from their management objectives altogether," said John Weisheit, Living Rivers Conservation Director. Weisheit and other Living Rivers staff and volunteers took this message on the road for two weeks in

August. Dubbed the “Habitat Security Tour,” the crew conducted outreach at public meetings pertaining to the river management plan in Denver, Salt Lake City, Flagstaff, Las Vegas and Phoenix.

Clad in life-like endangered fish costumes of Humpback Chubs and Razorback Suckers, and sporting Living Rivers Habitat Security jumpsuits, participants were greeted with a friendly message about the need for swift action on behalf of NPS to reverse the native habitat decline in Grand Canyon’s river corridor.

“You’re certainly getting your message out,” said Joe Alston, Superintendent of Grand Canyon National Park, and “We want you to know that we do care about the fish.”

In the letter delivered to Mr. Alston, in Denver, Living Rivers also reinforced that the ecological changes occurring in Grand Canyon’s river corridor represent a significant violation of the NPS’s Organic Act (1916) which requires that NPS preserve its lands unimpaired for the enjoyment of current and future generations. Specifically the letter demanded that the new river management plan identify means to:

- Restore essential sediment and nutrient flows from the mainstem Colorado River into Grand Canyon.
- Restore natural flow regimes to properly transport this sediment within Grand Canyon, when and where the sediment belongs.
- Restore natural seasonally variable water temperatures in the mainstem Colorado River through Grand Canyon.
- Develop a restoration and recovery program for the Colorado River corridor in Grand Canyon that includes the full recovery of all species known to be native to Grand Canyon prior to the operation of Glen Canyon Dam.
- Implement a non-native eradication program to minimize alien species in the Grand Canyon River corridor with a priority on those that prey on, compete with, or otherwise impair the health of native plants and animals.

To further this effort, Living Rivers has also helped to form the Grand Canyon Wilderness Alliance, a nationwide coalition working to ensure this new river management plan addressees a range of issues. In addition to ecological integrity, high on the Alliance’s list is ensuring the river corridor is managed as wilderness, eliminating the use of motorized rafts, and improving access for private river runners, who currently must wait up to 20 years to run the river as commercial outfitters are given 80 percent of the permits.

Public comments on the proposed scope of the Grand Canyon River Management Plan are being accepted until November 1, and additional public meetings are scheduled for Washington DC and San Francisco. Please send letters demanding that the Park Service address the river’s ecological integrity in the plan. Direct them to: Colorado River Management Plan, Grand Canyon National Park, PO Box 129, Grand Canyon, AZ 86023. Email: grca_crmp@nps.gov



More Information:
[Scoping comments:](#)
[Grand Canyon](#)
[Wilderness Alliance](#)

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Fossil Creek: APS Files for Surrender

Volume 2, Number 5, September 2002

Arizona Public Service Company (APS) has filed with the Federal Energy Regulatory Commission (FERC) a long-awaited "application to surrender" its license for operating the Childs-Irving Hydropower Plants at Fossil Creek. The Application to Surrender

marks perhaps the most significant milestone yet in Living Rivers battle to restore Fossil Creek and the surrounding riparian habitat.

The Childs and Irving plants are 90 and 100 years old respectively and draw the entire flow of Fossil Creek out of the stream bed and into a series of penstocks, flumes and tunnels for hydropower production. The plants produce a minuscule amount of power in comparison to the major damage they wreak on Fossil Creek, a perennial stream in the central Arizona desert.

The United States Forest Service (USFS) however is somewhat concerned. "Although the Forest Service strongly supports the goal of surrender and decommissioning to restore full stream flow to Fossil Creek, the Forest Service opposes certain provisions of the settlement agreement." Of particular concern is the USFS's request that "Additional or different structures are retained in the project site." Before the agreement was signed, each of the significant 52 components of the plants was considered, studied and its removal or retention painstakingly negotiated. To reopen these negotiations would be an unnecessary bureaucratic burden.

Living Rivers and the other environmental groups involved in the initial negotiations are still highly engaged and prepared to battle for nothing less than the initial goal: full flows to Fossil Creek. No compromise is acceptable.

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Climate Change: Uncertainty for the Colorado

Volume 2, Number 5, September 2002

The Environmental Protection Agency (EPA) and the United States Geological Survey (USGS) have published studies concerning global climate change and how these predicted changes could affect our future water supplies. As the Colorado River is the major supplier of water for 30 million people, these important studies forecast scenarios for both a severe sustained drought and also for years of severe flooding.

The results suggest the following for the Colorado River basin:

- streamflow can increase or decrease by as much as 30 percent
- the 400-year average virgin streamflow for the Colorado River at Lee's Ferry in northern Arizona totals 13.5 million acre-feet per year (16.4 was the original projection)
- the 20th Century was a wetter century than normal, with an approximate 20 percent higher yield
- high magnitude floods can stress spillway mechanisms and overflows will damage areas of development; dam failures are possible.

The above data does not compliment the “Law of the River,” the working document that governs the allocations and delivery systems for the seven states of the Colorado River basin and Mexico. Nature’s variations and man’s miscalculations will make it more and more difficult to plan for the long-term management of our water resources.

The data suggest that in the last 400 years there have been many severe sustained droughts in the Colorado River basin, with the longest occurring about 1579-1598. During that 20-year cycle it has been estimated that a 20 percent reduction in streamflow occurred for the Colorado River basin. Within that 20-year period there was a five-year cycle where streamflow was reduced by 34 percent. Says Robert Webb at the USGS Desert Lab in Tucson, “It is impossible to predict the weather for the next 20 years. We do know that as more and more people become dependent upon the available surface water and as our groundwater reserves become depleted, that it is going to be harder and harder to project and meet our upcoming operation plans.”

In modeling the affects of a severe sustained drought, it has been demonstrated that current water allocations will especially stress the upper basin states because their water rights are largely junior to those of the lower basin. The lower basin will be affected in another costly scenario: an increase in the salinity of their water at levels above legal standards and the associated costs to mitigate that increase.

A severe sustained drought for the Colorado River basin will also bring reservoir levels to near dry conditions and will effectively reduce hydropower by as much as 36 percent. However, it was noted in the reports that such a reduction in electricity would not cause major disruptions for most regional power grids. For Lake Powell, reservoir levels would drop 230 feet to the elevation of the generator’s intake pipes (penstocks) and would subsequently leave boat ramps and marinas high and dry. Compounding the situation would be the 30 miles of sediment plugs for both the Colorado and San Juan River arms.

According to John Dohrenwend, a retired USGS surficial geomorphologist, “As the rivers erode through these sediment deposits, the sand and silt will be mobilized and deposited closer to other reservoir facilities, including Glen Canyon Dam. Such sediment transport would significantly diminish the life expectancy of Lake Powell reservoir.” Because of the legal mandate to deliver on average 8.23 million acre-feet of water per year to the lower basin, Lake Mead reservoir levels would not be as drastically reduced. However, Lake Mead is still projected to experience diminished reservoir levels that would have similar sediment impacts on its water quality and recreational access.

Since 1942 there has been a reduction of sediment inputs into the reservoirs of the Colorado River basin. Current storage of normal erosional materials now occurs in the side streams and arroyos of the Colorado, Green and San Juan Rivers. Large destructive floods, such as occurred from about 1862 to 1941, will eventually transport this stored sediment into the many reservoirs of the basin. The deposition and storage of this sediment would greatly reduce the water storage capabilities of the reservoirs and consequently tax the flood control features of the dams. Catastrophic flood events

have been projected to even remove dams, which would consequently destroy the water delivery structures downstream. With no infrastructure to deliver water to the farms and metropolitan areas of the Southwest, the region's economic base would be severely compromised.

Richard Hereford of the USGS at Flagstaff, notes that, "Based on the remains of flood deposits in the vicinity of Lee's Ferry, Arizona, we know that streamflows of 500,000 cubic feet per second have occurred in our historic times." Glen Canyon Dam is designed to bypass flood flows but much depends on the duration of the flood, the volume of the flood and how much reservoir storage is available. In 1983, when the reservoir was full, spillway damage did occur when the total discharge at the dam was only 92,600 cfs, which also caused millions of dollars in flood damage to the lower basin.

With the scientific information currently available on climatic scenarios, obviously the current system of water allocation and delivery systems in the thirsty West is seriously flawed. It is therefore absolutely necessary to continue the process that will modify the various aspects of water law, policy and infrastructure with rigor and vigilance.

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BuRec Commissioner John Keys Wants to Hear from You!

Volume 2, Number 5, September 2002

At the end of September BuRec will release a draft environmental assessment for experimental operations of Glen Canyon Dam to restore native fish habitat in Grand Canyon. In 1996 such tests failed and these will too. Join Living Rivers and the Grand Canyon

Coalition in telling BuRec to stop testing, and start fixing, the Grand Canyon. Meetings are to be announced for Phoenix and Flagstaff. Living Rivers Habitat Security Force will be there. Check Living Rivers website for details, including advise on, and where to send in your comment letters.

RRFW Riverwire – OUTFITTER POLICY ACT STAGES A COMEBACK

September 11, 2002

HR 2386, the Outfitter Policy Act, is scheduled for House Resources Committee "mark-up" tomorrow. Please call your congressperson in regards to this bill. This is especially important if your congressperson is on the Resources Committee (list at end). It is important that Congress know that this bill is controversial and that it severely hampers land managers and the public.

The RRFW is opposed to the Outfitter Policy Act of 2001 (HR. 2386) because the bill fundamentally alters the laws governing the management of our public lands, provides new privileges to one class of recreational user at the expense of the general public and other users, restricts the powers of federal land managers to best manage lands for multiple use, and puts non-profit institutional organizations at a disadvantage when seeking to conduct educational and recreational outings for their members.

Opposition to HR. 2386

This bill reduces land agency discretion in management of public lands and limits public and non-commercial use of public lands as the bill would --

1) Burden federal land managers to guarantee "reasonable opportunity" for profits to commercial outfitters using public lands. This will result in: o "Grandfathering" commercial outfitter use in areas where high recreational demand mandates restrictions on public recreation access, thereby creating disproportionate use of scarce public resources by a select group o Limiting the number of authorized outfitters so that each has a better chance to make a profit, thereby limiting public choice and the benefits of healthy outfitter competition o Granting outfitters potentially greater access to federal lands than the public

2) Elevate commercial outfitter permits to a legal status greater than other types of federal permits, allowing permits to be transferred, inherited or sold and restricting the ability of land managers to modify, enforce or revoke permits

3) Continue to leave the status of institutional groups and non-commercial outfitters ambiguous, allowing different interpretations of the rules in different land agency jurisdictions

The favoritism provided to commercial outfitters coupled with the continued uncertain definition of institutional groups would reduce or eliminate outings by non-profit civic, children, and environmental education groups in our nation's most popular recreation areas. Even volunteer-led outings would be reduced or eliminated.

While there may be a need for reform of current permitting policies, there should be a clarification of the permitting process for non-profit institutional groups - an area not explicitly addressed by the current legislation.

House Resources Committee Members

Neil Abercrombie, (Dem.) Hawaii 1st 1502 LHOB 202-225-2726

Anibal Acevedo-Vila , (Dem.) Puerto Rico Resident Commissioner 126 CHOB
202-225-2615

Ken Calvert, (Rep.) California 43rd 2201 RHOB 202-225-1986

Chris Cannon, (Rep.) Utah 3rd 118 CHOB 202-225-7751

Brad Carson, Oklahoma 2nd 317 CHOB 202-225-2701

Donna M. Christian-Christensen, M.D., (Dem.) Virgin Islands Delegate 1510 LHOB
202-225-1790

Barbara Cubin, (Rep.) Wyoming At Large 1114 LHOB 202-225-2311

Peter DeFazio, (Dem.) Oregon 4th 2134 RHOB 202-225-6416

Calvin M. Dooley, (Dem.) California 20th 1201 LHOB 202-225-3341

John J. Duncan, Jr., (Rep.) Tennessee 2nd 2400 RHOB 202-225-5435

Eni F.H. Faleomavaega, (Dem.) American Samoa Delegate 2422 RHOB 202-225-8577

Jeff Flake, (Rep.) Arizona 1st 512 CHOB 202-225-2635

Elton Gallegly, (Rep.) California 23rd 2427 RHOB 202-225-5811

Jim Gibbons, (Rep.) Nevada 2nd 100 CHOB 202-225-6155

Wayne T. Gilchrest, (Rep.) Maryland 1st 2245 RHOB 202-225-5311

James V. Hansen, (Rep.) Utah 1st, Chairman 242 CHOB 202-225-0453

J.D. Hayworth, (Rep.) Arizona 6th 2434 RHOB 202-225-2190

Joel Hefley, (Rep.) Colorado 5th 2230 RHOB 202-225-4422

TIM HOLDEN, (Dem.) Pennsylvania 6th 2417 RHOB 202-225-5546

Rush Holt, (Dem.) New Jersey 12th 1630 LHOB 202-225-5801

Jay Inslee, (Dem.) Washington 1st 308 CHOB 202-225-6311

Walter B. Jones, Jr., (Rep.) North Carolina 3rd 422 CHOB 202-225-3415

Dale E. Kildee, (Dem.) Michigan 9th 2107 RHOB 202-225-3611

Ron Kind, (Dem.) Wisconsin 3rd 1713 LHOB 202-225-5506
Edward J. Markey, (Dem.) Massachusetts 7th 2108 RHOB 202-225-2836
Scott McInnis, (Rep.) Colorado 3rd 320 CHOB 202-225-4761
Betty McCollum, (Dem.) Minnesota 4th 1029 LHOB 202-225-6631
George Miller, California 7th 2205 RHOB 202-225-2095
Grace F. Napolitano, (Dem.) California 34th 1609 LHOB 202-225-5256
Solomon P. Ortiz, (Dem.) Texas 27th 2304 RHOB 202-225-7742
Tom Osborne, (Rep.) Nebraska 3rd 507 CHOB 202-225-6435
C.L. (Butch) Otter, (Rep.) Idaho 1st 1711 LHOB 202-225-6611
Frank Pallone, Jr., (Dem.) New Jersey 6th 420 CHOB 202-225-4671
John E. Peterson, (Rep.) Pennsylvania 5th 307 CHOB 202-225-5121
Richard Pombo, (Rep.) California 11th 2411 RHOB 202-225-1947
George P. Radanovich, (Rep.) California 19th 123 CHOB 202-225-4540
Nick Joe Rahall, II, (Dem.) West Virginia 3rd, Ranking Democrat 2307 RHOB
202-225-3452
Dennis Rehberg, (Rep.) Montana At Large 516 CHOB 202-225-3211
Jim Saxton, (Rep.) New Jersey 3rd 339 CHOB 202-225-4765
Bob Schaffer, (Rep.) Colorado 4th 212 CHOB 202-225-4676
Michael K. Simpson, (Rep.) Idaho 2nd 1440 LHOB 202-225-5531

River News 09/12/02

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The files open in portrait view. Click on the "rotate" menu, and choose "clockwise" to see the pages in landscape view in Acrobat Reader 5.

Take Action 09/23/02

Save San Juan River endangered fish: Decommission Navajo Dam!

The status of the endangered fish of the San Juan River has become supercritical. In 1992, fishery biologists working on the San Juan River were unable to find any adult Razorback Suckers and only about 100 adult Colorado Pikeminnows. Now, no adult fish of either species can be found. All because of the operations of Navajo Dam.

The Bureau of Reclamation has released a Draft Environmental Impact Statement (DEIS) proposing flow modifications for Navajo Dam, but this is too little, too late. Your input is urgently needed to demand that BuRec more comprehensively address and recommend the decommissioning alternative referenced in the DEIS so that it can comply with the law and recover the endangered fish of the San Juan River.

- Navajo Dam caused the inundation of critical breeding habitat, and blocks the natural migration route to rearing habitat 100 miles downstream. The major issue is not flows, but this loss of habitat and the river's natural dynamic processes. San Juan River endangered fish must be able to spawn high enough in the river channel, such that hatchlings can become sufficiently strong prior to be flushed into Lake Powell reservoir and consumed by non-native fish. The only way to remedy this situation is to move forward with the decommissioning alternative for Navajo Dam.
- The San Juan River's other critical native fish nursery habitat was inundated by Lake Powell reservoir. Therefore, a comprehensive EIS of the decommissioning of Glen Canyon Dam must also be undertaken to ensure the recovery of San Juan River endangered fish.
- The preferred alternative of a minimum flow of 250 cfs (cubic feet per second) outlined in the DEIS is unhealthy. It will degrade the water quality and promote the growth of algae, which depletes oxygen necessary for viable native San Juan fish habitat, were such habitat in existence.
- The 500 cfs minimum alternative, although theoretically better than the 250 cfs preferred alternative, does not address the loss of historic spawning habitat high enough up in the river channel to allow for native fish to sufficiently mature before the river propels them into Lake Powell reservoir.
- These proposed alternatives were based on experiments that yielded no demonstrated recovery of native fish, and are based solely on meeting water delivery contracts within the San Juan system and to maintain non-native trout habitat for sport fisherman.
- The DEIS does not sufficiently evaluate the impacts of potential future diversions on endangered fish habitat. The Animas-La Plata Project, Navajo-Gallup pipeline and further expansion of the Navajo Indian Irrigation Project will significantly

reduce flows necessary for recovery of San Juan River endangered fish habitat.

- The decommissioning of Navajo Dam will provide a net financial gain to Federal taxpayers, as the primary beneficiary of Navajo Dam is the Navajo Indian Irrigation Project, which receives subsidies averaging \$1.5 million annually because of the project's inefficiencies.
- The DEIS makes no provisions for addressing the predation of native fish by non-native fish such as Catfish and Stripped Bass.
- The DEIS makes no provisions for mitigating the impacts on endangered fish habitat from pollutants found in the river, such as PCBs, mercury, DDT, selenium, chlorine and chlordane.

For over ten years the San Juan River Basin Recovery Implementation Program has failed to restore a self-sustaining native fish population in the San Juan River as it flows through New Mexico, Colorado and Utah, and these new proposals offer more of the same.

Restoration of the river ecosystem can be implemented by simply creating programs that conserve water in our communities and farms. Such programs will save money, taxes and increase productivity while saving the natural and cultural heritage of the San Juan River.

Direct your comments by December 4, 2002 to:

Mr. Ken Beck
Bureau of Reclamation
Western Colorado Area Office
Southern Division
835 East Second Avenue
Suite 400
Durango, Colorado 81301

Email: kbeck@uc.usbr.gov
Fax: (970) 385-6539 Telephone: (970) 385-6558

Take Action

Say NO to new Glen Canyon Dam operations

The Bureau of Reclamation (BuRec) will soon be releasing a draft environmental assessment proposing new operating requirements for Glen Canyon Dam. BuRec's objective is to convince the public that it is working hard to stop the decline of the

Humpback Chub, which is about to become the fifth Colorado River endangered fish to go extinct in Grand Canyon National Park since the completion of Glen Canyon Dam. Your input is needed to tell BuRec that you are not so easily fooled, that its proposed tinkering with Glen Canyon Dam will not be enough to protect these fish, and that BuRec has been ignoring the law by not establishing a second population of Humpback Chub in the mainstem Colorado River in Grand Canyon National Park.

- BuRec has been experimenting with Glen Canyon Dam for more than six years. Over this time period Humpback Chub populations have declined from 8,000 to 2,000 adult fish. Furthermore, four other fish, Colorado Pikeminnow, Bonytail Chub, Roundtail Chub and Razorback Sucker, are already extinct. Nonetheless, BuRec has been widely promoting its efforts as successful, and indicative of a commitment to endangered fish recovery, when nothing could be further from the truth. BuRec must stop misleading the public and report on the true impacts of its dam operations on native fish habitat in Grand Canyon National Park.
- The flows being proposed only allow for minor changes in Glen Canyon Dam's operations, all of which could be overruled by electricity producing interests. BuRec must immediately implement operational guidelines for Glen Canyon Dam consistent with the 1996 biological opinion of the Fish and Wildlife Service calling for low, seasonally adjusted steady flows, and that such flows cannot be interrupted by any interests other than those agencies scientifically responsible for the recovery of the Humpback Chub.
- BuRec continues to ignore the a 1996 law requiring that a second population of Humpback Chub be established in Grand Canyon National Park. At present, only one population has been able to survive by moving to the Little Colorado River, in what historically has not been its native habitat. Therefore, in addition to addressing flows from the dam to influence habitat near the Little Colorado River, BuRec must meet the natural sediment, nutrient and water temperature needs to re-establish a second population of Humpback Chub in the Colorado River in Grand Canyon National Park.
- BuRec must complete a new Environmental Impact Statement on the reoperations of Glen Canyon Dam that addresses the full range of issues associated with the recovery of endangered Humpback Chub, and the full range of alternatives to resolve them, including the decommissioning of the dam.

Direct your comments to:

Mr. Michael Gabaldon
Deputy Director of Operations
U.S. Bureau of Reclamation
Department of Interior
1849 'C' Street, NW
Washington, DC 20240

email: mgabaldon@usbr.gov
fax: (202) 513-0308

LR Letter 9/25/02

Requesting expanded public participation for review of Glen Canyon Dam experimental flows

Mr. Michael Gabaldon
Deputy Director of Operations
U.S. Bureau of Reclamation
Department of Interior
1849 'C' Street, NW
Washington, DC 20240
Via Fax: 202-513-0308
RE: AMWG Public Participation

Dear Mr. Gabaldon,

Yesterday, the Bureau of Reclamation (BuRec) announced public meetings and its comment period for the Draft Environmental Assessment (DEA) of the proposed experimental flows from Glen Canyon Dam. BuRec has unnecessarily compressed the calendar for this public comment period, and in the process, further reinforced the continued disregard the Adaptive Management Working Group (AMWG) has for appropriate public participation.

1. The public has been given only 8/9 days notice for the upcoming public meetings (Flagstaff, AZ on October 2 and Phoenix, AZ on October 3). At minimum the public should be given 30 days notice of upcoming meetings.
2. The public will not be able to obtain the DEA, for which the public meetings are about, until the first of the two meetings. The DEA should be available for at least two weeks in advance of the first public meeting.
3. The public has only 18 days following the release of the DEA to submit comments. The public should have 30 days following the final public meeting to submit comments, or at minimum, 30 days following the public release of the DEA.
4. BuRec has scheduled the public meetings on the exact same days BuRec will be holding similar meetings on the Draft Environmental Impact Statement for the reoperations of Navajo Dam on the San Jaun River, making it difficult for members of the public to attend both.

To address these concerns, we respectfully request that you:

1. Add additional public meetings in Phoenix and Flagstaff with at least 30 days advance notice.
2. Extend the public comment period to 30 days after the final public meeting.
3. Require the AMWG to adopt and adhere to reasonable policies for ensuring adequate time for the public to participate in NEPA processes, such as commenting on the proposed experimental flows.

As the monsoon season in the watershed of the Paria River will have nearly passed, prior to any final decision being issued on this matter, there is no compelling reason not to extend the public participation process to accommodate a more reasonable schedule.

Furthermore, as was outlined in Living River's letter to you of January 18, 2002, the lack of attention to public participation by the AMWG is of major concern to us and the eight other organizations that signed the letter. You assured us that public comment was indeed a requirement of the AMWG process and that we would receive a timely response, yet none has been received.

As also mentioned in the January 18 letter, AMWG has a tremendous public responsibility for ensuring the future health and vitality of Grand Canyon's river ecosystem. As such, we appreciate the opportunity to participate in the upcoming meetings. We are concerned, however, that this ongoing disregard for making reasonable allowances for public input, and ignoring that input once received, continues to plague the effectiveness of the AMWG.

We look forward both to your response concerning this request to expand the public participation process for the experimental flows, and to our letter of January 18, 2002.

Sincerely,

Owen Lammers
Executive Director

cc: Hon. Gale Norton, Secretary of the Interior
Hon. John Keys, Commissioner, U.S. Bureau of Reclamation
Mr. Rick Gold, Director, Upper Colorado Region, U.S. Bureau of Reclamation
Mr. Robert Johnston, Director, Lower Colorado Region, U.S. Bureau of Reclamation
Mr. Joseph Alston, Superintendent, Grand Canyon National Park
Ms. Kitty Roberts, Superintendent, Glen Canyon National Recreation Area
Mr. Denny Fenn, Director, Grand Canyon Monitoring & Research Center

LR Press Release 09/25/02

**New dam flows to further fish extinction in Grand Canyon
Public Played for fools by Interior Department**

Contact:

Owen Lammers 435-259-1063
Lisa Force 480-990-7839

Yesterday the [Bureau of Reclamation \(BuRec\) announced](#) plans to solicit public comments on proposed experimental operating guidelines for Glen Canyon Dam under the guise of restoring endangered fish habitat in Grand Canyon National Park. Should the plan be implemented as proposed the endangered fish in question, the humpback chub, will likely be extinct before they can complete their multi-year experimentation.

"This is nothing more than the latest act in a six year-long charade by BuRec, and the water and power interest that control the operations of Glen Canyon Dam, to pretend that they are serious about reversing the extensive damage this dam has caused to one of the world's most famous national parks," says Living River's executive director Owen Lammers.

Since 1996, the Department of Interior has been required to establish viable populations of endangered humpback chub in two sections of the Colorado River in Grand Canyon National Park. But despite much fanfare surrounding this proposed and past experiments at Glen Canyon Dam, they have only succeeded in administering to the decline of the one remaining population. As of the summer of 2001, just 2,000 adult humpback chub remained in Grand Canyon, down from more than 8,000 when their experiments began.

Since BuRec and its supporters continue to only partially address some of the major variables impeding native fish recovery in Grand Canyon, the list of extinct native fish in Grand Canyon will soon increase from four to five. The razorback sucker, bonytail chub, roundtail chub and Colorado pikeminnow are already extinct in Grand Canyon due to the operations of Glen Canyon Dam.

- The current proposal will not reintroduce any of the 100 million tons of the sediment and nutrients critical for native fish habitat. It will only, if successful, reposition the minimal sediment remaining in the Canyon.
- The current proposal will not fully simulate the natural rivers flow through the dam, only partially mimic a high water event over a few days and in the dead of winter when natural flows would be quite low.

- The current proposal will not address the need to increase the river's water temperature, the major factor impeding native fish reproduction due to gonad suppression, as dam operations dropped the river's temperature to 46 degrees.

"They just want to tell the public, 'we tried,' and then go back to operating the dam however they wish once the fish are extinct," adds Lammers.

Living Rivers is also concerned with the accelerated public review process for this new proposal. Barely a week's notice was given for public meetings scheduled for Flagstaff and Phoenix, Arizona next week, and the public will only have 18 days to review and submit comments on the draft proposal's draft environmental assessment. [Living Rivers has asked that this process be extended.](#)

LR in the News 10/01/02

U.S. wants to flood Canyon to save native fish

By Shaun McKinnon for The Arizona Republic

Federal officials want to flood the Grand Canyon and evict thousands of non-native fish from the Colorado River next year in a repeat of a controversial 1996 experiment that produced inconclusive results and temporary benefits.

The U.S. Bureau of Reclamation will present its proposal at public briefing sessions this week in Phoenix and Flagstaff, outlining a plan scientists hope will begin to mend an ecosystem bruised more than 40 years ago by the construction of Glen Canyon Dam.

The two-year experiment calls for artificial floods similar to one staged in 1996 aimed at rebuilding some of the riverbanks and beach habitats along the canyon floor.

Scientists also would remove as many as 20,000 non-native rainbow and brown trout from the river in an effort to improve conditions for endangered native fish such as the humpback chub, whose numbers have dwindled from 8,000 to about 2,000 since the mid-1990s. The trout are thought to prey on the chub.

The experiments are part of a long-term goal of correcting problems created by the dam, including the loss of natural sediment, a drop in water temperature and the introduction of non-native fish. The floods, for example, attempt to mimic temporarily the natural behavior of the river, whose flows once fluctuated significantly over a year's time.

A 1996 flood, presided over by former Arizona Gov. Bruce Babbitt, then-Interior secretary, appeared to shore up some of the damaged beaches with few of the side effects predicted by critics.

Later studies suggested the flood's effects were short-lived and did little to help the endangered fish.

Several environmental groups say the latest plan is too little too late, especially for the chub and other species struggling to survive in their altered environment.

Owen Lammers, executive director of Living Rivers, called the proposal "the latest act in a six-year-long charade" by the bureau and water and power interests whose inattention has threatened the river's ecosystem.

"They just want to tell the public, 'we tried,' and then go back to operating the dam however they wish once the fish are extinct," Lammers said.

He said the experiments fail to reintroduce any new sediments and nutrients critical for native fish habitat and don't address the need to raise water temperatures below the dam. Native fish struggle to survive in the colder river, while the non-native predators thrive.

Nikolai Ramsey, program officer for Flagstaff-based Grand Canyon Trust, said the experiments will produce benefits, but delays in their start have compromised the overall goals.

Changes in the river's flow should have begun in early September to properly prepare the river for a full-scale artificial flood, Ramsey said. He also worries that the government has lost sight of the endangered fish, which continue to die.

"We should be putting our efforts more strongly into saving the chub," Ramsey said. "This is a fish that has lived in the Colorado River and only the Colorado River for 2 million years and now is close to extinction because of what we've done to the river."

Ramsey predicts stiff opposition to the government's plan from both environmentalists and others with a stake in the river, including sport fishery groups.

The timing and scale of the experiments will hinge in part on weather conditions in the coming months. Drought choked summer runoff from the Paria River, a tributary of the Colorado that in normal years would have shifted sand and sediment downstream into position for the artificial floods. Scientists don't yet know if there's enough to stage a flood by January.

Randy Peterson, manager of the bureau's upper-Colorado environmental resources division, said that plans allow scientists to adjust the schedule for the larger floods, which send water gushing through Glen Canyon Dam's rarely used bypass tubes. Those floods would take place as soon as the Paria delivers enough sand and sediment.

The fish relocation could begin as early as January, when above-normal flows from the dam would be used to disrupt spawning. Later in the year, biologists would use electrical charges to stun the fish at various spots along the river. The non-native fish would be removed and relocated, while native species would be left in the river.

Media Advisory 10/01/02

**River and Navajo activists call for Decommissioning of Navajo Dam
San Juan River endangered fish in jeopardy because of Dam**

Contact:

John Weisheit (435) 259-1063; Mobile (435) 260-2590

Lisa Force (480) 990-7839

The status of the endangered fish of the San Juan River has become supercritical despite efforts of the San Juan River Basin Recovery Implementation Program, which started in 1992. At that time fishery biologists working on the San Juan River were unable to find any adult Razorback Suckers and only about 100 adult Colorado Pikeminnows. Now, ten years later, even adult Pikeminnows cannot be readily found by the scientists and for what natural reproduction does occur, the numbers are very discouraging for those who care about the plight of these endangered fish.

"We are on the verge of completely losing the natural heritage of the San Juan River", says John Weisheit, Living Rivers conservation director, "and unless something is done very quickly the San Juan River will become a graveyard rather than a productive nursery for these unique native fish."

The Bureau of Reclamation (BuRec) has released a Draft Environmental Impact Statement (DEIS) proposing flow modifications for Navajo Dam to help in the recovery of habitat for these native fish species, but this can't work.

The major issue is not flows from the dam, but the loss of habitat and the river's natural dynamic processes. San Juan River endangered fish must be able to spawn high enough in the river channel, such that hatchlings can become sufficiently strong prior to being flushed into Lake Powell reservoir and consumed by non-native fish. "The only way to remedy this situation is to move forward with the decommissioning alternative for Navajo Dam," adds Weisheit.

Also not comprehensively addressed in the DEIS are the issues concerning the traditional medicine people of the Navajo Nation. Says Thomas Morris of the Diné Medicinemen's Association, "Navajo Dam has flooded and desecrated many of our sacred and holy sites. The traditional ways of the Diné have not been respected and these sacred sites must be restored. The traditional people have not been consulted in this public process and we look forward to a future meeting to seriously discuss what is good for the long-term interests of the Diné people, including productive alternatives for the Navajo Indian Irrigation Project and the Navajo - Gallup pipeline.

Other deficiencies in BuRec's analysis include:

- The other critical native fish nursery habitat in the San Juan river was inundated by Lake Powell reservoir. Therefore, a comprehensive Environmental Impact Statement of the decommissioning of Glen Canyon Dam must also be undertaken to properly evaluate recovery options for San Juan River endangered fish.
- BuRec's proposed alternatives were based on experiments that yielded no demonstrated recovery of native fish, and are based solely on meeting water delivery contracts within the San Juan system and to maintain non-native trout habitat for sport fisherman.
- BuRec does not sufficiently evaluate the impacts of potential future diversions on endangered fish habitat. The Animas-La Plata Project, Navajo-Gallup pipeline and further expansion of the Navajo Indian Irrigation Project will significantly reduce flows necessary for recovery of San Juan River endangered fish habitat.
- The decommissioning of Navajo Dam will provide a net financial gain to Federal taxpayers, as the primary beneficiary of Navajo Dam is the Navajo Indian Irrigation Project, which receives subsidies averaging \$1.5 million annually because of the project's inefficiencies.
- BuRec makes no provisions for addressing the predation of native fish by non-native fish such as Catfish and Stripped Bass.
- BuRec makes no provisions for mitigating the impacts on endangered fish habitat from pollutants found in the river, such as PCBs, mercury, DDT, selenium, chlorine and chlordane.

The San Juan River Basin Recovery Implementation Program has failed to restore a self-sustaining native fish population in the San Juan River as it flows through New Mexico, Colorado and Utah, and these new proposals offer more of the same.

Restoration of the river ecosystem can be implemented by simply creating programs that conserve water in our communities and farms. Such programs will save money, taxes and increase productivity while saving the natural and cultural heritage of the San Juan River.

Desalting Plant: Future Still Uncertain

Since it was built in 1977, the Yuma Desalting Plant (YDP) has loomed as the primary threat to the Cienega de Santa Clara, a 14,000-acre wetland in the Colorado River delta that survives on agricultural runoff from the US. Now the Bureau of Reclamation (BuRec) is preparing a report to Congress, nearly two years overdue, regarding the fate of the desalting plant and, with it, the fate of the cienega.

The YDP has never been used due to high operating costs. Were it to be fired up, it would use and divert all the water that currently feeds the cienega. Presently, the costs are still too high to justify operation, even with the intense demand for water in the basin. BuRec itself estimates that desalting water at the YDP would cost an estimated \$318 to \$463 per acre foot. By comparison, subsidized farmers in the area pay as little as \$3.50 per acre foot and most municipalities pay less than \$70 per acre foot.

The first draft of BuRec's report recommends that the cienega's water be offset at this time with such options as: "leasing water from willing sellers, investing in advanced irrigation techniques to reduce use, or obtaining non-systems supplies from groundwater and other sources." Although fiscal concerns are the paramount reason for the recommendation, Living Rivers and other advocates have made the cienega enough of an issue that its survival is noted as a benefit to keeping the YDP mothballed. Living Rivers is also pointing out that decommissioning the plant altogether could save taxpayers an additional \$5 million annually. BuRec is planning to incorporate this input into the next draft of its report.

LR in the News 10/02/02

Citizens oppose draft statement proposal to protect fish

By Laura Banish/Staff writer for Farmington Daily Times

FARMINGTON Objection to a federal water-flow plan was expressed loud and clear by local citizens at a public hearing Tuesday at the Farmington Civic Center.

The Draft Environmental Impact Statement proposed by the Bureau of Reclamation provides seven alternatives for operating Navajo Reservoir. Also included are the potential effects of implementing the proposed flow recommendations necessary to provide sufficient releases of water at the times, quantities, and durations necessary to conserve two endangered fish species native to this area, the razorback sucker and the Colorado pikeminnow.

The document was prepared in compliance with the National Environmental Policy Act. The recommendations were provided by the San Juan River Basin Recovery Implementation Program.

"I have received numerous calls about the statement and none of the concerns are positive," said Commissioner Karen Stevens, of the State Game Commission. She said she attended the meeting to express her worry that the proposed water flow rates will hurt local fisheries.

Stevens was not alone in addressing the concerns for fishing industry, with representing the fishing community being the most verbal at the meeting.

"I have an objection to the whole thing. It took seven years to study, three years to compile, and I can't make sense of it," said Tim Jimmerman, of the San Juan Fly Fishing Association.

He said he did not believe any of the alternatives would save the endangered fish, and that the new release levels would decrease populations of other fish in the San Juan River.

Jimmerman argued that by harming fish such as trout, the BOR's recommended water flows would kill not only the fish, but the area's fishing industry as well.

Farmington city attorney Jay Burnham said he agreed that the new flow releases could have an unfavorable effect on recreational uses of the river and cause economic hardships for those who profit from the industry.

Burnham said the city has submitted information regarding how the flow levels will impact hydropower in the area. He said that although he has not reviewed the statement extensively, it appears the flow rates will reduce the effectiveness of Farmington's hydroplant, and thereby have a negative impact on both water and air quality.

If there was anyone in the audience who should have been in favor of the impact statement, it would have been the two men representing the endangered fish, who attended the meeting dressed as the species they were defending, but even they were against it.

"This whole issue about pretending to care about the fish is a complete charade," said Owen Lammers, who spoke on behalf of the razorback sucker, and the fish conservation group Living Rivers. Lammers, and his partner in trying to save the two species, John Weisheit who was dressed as a Colorado pikeminnow argued that the water flows would not benefit anyone's interests, and the only way to save the fish is to decommission the Navajo Reservoir altogether.

"Attempting to manipulate nature will always fail," Lammers said. He said that if the bureau truly has intentions of saving the fish, they will abolish operation of the reservoir and dam.

BOR representatives said the idea of decommission is both unreasonable and impractical.

Of the 23 people who voice their views, only one man was in support of the alternative suggested by the BOR.

"No one sees the big picture. Everyone has to take a cut in one respect or another, and while it's hard to defend the BOR, this is the best alternative," said Stanley Pollack, who serves as legal water counsel for the Navajo Nation in Windowrock, Ariz.

He said that of the seven alternatives, one must be selected, and the water release rate plan preferred by the BOR is the best one in respect to satisfying the needs of everyone with interests in the reservoir.

The BOR's preferred alternative for protecting the endangered species in addition to meeting other requirements of the dam, is the 250/5000 plan. Under this strategy, releases would range between 250 and 5000 cubic feet per second on a case-by-case basis. Bureau representatives said the modifications would help the fish and enable water development to occur in compliance with applicable laws, compacts, decrees, and Native American trust responsibilities.

"This reaction is pretty much what I expected," said Ed Warner, BOR resource division chief. He said that of the three public hearings scheduled in the Four Corners area this week, he anticipated San Juan County residents to voice the most heated objections. Other meetings will be held today in Durango, Colo., and Thursday in Bluff, Utah.

Aside from dissatisfaction with particular sections of the impact statement, one of the most frequent complaints was that there was not enough time to examine the 600-page document.

The draft was released for a 60-day public comment period beginning Sept. 3.

Warner said that while he could not make guarantees, an extension of the review period may be considered.

As of now, the bureau will accept written comments from the public until Nov. 4., and a final draft of the statement is expected to be finished by April 28, 2003.

The draft in its entirety can be viewed on the bureau's Web site at www.uc.usbr.gov

Laura Banish: laurab@daily-times.com

Take Action 10/03/02

SAVE GRAND CANYON FROM GLEN CANYON DAM

**COMMENTS NEEDED BY
NOVEMBER 1, 2002!**

Glen Canyon Dam is causing tremendous harm to the Colorado River in Grand Canyon National Park. All native insect species are gone, as are four of eight native fish, otters, muskrats, and the native vegetation in high water zones. There are two public comment opportunities underway until November 1, 2002 that Living Rivers hopes you will consider taking part in.



- [Grand Canyon National Park is undertaking a revision of its Colorado River Management Plan](#)
- [The Bureau of Reclamation is proposing new experimental operating guidelines for Glen Canyon Dam.](#)

Neither of these programs are seriously addressing the needs to remedy the harm brought to Grand Canyon's river ecosystem by Glen Canyon Dam. Please click on one or both of these topics to learn more and where to direct your letters.

Take Action 10/07/02

Help Protect Colorado and San Juan River Native Fish

COMMENTS NEEDED BY DECEMBER 4, 2002!

The Bureau of Reclamation is accepting public comments on plans to reoperate two of its dams with the objective to restore habitat for Colorado and San Juan River native fish. Unfortunately, neither of these plans will do an adequate job, and without your help these most unique of desert fishes will be headed further down the path to extinction. Please consider lending your comments to one or both of these dam reoperation plans.

Click on the appropriate issue for further details.

- [Reoperation of Navajo Dam](#) on the San Juan River to aid in recovery of endangered Colorado pikeminnows and razorback suckers in the San Juan River between Navajo Dam and Lake Powell reservoir
 - [Reoperation of Glen Canyon Dam](#) to aid in recovery of endangered humpback chub in Grand Canyon National Park
-

River News 10/08/02

RRFW Riverwire - PIPELINE PROPOSED AT BADGER RAPID

October 8, 2002

Grand Canyon National Park could be opened up for a major water development to collect, pump and pipe water from the Colorado River to the Black Mesa and Kayenta coal mines in northern Arizona in a last minute change to legislation sponsored by Senator Jon Kyl. A pipe would be constructed down Jackass Canyon to draw water at Badger rapid. The Bureau of Reclamation is expected to announce soon a proposal for a water pumping and pipeline project. Full environmental review would not be required, according to another of the bill's changes.

"This is an extraordinary invasion of Grand Canyon National Park which clears the way for tearing up the shoreline, building water treatment and pumping plants, and constructing a pipeline in one of the world's greatest natural areas," said Rob Smith, Southwest Representative for the Sierra Club in Phoenix. "The Colorado River belongs in Grand Canyon National Park, not in a coal slurry pipeline."

Unrelated legislation seeking to resolve water rights for the Zuni Tribe and other water users on the Little Colorado River – S. 2743 – was introduced by Senator Kyl in September after four years of negotiations without any Grand Canyon water project provisions. But a new section was quietly added to the bill in Senate Indian Affairs Committee last week to provide water for a pipeline to the coal mines from the Grand Canyon without any notice or public hearings on the issue.

"The Grand Canyon water project has nothing to do with settling the Zuni's water rights, and should be removed from this bill," said Smith. "There are other alternatives to solving the Hopi's water problems which don't involve sacrificing the Grand Canyon to the coal industry."

The amended bill authorizes water to be leased to Salt River Project (SRP) and removed from the Colorado River "between Lake Mead and Lee Ferry" to be used "only for mining related purposes...and for slurring coal from the Black Mesa and Kayenta Coal Mines."

SRP operates the Navajo Generating Station near Page, Arizona, which gets coal from the Kayenta mine, and is partial owner of the Mohave Generating Station at Laughlin, Nevada, which currently uses water from an underground aquifer to slurry coal from the Black Mesa mine to the power plant. The Hopi Tribe has opposed pumping more underground water for the coal slurry because springs and streams have dried up on the reservation.

River News 10/09/02

RRFW Riverwire - PIPELINE LANGUAGE STRICKEN

October 9, 2002

You did it! Good work!

Thanks for your help on killing the Grand Canyon pipeline deal of an otherwise acceptable--and unrelated--water settlement with the Zuni Tribe!

Title II was the offending section, and the state's Senator has stricken the pipeline language from this legislation. The Senate offices ask that folks cease calling. Water law appears to prohibit Arizona water to be used for a Nevada power plant. Also, any water used in lower basin states must be drawn from below Lees Ferry, which is the dividing line.

While Senate staffers argue that the language doesn't actually authorize construction, it opens the door to a very bad idea, and why create the opportunity if the project should never be built in the Grand Canyon?

Stay tuned. Peabody and the Salt River Project are still trying to work out the water deal somehow to benefit the Mohave power plant and keep the Black Mesa mine open. Likely, this concept has not been killed, just delayed.

LR Press Release 10/10/02

Announcing Colorado Riverkeeper Inaugural Patrols Getting Underway This Week

Contact:

John Weisheit, Living Rivers: 435-259-1063; mobile, 435-260-2590
Alisa Hilfinger, Waterkeeper Alliance, 914-674-0622, x208



The international Waterkeeper Alliance of New York and Living Rivers of Arizona and Utah, announced today the establishment of Colorado Riverkeeper, the first on-the-water advocacy and restoration program for the Colorado River watershed.

With rafts, canoes and kayaks, Colorado Riverkeeper will be patrolling the watershed to better document the growing violations of federal environmental laws caused by dams, diversions and excessive water consumption, and use these findings to support litigation strategies to have these laws enforced.

Colorado Riverkeeper will also be mobilizing the basin's extensive commercial and private river running community to take part in advocacy programs to ensure enforcement of environmental laws and to return the natural ecological viability to the Colorado River watershed.

"We're delighted to have joined forces with Living Rivers to advance this rapidly growing model of river advocacy in the watershed that National Geographic described last month as one of the most troubled water sources in the world," said Robert Kennedy, Jr., president and founder of Waterkeeper Alliance. Since 1999 Waterkeeper Alliance has helped form a network of nearly 100 similar water advocacy programs in the US and abroad.

"Waterkeeper's arrival on the Colorado couldn't come at a better time considering the rapidly advancing decline of its unique desert river habitat," says John Weisheit, who will head up the Colorado Riverkeeper program for Living Rivers. "Their network's incredible track record of on-the-water advocacy and precedent-setting litigation on behalf of rivers and aquatic ecosystems across the country is something we fully plan to continue here on what has become the most developed river system in the country."

Colorado Riverkeeper's initial priority will be addressing major violations of the Endangered Species Act caused by a system of more than 40 major dams. The Colorado River through Grand Canyon National Park, for example, has had its native ecosystem destroyed due to the operations of Glen Canyon Dam. The river corridor's entire food web has been transformed, four of the eight native fish species are now extinct, and otters and muskrats can no longer survive.

"I first rafted the Grand Canyon nearly forty years ago, and am appalled that the US Bureau of Reclamation and other federal agencies have allowed the ecological integrity of this internationally acclaimed river corridor, and designated World Heritage Site, to be so severely devastated. Just like the return of the Peregrine Falcon and California Condor to the Canyon's skies, it's now time to ensure the recovery of endangered species to the Canyon's river," adds Kennedy.

Colorado Riverkeeper launched its first patrol of the Colorado River in Grand Canyon on Tuesday, and Friday a patrol will be launched that will cover sections of the Green and Colorado Rivers above Lake Powell reservoir.

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For electronic information:

[LivingRivers](#)

[WaterkeeperAlliance](#)

Living Rivers Currents 10/11/02

Volume 2, Number 6, October 2002

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Living Rivers Currents 10/11/02

Temperature Rising: Modifications Proposed for Glen Canyon Dam

In an attempt to finally honor the 1994 recommendations of the Fish and Wildlife Service concerning the endangered native fish in Grand Canyon, the Bureau of Reclamation (BuRec) is considering constructing a mechanism to increase the water temperature released from Glen Canyon Dam.

The purpose of this modification is to warm the water sufficiently to stimulate the reproduction processes of these desert fish in Grand Canyon National Park. The proposed temperature control device (TCD) would provide a mechanism to draw water from near the surface of the reservoir where the water is consequently warmer. When the TCD was first proposed in 1999, concerns were raised by the scientific community

about how non-native fish (for example, striped bass) from Lake Mead or Lake Powell reservoirs could affect newly hatched endangered fish.

Another concern is that the warmer water will alter the food base. Glen Canyon Dam has changed the river's natural warm-water food base into an exotic, cold-water food base. It will take time for the ecosystem to respond to the warmer water, which could cause subsequent food shortages for the endangered fish.

There are a total of eight vertical intake tubes that feed water to the generators at Glen Canyon Dam. It has been proposed that five of the eight tubes be retrofitted to include a total of three intakes on each tube, the main intake 230 feet down, another near the top of the reservoir, and the third in between. The total cost is estimated at 60 million dollars. Environmental review is moving forward with a final decision to be made around October of 2003.

"We are confident that this experiment will work and I support this endeavor wholeheartedly," says Wayne Cook, executive director of the Upper Colorado River Commission. "The only way we will know that success can be achieved is to build the infrastructure and to see how the ecosystem responds. If it works, then the money was well spent." Concerned citizens who have been monitoring the efforts to save Grand Canyon's endangered fish are not convinced that such an adaptive mitigation plan will work satisfactorily.

Says David Haskell, former science director of Grand Canyon National Park, "The water temperature leaving the dam is 30 degrees below optimal for successful reproduction of endangered humpback chub. It is highly unlikely that the TCD, as envisioned by BuRec, will be able to raise the water temperature enough to benefit the survival of the chub. The time needed to design, build and test this device will take several years—years the humpback chub may not have."

Living Rivers Currents 10/11/02

Pipeline Proposed to Divert Water from Grand Canyon

In early October, Arizona Senator John Kyl attempted, unsuccessfully, to secure Congressional authorization for the construction of a major pumping plant and pipeline from the Colorado River in Grand Canyon National Park. The water would principally be used to slurry coal from the Black Mesa coal mine on the Navajo and Hopi reservations to the Mojave Generating Station coal-fired powerplant near Laughlin, Nevada. Coal is presently being slurried from the mine with groundwater from the two reservations. This, however, is significantly depleting the drinking water resources for the Hopi tribe, which desires an alternative water source or mechanism to be used to transport the coal. While Kyl did not succeed during this session of Congress, the concept remains alive

and well, as the Bureau of Reclamation told Living Rivers Currents that it was preparing a feasibility study for such a pipeline.

The proposed site of extraction, Jackass Canyon, lies eight miles below Lee's Ferry, where Grand Canyon river runners begin their expeditions. The facility would pump nearly 3,000 gallons per minute from the river, up 1,000 feet, and then eighty miles across the Navajo Reservation to the Black Mesa coal mine.

California condors can often be found perched on both sides of the Colorado River at its confluence with Jackass Canyon. Over the past decade public and private efforts have aggressively worked to maintain a successful reintroduction program for this endangered species. Jackass Canyon also contains one of the few sets of dinosaur tracks known to exist in Grand Canyon National Park. Despite these potential impacts, Senator Kyl's proposed legislation would have exempted this project from environmental review as required by the National Environmental Protection Act.

Living Rivers Currents 10/11/02

Habitat Security Back in Action

Living Rivers' Habitat Security Force was called into action again this month, challenging the Bureau of Reclamation's (BuRec's) misguided proposals for improving habitat conditions for native fish in Grand Canyon National Park and on the San Juan River below Navajo Dam. At meetings in Farmington, New Mexico and Flagstaff and Phoenix, Arizona, Living Rivers expressed concern that BuRec is continuing to demonstrate a lack of any serious interest in recovering endangered native fish in the Colorado River watershed.

As the only advocates for native fish amongst the 50 participants in the Farmington meeting, Living Rivers made it clear that nothing short of decommissioning Navajo Dam could yield any significant recovery. "This is nothing but make-believe," Living Rivers executive director Owen Lammers told the crowd. "The necessary distance in natural flowing river miles for native razorback suckers and Colorado pikeminnows no longer physically exists because of Navajo Dam upstream and Glen Canyon Dam downstream." The river current flushes any young native fish into Lake Powell, where they are consumed by non-native fish before having a chance to mature. Native fish either need the opportunity to spawn back in their native habitat above Navajo Dam, or Lake Powell must be drained for successful recovery to occur.

The majority of other remarks made at the hearing concerned impacts of any operational changes on the non-native recreational trout fishery below the dam. "The razorback sucker has lived here for thousands of years; it will figure out how to survive, but we need to protect the trout," one commercial fishing guide stated.

BuRec's Glen Canyon Dam public meetings in Phoenix and Flagstaff the following two days were huge blemishes for citizen participation. With barely one week's notice, and no advance copies of its environmental assessment available for the public to review, less than a dozen people not directly involved with BuRec's activities attended the combined meetings. "These meetings represented the first opportunity in years for the public to learn about and comment on BuRec's plans for Glen Canyon Dam and Grand Canyon, and they succeeded in doing everything possible to keep the public out," adds Lammers.

At issue were new flow recommendations from Glen Canyon Dam to help conserve sediment and disrupt non-native fish reproduction, so as to benefit recovery of the sole remaining population of humpback chub in Grand Canyon. BuRec is also planning to remove up to 20,000 non-native trout near the humpback chub rearing areas to reduce predation. With humpback chub populations down to just 2,000 fish, Living Rivers pointed out that such efforts are too little too late, and more aggressive measures need to be reviewed.

Somewhat surprisingly Randy Peterson, director for BuRec's Glen Canyon Dam Adaptive Management Program, was publicly combative toward Living Rivers representatives, stating, "Your rhetoric is not helpful...your views irrelevant," and "you should check your [dam decommissioning] baggage at the door." BuRec is clearly becoming increasingly frustrated with the growing public concern for its lack of progress, and its resistance toward doing the bare minimum as required by the Fish and Wildlife Service (see reverse side).

There is still time for the public to weigh in with written comment on both these issues until November 1, 2002. Contact Living Rivers or visit our website for details.

Living Rivers Currents 10/11/02

Dam Flows Fail to Help Grand Canyon Native Fish

In 1994 the Fish and Wildlife Service (FWS) recommended that Glen Canyon Dam be operated in a manner more consistent with the Colorado River's natural flow regime in order to protect native fish in Grand Canyon. The Bureau of Reclamation (BuRec) ignored these recommendations and implemented an operating regime that would provide greater benefits for hydroelectric power production. Now, in a new report released on September 30, 2002, FWS in association with Northern Arizona University again recommends the critical need for dam operators to heed FWS' 1994 recommendations.

Titled *Monitoring and Research: The Aquatic Food Base in the Colorado River, Arizona During 1991-2001* the 225-page report stated, "We recommend a decade of the Seasonally Adjusted Steady Flow alternative, with spring beach building flows as climate permits....We feel these flows in combination with alien fish suppression and

thermal modification of GCD (Glen Canyon Dam) could make Grand Canyon a sanctuary for native fishes of the Colorado River basin.”

BuRec claimed that its preferred operating plan, known as Modified Low Fluctuating Flows, would potentially generate a major increase in the Canyon's aquatic food base, but according to the report, this has not happened and, in fact, the food base is very unstable. "The food base responds negatively to peaking hydropower flows and therefore, this same response applies to native fish and their habitat.”

With native humpback chub populations down 75 percent during the study period, it's quite clear that BuRec's efforts are failing. But despite this science-based validation of FWS's 1994 recommendations, no immediate actions by BuRec are being contemplated, just more experiments.

Living Rivers Currents 10/11/02

Colorado Riverkeeper Launched at Living Rivers

The international Waterkeeper Alliance of New York has selected Living Rivers to establish the first on-the-water advocacy and restoration program for the Colorado River watershed. With rafts, canoes and kayaks, Colorado Riverkeeper will be patrolling the watershed to better document the growing violations of federal environmental laws caused by dams, diversions and excessive water consumption, and use these findings to support litigation strategies.

Colorado Riverkeeper will also be mobilizing the basin's extensive commercial and private river running community to take part in advocacy programs to ensure enforcement of environmental laws and to return the natural ecological viability to the Colorado River watershed.

“We're delighted to have joined forces with Living Rivers to advance this rapidly growing model of river advocacy in the watershed that National Geographic described last month as one of the most troubled water sources in the world,” said Robert Kennedy, Jr., president and founder of Waterkeeper Alliance. Since 1999 Waterkeeper Alliance has helped form a network of nearly 100 similar water advocacy programs in the US and abroad.

“Waterkeeper's arrival on the Colorado couldn't come at a better time considering the rapidly advancing decline of its unique desert river habitat,” says John Weisheit, who will head up the Colorado Riverkeeper program for Living Rivers. “Their network's incredible track record of on-the-water advocacy and precedent-setting litigation on behalf of rivers and aquatic ecosystems across the country is something we fully plan to continue here on what has become the most developed river system in the country.”

Colorado Riverkeeper's initial priority will be to complement the work Living Rivers is undertaking to document violations of the Endangered Species Act caused by the Colorado's system of more than 40 major dams. The Colorado River through Grand Canyon National Park will of course be a major priority. The river corridor's entire food web has been transformed, four of the eight native fish species are now extinct, and otters and muskrats can no longer survive.

"I first rafted the Grand Canyon nearly forty years ago, and am appalled that the US Bureau of Reclamation and other federal agencies have allowed the ecological integrity of this internationally acclaimed river corridor, and designated World Heritage Site, to be so severely devastated. Just like the return of the peregrine falcon and California condor to the Canyon's skies, it's now time to ensure the recovery of endangered species to the Canyon's river," adds Kennedy.

Colorado Riverkeeper launched its first patrols the week of October 7, with one traveling down the Colorado River through Grand Canyon and the other down the Green River through Canyonlands National Park and Cataract Canyon, finishing on Lake Powell reservoir. Overall, Living Rivers' Colorado Riverkeeper program will be establishing a network of patrols spanning over 1,000 miles, including sections of the Green, San Juan and Yampa Rivers, as well as the Colorado mainstem. To participate in the Colorado Riverkeeper program, including traveling on one of the patrols, contact John Weisheit at Living Rivers.

River News 10/14/02

RRFW Riverwire - NO MORE FREQUENT FLOATING?

Sources indicate that planners in the River Permits Office in Grand Canyon National Park may be considering yet another avenue to limiting the number of trips taken by self-guided boaters not on the waiting list to one trip in a given period.

This new rule, if imposed, would apply only to exactly those participants who can help make trips safer, richer in Canyon lore, and more environmentally aware; that is, non-commercial boaters who have been down the Grand Canyon before.

At the same time, the Park continues to discriminate in favor of commercial guests (who can go as many times as they can afford in time and money), and in favor of commercial employees, who are, of course, the most frequent users of the river, and who are not barred from using non-commercial slots for themselves even if they have taken several commercial trips that same year.

There are already 2 rules that limit repeating a trip: 1. Non-commercial participants may take only 1 trip while they are on the waiting list (a minimum of 12 to about 20 years). 2. Anyone unlucky enough to be included on a trip in which the permit passes from the

original to an alternate trip leader will be thrown off if they have made a non-commercial trip in the past 4 years, including the alternate trip leader.

The timing is troubling: Is GCNP suggesting changes that are plainly biased in favor of commercial operations just as the CRMP process is getting underway? This kind of pro-commercial rule proposal erodes public confidence in the Park's ability to produce a river plan that will benefit anyone but the river industry and its wealthier clients.

According to the statistics furnished on the River Permit Statistics handout (www.nps.gov/crmp), repeaters filled about 19% of the trips slots during the nearly 4 years from 4-98 to 1-01. Similar data for commercial operations do not appear on Park handouts, but information from the mid-nineties shows that commercial crew fill 18% of commercially-launched seats. That is, the experienced-to-passenger ratio is about the same for both commercial and non-commercial trips.

Unfortunately, even Draconian new rules may not move the waiting list much faster. If trip vacancies are filled by non-repeaters, there will be no change. Of course, to keep expenditures down, cost-sharing non-commercial trips that lose a passenger or two will try to find replacements--if time allows. But even if those vacancies are not filled, rough calculations indicate the wait could be shortened by four years or less from the current 19+ years by turning the user days into new permits.

Having an experienced Grand Canyon passenger on your trip list sets you up for possible GCNP rule changes aimed at reducing your choice of companions as well as your safety and enjoyment, in the slim hope that these "forced cancellations" might create space for some more trips. Some non-commercial trips would go with less-than-optimal qualifications, increasing the chance for situations in which NPS and commercial staff can criticize the conduct of non-commercial trips. Additionally, there could be a huge increase in cancellations if permittees feel unqualified to conduct their trips with little or no experience, and therefore cancel their trips.

RRFW sincerely hopes this information is incorrect and such a new rule is not being considered.

RRFW has also heard that about 300 unused commercial user days may be turned over to the do-it-yourself sector this year according to the terms of the court settlement agreement.

LR Press Release 10/30/02

**Glen Canyon Dam experimental flows a waste of public resources
New Environmental Impact Statement needed to address dam decommissioning**

Contact: John Weisheit (435) 259-1063

In a [letter](#) delivered today to the Bureau of Reclamation (BuRec), Living Rivers demanded the agency abandon its proposed experiments aimed at restoring endangered fish habitat in Grand Canyon National Park.

"It's unbelievable that BuRec is attempting to feed the public such pseudo-science as a recipe for fixing the mounting problems Glen Canyon Dam is causing to Grand Canyon National Park," said John Weisheit, Living Rivers conservation director.

Earlier this month, BuRec released an environmental assessment outlining new experimental operating criteria for Glen Canyon Dam. Living Rivers' letter emphasized that one of BuRec's main goals, to improve habitat conditions for endangered fish by transporting sediment, is dead on arrival.

- For the past three years there has not been sufficient sediment in the Paria River to warrant the proposed experimental operations.
- Even were such sediment available, it is not enough to counteract the loss of 95% of Grand Canyon's sediment and nutrients now trapped behind Glen Canyon Dam.
- The timing BuRec has selected for its special habitat flows is five months in advance of when native fish could benefit. Most of the habitat created would be eroded away by the time young fish might be available to use it.

"If BuRec were serious about addressing the sediment problem, it would be discussing how to get more sediment from behind the dam into the system, not merely proposing flow regimes for sediment that is no longer there," adds Weisheit.

Living Rivers' letter also points out how BuRec's continued unwillingness to honor the opinion of the Fish and Wildlife Service represents a major reason why the endangered fish population in Grand Canyon National Park continues to decline. A recent report issued by the Service reiterates its 1994 recommendation that flows into Grand Canyon National Park from Glen Canyon Dam more closely mimic the river's natural flows. BuRec has been unwilling to implement such recommendations due to resistance from hydropower interests.

Because endangered Humpback Chub populations have declined so precipitously over the past decade, down to just 2,000 adult fish, and that four other native fish along with otters and muskrats have now disappeared from Grand Canyon's river corridor, Living Rivers is calling on BuRec to immediately undertake a full Environmental Impact Statement on Glen Canyon Dam's impacts to Grand Canyon, including the evaluation of the dam's decommissioning as one alternative to achieve habitat restoration in the Canyon.

LR Letter 10/30/02

Comments on Glen Canyon Dam experimental flows

Mr. Randall Peterson

Bureau of Reclamation, Upper Colorado Region

125 South State Street, Room 6107

Salt Lake City, Utah 84138-1102

Via Fax: 801-524-3858

Re: Proposed Experimental Releases from Glen Canyon Dam and Removal of Non-Native Fish, Environmental Assessment

Dear Mr. Peterson,

Living Rivers appreciates this opportunity to submit the following comments on the Environmental Assessment (EA) concerning proposed experimental releases from Glen Canyon Dam and removal of non-native fish from Grand Canyon National Park, September, 2002.

Living Rivers is keenly aware of the rapidly declining Humpback Chub populations, as well as other Grand Canyon native fish species, caused by the operations of Glen Canyon Dam. While the purpose of this EA is in response to the need to modify the operations of Glen Canyon Dam and to test methods to mitigate these impacts, the proposed actions, especially as they pertain to sediment retention and habitat-building, are fundamentally flawed. Of critical concern, this EA does not evaluate any alternatives for meeting sediment needs blocked by Glen Canyon Dam into the Grand Canyon river corridor.

Adequate attention to sediment retention and augmentation experiments for native fish in Grand Canyon necessitates a full Environmental Impact Statement (EIS) not the cursory analysis undertaken in this EA. Such an EIS must fully evaluate the decommissioning of Glen Canyon Dam as an alternative. The need for such an EIS stems far beyond the issue of sediment, but to all aspects of the dramatic decline in Grand Canyon Humpback Chub populations. The reduction to just 2,000 adult Humpback Chub constitutes significant and new information to that which was evaluated in the 1994 Fish and Wildlife Service Biological Opinion, and 1996 Final EIS on Glen Canyon Dam operations.

Lastly, as stated in our letter of September 25, 2002, the public review process for this proposed action has been wholly unsatisfactory. The Bureau of Reclamation (BuRec) and its Adaptive Management Program for Glen Canyon Dam (AMP) must overhaul its procedures for public participation.

1. No sediment to justify experimentation

The EA focuses on utilizing experimental flows from Glen Canyon Dam to manage sediment for the benefit of Humpback Chub populations. However, there has been, and

may not be during the proposed experimentation period, much sediment to manage. Thus, such experimentation may not occur at all. Ninety five percent of the historic sediment load for Grand Canyon native fish remains trapped in Lake Powell reservoir. In the best of conditions, such experiments as proposed in the EA, could manage only five percent of what would exist in natural conditions. However, this five percent has not proven sufficient to provide the turbidity and food base needs for the Humpback Chub. Furthermore, recent sediment inflows from the Paria River, the principle source for this remaining five percent (and the proposed experiments), have been the lowest since 1923. The EA did not report this. Such sediment inflows are not sufficient to allow for the proposed experimentation, and thus will in no way benefit the Humpback Chub.

Sediment is a key missing component for advancing the recovery of native fish in Grand Canyon (Rubin, et. al., EOS v83, n25, 2002). However, the EA focuses on flow releases to transport the sediment without insuring the availability of sufficient sediment to aid recovery. BuRec must therefore address through an EIS process methods to augment the remaining sediment inflows.

2. Climate change and the associated effects on long-term habitat improvement

The EA ignores climatic factors that will effect the proposed experimental releases. As noted above, without significant sediment augmentation the anticipated input of sediment and nutrients for the Colorado River main stem in Grand Canyon may not occur. Scientists from the US Geological Survey (USGS) have reconstructed the historic climate conditions for the Colorado River basin. Their reports indicate that a sustained severe drought could lie before us and that such a climate regime would jeopardize resource management challenges. (Hereford and Webb, 2002).

Another climatic factor that inhibits the proposed conservation strategies is below normal levels for Lake Powell reservoir; specifically reservoir levels set below the spillway portals. Presently, the spillway portals are perched above the reservoir, which will not provide for experimental flows above 45,000 cfs. If below average inflows into Lake Powell reservoir continue, resulting in additional elevation decreases, maximum discharge could be reduced an additional 50 percent or more. Such discharge rates would be ineffective to transport sediment as called for in the EA, even were such sediment available for transport.

3. Timing of spike flows and sediment deposition will provide no benefits to native fish rearing

Under ideal circumstances, fall sediment inflows from the Paria River will be conserved through low flow dam releases until January, at which time a spike flow is to occur in an effort to build beaches and habitat for the rearing of Humpback Chub. However, previous experiments have revealed that much of this habitat disappears within six months of the spike flow. Since rearing Humpback Chub would not be available to utilize such habitat until five months following the spike flow, it makes little sense to time such flows so far in advance. To be of any benefit, such spike flows should be timed to coincide with the natural high flows entering Lake Powell reservoir.

4. Proposed flows ignore Fish and Wildlife Service opinion for the recovery of Humpback Chub

The EA states that the present flow regime from Glen Canyon Dam (Modified Low Fluctuating Flow or MLFF) has failed to benefit the habitat of the Humpback Chub. This conclusion came from data provided by the Grand Canyon Monitoring and Research Center (GCMRC) (Coggins and Walters 2001), which concludes that a dramatic reduction in the Humpback Chub population has occurred since this flow regime was implemented.

This flow regime was selected as the preferred alternative by the Secretary of Interior despite objections by the Fish and Wildlife Service FWS in its 1994 Biological Opinion. That opinion specifically stated that the MLFF alternative would "likely destroy or adversely modify designated critical habitat." FWS recommended the alternative known as the Seasonally Adjusted Steady Flow (SASF). FWS in conjunction with the Department of Biological Sciences at Northern Arizona University, reiterated these recommendations in their September, 2002 report, Monitoring and Research: The Aquatic Food Base in the Colorado River, Arizona during 1991-2001 (Benenati, et. al.). This report states, "We recommend a decade of Seasonally Steady Flow alternative, with spring beach building flows as the climate permits and unlimited hydropower ramping within 10% of the predicted seasonal mean. We feel these flows in combination with alien fish suppression and thermal modification of GCD could make Grand Canyon a sanctuary for native fishes of the Colorado River basin."

The proposed experimental releases outlined in the EA will continue to conflict with these recommendations in two ways. First, as noted above, the habitat-building releases do not occur at the preferred time-period of the annual, historic snowmelt, to which these native fish are naturally attuned. Second, the prescribed fluctuating flows for non-native fish suppression would disrupt the food supply for the native fish species. Additionally, the EA does not sufficiently analyze the impacts to other habitats, with their associated species, caused by experimental releases inconsistent with the river's natural hydrograph.

5. Supplemental EIS needed

The proposed actions in this EA, either separately, or in combination with other actions contemplated by BuRec and AMP, are not seriously addressing the precipitous decline of endangered Humpback Chub in Grand Canyon National Park. This decline, described by Coggins and Walters, while not surprising given lack of management activities on behalf of the Chub, was not anticipated when the Record of Decision was signed. The population has been considered to be fairly stable over the last decade or more. Therefore, under National Environmental Policy Act (NEPA) regulations found at 40 CFR 1502.9(c)(1)(ii), these new data represent "significant new circumstances or information relevant to environmental concerns," triggering a requirement to prepare a Supplemental EIS (SEIS) to the 1996 Glen Canyon Dam EIS. The Bureau of Reclamation, the National Park Service, and other agencies are likely in violation of the Endangered Species Act and the Grand Canyon Protection Act for failing to ensure

protection and recovery of the Humpback Chub population in Grand Canyon National Park. BuRec, in conjunction with National Park Service, and other relevant agencies, should immediately begin work on such an EIS for the full recovery of the Humpback Chub populations in Grand Canyon National Park. Such an EIS must address all issues affecting the Humpback Chub including: temperature, sediment and nutrients, flow conditions and non-native fish impacts. Most importantly, the EIS must evaluate the decommissioning of Glen Canyon Dam as one of the alternatives to meet Humpback Chub recovery objectives.

6. Public review process

BuRec did not fully comply with the spirit of the public review process as outlined by NEPA. Less than ten days notice was given prior to its two public meetings. No notification was mailed out in advance of, or subsequent to, these meetings. As a result, less than a dozen people not directly affiliated with the activities of BuRec or the AMP attended the combined meetings. The EA was not made available to the public in advance of these meetings. With the exception of those few who attended the first meeting in Flagstaff, Arizona, to obtain a copy of the EA, most others were afforded less than 30 days for which to formulate and submit comments.

The AMP is charged to fully involve the general public in its activities. We request that in the future BuRec assert greater diligence in the future concerning public participation and ensure that ample time is given to the public to learn about, and become engaged in, those activities pertaining to the operations of Glen Canyon Dam, and its associated impacts to Grand Canyon National Park.

In conclusion, Living Rivers finds this EA and the experiment proposed pertaining to sediment, an unfortunate waste of public resources. The crisis facing the Humpback Chub in Grand Canyon is quite serious, but it has yet to be taken seriously by BuRec and the AMP. The proposed habitat-building experiment is unlikely to materialize due to lack of available sediment. Even if such sediment were available, it would not be distributed in a timeframe to benefit the Humpback Chub. Regardless, such sediment would be insufficient to mitigate the loss of 95 percent of sediment and nutrients now trapped behind Glen Canyon Dam. This EA further demonstrates BuRec's and AMP's unwillingness to follow the recommendations of FWS, and as a result, will lead to the further declines in the Humpback Chub populations in Grand Canyon National Park. BuRec must abandon this EA and proposed experimentation and conduct a full EIS on new operating regimes for Glen Canyon Dam, including decommissioning, to fully recover endangered fish habitat in Grand Canyon National Park.

Thank you for the opportunity to submit these comments and recommendations.

Sincerely,

John Weisheit
Conservation Director
Living Rivers

River News 0/31/02

RRFW Riverwire - CRMP COMMENT DEADLINE TOMORROW

You knew we would be nagging you. The deadline for comments is through the end of tomorrow, Nov. 1st. Urge your friends and family to comment. This is everyone's park!

The email address is: grca_crmp@nps.gov

Please include a sentence on any or all of these topics, or others of your own interest: Grand Canyon National Park must be at the forefront in protecting the ecosystem. The canyon is in catastrophic decline due to the dam upstream. Species are gone or on the brink of disappearing. The park cannot depend upon the Bureau of Reclamation and other government agencies to protect the canyon, but must speak up in its defense.

The park must protect all of the great Park's intact biological communities, natural processes, and archeological treasures. Preserve and protect the wilderness character of the Colorado River unimpaired for future use and enjoyment as wilderness.

The park must provide outstanding opportunities for solitude and a primitive recreational experience--without the use of motorboats. The peace and tranquility should not drown in clamor of crowds or the racket of an outboard motor. Remove motors from the river.

Motorboats are not as safe as oar-powered craft, nor do they provide economical trips as claimed by some river concessionaires. They simply allow corporations to crowd more people onto noisy boats to rush through the Canyon.

The park must end the launching of up to 7 parties a day (only 1 or 2 of these are non-commercial), even out the launches and distribute use throughout the seasons to reduce crowding and congestion along the wilderness river.

There must be a reform of the current concession services and provide fairer access and affordable trips to include a broader representation of citizens. It is grossly unfair that non-commercial river runners must wait up to 20 years to get a trip permit.

The park must eliminate noisy, intrusive helicopter passenger exchanges. The use of helicopters should be limited to life and health-threatening emergencies, or essential administrative imperatives.

RRFW Riverwire – WILDERNESS WITHOUT THE RIVER?

River Runners for Wilderness (RRFW) has recently learned that the Grand Canyon River Outfitters Association, their legal council and staff from the Grand Canyon Trust have been on Capitol Hill, to gather support for a Grand Canyon Wilderness bill that excludes the river.

Tom Martin and Jo Johnson of River Runners for Wilderness took the opportunity while in Washington for the Colorado River Management Plan Scoping Meetings to inform congressional staffers about the progress of the open public CRMP process. Also participating in the informational meetings were members from the Arizona Wilderness Coalition, The Wilderness Society, American Canoe Association and American Whitewater.

Jo Johnson noted “Our purpose was to educate staffers on the Colorado River Management Plan process and ask their help in assuring the process would go forward unimpeded by surprise legislation, as happened when the Hatch Appropriations Rider was passed in 1980. So you can imagine our astonishment when we learned about the river concessionaires activities.” Several congressional staffers confirmed they had been visited one month earlier by the outfitters group and the Trust to gather support for a possible Grand Canyon Wilderness bill that excludes the river.

“We are right in the middle of the most intensive on-going public process for managing the Colorado River in over twenty years, driven by a legal settlement to complete the planning process in time to award new river concessions contracts. It’s alarming that the river concessions would be considering a legislative end run around the public process at this time” noted Tom Martin.

Wilderness Management of the Colorado River in Grand Canyon is whole-heartedly embraced by the American public. Wilderness management is also supported by the Wilderness Act and National Park Service policy. It is unfortunate that wilderness management has been fought at every step of the way by the river concessionaires and their allies. It's clear America wants a river wilderness, especially in Grand Canyon. Wilderness areas in the country strictly control for-profit private business activities, both in minimizing the amount of guaranteed access the private businesses are allowed, and in making sure America's motor free heritage is preserved.

River News 11/06/02

RRFW Riverwire – NEW WESTWATER RESERVATION SYSTEM

Westwater Canyon, a popular 1- to 2- day river trip, will be accessed through a new method of permit issuance this year. Chad Niehaus, Recreation Planner for Bureau of Land Management's Moab River Office explained: "We wanted to reduce cancellations and maximize the available use in Westwater Canyon while making the reservation system more user-friendly".

The website at www.blm.gov/utah/moab/ww-info.html features an online calendar of available launches, updated daily. Prospective permittees may call to reserve their date up to two months before their desired date—the call-in date is conveniently listed for each date. "We tried this on launch dates in the secondary season last year," Niehaus said, "and it worked well enough for us to apply it to the main season."

The previous annual lottery which was held early in the year was apparently not well suited to Westwater Canyon, which requires less planning lead time since it can be run as a day-trip and is a relatively short drive from several metropolitan areas. The cancellation rate was high and the River Office was increasingly forced to phone permittees to find out if permits would be used. Unused spaces were released as available permits, but often with little lead time.

The River Office is hoping to decrease administrative costs of river permitting. "There will still be "crunch" times when the phone lines will be jammed" acknowledged Niehaus, "but overall, this system should work much better for everyone." Westwater's method has not been used before, but if successful, other river permitting agencies may incorporate elements into their own permitting systems. There has been a lot of interest in the details by planners in other locations, according to Niehaus.

River News 11/23/02

RRFW Riverwire - 2002 RIVER INCIDENT UPDATE

The primary river season for the Colorado River in Grand Canyon National Park has drawn to a close. Below is a list of reported river incidents.

Non-commercial river runners reported 9 incidents; six incidents required helicopter evacuation. Three were on-the-water boating accidents, one was an in-camp accident, and two were the result of dehydration. The remaining three incidents were a flash flood in Havasu Canyon that caused minor trauma to 2 individuals who stayed on the river, a runaway from a trip in which poor group dynamics was reported, and a rock slide which caused property damage only.

There were 41 commercial concessionaire river incidents, thirty of which required NPS evacuations. Three were evacuated at the Whitmore Helipad to the Bar-10 Ranch, and went on to Las Vegas hospitals. There were eighteen medical incidents, twenty four trauma incidents, and five incidents categorized as "other". One person was checked by rescue personnel, and was found to be fine.

Also reported on commercial trips were a snakebite, five dehydration incidents (a decline from last year), five day hike injuries, four boat accidents, an in-camp accident, and two people who were injured when they jumped off a boat. There was one river guide fatality. One incident involved a bone that had been collected by a guide and stored for 1 month in an ammo can. A commercial passenger (a doctor) thought the bone to be human and gave it to the trip leader, who turned it into NPS rangers.

The 41 commercial concessionaire river incidents reflect an overall increase from the annual average of 34 incidents.

In addition to incidents handled by GCNP, there were 5 calls for assistance by hikers or non-commercial boaters that were handled by concession crews.

LR Letter 11/27/02

Comments supporting PWC ban on Lake Powell reservoir

Kitty Roberts
Superintendent
Glen Canyon National Recreation Area
Attn: PWC DEIS
P.O. Box 1507
Page, AZ 86040
Via Fax: 928-608-6212

RE: Comments on National Park Service's Draft Environmental Impact Statement and Personal Watercraft Rule-Making for Glen Canyon National Recreation Area

Dear Superintendent Roberts:

Living Rivers respectfully submits the following comments on the National Park Service's Draft Environmental Impact Statement (DEIS) and personal watercraft (PWC) rulemaking for Glen Canyon National Recreation Area (GCNRA).

PWC use is an extremely important issue facing the National Park Service, and GCNRA specifically. Unfortunately, while other Park Service units have addressed it as such, the DEIS reveals a cursory analysis by GCNRA, which lacks compliance with the National Environmental Policy Act (NEPA) process in an effort to justify a preferred alternative that does little to address the concerns which triggered this NEPA process.

1. No data to support conclusions relating to Alternative C.

Throughout the EIS there are references to Alternative C which state "by the end of the ten-year analysis period, most former personal watercraft users would have returned to the recreational area with other motorized watercraft." This unsubstantiated conclusion is used to support the supposition that implementing Alternative C would not significantly affect air quality, water quality, noise, visitor experience, etc. over the medium to long term. The DEIS contains no data or analysis to back-up this prediction. There is, however, data presented in the DEIS that indicates that the opposite can be anticipated, allowing for extensive and permanent reduction of impacts.

Although not stated, but clearly supported in the data presented in the DEIS, is that the overwhelming majority of PWC use at Lake Powell reservoir is associated with the use of other vessels, such as powerboats and/or houseboats. Only a small percentage of PWC users at Lake Powell reservoir employ PWCs as their primary vessel. On page 126 the DEIS states that 32 percent of groups visiting Lake Powell use PWCs, while 84 percent use powerboats and 29 percent use houseboats. It also states that 39 percent of the houseboat groups and 25 percent of the powerboat groups include at least one PWC. This means that 11 percent of the groups on the reservoir have houseboats and PWCs and another 21 percent of the powerboat groups have PWCs. Combined this represents 32 percent of the groups on Lake Powell reservoir—the same figure for PWC groups stated in the DEIS. Because some groups contain houseboats, powerboats and PWCs, this calculation may yield a slightly exaggerated figure. However, the percentage of such three-craft groups is likely rather low, else it would have been included in the data presented in the DEIS. If, as the DEIS states, 32 percent of all groups employ PWCs, and 32 percent—minus some small amount—of all groups use PWCs with powerboats and/or houseboats, it is clear that PWC use is significantly tied to the use of these other watercraft.

Therefore, like waterskis, wakeboards and other recreational equipment, PWCs represent merely one form of recreation associated with the collective activities of groups using other vessels. Permanently banning PWC use does not necessarily mean that these powerboat and houseboat groups will utilize an additional vessel, merely that they will have one less recreational activity associated with their time on Lake Powell reservoir. While many of these users will continue to take part in motorized reservoir activities, there is no data or analysis presented for why these groups will necessarily incorporate additional watercraft to replace PWCs. Nor is there any evidence to suggest that there would be a one-to-one relationship over time to the replacement of PWCs lost with other vessels. Lastly, there is also no evidence to support that the small percentage of groups that only use PWCs will use the reservoir at all, given that their preferred activity is permanently banned.

Absent evidence to the contrary, it is clear that the analysis of Alternative C is significantly flawed, grossly misleading the public as to the actual social and environmental benefits associated with a permanent ban of PWCs on Lake Powell reservoir. A much more likely scenario is that any change in motorized use on the reservoir will occur at a pace consistent with current trends, absent the use of PWCs.

2. Alternatives A and B are arbitrary.

As illustrated in Table 18 on page 131 the areas proposed for PWC restriction in alternatives A & B constitutes low use areas on Lake Powell reservoir by PWCs. These proposals provide limited benefits to the visitor experience relative to more than 190 other side canyons that are to remain accessible to PWCs from Lake Powell reservoir. Such a limited selection is arbitrary and capricious. The fact that these areas may have had PWC restrictions associated with them in the past, should not render them the sole locations for the development of alternatives. Similar problems with noise and competing uses, which represent the primary justification for the presentation of Alternatives A & B, also occur at Navajo, Antelope, Moqui, Lake and many other side canyons inundated by Lake Powell reservoir. These areas must be given equal, if not greater consideration, in the analysis of alternatives, not be systematically ignored.

3. Insufficient justification for eliminating alternatives from further consideration.

Page 61 states that limiting PWC use to the main channel of Lake Powell reservoir would be, "...inconsistent to the objectives of the recreation area as defined in its enabling legislation. The objectives of the recreation area are to manage the area so that it provides maximum recreational enjoyment to the American public and its guests...".

Limiting PWC use to the main channel in no way compromises a visitor's recreational enjoyment. PWCs are not primarily used for transportation to other recreational opportunities/locations on Lake Powell reservoir. As stated in the DEIS, PWCs are "high-performance vessels designed for speed and maneuverability and are often used for stunt-like maneuvers." So long as the Park Service provides for this opportunity at a reasonable number of locations, there would be no conflict with the spirit of the enabling legislation. Furthermore, as the user group analysis in Section 1 above illustrates, the vast majority of PWC users are accompanied by other vessels, therefore they can gain access to all other areas on the reservoir where other forms of power boating is allowed. Lastly, while PWCs may afford access to some areas too small for other vessels, such areas constitute the precise types of locations that generate substantial conflict with non-motorized users, and thus should warrant a ban on PWC access.

4. Only alternative C ensures compliance with federal law.

The National Park Service Organic Act states that Park resources are to be managed so that they remain "unimpaired for future generations." The allowances for PWCs into the GCNRA has indeed caused such impairment. The Park Service attempts to justify PWC use as consistent with GCNRA's enabling legislation. However, the 1972 enabling legislation was not able to predict the evolution of these vessels, and the profoundly negative impact they would have on these "future" generations. Unlike other forms of powerboating on Lake Powell reservoir, PWCs contribute significantly to water, air and noise pollution, and more specifically, to the derogation of the visitor experience throughout the reservoir. The 1978 Redwood Act states that there should be no "derogation" of Park resources, yet GCNRA has taken no steps to restrict this relatively new, and growing source of conflict for visitors to Lake Powell reservoir.

While the 1979 GCNRA General Management Plan's mission may be to "...provide maximal recreational enjoyment to the American public and their guests..." this does not allow for one form of recreation to increasingly detract from others. Maximal enjoyment must allow for a threshold, particularly in light of increasing demands for non-motorized activities in the reservoir's many side canyons. GCNRA may encompass more than 1.2 million acres, but the side canyons and tributaries feeding the reservoir's mainstem are amongst its most spectacular assets and must be managed accordingly. Only Alternative C provides for the management requirements consistent with federal law, and therefore should become the preferred alternative.

5. Lake Management Plan

The DEIS states that within Alternatives B & C that GCNRA will "seek funding for the development of a Lake Management Plan." This should be a component of all alternatives. Moreover, the term "seek funding for" does not provide sufficient assurances that such funding will ever be obtained. GCNRA should make the development of a Lake Management Plan a priority, and commit to getting it done, not merely alluding to it pending the outcome of uncertain resource allocation decisions. Additionally, such a plan must explore placing similar restrictions on powerboats and houseboats as those being contemplated for PWCs.

In light of the above, Living Rivers believes the only viable alternative outlined in the EIS is to make permanent the current PWC ban on Lake Powell reservoir, by implementing Alternative C.

Sincerely,

Owen Lammers
Executive Director

LR in the News 12/01/02

A tale of two dams

Bureau of Reclamation anniversary has special significance in valley

By Joe Rowley for the The Herald Journal

Through several dryer-than-normal years much of the West, and Utah especially, has been trying to keep from choking on its own thirst. And during the past year the U.S. Bureau of Reclamation has been celebrating its 100th anniversary of trying to quench that thirst.

But at the same time, there have been cries raised for rivers to be returned to their natural state and dams to be torn down. Others have simply called for more scrutiny in water development projects. In the middle of it all the Hyrum City Council last month

passed a resolution making clear their support of Bureau of Reclamation projects and their condemnation of those who would tear down the concaved concrete walls.

That resolution raises the question: What is the bureau's legacy in Cache Valley?

Bob Parson, Utah State University Archivist in USU Special Collections takes a personal interest in local water and valley history. He said the bureau has been very active on the Bear River almost from its creation in 1902.

Two water storage projects in the county owe their existence to the Bureau of Reclamation, Hyrum Dam and the expansion of a much older, much smaller Newton Dam. While there have been criticisms of the efficacy of some bureau projects, the two reservoirs here, Parson said, live up to expectations better than most.

That is because the pioneers who settled the valley had already constructed an irrigation infrastructure leaving only the need for greater quantities of water to make the valley more arable. The ditches and canals already dug throughout the valley made it easier to make dams that could efficiently deliver water, Parson said.

The Bureau of Reclamation's stated purpose is making land more arable, or suitable for producing crops, reclaiming the arid lands of the West. But when the bureau was created in the early 21st century there was an agenda behind that purpose: Encouraging people to move West and spread out, said Jay

Henrie, Deputy Area Manager in the bureau's Provo office.

Reclamation projects are spread throughout 17 western states beginning at the eastern borders of Texas, Oklahoma, Kansas, Nebraska and the Dakotas.

Newton Dam especially holds a prominent position in the history of American irrigation, if not merely some interesting insight into the settlement of the valley. Parson said Newton is believed to be the first dam in the state. His statement is backed up by bureau literature on the project, which goes as far as to say that it may have been the first large body of irrigation storage in the nation.

Settlers founded Clarkston early in Cache Valley history and began tapping Clarkston Creek to water their fields. When a splinter group of settlers moved down stream to found New Town, later Newton, they quickly found there was not much water left in the creek when Clarkston people finished with it. So they built a dam to store what little water came downstream, Parson said.

That was in 1872 and the total capacity was only 1,566 acre-feet.

"The new reservoir was woefully inadequate," Parson said. "People began talking about building a bigger dam almost as soon as it was completed."

The bureau turned its eye to expanding Newton as early as 1918, but it wasn't until 1946 that a larger dam was completed a mile-and-a-half downstream. The reclamation project increased the capacity to 5,600 acre-feet.

Before working on Newton the bureau worked on the Little Bear River just south of Hyrum, building the larger of its two projects in the valley. Hyrum Dam was similar to Newton's in that it was the local landowners who really pushed for it, and dissimilar from many projects of today for the same reason.

"Today you can't build a dam because they're too expensive. There's too much mitigation, too many interest groups," Parson said. "In the 1920s there wasn't (all that). It was mainly the irrigators and they all rallied around the cause."

Hyrum Dam's 18,800 acre-feet capacity of water now provide supplemental irrigation to more than 6,300 acres and \$1 million worth of crops, according to bureau data.

Hyrum reservoir acts as an effective catch-basin for spring runoff because of its large drainage area, Henrie said. Nearly 220 square miles above the dam drain into the Little Bear River. The drainage is so large, in fact, that Henrie said it's a rare year when the reservoir doesn't fill up, even during dry spells.

Hyrum Dam is "incredibly successful" as a Bureau of Reclamation project, Parson said. Without Newton Dam, that part of the valley would all be dry farm.

But there are tradeoffs in water storage projects.

Besides the land that gets inundated under a reservoir, the summer-time flow in the river is kept artificially high and turbulent, creating more sediment in the water. Without low-water times when vegetation can move down the bank and secure the dirt with its roots, the river banks erode more quickly, Parson said.

The real criticisms of the Bureau of Reclamation, to which the Hyrum city resolution refers, come from people like Owen Lammers and his Moab-based grassroots action group, Living Rivers.

Lammers accuses the bureau of being unwilling to enter the 20th century. While stopping up rivers and storing water may have been effective in the past, he said that is often no longer the case. The bureau is trying to squeeze more water out of the rivers than they have to give, and in planning future projects the bureau is finding more water on paper than really exists, he said.

Not only that, people better get used to the state they're in now. Lammers said the recent dry spell is really a taste of what normal precipitation levels are and that the West is in for even drier periods. The bureau is doing nothing to address that threat, he said.

"(There's) a huge social reality that we do not have enough water to meet the obligations that the agency is making," Lammers said. "The agency continues to spend its time trying to adapt rivers to meet our consumption. What we really need to begin to do now - because the rivers have no more to give - is adapt our consumption to the rivers."

Lammers also accuses the bureau of being unwilling to adapt to a greater social interest in the environment. When it was created 100 years ago, he said, there was little public concern for environmental and wildlife habitat issues.

Living Rivers promotes large-scale river restoration, including the Colorado River Basin, and is one of the primary groups pushing for the drainage of Lake Powell. Lammers and his group would like to see Glen Canyon Dam decommissioned, along with some other Bureau of Reclamation projects.

Keeping the water in Lake Powell is actually being wasteful because as much as 10 percent of the lake's capacity is lost during the year through evaporation and seepage into the sandstone, Lammers said. If the water were allowed to flow free the full amount would be available for use during the year. Storage for downstream users would not be a problem because Nevada's Lake Mead, held back by the Hoover Dam, is large enough for the purpose.

When it comes to being proactive in water conservation, Lammers said the bureau has a strong authority that it refuses to exercise. As the apparent watermaster of the West, the bureau could mandate planting patterns to support more water-efficient crops. It could dictate what farmers grow with the water it releases, he said.

For example, half of the water released from bureau systems is used to raise alfalfa, which requires 30 times as much water to get one pound of protein for cattle as other sources of vegetable protein, Lammers said. If the bureau mandated cropping patterns that didn't include alfalfa it could free up 35 percent of the water for other uses.

People need to "begin to work in balance and harmony with the system and not continue to pretend that we can technologically cheat it," he said.

"Why can't (the Bureau of Reclamation) take that same creativity and vision that they had to destroy rivers and put it into addressing the current problems of the day," Lammers said.

The Utah Rivers Council offers a more moderate view of the Bureau of Reclamation. Utah Rivers Council Executive Director Zach Frankel makes a distinction in saying that he is not an environmentalist, he is only a member of the public.

"That's why we're not on the Lake Powell thing, that's just not our cause," Frankel said.

His view of the bureau is a federal agency that should be subjected to increased scrutiny. To unilaterally say "the bureau is good" or "the bureau is bad" is not wise, he said. But as a major user of the United States' tax base, Bureau of Reclamation projects should be scrutinized on a case-by-case basis.

A good example of scrutiny can be seen in the recent defeat of the proposed Honeyville and Amalga dams, though they would not have been bureau projects. The two dams were removed from a list of future Bear River projects after farmers and non-farmers alike fought against them. The dams would have covered prime farm land along as

much as 13 miles of the Bear River and would have provided water to only Salt Lake urban communities, Frankel said.

"They weren't tree huggers, they were farmers and ranchers and Shoshone tribe members," Frankel said.

"They were also tax payers. They felt like, 'Why should Salt Lake take Box Elder and Cache counties' water when the farmers depended on it for their lifeblood?'"



While those and other dams may not be in the best interest of the community, there are others that are, Frankel said. There is a large difference between the proposed Honeyville and Amalga dams and the Hyrum and Newton dams, he said.

"Hyrum Reservoir is a different beast. Farmers need water to irrigate and people need food to eat," he said.

What really needs to be done is create more dialogue in water development, Frankel said, rather than allowing one federal agency to make all the decisions.

Henrie said the bureau has altered some of its practices since 1970 to meet the change in public interest. What used to be projects coordinated between the local entity and the federal government has now begun to involve more public input, he said.

As for Cache Valley, there will be no more Bureau of Reclamation projects here. Anywhere the bureau works, it is there at the invitation of the state, Henrie said. Thirty years ago Utah lawmakers decided the state should take charge of future water development on the Bear River.

Whether 2002 was indeed the fourth year of a drought cycle, or just a taste of a reality to come, the benefit of Hyrum Reservoir to the nearly 200 farms it feeds prompted the Hyrum City Council to express its support of reclamation projects.

"Cache Valley has endured another year of drought thanks to the foresight of those who planned and built the reservoirs holding our precious water supplies," Mayor Gordon M. Olson said in a written statement.

In the resolution and the letter, Olson and the city accuse those who call for the decommission of dams shortsighted. Olson wrote that they ignore the economic benefit of having water held back by dams and they don't worry about the 10 million acres of farmland to which reclamation projects supply water, not to mention the \$4.3 billion they add to the economy.

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LR Letter 12/04/02

Navajo Dam re-operations on the San Juan River

Mr. Ken Beck
Bureau of Reclamation
Western Colorado Area Office
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Durango, CO 81301
Via Fax: 970-385-6539

Re: Navajo Dam Operations, Draft Environmental Impact Statement

Dear Mr. Beck

Living Rivers appreciates this opportunity to submit the following comments on the Draft Environmental Impact Statement (DEIS), Navajo Dam Operations, September 2002 (DES-02-35).

The San Juan River is one of the most dynamic ecosystems on the planet, supporting an incredible diversity of endemic plants and animals, as well as native cultures. We are quite concerned with the demise of its native fish species, but believe with proper river management, full recovery of these species is achievable.

It has been acknowledged that the two prime reasons why San Juan River native fish are endangered can be attributed to alien fish competition and the building of dams and diversions. Despite this, the DEIS provides little assurances that these impacts will be adequately addressed, such that recovery can occur. In particular, Living Rivers finds the 250/5000 alternative recommended in the DEIS to be totally unacceptable as a means to achieve this objective.

First, while the DEIS acknowledges that endangered species have yet to achieve a "positive population response" from the present flow regime, it none-the-less recommends continuing with the same regime. In fact there has been little to no benefit whatsoever to the endangered fish populations as a result of present dam operations.

Since it's not working now, and the DEIS provides no evidence to ensure that it will work in future, it seems imprudent to make permanent such a flow regime. Furthermore, it seems imprudent for the DEIS to be making any recommendations at all, as the final report of the Biological Committee has yet to be issued.

Second, without recognition of the need to: increase the length of the habitat reach through effective fish passage and potential dam decommissioning; mandate mechanisms to ensure sufficient in-stream flows in light of existing and proposed diversions and climate change; and aggressively eliminate non-native fish and plant threats to the habitat, it is unlikely that full recovery of razorback sucker or Colorado pikeminnow will ever occur in the San Juan River. Failure to adequately address these critical issues, not only threatens the validity of preferred alternative, but all alternatives presented in the DEIS. The comments which follow address these deficiencies within the EIS in greater detail.

1. Truncated reach too short to enable recovery

Historic habitat for the native San Juan River fish included the spawning beds above Navajo Dam and the sections now inundated by Lake Powell reservoir. The critical habitat identified by the DEIS on the San Juan River is substantially less, the distance between Lake Powell reservoir and Navajo Dam. Furthermore, this remaining stretch is truncated even further by a number of diversion projects.

The only remaining critical habitat, of the native 320 river miles, available for fish recovery is the San Juan River which lies between Hogback Diversion Dam and the head of Lake Powell reservoir, approximately 138 miles. Included in this 138 miles, are the 57 miles of swift water at San Juan Canyon, which is documented as habitat not advantageous for the rearing of native fish. Therefore the total available habitat for fishes that once ranged throughout the San Juan River and its tributaries has been reduced 75 percent to a mere 81 miles.

The DEIS does not demonstrate how this remaining habitat is sufficient to accommodate the rearing of native fish. There are two kinds of habitat that are needed by the native fish of the San Juan River: spawning habitat and rearing habitat. It has been demonstrated that spawning habitat is available for the fish to utilize, but that rearing habitat for the hatchlings has been severely diminished, as most of the hatchlings drift into Lake Powell reservoir to be predated upon by the exotic fish. It has been suggested by aquatic biologists that historic habitat was available to the drifting hatchlings in the lower river reaches of the San Juan beyond Clay Hills and in the areas of the Colorado River mainstem.

While the preferred alternative does call for combined flows from Navajo Dam and the Animas River to drop to 500 cfs, this may not be sufficient to halt young fish from being carried down to Lake Powell reservoir, and anything lower would reduce the backwaters habitat, which is even more critical for their survival. The success being experienced with fish recovery on the Green River is largely the result of habitat length. The DEIS fails to address these restrictions on the San Juan River, or the alternatives available to correct them.

First, most of the water diversions do not allow for adult fish passage to enable spawning in the upper reaches of the remaining habitat. This includes the diversions of the Animas River, which is part of the historic habitat of the endangered San Juan River fish. And while a fish passage device has been constructed at the Hogback Diversion Dam, it has not been determined if endangered fish even utilize it.

Second, even should successful fish passage be achieved, there is no evidence that this stretch of river will be sufficient to accommodate the needs of these larval and early juvenile fish. Historically, San Juan River native fish could rely on the free-flowing Colorado through Glen Canyon to provide both rearing habitat for San Juan River native fish, and as a refuge in times when the San Juan River ran dry. Decommissioning Glen Canyon Dam would restore the historic geomorphic habitat that the fish evolved with and would also favorably increase the range and conditions of critical habitat necessary for the recovery of San Juan River native fish.

The DEIS should have: one, identify how successful fish passage will be achieved to maximize availability of the remaining habitat; two, evaluate the effects of Glen Canyon Dam on the San Juan River Basin Recovery and Implementation Program (SJRBRIP); and three, evaluate the decommissioning of Glen Canyon Dam as a legitimate alternative to restore San Juan River native fish populations.

2. Long-term operations of Navajo Dam

At least until such time as Glen Canyon Dam is decommissioned, San Juan River native fish are dependent on Navajo Dam to reduce the likelihood that the remaining habitat will run dry. The DEIS, however, makes no reference as to the impermanence of Navajo Dam, and how its decommissioning, either through dam failure, or sedimentation could effect fish recovery.

Catastrophic floods are known to occur in the drainage of the San Juan River. Navajo Dam's ability to control floods has been called into question due to unexpected piping of reservoir water through the dam's earthen structure (Bureau of Reclamation, Engineering and Research Center, Denver). Such piping has caused other earthen dams to fail, such as BuRec's Teton Dam in Idaho, which caused loss of property and loss of life. The DEIS needs to document the integrity of Navajo Dam, and how, in the event of a dam failure, it would avoid a complete loss the San Juan's remaining, and/or recovered, native fish.

For Navajo Dam to use its river outlet works for extended periods of time during the seasonally adjusted high flows, the EIS must also report on the safety concerns related to cavitation and other potential operating hazards that could occur while using these outlet works (SJRBRIP Coordination Committee Minutes of 10/15/98).

As the San Juan River erodes a geographic area that includes soft host rocks, it is no surprise that it is the major contributor of sediment for the Colorado River system. This high content of sediment poses serious concerns to Navajo Dam operations, and will eventually force the dam's decommissioning. The DEIS must outline the timeframe by

which Navajo Dam will likely need to be decommissioned, and how this decommissioning will effect recovered endangered fish habitat.

3. Water quality concerns & climate change

The DEIS fails to adequately address how it will guarantee necessary in-stream flows. While historically, the San Juan River has run dry, this did not significantly affect native fish populations as they were able to seek refuge in the Colorado River. Until such time as Glen Canyon Dam is decommissioned, such refuge is not available. Therefore, BuRec must ensure water will be available for the fish. This is particularly problematic given the extent of unresolved water claims. While the DEIS recognizes the existence of such claims, and admits in particular that Navajo Nation claims, "if exercised could place in conflict most of the water in the basin," it outlines no mechanism for how the necessary in-stream flows will be guaranteed. Recent history on the Klamath and Rio Grande Rivers reveals that the Bureau of Reclamation has demonstrated an unwillingness to make such flows a priority.

Additionally, the DEIS fails to assess the likely impact climate change will have on water availability. The upcoming year, in particular, may be an eye-opener for resource managers and citizens of the San Juan River system. It is projected that even if the coming year receives normal precipitation, there will not be sufficient water supply to meet the level of demand (Personal communication, New Mexico Game and Fish, 2002.) This is indicative of the over-developed nature of the San Juan River and this issue must be more thoroughly addressed by the DEIS to produce water in times of drought for the recovery of native fish.

Recent reports issued by the US Geological Survey (USGS) specifically indicate that resource managers will have problems meeting their future water delivery projections (R. Hereford, Flagstaff and R. H. Webb, Tucson, 2002). The data indicates:

- The 20th Century was a wetter century than normal by 20.
- The 400-year average virgin streamflow for the Colorado River at Lee's Ferry, Arizona totals 13.5 million acre-feet per year; 16.4 was the original projection.
- Colorado River virgin streamflow at Lee's Ferry, Arizona can increase or decrease by as much as 35 percent.
- High magnitude floods can stress spillway mechanisms and overflows will damage areas of development; dam failures are possible.

Climate change is becoming an increasingly important issue affecting surface water management, thus it's surprising, in light of the above, that the DEIS did not address it.

The preferred alternative will only work when climate behaves normally and would fail in a severe and sustained drought. The DEIS should have provided the total amount of acre-feet required to conserve native fish species for each alternative, and how this relates to the natural annual flow of the Colorado River. It should have also provided adjusted streamflow statistics on the consequences of climate change. Such analysis is

imperative to properly manage the San Juan River and the conservation goals as outlined by the DEIS.

Lastly, the DEIS did acknowledge water supply constraints in its analysis of the 500/5000 Alternative, stating that it would not be technically feasible to implement due to present diversions. The DEIS failed to state, however, how such an alternative would in fact be of much greater benefit to the native fish, only that it is not feasible. The DEIS did not discuss opportunities for purchasing, transferring or otherwise acquiring the necessary water rights to enable the implementation of this more beneficial alternative.

To be credible, the DEIS should have developed an alternative based on the water needs of the native fish, then determined how to ensure the water availability and flow regimes that will best provide ensure such water is provided on a permanent basis.

4. Insufficient high flows

The maximum flows outlined in the preferred alternative are not sufficient to meet the needs of the razorback sucker. This fish responds very well to spikes in the hydrograph, but the DEIS ruled out flows above 5,000 cfs from Navajo Dam due to the technical constraints associated with the dam's river outlet works. As stated in the Flow Recommendations for the San Juan River, prior to Navajo Dam, spring spike flows of 33,000 cfs occurred at Bluff Utah, 30 percent of the time. However, the preferred alternative will not allow for such spikes. The preferred alternative is based on a calculation of the average spike flow, yet provides no analysis to demonstrate that such a flow is indeed sufficient to invoke the types of benefits necessary for the razorback sucker. Therefore, similar to the need to make necessary engineering modifications to allow for fish passage, the DEIS should have addressed more completely the benefits to razorback sucker recovery associated with higher and more consistent spike flows from Navajo Dam.

5. Removal of alien fish

It is well documented that the introduction of alien fish species has contributed significantly to the decline of the native fish populations in the San Juan River. Members of the Desert Fishes Council have specifically documented their concerns about alien fish impacts on the available resources of food and habitat in our desert rivers (Battle Against Extinction, W. L. Minckley, 1991).

Every alternative presented supports the continued existence of an artificial trout fishery. These fish should be removed because they significantly compromise native fish recovery goals—feeding on the larval and early juvenile native fish. Sport fishermen have alternative venues to pursue their recreation, some nearby where trout are a natural feature of river ecosystems. The native fish do not have such alternatives and are forced to compete for survival in an impossible coexistence. Other alien fish species, such as stripers, catfish and carp, too must be eliminated as opposed to the proposed suppression strategies.

6. Removal of alien plant species

Invasive tree species such as tamarisk and Russian olive need to be more aggressively mitigated with programs other than the mimicry of the natural hydrograph called for in the DEIS. These trees have dramatically changed the geomorphology of river bed, which alters the optimal productivity of the spawning habitat for the endangered fish, as well as the habitat of the endangered birds and some species of special concern. These exotic plants should be eliminated and replaced by native vegetation such as cottonwood and willow.

7. Water quality

The DEIS does not sufficiently address how water quality will be improved such that there will no longer be impacts on native fish. The health of San Juan River native fish is presently being compromised by oxygen sags, lesions from toxic chemicals associated with the production of petroleum products and sewage treatment plants.

This situation is anticipated to worsen as new projects and diversions come on-line. Pollution and heavy metals from return flows will increase, suppressing further native fish productivity. Increased selenium in the soil systems of the drainage is of particular concern, as it is known to shunt the reproduction organs of the endangered fish. Moreover, in the summer of 2001, BuRec published The Low Flow Test: San Juan River, which concluded that the reoperation of Navajo Dam, as called for in the preferred alternative, would not meet New Mexico water quality standards over the long-term.

The DEIS claims that BuRec plans to address these matters through dilution by the recommended flows. However, such flows are already being implemented, and water quality standards continue to be violated. Clearly, this is not a viable solution in the near or long-term. While the DEIS also states that efforts will be made to increase enforcement of non-point source pollutants, it provides no details of how this will occur and how this will necessarily benefit water quality.

8. Water management

The constraints facing the recovery of San Juan River native fish are indicative of a much greater disaster in years to come. The over allocation of the river, unresolved water rights claims combined with lower water volumes due to climate change will lead to extensive conflicts and a dried-up river with regularity. There will be no recovered fish, or water for many of the users that presently have rights. Surprisingly, however, BuRec is doing nothing to resolve this.

In addition to the comments pertaining to water quantity in item 3 above, BuRec must comprehensively address how water from the San Juan River basin will be allocated in such a way that the needs of native fish will not be compromised. BuRec must identify what mandated water conservation and water utilization policies will be enforced on all users to sufficiently reduce their take from the river to eliminate the likelihood of shortages, both for native fish and water users. Such policies will not only resolve many existing and future problems, but save money by eliminating the need for some of the

basin's existing and proposed projects.

Conclusion

Living Rivers has no confidence in the conclusions of the DEIS or any of its alternatives to successfully recover the native fish of the San Juan River. The preferred alternative represents the continuation of present operations, which has yet to demonstrate any results. Additionally, before any alternative can be adequately considered, the DEIS must be significantly expanded to address the likelihood that the current habitat is too short in length to allow for recovery, and alternatives explored to remedy this. The DEIS must also address specific mechanisms to maintain in-stream flows in light of present and anticipated demands on the system, climate change, and the prospect of Navajo Dam failure and eventual decommissioning. The removal of non-native fish and plant species must become a higher priority, as should improvements in water quality.

Alternatives, which may be more beneficial to recovery, such as the 500/5000 Alternative must not be excluded merely because of water constraints. BuRec should identify what's best for the native fish, then determine how to attain it, such as mandated water conservation and acquisition of water rights for the fish. Lastly, BuRec must face the reality that the San Juan is going to regularly run out of water if new water conservation, allocation and management policies are not swiftly implemented.

Sincerely yours,

John Weisheit
Conservation Director

River News 12/09/02

RRFW Riverwire - BECOME A RRFW MEMBER FOR FREE!

December 9, 2002

River Runners for Wilderness invites you to become a member—it's free!

The Grand Canyon! Do you want to keep it Grand? Do you believe it deserves to be a designated, motor-free wilderness with fair access for anyone that desires to experience its wonders? Don't have a lot of ready cash, but still care about the issues? RRFW would like to extend a free lifetime membership to you!

Join us by filling out the form on the "join" menu at our website www.rrfw.org, or send us your name, complete address, phone (and fax if you have one), and email address via email at membership@rrfw.org or by mail to River Runners for Wilderness, PO Box 466,

Moab, UT 84532-0466. We'll keep you informed about the latest breaking river wilderness issues with mailing alerts, updates and bulletins.

We've contributed countless hours and quite a few dollars to the wilderness and access causes. In the last 6 months, here's what we've done:

- Issued alerts about moves in Washington DC to strip wilderness protection for the Colorado River, the Jackass Waterline Project, Firewalk group, alleged changes to non-commercial regulations, the Outfitter Policy Act, river fatalities and illnesses, exploring business permits as an alternative to concessions contracts, the new Westwater Permit system, and other important issues.
- Formed the Grand Canyon Wilderness Alliance (GCWA) of 5.5 million members with 30 other environmental groups to craft CRMP comments, participate in the CRMP process and advance a motor free wilderness designation of the Colorado River and Grand Canyon.
- Traveled to DC to educate our elected officials on the CRMP. During 3 days and 17 meetings, we asked our elected officials to support the ongoing CRMP and block any attempted legislation to interrupt it.
- Represented the interests of wilderness paddlers at meetings with BLM planners working on the Gunnison Gorge Management Plan.
- Traveled to Marble Canyon Lodge to attend a summit of individuals and groups exploring common interests and goals for Grand and Glen Canyons, as well as wilderness and educational conferences in Albuquerque and Tucson.
- Sent you up-to-date Riverwires on changes affecting Grand Canyon, from river flows out of Glen Canyon Dam to congressional actions in Washington, DC.

It's free, too. If you're interested in email alerts, email us at riverwire@rrfw.org.

We're happy to have you as a member, and please consider donations to help us cover expenses. We're particularly in need of a few things: postage stamps, 2 fax machines, paper, an Adobe Acrobat® program, a scanner and prepaid long distance phone cards.

We've been careful in spending our money, but long distance phone calls, travel expenses, Internet access, postage and office equipment and supplies add up. Can you help us out? It's fully tax deductible. Thanks!

River News 12/10/02

RRFW Riverwire - CRMP UPDATE: NEXT MEETING IN JANUARY 2003

December 10, 2002

For the first time in 30 years, a concerted effort is underway to address the backlog of recreational issues surrounding the Colorado River in Grand Canyon National Park. Issues such as who gets to go, allocation of use, the spectrum of concessions services,

The Herald Journal wilderness, helicopter and motorboat use issues are on the table. The next step in this process may be a week's worth of meetings in Phoenix, Arizona, at the end of January 2003.

During the summer, park planners once again undertook to move forward the Colorado River Management Plan "with much trepidation", according to park Superintendent Joe Alston. A series of public meetings was held this summer and fall from coast to coast across the nation, generating over 8000 comments from the general public by the close of the scoping comment period November 1, 2002. In an ongoing attempt to include stakeholders in this open public process, the Park is considering three meetings to further allow stakeholder input into the CRMP. These meetings are scheduled to occur at Arizona State University in Tempe, Arizona. The meetings are tentatively planned for January 29, 30 and 31 and may possibly be connected via videoconference equipment to locations at Northern Arizona University in Flagstaff and the University of Arizona in Tucson.

RRFW has learned that there may be two focus group discussions, and two expert panel presentations. The focus groups will be on 1) The non-commercial access system and 2) The spectrum of river concessions services. The expert panels will cover 1) Carrying capacity, group size, and seasonality, and 2) Allocation of use. The findings of these focus groups and expert panels will be used by the Park's CRMP contractor in helping the Park draft several alternatives for the final plan. These alternatives, with one selected as the Park's "preferred" draft alternative are slated to be released during the summer of 2003.

RRFW feels that the final plan would be better served if the Park released a variety of preliminary alternatives for public comment prior to coming forward with a draft preferred alternative. This practice is an accepted management plan process, both within the National Park Service and other land management agencies. Denali National Park released a draft of preliminary alternatives for public review last year, with no preferred alternative selected. The draft with a preferred alternative should be released shortly for a second round of public review. The Bureau of Land Management is currently allowing two weeks of comments on preliminary draft alternatives for a wilderness management plan on the Gunnison Gorge (see www.gunnison-gorge-eis.com). A review of this type allows additional public participation in the crafting of viable alternatives during the planning and development stages. RRFW is encouraging park planners to allow the interested public a similar opportunity for comment on alternative plans prior to the park identifying a draft preferred alternative.

Count on us to keep you informed on CRMP developments and other Grand Canyon issues as they come up.

RRFW Riverwire – COMMENT ON GUNNISON GORGE PRELIMINARY ALTERNATIVES

Gunnison Gorge National Conservation Area (GGNCA) has released preliminary draft alternatives for public comment, due by Tuesday, November 17. This stretch of the Gunnison River flows through a double canyon (2 rims) below Black Canyon of the Gunnison National Park. The Bureau of Land Management-administered area includes a variety of scenery, land uses and recreational opportunities divided into zones for different administration. Of particular concern to river runners is 14 miles of the river as it flows through the small inner canyon Wilderness Area of about 17,000 acres called Zone 1. River runners must hike to the launch area down the 1 mile Chukar Trail and either backpack their gear in or arrange with the approved horse packing outfitter to have it brought down. Consequently, this run is more popular with non-commercial kayakers than rafters. The take out is outside the wilderness boundary on BLM land at Gunnison Forks.

Extensive public and focus group meetings were held during the spring and summer. The GGNCA has released preliminary draft alternatives for its management plan revision. This is an opportunity for the public to be involved before the draft alternatives, usually with a “preferred alternative” chosen by the agency, are released. Current comments will be considered for incorporation into the draft alternatives which are scheduled for release in February, 2003.

Four preliminary draft alternatives are presented. Concerning Zone 1, Alternative A is the “status quo”, or keeping most management aspects as they are now. Currently, there is no formal permitting system for noncommercial boating use and fishing use. Commercial boating outfitters are limited to 2 launches per day, divided among several permitted companies (not concessions). Boating group size is limited to 12 people, regardless of trip type. Currently, a noncommercial trip must pay a small trip fee, read the regulations and sign the self-issued form on behalf of the trip at the Chukar launch site. This applies to non-commercial recreational boaters and fishers.

Carrying capacity has been determined to be 75 people per day in the small canyon. This number is exceeded about 10 days during the stone fly hatch in May and/or June. The group size maximum of 12 has been determined by the size of the existing designated campsites (no camping in non-designated sites). Self guided fishing visitors, when boating, are lumped with recreational boaters, and with backpackers and hikers if they are not using a boat.

Alternative B would keep commercial group sizes at 12, including guides, and would keep commercial launches at 2. Noncommercial groups would be reduced to 8 participants. A non-commercial permit system would be implemented and would allow 4 trip launches per day with a maximum of 6 boats per trip. Non-commercial trip participants would be subject to education of the requirements for travel in the canyon. Fees were not addressed in this alternative. This alternative would establish “use

indicators” and monitor user satisfaction levels, resource degradation and use adaptive management techniques to change policies and procedures to accommodate necessary changes.

Alternative C would use the same adaptive management techniques. Commercial launches would increase to 2 overnight plus 1 day use trip. All group sizes increase to 16 people (including guides for commercial trips). Unlimited guide training trips would be allowed. Two noncommercial trips would be allowed in addition to unlimited day use. Fees were not mentioned.

Alternative D deviates from specific prescriptions for recreational use, and instead creates an opportunity for deeper study and a longer, more intensive process for administering that use. This would be achieved by analyzing current visitation, existing resources and the present outfitter system. Needed changes would be identified and considered to shift allocation of use between trip types and between outfitters. Methods of assessing and monitoring visitor satisfaction and resource protection over time would be developed. A “friend’s group” would be formed to assist in management, trail and facilities work, user education and to provide feedback to the BLM.

RRFW believes rules should be applied evenly wherever possible between commercial and non-commercial trips. Therefore, disparities in group sizes, boat limits, and user fees are not justified. The scale of the canyon and river within it are small, and GGNCA has made a good case for establishing the group size of 12 people; an increase for any trip type is not justified. It also is difficult to justify limiting non-commercial use via a permitting system while a substantial amount of commercial allocation goes unused, as happens now. Similarly, noncommercial boaters have not been shown to cause a disproportionate level of resource abuse, making the proposal to require educational programs an unnecessary burden to noncommercial boaters and BLM administrators. Furthermore, few permitting systems in use today are fair or satisfactory to do-it-yourself boaters.

Alternative D creates some exciting opportunities, but at the same time, provides no safeguards that the outcomes will be appropriate. Budgetary and legal concerns could make this a difficult process, and clearly, it will take longer. It appears to be a new concept in draft alternatives, and the GGNCA should be applauded for including it.

The current situation, Alternative A, works nicely for non-commercial boaters. Admittedly, there are resource issues stemming from the increased fishing use during the stone fly hatch season, but boating logistics limit access far more than agency obstacles. RRFW urges GGNCA to postpone formal permitting of non-commercial boaters as long as possible to avoid the substantially increased administrative overhead and dissatisfaction among non-commercial boaters.

The alternatives include much more than the boating issues covered here, we urge you to go to the GGNCA Management Plan website at www.gunnison-gorge-eis.com. To get a detailed Excel spreadsheet of each alternative’s boating-related elements, reply to this message and you will receive it as an attachment. Comments are due tomorrow, Tuesday, December 17, 2002. Send them to Angie Nelson at Tetra Tech, Inc. (acting as

a contracted agent to the BLM), by email: angie.nelson@tetrattech.com or by fax: (720) 406-9114.

River News 12/16/02

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participants. A non-commercial permit system would be implemented and would allow 4 trip launches per day with a maximum of 6 boats per trip. Non-commercial trip participants would be subject to education of the requirements for travel in the canyon. Fees were not addressed in this alternative. This alternative would establish “use indicators” and monitor user satisfaction levels, resource degradation and use adaptive management techniques to change policies and procedures to accommodate necessary changes.

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LR Press Release 12/16/02

Congressman Touts Living Rivers "Record of Success" at Colorado River Water Users Meeting

(Las Vegas) According to Congressman John Shaddeg, R Phoenix, the greatest threat to the future of Colorado River management is not the forces of nature, or the Southwest's growing population, but the advocacy group Living Rivers.

Throughout the course of his 40 minute address to the annual Colorado River Water Users Association (CRWUA) at Caesar's Palace Hotel, he emphasized the growing power and influence Living Rivers is playing in Colorado River politics.

"These people have a track record of success that is enviable," Shaddeg told the capacity crowd of water agency brass, irrigation district representatives and government officials, who earlier heard remarks by Interior Secretary Gale Norton. "It would be a grave risk or a dangerous gamble to bank on them not winning, because they are more determined, more patient, working hard and growing."

Remarking on Living Rivers' calls for aggressive water conservation strategies, such as mandated cropping patterns that preclude water-wasting, non-food crops like alfalfa, Shaddeg hoped to mobilize opposition to Living Rivers amongst the CRUWA rank and file--the irrigators. Eighty percent of Colorado River water is used for irrigation, roughly half of this is for alfalfa and other forms of cattle feed.

"We are certainly pleased that Representative Shadegg continues to publicize the shifting debate surrounding the Colorado River," says Lisa Force, Living Rivers Program Director who is attending the CRUWA meetings. "It's unfortunate, however, that he tries to mobilize the water users to swim upstream against mounting public opinion. There are only a few hundred Colorado River Water User members; it's the 280 million people in the US who ultimately have a say over this federally-managed river."

Shaddeg was particularly concerned with Living Rivers' Colorado Riverkeeper program, which is affiliated with the international Waterkeeper Alliance based in New York and founded by Robert Kennedy, Jr. "I rue the day when Colorado River water use is decided by the East Coast," Shaddeg said.

Shaddeg, a long time defender of Glen Canyon Dam, reinforced the growing support for Living Rivers' efforts to bring about the dam's decommissioning. "We're hearing this proposal coming from more and more reasonable voices," he said.

Shaddeg alluded to this growing public influence earlier this year when he and three other western Congressman co-authored a fund raising letter for the Page, Arizona-based Friends of Lake Powell. "If there were a vote on the floor of the U.S. House of Representatives tomorrow that called for the decommissioning of Glen Canyon Dam and the draining of Lake Powell, there is a chance that we would lose that vote," the letter stated.

"It's not a matter of if, but when such a vote will be lost," adds Force. "The water loss through evaporation and seepage alone associated with Lake Powell reservoir could service four million people and generate \$500 million in revenues for the federal treasury. Properly organized, such urban demand can generate a lot more political clout than a handful of federally subsidized farmers."

River News 12/17/02

RRFW Riverwire – MORE ON GUNNISON GORGE PRELIMINARY ALTERNATIVES

Comments are due today, Tuesday, December 17, 2002, not November 17th as listed in some copies of yesterday's Gunnison Gorge Preliminary Draft Alternatives Riverwire.

Gunnison Gorge NCA has received the results of a user satisfaction survey conducted by Arizona State University over 2 years (2 seasons), according to Bill Bottomly, Planning and Environmental Coordinator at the Bureau of Land Management unit.

"We were happy to hear that recreational users are generally very satisfied with their visits here", he said. There was a notable exception, however. Guests of commercial outfitters were very unhappy with what they perceived as "excessive crowding" of the river canyon during their visits, rating their satisfaction at 2.9 out of a possible 10.

Ironically, GGNCA's boating outfitters are calling for an increase in their launches, currently set at 2 per day, and in their group sizes from the 12 allowed now to 16. They also would like to conduct guide training trips outside of their current allocation instead of using some of their launches for training purposes. This additional use would seem to run very counter to the wishes of their clients.

He also confirmed that Alternative D-1 is a relatively new concept in EIS drafts. "While our status quo, Alternative A, seems to be filling most users' needs, we know that with increased visitation we will have to find better ways to deal with use and safeguard the resource without sacrificing user satisfaction" he stated. "We hope to accomplish with Alternative D".

Alternative D-1 establishes a "Wilderness Recreation Strategy" by meeting 5 specific outcomes: 1) Analysis of visitor use and resources and consideration of the existing outfitter system and noncommercial use, 2) Identify needed changes to existing system to consider additional use by all visitors and possible reallocation of current use. 3) Process for expanding opportunities for new outfitting companies 4) Possible changes to all recreational management to protect wilderness values and 5) Methods of assessing and monitoring visitor satisfaction and resource protection over time.

The alternative would also form a citizens group to assist the BLM with managing the resources, providing feedback on management, educating users, monitoring and improving conditions and providing volunteer assistance with facilities and trails maintenance. Comments are due today. Direct them to: Angie Nelson, Tetra Tech, Inc. , at fax number 720.406.9114 or by email to: angie.nelson@tetrattech.com.

Environmental and wilderness laws have established conduits for public involvement and direction in how our lands are protected and used. RRFW urges you to participate in the process when and where you can.

Living Rivers Currents 12/23/02

San Juan River Fish Need Lake Powell Drained

While Glen Canyon Dam's impacts on the ecosystem at Grand Canyon are well-documented, less publicized are the impacts that Lake Powell reservoir has on critical habitat upstream. Nowhere is this more apparent than on the San Juan River where 20 percent of the habitat has been inundated by the reservoir. The Bureau of Reclamation (BuRec) claims it can remedy these problems by re-operating Navajo Dam upstream, but Living Rivers is leading the effort to reinforce how futile this exercise has been, and will continue to be, until Lake Powell reservoir is drained.

The San Juan River is well-known for contributing about a third of the sediment that historically nourished the lower Colorado River system and its delta. The 355 mile long San Juan River is also one of the most unique ecosystems on the planet, supporting an incredible diversity of endemic plants and animals, as well as native cultures. But, like so many rivers in the Colorado watershed and beyond, the San Juan has suffered tremendously as a result of dams and water diversions.

Of the six native fish species that once thrived in the San Juan, four are species of "special concern," and two are threatened with extirpation. Under pressure from the Fish and Wildlife Service, BuRec has been studying ways to modify the operations of its Navajo Dam facility to improve San Juan River habitat conditions for the endangered Colorado Pikeminnow and the Razorback Sucker. Located 208 miles upstream from where the San Juan River becomes part of Lake Powell reservoir, it is believed that changes in dam operations could bring about the recovery of these native fish.

But, as was acknowledged in a recent Environmental Impact Statement on the operations of Navajo Dam, such flow regimes have yet to achieve a "positive population response." In fact, scientists have concluded that there has been little to no benefit whatsoever to the endangered fish populations as a result of present dam operations. Nonetheless, BuRec recommends continuing with the same regime.

"The problem is they're looking in the wrong direction," says Living Rivers conservation director John Weisheit. "The major constraint is not the need to manipulate flows, but to recognize that the remaining stretch of river is too short to allow for young fish survival."

Historic habitat for the native San Juan River fish included the spawning beds above Navajo Dam and the rearing sections now inundated by Lake Powell reservoir. Navajo Dam, Glen Canyon Dam and the nine diversion dams in between, have reduced river habitat down to 81 miles (a loss of 75 percent). While it has been demonstrated that spawning habitat is available for the fish, the important rearing habitat for young fish is insufficient. Hatchlings drift into Lake Powell reservoir and are consumed by non-native fish before they have sufficiently matured to swim upstream against the current.

Historically, the native fish of the San Juan River could rely on the free-flowing Colorado through Glen Canyon to provide both rearing habitat and refuge habitat when the San Juan River ran dry. Decommissioning Glen Canyon Dam would restore the historic geomorphic habitat that the fish evolved with, as well as increase the range and conditions of critical habitat necessary for the recovery of these incredible fish.

"BuRec is completely ignoring these rearing habitat constraints and the role a decommissioned Glen Canyon Dam must play in eliminating them," adds Weisheit.

"BuRec must stop wasting public monies pretending. They must concede that this remaining habitat is not sufficient to support recovery, and that they will be in violation of the Endangered Species Act until Lake Powell is drained."

Living Rivers Currents 12/23/02

Delta May Suffer from Low-Flowing Rio Conchos

Living Rivers is monitoring a new threat to the people and ecology of the Colorado River delta. In retaliation for an overdue Mexican water debt, the U.S. International Boundary and Water Commission (IBWC) has begun researching the feasibility of stopping Colorado River water from reaching the already parched Baja California.

Under a 1944 treaty, the U.S. must deliver to Mexico an average of 1.5 million acre-feet of water annually from the Colorado River. This represents a scant ten percent of the river's historical natural flow which nourished the delta region before the Colorado was dammed. Although the river basins are geographically unrelated, the same treaty

requires Mexico to deliver to the U.S. an average of 350,000 acre-feet of water a year from the Rio Conchos Basin and other tributaries. Due to an extraordinary drought in the state of Chihuahua, Mexico has fallen behind on its deliveries for two consecutive five-year cycles.

The Colorado River water currently delivered to Mexico is used for irrigation in Baja California and for the densely populated city of Mexicali. What little water is left, to support the environment and the many threatened species of the delta, comes mostly from agricultural runoff, or excess "spills" from U.S. reservoirs during years with above-average runoff. This is an unlikely occurrence considering the current drought cycle.

Gordon Hill, general manager of Bayview Irrigation District in south Texas, said recently, "When I suggested blocking the Colorado more than three years ago nobody—the Clinton administration, the State Department, the IBWC—would look at it. Now, finally, we have come full circle."

The threat has received support from both Texas Agriculture, Secretary Susan Combs, and Texas Commission on Environmental Quality, Chairman Robert Huston. Secretary Combs has called on the Bush administration not only to withhold Colorado River water from Mexico but also to cut economic aid.

Living Rivers Currents 12/23/02

Colorado Riverkeeper Off and Floating

When the Waterkeeper Alliance approved Living Rivers' Colorado Riverkeeper program in October, we quickly discovered that many Colorado River boaters are very eager to advocate for watershed protection and to share that knowledge with the boating public.

By combining environmental advocacy with river running, three patrol trips involving 25 people have already plied 335 miles of the Colorado watershed to spread the protection message by engaging the people they meet on the river, and by monitoring the river reaches for environmental degradation.

The first launch occurred in Grand Canyon National Park and was led by Tom Martin of River Runners for Wilderness. The second Patrol was led by the Colorado Riverkeeper coordinator, John Weisheit, which launched on the Green River above Canyonlands National Park and included the Colorado River through Cataract Canyon. The third trip was led by Susette DeCoster, of Colorado Plateau River Guides, and launched directly below Hoover Dam. These three river trips were completed in areas managed by the National Park Service, where the natural ecology has been heavily impacted by the two largest concrete dams on the Colorado River—Glen Canyon and Hoover Dams.

The Grand Canyon trip began below Glen Canyon Dam, with unnaturally crystal clear and cold water flowing past sediment-starved beaches which, like the river's endangered fish, are barely hanging on to existence.

Where was the missing sediment? In Lake Powell, where the Cataract Canyon patrol ended. These boaters had to endure 30 miles of massive sediment deposits revealed by the lowering of Lake Powell reservoir during the driest period on record for the Colorado River. Their final night was spent on a vast plug of sediment (moist sand/clay topped by tumbleweeds) that rightly belonged in Grand Canyon, 200 miles downstream. Upon arriving at their final destination, Lake Powell's Hite Marina, they found the boat ramp closed due to sediment and the low reservoir level. The alternate ramp had a warning sign that exclaimed, "Use at your own risk."

DeCoster's patrol below Hoover Dam was marked by incredible amounts of pollution, including trash, toilet paper, human feces and odors of human urine, which impacted the camping areas and the natural hot springs for which this river corridor is famous. Additionally, Homeland Security helicopter overflights kept a close eye on all river visitors.

The Colorado Riverkeeper will continue to document the violations they encounter on their patrols and to engage in outreach activities whenever possible. Our next patrols will occur in the coming Spring on the Green and San Juan Rivers. Contact Living Rivers if you would like to take part.

Living Rivers Currents 12/23/02<

Canyon Outfitters Saying No to River Wilderness

Representatives of Grand Canyon National Park's \$30 million commercial river outfitting industry are discussing a bill for Congress that would exclude the Canyon's river corridor from wilderness designation. If enacted, this would be a significant blow to efforts to restore the Colorado River in Grand Canyon National Park.

At issue is the use of outboard motors by the majority of Grand Canyon river outfitters. Motorized pontoon boats can accommodate 32 people and whisk them through the Canyon. The designation of wilderness would likely lead to a phase-out of motors, forcing the companies to revert back to smaller oar-powered rafts and traveling at river pace.

This is a major issue now being addressed by Grand Canyon National Park through a revision of its Colorado River Management Plan. Concerned that the outcome of this process might cause their motors to be destined for the scrap heap, the outfitters are considering help from Congress. The Grand Canyon River Outfitters Association is discussing a wilderness bill that only includes the terrestrial portion of Grand Canyon.

"This is a hollow bill which has nothing to do with protecting Grand Canyon and everything to do with preserving profits," says Jo Johnson of River Runners for Wilderness, a project of Living Rivers. Johnson's group and the Grand Canyon Wilderness Alliance, of which they are a part, is concerned that should such a wilderness bill pass, neither the Park Service nor Congress will be willing to challenge outfitters and pursue protection of the river corridor in the future.

"It's unimaginable that the soul of the Canyon would be excluded," says Roderick Nash, author of *Wilderness and the American Mind*. "This wild corridor of deep time, unique on this planet, deserves the most wilderness-conscious regulation our political system is capable of providing." Certainly the biggest loser would be the Canyon's unique native ecology. According to Kim Crumbo, former wilderness coordinator for Grand Canyon National Park and now with the Arizona Wilderness Coalition, "Designation of wilderness would give the National Park Service a much stronger legal mandate to restore the river corridor back to its pre-Glen Canyon Dam state."

Although Glen Canyon Dam has caused extensive impacts to the river, this in no way precludes the river corridor from wilderness designation, as the criteria for inclusion into the wilderness system is a much lower standard than the criteria for how wilderness is managed once designated. In 1978 Grand Canyon National Park recommended the river corridor as potential wilderness, but it has yet to seek designation, largely due to pressure from outfitters.

According to the Wilderness Act, wilderness designation would compel the Park Service to work toward managing the river corridor in an "unimpaired state," and, "seek to sustain the natural distribution, numbers, population composition, and interaction of indigenous species." Such a mandate would allow the National Park Service to challenge the Bureau of Reclamation to go much further in its efforts to mitigate the impacts of Glen Canyon Dam on Grand Canyon. With four of the Canyon's eight native fish gone, and three more just hanging on, such designation, "would be a welcome tool," adds Crumbo.

One conservation group, the Grand Canyon Trust, feels it's inappropriate to pursue wilderness in the river corridor at this time. "We must first work to get the outfitters on our side, then work for wilderness on the river," stated the Trust's president, Geoff Barnard, at a meeting of Grand Canyon activists in November. But according to Johnson and Crumbo, this will never happen. "The outfitters will only get stronger and more set in their motorized ways if we continue to let them off the hook," says Johnson.

Big Straw Colorado's Pipe Dream

A \$500,000 study is being considered by the state of Colorado to determine the feasibility of a project to pump water from the Colorado River, at the Utah border, to the suburbs of Denver. Although officially known as the Colorado Aqueduct Return Project (CARP), it's nickname has become "The Big Straw." Early this month, Living Rivers voiced its opposition to the 600,000 acre-feet diversion at a public meeting held in Grand Junction.

With the federal government now forcing California to start reducing its take from the Colorado River, the state of Colorado is aggressively seeking ways to develop its unused water allocation. Initial costs for the Big Straw have been estimated to be \$5 billion. This projection does not include the operation costs, such as the energy necessary to pump the water uphill, nor the costs to mitigate the environmental damage. Pat Mulhern, a civil engineer speaking at the meeting stated "I'm not yet convinced that this project is economically or environmentally feasible and suggest that the proposed study focus on these two fundamental questions." Electricity costs alone have been estimated to be \$165 million annually. Matt Sura, director of the Western Colorado Congress said, "Isn't this the fatal flaw of the project? Why is a study even required?"

Water quality was one of the biggest issues raised by the public. Al Pfister of the U.S. Fish and Wildlife Service mentioned that selenium in the Colorado River at the Utah border "exceeds the current state standard 85 percent of the time. Poor water quality could affect numerous fish and wildlife species in the rivers and streams where the water is delivered."

The boosters refuse to look at conservation policies that would increase water yields by reducing consumption. Representing agriculture, Harry Talbott recommended a way to increase water yields by removing "guzzling plants, such as Tamarisk." Nic Korte of the Grand Valley Audubon Society noted that, "drip irrigation for agriculture can reduce water use by 30 -70 percent and increase crop yields 20-90 percent."

RRFW Riverwire - EXPERT PANEL AND STAKEHOLDER WORKSHOP DATES SET

The dates, times and locations for the next step in the Colorado River Management Plan have been announced. This step will involve stakeholder workshops and expert panels. The stakeholder workshops will cover the noncommercial trip permit system, and the spectrum of services to be provided to the public. Certain designated attributes (e.g. flexibility, simplicity, fairness, etc.) of a permit system and types of services will be rated against each other to understand what different segments of stakeholders consider to be important considerations. The Park and its CRMP contractor, SWCA, will use this expanded information in addition to scoping comments already received to craft the new CRMP.

The original concept included 10 designated stakeholder groups. Each group was to be comprised of 4 stakeholder representatives. These representatives would then participate in each of the interactive workshops. Some of the 10 stakeholder groups identified for inclusion were: non-commercial boaters, river outfitters, commercial clients, outfitting guides, wilderness groups, scientists, Native American Tribes, and ecological groups.

River Runners for Wilderness (RRFW), the Grand Canyon Wilderness Alliance, business interests and other stakeholders have voiced concerns about a lack in depth of the representation of the non commercial segment at the stakeholder workshops. While commercial boating stakeholder groups include river concessioners, commercial passengers, and river guides for a total of 12 stakeholder seats, non commercial boaters who include permit holders, passengers, non-commercial river running advocate groups and non-commercial support services all vied for a total of 4 stakeholder seats. Mary Orton, the contractor arranging these meetings, has acknowledged the noncommercial community may be underrepresented and is exploring options to address this concern raised by RRFW.

The expert panels' topics will cover allocation of user days among user groups--sure to be a lively topic--as one, and physical, social and ecological carrying capacity, group size and seasonality of recreational use of the river for the other discussion. All expert panels and stakeholder workshops will be held at the Arizona State Capitol building in the Governor's Protocol Room, 1700 West Washington, in downtown Phoenix, and video-conferenced to a room--as yet unspecified--at Northern Arizona University in Flagstaff.

Expert Panel #1 will be held on Wednesday, January 29, 2003 from 2:00pm to 5:00pm and 6:00pm to 9:00pm. The two Stakeholder Workshops will be held Thursday, January 30, 2003 at times to be announced. The second Expert panel will held on Friday, January 31, 2003, and be from 8:00am to 11:00am and 1:00pm to 4:00pm. In addition,

the sessions will be videotaped and made available to interested persons not able to attend the Arizona meetings.

All events will be open to the public, and the Expert Panels will allow for questions by the audience. More information will be coming your way as it is made available.

RIVERWIRE is a free service to the boating community from River Runners for Wilderness. Membership is FREE! Send your e-mail address to riverwire@rrfw.org and we'll add you to the RRFW RIVERWIRE e-mail list.

To join, visit our website at www.rrfw.org

Take Action 01/22/03

Join Living Rivers to Save Grand Canyon Fish, January 28-29

The Glen Canyon Dam Adaptive Management Program (AMP) will be holding its next meeting Tuesday, January, 28 and Wednesday, January 29 in downtown Phoenix. For the past year, Living Rivers has been encouraging the AMP to be more aggressive in its efforts to bring about the recovery of endangered native fish in Grand Canyon National Park. Unfortunately, the AMP continues to drag its heels, so the plight of native fish in the Canyon continues to worsen. Humpback Chub populations have declined 80 percent to just 2,000 adult fish. Razorback Suckers have now joined the Bonytail, Roundtail Cub and Colorado Pikeminnows on the extinction list. Take some time to lend your voice to call for more urgent action!

Glen Canyon Dam Adaptive Management Program
Bureau of Indian Affairs Offices
Two Arizona Center
400 N. 5th Street, 12th Floor
Conference Rooms A&B
Phoenix AZ

9:30 a.m. - 5:00 p.m., Tuesday, January 28

9:30 a.m. - 11:30 a.m., Wednesday, January 29

[Agenda](#) [65k PDF File]

Additional Information

Information on Living Rivers efforts to restore Grand Canyon, part of our:
[Canyon's of the Colorado Campaign.](#)

[Living Rivers comments on proposed AMP experiments at Glen Canyon Dam.](#)

Letter from Living Rivers to U.S. Bureau of Reclamation, October 30, 2002
[Living Rivers Coalition demands action by the Glen Canyon Dam Adaptive Management Working Group to follow the law and restore Grand Canyon.](#)

Living Rivers letter to Michael Gabaldon, Deputy Director of Operations U.S. Bureau of Reclamation, January 18, 2002
[Minority opinion of Glen Canyon Dam Adaptive Management Working Group on censorship of Living Rivers coalition's comments of January 18, 2002.](#)

Letter from Southwest Rivers et.al. to Michael Gabaldon, Deputy Director of Operations U.S. Bureau of Reclamation, January 28, 2002
[Groups Call for Action to Save Colorado River in Grand Canyon National Park](#)

Living Rivers Press Release, July 18, 2002
[Canyon Changes are Crucial](#)

Arizona Republic: January 16, 2002
[Grand Canyon: Living Rivers Calls for Immediate Action](#)

Living Rivers Currents, January 2002
[Electroshock in the Grand Canyon](#)

Living Rivers Currents, January 2002
[Native Fish: Recovery or Rhetoric?](#)

Living Rivers Currents, January 2002
[Grand Canyon Native Fish: Going, Going, Gone?](#)

Living Rivers Currents, December 2001
[Grand Canyon Fish at Risk of Extinction](#)

Living Rivers Press Release, December 10, 2001
[Living Rivers Comment Letter on Endangered Colorado River Fish to US Fish and Wildlife Service, December 10, 2001](#)

[Environmental groups criticize plan to rescue endangered fish](#)
Associated Press, December 11, 2001

[Download PDF of January 18, 2002 Save the Grand Canyon" Rally Flyer Flap over Endangered Fish](#)

Rocky Mountain News, December 11, 2001
[Resolution of the Desert Fishes Council on Colorado River Endangered Fish Recovery, November 18, 2001](#)

River News 01/27/03

RRFW Riverwire – GRAND CANYON RELEASES AIRCRAFT NOISE STUDY

The National Park Service at Grand Canyon has released a report titled, Aircraft Noise Model Validation Study, dated January 2003. The report completes a study to determine which of four computer models best calculates tour aircraft audibility in the Grand Canyon. The results of the study are important because computer models are the only practical means to assess progress in meeting the requirements of Public Law 100-91 to substantially restore natural quiet at Grand Canyon National Park. Audibility is the measurement used to define substantial restoration of natural quiet. The report was prepared by Harris Miller Miller & Hanson Inc., a leading acoustics consulting firm, for the National Park Service.

In the report, which can be found on the park's website at www.nps.gov/grca, and its attached appendices, the reader will find a detailed step-by-step description of all methods, data, and results of the study. This is a highly technical scientific report prepared by experts primarily for experts. Readers are strongly encouraged to start with the Executive Summary and Study Summary at the beginning of the report.

As detailed in the report, the study methodology was developed by consultant firms with comments, advice, and review by staff from federal agencies and a team of recognized experts in acoustics, statistics and scientific methods. In the Acknowledgements section, however, the authors carefully point out that the final interpretations and words in the report are those of the authors, Harris Miller Miller & Hanson Inc., and not those of any of the other study participants.

For additional information regarding this report, please contact Dr. Kenneth Weber, Grand Canyon Science Center, at (928) 638-7753 or Maureen Oltrogge, Public Affairs Officer, at (928) 638-7779.

Maureen Oltrogge Public Affairs Officer Grand Canyon National Park (928) 638-7779

LR in the News 01/27/03

Canyon's Recovery Must Rest on Science

The Arizona Republic OpEd

The Republic's January 19 editorial "Fish fight: saving chub must be more than just killing trout" is a good introduction to the plight of our state's most valuable natural

wonder, the Grand Canyon. However, continuing to allow the Glen Canyon Dam Adaptive Management Program (AMP) to control the Grand Canyon's fate, as the Republic recommends, will only speed the current death spiral of the canyon's native ecosystems.

From its inception, the AMP has opposed implementing U.S. Fish and Wildlife Service recommendations to mimic the Colorado River's natural flow regime, thereby propping up the Grand Canyon ecosystem. Ninety-five percent of the vital sediment and nutrients that would be deposited by a free-flowing river system are now trapped behind Glen Canyon Dam. Without sediment deposition, species go extinct and beaches for mammals, native vegetation and human recreation erode away. Four native fish species have already disappeared, along with river otters, muskrats and every single native insect species that formed the base of the food chain. Yet the AMP has proposed no viable plan for moving the necessary amounts of this sediment into the Grand Canyon.

Instead, AMP has undertaken a handful of experiments to try to build beaches by moving around the meager sediment that deposits downstream of the dam. The result of AMP's efforts to date is a precipitous eighty percent decline in the humpback chub population--the principle endangered fish species AMP is supposed to be recovering.

Because of these declines the AMP is now considering stocking the Grand Canyon with hatchery fish. This is not recovery. This is a zoo. Recovery implies self-reproducing native populations, not manufactured fish which cannot reproduce and which must be constantly restocked as they die off in their unnatural and inhospitable habitat.

Had the AMP been dominated by science as was presumably intended, it might have been a worthy process, capable even of achieving its objective. The AMP boasts stellar scientists producing good ideas for restoring the Canyon. Scientists, however, have taken a backseat to AMP politics, restricting recommendations to those that are politically acceptable, else risk having AMP's funding cut.

Dominated as it has become by state water engineers, industrial irrigators, and hydroelectric merchants, the AMP has been unwilling to support the changes in Glen Canyon Dam operations necessary to reverse Grand Canyon's ecological decline. The AMP players that are truly concerned with environmental restoration are simply politically outmuscled by those who wish to retain the status quo of abusing the Colorado River system for water and energy profits.

While society has an array of technologies to meet water and energy needs, we have only one Grand Canyon. If this natural wonder is going to be protected, the AMP must be replaced with a purely scientifically-based advisory panel. Its first task must be to produce an Environmental Impact Statement considering a full range of alternatives for Glen Canyon Dam operations, including those which will be truly effective in recovering Grand Canyon's native habitats. Only through such unbiased research and recovery programs driven by scientists rather than politicians will Grand Canyon's ecosystem have any hope of salvation.

The AMP participants convene here in Phoenix this week. At the January 2002 AMP meeting, the environmental group Living Rivers exercised their right to become involved in this taxpayer-funded process by presenting a document requesting some specific definitive actions on behalf of the collapsing Grand Canyon ecosystems. A full year later AMP leaders have still not replied. Arizonans, this is our Canyon, our tax dollars and our opportunity to demand results. Attend the AMP meeting this year and insist on real protection for the Grand Canyon.

Lisa Force, Program Director, Living Rivers For more information on the AMP meeting: www.livingrivers2.org

River News 01/28/03

RRFW Riverwire – COMMENT ON PWC USE IN GLEN CANYON NRA

This is a second comment opportunity on proposed PWC use in Powell Reservoir. The Bush Administration has proposed a rule which allows personal watercraft (PWC) operation on nearly all of Glen Canyon NRA. The ruling was published on January 17th. The administration made this decision despite the fact that the NPS' recent environmental review of PWC use at Glen Canyon found that the thrillcraft damage park resources and wildlife.

Also, there is a disproportionate acreage of the NRA open to PWC use, which is simply unfair to the majority of visitors who come to the recreation area to enjoy more contemplative forms of recreation like swimming, hiking, fishing, canoeing, kayaking, and wildlife viewing. The ruling comes despite continued overwhelming comments against personal watercraft (Jetski®) use at the National Seashore and various Parks, including Glen Canyon National Recreation Area.

PWC recreation causes significant damage to air and water quality, visitor enjoyment, public health and safety, natural soundscapes, and wildlife. At Cape Hatteras, PWC operation was the number one source of visitor complaints before the machines were finally banned there. In some instances, PWC activity and its proven threat to personal safety pushes other forms of recreation such as swimming or bird watching off a waterbody.

This is discriminatory. If you feel a full ban on PWCs in Glen Canyon NRA is the only appropriate action, please send your comments to Kitty Roberts, Superintendent of Glen Canyon National Recreation Area, and tell her that you support protecting the irreplaceable resources and wildlife of Glen Canyon from personal watercraft.

Letters should be sent to glca_pwc@nps.gov or to the address below. Superintendent Kitty Roberts Glen Canyon NRA PWC Rule-Making Box 1507 Page, Arizona 86040 RE:

RIN 1024-AC90, Comments on Draft PWC Special Regulations Had a close call or negative experience with PWCs after an otherwise idyllic Cataract Canyon trip? Include that in your letter to Supt. Roberts, along with other personal observations.

River News 02/04/03

RRFW Riverwire - LAKE POWELL DRAINED 50%

LAKE POWELL DRAINED 50%--FOUR YEARS TO GO! MARINAS LEFT HIGH AND DRY, CONCESSIONAIRES CONTEMPLATE PULLING OUT

Lake Powell reservoir is down 86 feet from normal, equating to a reservoir that is half full. The National Park Service, which manages marina facilities at Lake Powell, is busy trying to make adjustments with the hope that they can still accommodate visitors at some locations. Meanwhile, the recently approved \$70 million Antelope Point Marina project is in jeopardy of never being used.

Now in the fourth year of an anticipated sustained drought, Lake Powell reservoir will soon be empty. Forecasters have informed the Park Service that the reservoir levels will only be getting lower. The reservoir is dropping faster than it can be replenished. Even when the snow begins to melt this spring, the reservoir is not expected to rise any higher than where it is right now. By July, the reservoir will again start dropping.

The United States Geological Survey 2002 report on Southwest climate change predicted that the Colorado Plateau would be heading into a 30-year period of below average river flows. Previous estimates by forecasters, on the impacts of such a sustained drought, calculated that Lake Powell would be drained within eight years. It's right on schedule. In July 1999, Lake Powell was at 90 percent. As of February 1, 2003, it was at 50 percent.

If the present drought does not relent, Lake Powell will eventually drain to the level of the penstock tubes that spin the generators at Glen Canyon Dam. According to a model that was published in October of 1995 in the Water Resources Bulletin, if a severe and sustained drought similar to the drought of the late 16th century appears, Lake Powell could stay drained for eight years.

"We're witnessing the end of Lake Powell right now," says Living Rivers' Conservation Director John Weisheit. "This was predicted, and nothing the National Park Service or the marina operators can do will change this."

o At present three of the concrete boat ramps have been closed: Antelope Point, Stateline and Hite Marina. For Stateline, the concrete ends where the wet sand and mud begins; it was officially closed on February 3. For Hite Marina, river sediment closed the concrete ramp and an alternative ramp on gravel began in the autumn of 2002. This alternative ramp too is now closed due to sediment fill from the Colorado

River. Antelope Point's ramp was the first ramp to close last year, just three years after construction in 1999.

o A \$3 million emergency appropriation was made in January to extend boat ramps at Bullfrog, Hall's Crossing and Wahweap marinas. It is unclear, however, how far these ramps will be extended, or if additional funding will be sought to extend them all the way to the bottom as levels continue to drop.

LR Press Release 02/04/03

Living Rivers Welcomes New Outreach Coordinator

High-Profile Environmental Group Hires Outreach Coordinator To Target Colorado River Delta Issues as Drought Situation Worsens

As declining reservoir levels and water scarcity concerns multiply across the state and into Mexico, Living Rivers is pleased to announce the arrival of Michelle Pulich Stewart to the Arizona office, based in Scottsdale.

Before joining Living Rivers, Ms. Pulich served in a variety of non-profit, academic and government roles pertaining to resource management and habitat restoration, including: Lady Bird Johnson Wildflower Center, Texas Parks and Wildlife Dept, Maricopa Community Colleges, Sierra Club, Center for Biological Diversity and Sierra Madre Alliance.

"I'm pleased to be bringing both my research and on-the-ground organizing experience to the mounting ecological crises and restoration needs of the Colorado River here in Arizona and across the border into Mexico," says Ms. Pulich. "Even should drought conditions persist, there is more than enough water to meet the state's human and ecological needs, but the public has not been exposed to the river management options available to achieve such a balance. I look forward to helping make that happen," adds Ms. Pulich.

Her formal education includes both a B.A. from Rice University and a Master's degree in Environmental Resource Management from Southwest Texas State University, although she has found, streambeds, canyons, prairies, and prescribed burns to be striking repositories of knowledge.

"We are certainly excited about adding Michelle to our team," says Lisa Force, Living Rivers' Program Director. "Her teaching experience and activism history will be valuable assets to our efforts to bring about sustainable Colorado River management here in Arizona as well as delta restoration."

Ms. Pulich also enjoys backpacking, yoga, gardening, and of course, floating down rivers. Ms. Pulich will be married to Alex Stewart in late May of this year.

Living Rivers works to mobilize people to protect and restore the integrity of rivers and watersheds.

LR Press Release 02/04/03

Lake Powell drained 50%--four years to go!
Marinas Left High and Dry, Concessionaires Contemplate Pulling Out
Contact:

John Weisheit (435-259-1063 or 435-259-8077)

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the autumn of 2002. This alternative ramp too is now closed due to sediment fill from the Colorado River. Antelope Point's ramp was the first ramp to close last year, just three years after construction in 1999.

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- Potable water is becoming a problem at Hite Marina. The site draws its drinking water directly from the reservoir, treats it and then stores it in tanks for consumption. But the intake buoy is about to go aground and needs to be extended into deeper water. Besides being expensive to modify the intake, there is no assurance that deep water can be maintained as Lake Powell's delta continues to advance beyond the bay at Hite.
- The planned marina at Antelope Point will find a 500-foot cliff being exposed where the second launch ramp is proposed. Calls to Antelope Point Holdings and their engineers, revealed no comment to the feasibility of the project. According to the National Park Service, construction was supposed to begin in March, but it has now been delayed to at least May.
- The problems at Hite Marina are causing the concessionaire, Aramark, to question whether they should shut their Hite operation down altogether. To preserve the marina may require moving it, a cost Aramark may not wish to incur. No decision has yet been taken. With visitation through Glen Canyon National Recreation Area dropping by 10 percent per year, Aramark may be looking to pull out of the other marinas as well.
- The fate of the white-water rafting industry, which concludes trips at the top of Lake Powell, is also a major question. With sediment and mud clogging the marina and boat ramp at Hite, rafters will have a very difficult time getting off the water.

"As the drought persists, it is going to be very difficult, if not impossible, to conduct business as normal with the river and reservoir users. This includes the Grand Canyon river runners who will lose the large Glen Canyon Dam releases they need to run their large motorized boats through the canyon only to arrive at the sediment-choked Lake Mead," adds Weisheit.

Lake Powell is not the only problem. The entire Colorado River storage system has dropped from 92 to 60 percent over the past 40 months. "Lack of access to flat water recreation is the least of our worries," concludes Weisheit. "The Southwest plumbing system is headed for complete catastrophe, and the Bureau of Reclamation and the seven states that use Colorado River water have no disaster preparedness."

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Web pages on Southwest climate change:

[Severe and Sustained Drought for the Colorado River Watershed](#)

[Precipitation History of the Colorado Plateau](#)

River News 02/07/03

RRFW Riverwire – NO WILDERNESS BILL WITHOUT THE RIVER

WILDERNESS COALITION DISCOURAGES LEGISLATION By Brad Fuqua Grand Canyon News Editor Sunday, February 02, 2003

As the next phase of the Colorado River Management Plan process gets ready to begin today in Phoenix, the Arizona Wilderness Coalition believes there could be something happening behind the scenes in Washington. Kim Crumbo, Grand Canyon regional coordinator for the Arizona Wilderness Coalition and former National Park Service river guide, said the federal agency's congressional liaison office in Washington has wilderness designation legislation on its docket, although "not signed off."

"The only way a wilderness bill would pass this Congress is to eliminate the river from wilderness consideration or grandfather in motorize use," Crumbo said Thursday. "All this should take place in the planning process ... why the Park Service is considering wilderness legislation at this time makes us suspicious. We're asking them to just pull it; let's wait until the appropriate time."

Grand Canyon National Park sources, including CRMP planning leader Rick Ernenwein, said they were not aware of any legislative activity in Washington. Therefore, they could not comment on AWC's information.

In a press release dated Jan. 22, the AWC claims the potential legislation "could blindsides the American people with a 1.1-million-acre wilderness proposal that removes the Colorado River from wilderness protection, thereby ensuring continued ecological damage from large crowds and pollution from motors." "We just want all that to stop until the public involvement process is completed," Crumbo said. "It's inappropriate to be pursuing this before the public process runs its course."

The AWC supports recommendations to not decrease use on the river, but spread it out over a longer time period while eliminating motors. At the same time, Crumbo said commercial allocations could remain the same while the cost of a river trip could become more affordable and available to more people.

River outfitters have a different set of recommendations on the issue to support their beliefs and Crumbo said they "have the best arguments." "We'll see what transpires,"

Crumbo said. "It should go on for another full year." In the meantime, the AWC planned to encourage people to attend this week's expert panels and workshops in Phoenix and Flagstaff.

Reprinted with permission.

River News 02/14/03

RRFW Riverwire – LAWSUIT FILED TO START DESCHUTES COMMON POOL

A group of Deschutes River users filed suit Thursday, February 13th against Oregon's Department of Parks and Recreation (OPRD) and director Mike Carrier. The suit contends that the OPRD has violated Oregon law with its current role and stance in delaying implementation of a "common pool" permit system, that provides equal access to all, as called for in the Lower Deschutes River Management Plan (LDRMP). The motion was filed by the Northwest Rafters Association (NWRA), and Mark Shuholm representing the general public. This action is also being supported by National Organization for Rivers (NORS), River Runners for Wilderness, and the American Canoe Association (ACA).

The Plaintiff's position is that full implementation of the LDRMP will insure the greatest level of access to the Deschutes River by the general public for generations to come. A failure to immediately implement the LDRMP, as currently written and required by Oregon Law, jeopardizes future access by the general public to this public resource.

Under the guidelines of Oregon State Statue ORS 390.934, the LDRMP and its supplement were developed over several years with input from the OPRD, BLM, The Confederate Tribes of the Warm Springs Reservation, other government agencies – as well as the general public. The Lower Deschutes River Management Plan was finished in 1993 and the supplement in 1997. Both the LDRMP and the supplement were adopted by the OPRD under administrative rule OAR 736-040-0070. The LDRMP and its supplement call for implementation of a limited access "common pool" permit system once certain trigger levels of use have been reached for various segments of the river. A "common pool" system offers equal access to all parties – without preference given for any specific group or interest. If and once these trigger levels of use are reached for any year, then a "common pool" permit system is to be implemented the following year. Levels of use that would trigger implementation of the "common pool" permit system were reached in 1997, 1998, 1999, 2000, 2001, and 2002. Although the LDRMP has therefore called for implementation in each of the years 1998, 1999, 2000, 2001, 2002, and 2003, the OPRD has not taken the legally required action relating to implementation of the system.

Further, the OPRD is currently promoting an agenda counter to that outlined by the LDRMP. At a November 14th meeting of managers from the various agencies, the OPRD proposed a 3 year further delay in implementation of the "common pool" permit

system - as well as re-introducing the topic of a "split allocation" permit system - a system that would guarantee access to commercial interests by limiting access to the general public.

The Suit asks that the OPRD be found to have unlawfully refused to act and unreasonably delayed taking action in implementation of the LDRMP - and that the OPRD be compelled to implement the "common pool" permit system for the 2003 season.

LR in the News 02/16/03

**From panic to denial on water:
Reactions to crisis disparate in Four
Corners states' plans**

By Michael Booth

Denver Post Staff Writer
Sunday, February 16, 2003 - The multiyear drought in the Four Corners states has brought sacrifice to some cities and recreation areas, and a mere shrug of the shoulders from others.



From Salt Lake City to Aurora, and Albuquerque to Phoenix, water managers and their constituencies react to the absence of snow with the full range from panic to denial. Some scramble to prop up reservoir levels at all costs; others argue the definition of "reservoir" is a bank of water that gets drawn to zero in dry times.

Phoenix will exhaust its local reserves this summer.

Yet Rocky Mountain snowmelt coming down the Colorado River means the largest city in the Southwest has no lawn-watering curbs. Well-soaked residents even plant a winter variety of seed over their dormant summer bluegrass to ensure green color all year.

At half-full Lake Powell, the water playground for millions of Westerners, boaters this summer might want a taxi to get from the marina to the fast-receding Colorado River water. But the lucrative tourist season looms, and National Park Service officials contemplate blowing up a rock formation uncovered by the drought at the Arizona end so this summer's demanding boat traffic can avoid a 7-mile detour.

The Southwestern approach to drought is "definitely head-in-the-sand," said Owen Lammers of Utah-based environmental group Living Rivers, which is sharply critical of how federal dams and what it calls greedy cities rearrange Western water flows. "We're characterizing this as the Enron of water management. The government keeps saying lake levels will get better, and the reality is that things are going down, down, down."

The wide variance in public water restrictions can deflate conservation efforts by prompting complaints of unfair treatment and downstream waste, water experts said. And even if downstream draws from the Colorado River are legal, they may injure streams or lakes in a way that everybody has to pay for in the future.

"The river that many of these states depend on is being overtaxed, so despite what your rights are, there are reasons here to be concerned," said Bart Miller, water projects director for Land and Water Fund of the Rockies. "It strikes the average citizen as unfair or strange when others are using much, much more water."

Cities with looser water policies defend the lack of rules as a benefit of well-secured supplies.

"All these decades of planning for water resources and storage have paid off," said Ken Kroski, spokesman for the Phoenix water supply, where the main reservoir for the perpetual boom city is down to 14 percent of capacity. As Aurora tells people they can't plant a single flower this spring, and Denver ponders a year-round shut-off of lawn sprinkling, Phoenix is still in Stage 1 of its drought plan, asking for voluntary 5 percent cutbacks in home water use with no rules for what days to water.

Knowing there will be no water available from Arizona snowmelt or rain this summer, Phoenix is confident its share of Colorado River water coming down the cement channels of the Central Arizona Project will be more than enough for city lawns in 2003.

Checking in with other cities shows just how disjointed Western water policy can be - while Denver, Phoenix and Salt Lake City watch their reservoirs drain, Albuquerque will switch from more predictable well water to a new reservoir system over the next three years.

Santa Fe drivers can't drive through a car wash more than once a month. Tourists to the high-desert jewel won't get their hotel sheets changed until their fourth day.

Currently in Albuquerque, "when it's dry, we just pump more from the aquifer," Mayor Marty Chavez said. "But we're depleting the aquifer. We can get away with it for a summer or two, but not in the long term."

Realizing the underground supply may be used far faster than it is recharged by runoff, Albuquerque sought voluntary water savings last summer - of only 3 percent to 5 percent, a far cry from Denver's goal of cutting use from a normal year by 30 percent.

Around the Four Corners, these cities and recreation areas hope for snow with varying degrees of fervency:

Phoenix: Open taps in the desert

Phoenix has some of the lowest water rates in the West, and the only mandatory cut in effect right now is a 5 percent slice from government use.

"A lot of people automatically and incorrectly associate the desert with no water," Kroski said.

But the free-flow philosophy permeating Arizona does frustrate some water officials, including Phoenix's conservation coordinator, Tom Babcock.

"There really hasn't been a debate on more restrictions," he said. "It's ludicrous when you consider we're in the Sonoran Desert."

Phoenix did try a stair-stepped system for water rates, raising the fee per 1,000 gallons every time homeowners reached certain benchmarks. (Denver operates under that system, with drought surcharges added on top.) It didn't work for Phoenix, Babcock said, putting a disproportionate burden of the rates on lower-income residents with large families "and the crummiest plumbing."

The city is now back to a seasonal rate, charging more in summer for water than the winter base rate.

Even without water dribbling down from Arizona sources, Phoenix claims it has plenty of supply in the next few years because it draws a major allocation from Colorado River dams under federal interstate compacts. Siphoned off from Lake Havasu at the Central Arizona aqueduct project, most of the water for Phoenix this year will be Colorado snowmelt.

Salt Lake City: Bracing for the worst

Salt Lake City ends up with some water from the Colorado River basin, pumped across the Wasatch mountain range, but relies most heavily on snowfall in its famous ski areas to melt and flow down Deer Creek. Until late last year, Salt Lake had avoided the more severe droughts seen in neighboring states.

Now the city is preparing for the worst, water spokeswoman Stephanie Doerr said. Last year, it made up for shortfalls in its own basin through water purchases from the Central Utah Project, which brings Colorado River basin water under the Wasatch mountains. "That water just isn't available this year, because no one else has water, either," Doerr said.

Preparing for a hot summer, Salt Lake expanded the months for its higher summer water rates, recognizing what Denver saw last year in people watering heavily from May through October. The city also wants a stepped rate structure this summer, charging more for higher use, and will also start water meters "from the first gallon" rather than allowing a free minimum on each bill.

"We're nowhere near cracking this drought," Doerr said. "There is no winter. It's just not happening."

Lake Powell: Scrambling to stay afloat

Lake Powell has fallen to levels the massive Utah and Arizona reservoir hasn't seen since it was still filling up in May 1973. Last year, for the first time, Lake Powell did not

rise at all in the spring: Because the reservoir had to keep releasing water downstream to satisfy calls in California and Arizona, snowmelt running in added nothing to the pool. The same is likely to happen this spring, meaning the recreation pool starts low and will get lower.

Lake Powell is shutting some boat launch ramps and extending others with gravel, while considering what to do with entire marinas left too high and dry. At the southern end, the Castle Rock cut allowing boaters from the Wahweap marina to save 7 miles of travel now juts up above water, and the Park Service is debating whether earthmovers or explosives should be used to reopen the channel.

Environmentalists heckle the idea of going hard-rock mining to find more water, calling it typical of the way governments have deformed Western waterways in catering to jet skis and lawn sprinklers.

"In the name of emergencies, they'll do that kind of thing and ask questions later," said Lammers of Living Rivers. "Given the climatic conditions, we're going to be looking at a major crisis very soon."

Other cities need to think twice, though, before pointing fingers at Phoenix or Lake Powell management, said Barry Worth of the U.S. Bureau of Reclamation's Glen Canyon Dam office. If it weren't for water-banking systems such as Powell and Mead, upper Colorado River states such as Colorado and Utah would have to let far more river water go by their land this summer to satisfy compacts guaranteeing flows to California, Arizona and Mexico.

"Sometimes people will say, why does somebody in Colorado or Wyoming care about Lake Powell, because it's long gone from our state," Worth said. "It just happens to be where their insurance account resides."

Santa Fe: Cracking down on users

Santa Fe got serious about drought response before many Southwestern cities knew they had a problem, implementing its current severe stage of curbs on April 10.

Restrictions there include no new plantings of perennials and flowers, delaying hotel sheet changes, no washing of cars at home and only once a month at a commercial wash, one-day-a-week lawn watering and heavy surcharges. While Denver charges \$1.90 on each 1,000 gallons of water over 20,000, Santa Fe charges \$25.

Also in Santa Fe, water caught fleeing the scene of a crime - a leaky or misdirected lawn sprinkler - is officially dubbed "fugitive water" and can cost the homeowner a hefty ticket.

City reservoirs are 29 percent full, compared with 65 percent in the comparable season of an average year, spokesman Juan Rios said.

A major portion of Santa Fe water comes from wells mining the aquifers connected to the Rio Grande, but depleting those is a major concern, Rios said. Two more months of

drought will force the City Council to consider a complete watering ban or even a building moratorium, he said.

"We started out the winter very well. But it seems El Nino dried us up and left us hanging," Rios said.

Albuquerque: Switching philosophies

Albuquerque is overhauling both its physical and cultural approaches to water.

Over the next three years, the city will switch from well water to surface water, captured in reservoirs near the New Mexico-Colorado border and brought down the Chama-Rio Grande river systems. That means Albuquerque residents will be praying just as hard for Colorado snowfall as the residents of Denver do, Mayor Chavez said.

Environmental groups, however, question the new draws from the Rio Grande because they may further endanger the silvery minnow and other river life.

The cultural overhaul will take longer, Chavez added. "For years our building codes required X minimum amount of grass. We've changed that, but the cultural shift has been a little slow. It's hard to tell businesses to plant grass, then two years later say, take out your grass. Getting there takes time," Chavez said.

Las Vegas: Light on the restrictions

Las Vegas doesn't fall under the Four Corners moniker, but draws 88 percent of its water from the all-important Colorado River system through Lake Mead.

But one river doesn't make one uniform policy - under current drought restrictions, Las Vegas homeowners can water lawns every other day this coming summer, even though natural rainfall at 4 inches a year is less than one-third of Denver's.

The Las Vegas conservation program focuses on stopping water waste although a citizens advisory committee is considering small drought surcharges for this summer's water rates, said spokeswoman Tracy Bower.

Denver Post staff writer Michael Booth can be reached at mbooth@denverpost.com or 303-820-1686.

LR Event 02/23/03

Hear the Echo...

50th Anniversary Yampa & Green River Trip, June 2-6, 2003

In June, 1953 Living Rivers' co-founder, the late David R. Brower, launched the modern-day river advocacy movement with a trip down the Yampa and Green Rivers in Dinosaur

National Monument. His objective, which was achieved, was to raise awareness to defeat the proposed Echo Park Dam and to save the Monument from inundation.

Join Living Rivers and the Colorado Riverkeeper, in association with Holiday River Expeditions and other leading Colorado watershed advocates, as we relive this historic trip and launch a new initiative to save Dinosaur from the much slower death caused by Flaming Gorge Dam upstream. The trip is limited to 25 people, so act quickly. The cost is \$1,000.

Participants in this river trip will include activists and naturalists who will openly share their river knowledge with you and your friends. We will discuss the river campaigns of the past and the present, and keep our river ecosystems healthy and our national parks protected. These respected members of the river community include:



Dr. Roderick Nash, who wrote the conservation classic *"Wilderness and the American Mind,"* will row his beautiful wood dory through the towering sandstone cliffs of the Yampa River. The most remarkable cliff face is called Tiger Wall, where tapestries of desert varnish color the surface like the fur of a Bengal tiger.

Jeff Ingram was hired by David Brower when he was the executive director of the Sierra Club, and specifically to help him with the campaign to keep dams out of the Grand Canyon. Mr. Ingram is currently writing a book about this successful campaign and will share this knowledge around the evening campfires after a satisfying dinner.

Dee and Sue Holladay founded Holiday River Expeditions in 1965 and have completed hundreds of river trips in Dinosaur NM. They will share their intimate knowledge of the human and natural history of Dinosaur National Monument as we hike to places of interest.

Kim Crumbo is a famous Colorado River boatman and professional river guide. He is also a passionate advocate of wilderness protection for the river corridors of the Colorado River basin. He is also a respected historian and naturalist, and the author of an excellent river guide that focuses on the human history of the Grand Canyon.

John Weisheit is the trip leader of this expedition and another long-time river guide of the Colorado, and a strong advocate for a free-flowing Green River. He has co-authored a book about the Colorado River in Canyonlands National Park, which will be issued

soon by the University of California at Berkeley. The Waterkeeper Alliance recently designated John as the Colorado Riverkeeper for his dedication to protect this endangered watershed.

For more information contact [John Weisheit](#) at (435)259-1063.

[Holiday River Expedition's home page](#)

[Holiday River Expedition's Yampa River trip](#)

[Maps of Dinosaur National Monument](#)

[Living Rivers' scoping comments on the Flaming Gorge Dam EIS](#)

[PDF of Hear the Echo flyer](#) [592 PDF File]

The History of the Echo Park Dam Controversy and the Birth of the River Protection Movement



The Bureau of Reclamation (the Bureau) became a very bold bureaucracy after the completion of Hoover Dam on the lower Colorado River. With the construction of that high dam, the Bureau was transformed into a government-owned business that provided electricity for the consumer market, which was a deviance from its original mission to provide irrigation water for farmers. This set a precedent for the United States government, because it could now compete with private industries and with its infrastructure subsidized by the US taxpayer.

In later years that boldness took another step, just like an expanding corporation, in the form of a search for new dam sites and with the assistance of western, pork barrel politicians. The Bureau tested the waters, so to speak, by proposing that a dam be

built in Glacier National Park, which, as all national parks are, protected by the Organic Act of 1916. That cornerstone Act mandates that park values be forever left "unimpaired by man." That plan rightfully met stiff opposition and the Bureau immediately acquiesced, but did not relent. They decided to try their luck with Dinosaur National Monument, which is protected under the Antiquities Act of 1906.

A certain professor at Harvard University, who had received the Pulitzer Prize for a history novel, steamed under his collar when he heard about the Bureau's continued aggression on our national treasures. His name was Bernard DeVoto, born and bred in Ogden, Utah, and he wrote a scathing article in 1950 for the *Saturday Evening Post* and sparked a movement to save river ecosystems that continues to this day.

In 1952 the Sierra Club hired its first executive director, David Brower, from Berkeley, California. Brower went to work immediately to further build the grassroots campaign that DeVoto started. He formed a coalition of conservation groups that included the Wilderness Society and the Issac Walton League. He involved another professor and Pulitzer Prize winning author from Stanford University, Wallace Stegner, to edit a book called *This is Dinosaur*, that would eventually end up in the hands of every member in Congress. Brower also organized week-long river trips to show Sierra Club members and supporters what was to be destroyed should the Bureau's dam be built. The campaign was successful by using all these organizing components and, by 1956, a vexed Congress killed the authorization to build Echo Park Dam.

Undaunted, the Bureau continued in their relentless campaign to build dams and power plants at the sacrifice of river ecosystems and taxpayers. In 1959 Floyd Dominy, from Wyoming, was appointed as the Bureau's commissioner and would match the organizing skills of David Brower, but in a contrary, top-down fashion. Audaciously, he envisioned building dams in the Grand Canyon, the most sublime canyon on the planet. Since dams could not be built in lands protected by the National Park Service, Floyd would build them above and below these protected lands. At that time Grand Canyon was a smaller national park, centered at Grand Canyon Village near the south rim.

Brower didn't waste any time and countered Dominy at every turn to successfully stop these two dams from being built and by using the same grassroots organizing skills as before. But a new twist was added to the campaign, which included a full-page ad in the *New York Times* and the *San Francisco Chronicle*. The ad's headline said, "Should we also flood the Sistine Chapel so tourists can get closer to the ceiling?" In 1975, Grand Canyon Park was enlarged and brought under the protection of the Organic Act.

Unfortunately, Brower was not successful in stopping the construction of Glen Canyon Dam. Before he died, in November of 2000, he launched yet another grassroots campaign to decommission this dam before its scheduled 100-year life span is completed; when sediment reaches the intakes of the emergency bypass tubes. On March 14, 2000, on the third "International Day of Action Against Dams, and for Rivers, Water and Life" held at Glen Canyon Dam, Brower, participants and 60 other environmental groups signed the "Glen Canyon Declaration." This document promises to restore the Colorado River in Glen and Grand Canyons to their full natural heritage by means of a grassroots campaign, that includes doing river trips.

Please consider your attendance on our Yampa River expedition, June 2 – 6, 2003, to commemorate a fantastic and exciting future for river restoration.

John Weisheit
Colorado Riverkeeper

Take Action 02/26/03

Living Rivers Director Runs for Sierra Club Board

Living Rivers and the Sierra Club have long shared some common goals, primary among them the restoration of Glen Canyon and the preservation of the currently threatened Grand Canyon ecosystems. So when the Sierra Club's nominating committee asked our own Lisa Force to run for a seat on the Club's national board of directors, it seemed a natural fit.

Ms. Force accepted the honor and is on the ballot for the 2003 Sierra Club Board of Directors. She is running with four other candidates on a slate which promotes an aggressive conservation agenda. The five candidates on Ms. Force's slate will be running against eleven other candidates for the five open board seats.

The other candidates on the slate are: Connie Hanson Gordon LaBedz Nancy Rauch Don Young

Please watch for your ballot statement from the Sierra Club, via mail or email, in the first week of March, and vote to save the planet!

Ms. Force's ballot statement is below. To access the statements of the other four candidates, please see www.johnmuirlives.org.

Sierra Club Ballot Statement:

LISA B. FORCE

Residence: Scottsdale, Arizona

Occupation: Program Director, Living Rivers

Contact: 480-990-7839; LForce@LivingRivers.org

Current Member since: 1998

Background:

Originally from Colorado, I've lived in Arizona for 15 years where I've worked for two leading environmental organizations, fighting for protection of endangered species and restoration of the Grand Canyon, Glen Canyon and the Southwest's wild rivers.

- Previously, owned a successful management consulting business for 8 years
- Longtime Sierra Club activist on sprawl, wilderness, energy and water issues
- Led grassroots activists in anti-logging campaigns
- Defeated state anti-wildlife referendums
- Successfully negotiated with government agencies for river and wildlands restoration
- Launched a Western Grazing Reform program

- Featured in National Geographic and BBC documentaries highlighting US/Mexico environmental issues
- Education: MBA; Bachelor of Science.

Endorsements include current Board members Marcia Hanscom, and Ed Dobson – who says: "Lisa Force is the fastest rising star in the Sierra Club's firmament. She has the skills, passion, and tact to excel at the most demanding of Club positions. We are blessed that she is ready and willing to serve."

Statement: My success in grassroots activism, plus strong business experience, will be assets to the Board. I need and appreciate your vote! Key committees in the new Congress are now chaired by stalwart allies of polluting industries, taking deadly aim at our forests, the Arctic, Yellowstone and more of our last wild places. We must unite now to stop Bush's attack on the environment. We must recruit more Sierra Club members, strengthen our legal tactics and promote aggressive on-the-ground activism. I'll champion Club efforts to defend hard-earned achievements, while creating and taking advantage of new advocacy opportunities at Chapter and National levels.

I'll help the Club achieve a groundswell of action to awaken and motivate the American people to:

- Aggressively protect our parks and wilderness areas;
- Uphold and strengthen environmental legislation;
- Protect public lands from development;
- Promote sustainable agriculture; and
- Create livable, sprawl-free communities.

I'll use my environmental advocacy skills, extensive fundraising background and experience as a successful businesswoman to promote a national agenda that will make the Sierra Club an even more powerful force by:

- Making sure Chapters and Groups get the resources they need. We must use every dollar more efficiently.
- Mobilizing all environmentally concerned citizens to support Club efforts, through expanded grassroots activism and media campaigns.
- Maintaining our strong Outings Program.
- Listening and responding to our members.

I want to hear from you how I can help make the Club work for you. Please contact me!

LR in the News 02/27/03

The Lake Effect

by Christopher Smart
The Salt Lake Tribune

BULLFROG -- Tourism promoters as well as environmentalists who despise Utah's largest reservoir agree on one thing: This is the year to visit Lake Powell.

Thanks to record-low lake levels, new beaches and eye-popping sandstone formations hidden underwater for years have surfaced.

The Lake Powell recreational experience, tourism promoters boast, is as breathtaking as ever. And this year promises to be the best bass-fishing year since 1996 along the reservoir's 2,000 miles of shoreline, say state fisheries biologists.

Meanwhile, environmentalists who favor decommissioning Glen Canyon Dam and draining the Colorado River water it impounds say chances to visit Powell are dwindling. If the drought continues for four more years, they contend, there will not be a Lake Powell. So those wishing to visit the lake should not wait any longer.

Boat ramps at Bullfrog in Utah and at Wahweap in Arizona have been lengthened to reach the receding waters. Now at a record low of 3,612 feet above sea level (equivalent to the low mark set 10 years ago), Lake Powell still provides excellent boating and fishing and superlatives still cannot describe its natural wonders.

However, the lake does not snake up its many narrow canyons as far as it did last summer, according to Morris Christensen, Bullfrog boat-rental manager. In the past, boaters navigating Forgotten Canyon could dock just below the Anasazi ruin known as Defiance House. This year visitors must hike a half-mile up the canyon to reach the ruin.

"It's so weird to come to a place where you were swimming last summer and now there's no water," Christensen says.

In the creek bed below Defiance House, green grass stands in bright contrast to the red rock walls and the 86-foot-high whitish bathtub ring that defines the drought and the diminished waters.

At Hite, where the Colorado River enters the reservoir, acres of mucky silt have sprouted weeds. The boat ramp has been moved several times, but the National Park Service and Lake Powell marina operator ARAMARK are just about out of moves until the water rises. In addition, pumps that supply the Hite community with culinary water from the lake must be moved before the silt clogs them. Boat ramps at Stateline and Antelope Point are closed.

But Dan Resmondo, the director of operations for ARAMARK's North Lake Powell marinas, says it is business as usual. "It's normal operation for us to follow the lake up and down," he says. "We're seeing the same levels we saw in February 1993."

"From a recreation standpoint, it gives a different perspective," Resmondo says. "The canyons look different. If you haven't been here for a while, it will look quite different and provide a new experience." Certainly Bullfrog does not look like it did four years ago, when the lake was at a record high of 3,698 feet. What once was a narrow waterway between Bullfrog and Halls Creek now appears as a hill. Four years ago, the dock was

not far from the marina store. Now, it's a quarter-mile away and looks to be sitting in an empty redrock basin surrounded by dusty buoys.

The Lake Is Open: The National Park Service will spend about \$2 million refurbishing and lengthening boat ramps at Bullfrog, Wahweap and Halls Crossing, says spokeswoman Char Obergh.

"We want people to know the lake is open," she says. "There may be some delays in launching, but we're doing everything we can to make it a good experience."

Lake Powell consistently ranks as the second- or third-most-popular Utah tourist attraction. Last year visitation dipped to 2.1 million from 2.3 million in 2001, says Jon Kemp, Utah Travel Council research analyst. He blamed the downturn on the aftermath of 9-11, as well as a perception that the lower water level hinders boating and the scenic experience.

However, the 200,000-visitor drop did little damage to the state's \$4 billion tourist economy, Kemp explained. "It's almost impossible to quantify any economic impact" from the 9 percent drop in Powell visitors.

All that could change, argues John Weisheit of Living Rivers, an environmental organization that favors draining Lake Powell. If the severe drought persists for four more years, he notes, the reservoir will effectively be drained -- dam or no dam.

"It's going to continue to drop. And it's going to drop dramatically. The boat ramps are going to run out of topography," he says.

That may sound like a wild claim, but it is not out of the question, concedes Andrew Gilmore, hydraulic engineer for the U.S. Bureau of Reclamation. "It's conceivable that we could run out of water at Lake Powell. If we had another four years [of drought], we'd be awfully close," he says.

According to bureau calculations, the lake level will fall until the spring snow runoff, when the water will begin to rise, Gilmore says. "Our current inflow forecast has Lake Powell dropping another seven feet until April, when it will begin to fill up."

But unlike 10 years ago -- when the lake level jumped by 60 feet during a spring with substantial snowpack across the Colorado River drainage system -- this year's melt will be modest. "The snowpack is fairly meager across the whole basin," Gilmore says. "Our forecast is for 58 percent [of normal] runoff."

Periods of low precipitation are the reason Glen Canyon Dam was built, Gilmore says. "We look at it like it's performing its job. In a drought, Lake Powell is doing its job," he says of its water-storage capabilities.

At 53 percent full, Lake Powell now holds about 13 million acre-feet of water, Gilmore says. The forecast calls for the reservoir to gain about 4 million acre-feet in runoff. But under the Colorado River Compact signed by the seven states in the Colorado River drainage, Lake Powell must deliver annually 8.23 million acre-feet of water downstream, where it is impounded at Lake Mead.

"In these drought years, more goes out than comes in," Gilmore says.

No one is sure whether the drought will continue. But a study in the Feb. 11 edition of Geophysical Research Letters tracking ocean temperatures and tree rings anticipates the drought will linger, according to one of its authors, Julio Betancourt.

A research scientist for the U.S. Geological Survey and an adjunct professor at the University of Arizona, Betancourt explains that the last time the South Pacific was as cold as it is now and the North Atlantic was as warm, the Colorado River drainage experienced the drought of the 1950s, which lasted 25 to 30 years in some places. "We are now in a megadrought," Betancourt says, "in that it stretches from Montana to New Mexico and involves several seasons."

Good for the Fish: Analysis of tree rings during a 750-year period in the region revealed that dry and wet patterns do not occur at regular intervals. "You can't predict drought by time. The tree rings show that droughts don't occur cyclically," he says.

Whether Lake Powell eventually turns into a mud puddle remains the stuff of conjecture. But in the short term, the drought is good for the warm-water fishery, according to Wayne Gustaveson, a biologist with the state Division of Wildlife Resources.

"We need these low periods to re-establish habitat and nutrients,"

LR Press Release 03/03/03

Living Rivers to Target Mill Creek Revival on March 14

We've seen it every summer: a dried-up creek along our beautiful Mill Creek Parkway, the most blatant example of the growing ecological crisis occurring along this much appreciated drainage. Water may be pouring off the La Sals, but by the time it makes its way into Moab, every drop has been diverted. As drought and water demands persist, it's unlikely this situation is going to change without community support to bring our beloved Mill Creek back to life. Living Rivers will be kicking-off a new campaign to aid in the Creek's defense on Friday, March 14, the Sixth Annual International Day of Action Against Dams, and for Rivers, Water and Life.

The festivities begin with a noon rally and picnic on the lawn at the County Courthouse. Longtime environmental musician Peter Neils will help set a festive mood while a host of concerned citizens present information on how and why we need Mill Creek's flow. A set of recommendations for the County Council consideration will also be presented, along with ways in which the community can become involved in promoting them.

That evening, beginning about 9:00 P.M., Living Rivers will be hosting the "Mill Creek Revival & Colorado River Fiesta" at the MARC (100 North and 100 East). This free party will emphasize a revival spirit with dancing, costumes and games. There is no

admission charge and refreshments are free. Also at the MARC that evening, beginning at 7:00 P.M., is a free film "U.S. Foreign Policy: The War Against the Third World" sponsored by Moab Citizen's for Peace and Global Justice.

Mill Creek's ecology is being devastated. Native fish, such as the flannelmouth and bluehead suckers, depend on a flowing Mill Creek. Other critters, like beavers and muskrats, need Mill Creek too. The most critical habitat of Mill Creek is near the mouth, which provides a refuge and food source for the endangered and threatened fish species of the Colorado River.

"What's happening here in Grand County is emblematic of the larger problem affecting the entire Colorado River watershed," says John Weisheit, Living Rivers conservation director. "Despite nature's warnings that we are using far too much water, we continue to focus on getting more and not on conservation."

Last month the Grand County Water Conservancy District asked the Bureau of Land Management for permission to reduce by half the amount of water it leaves in Mill Creek below the diversion for Ken's Lake. This request will likely be denied. But the search for water continues as an expensive proposal to pump Colorado River water into Ken's Lake moves forward.

Evaporation and seepage losses to Ken's Lake alone amount to 30 to 70 percent of the water diverted from Mill Creek. Increasing this storage efficiency could go a long way towards helping to get water back into the creek.

Additionally, many of those irrigating with Mill Creek water are given no incentive to conserve. Their water rights are often based on what is known as a "use it or lose it" principle. If irrigators do not use the amount of water the state of Utah believes is necessary for them to grow their particular crops, they can lose their right to this water. Some farmers have stated that they would be glad to leave some water in the creek, if a system could be put in place to allow this to occur. For example, The Nature Conservancy has received approval to transfer water rights to the Utah Division of Wildlife Resources for increasing stream flow.

Most of the water diverted from Mill Creek is used for alfalfa, which, if not irrigated efficiently, can be a very water intensive crop. However, no help is available for those who are potentially interested in making the transition to more water efficient, higher value crops. For example, alfalfa can require four times as much water as grapes, and provides the farmer with a crop that yields only \$100 per acre-foot of water, whereas good quality grapes can yield \$7,500 per acre-foot. Implemented properly, such programs could not only aid in improving Mill Creek, but also increase the economic output of the community. It has also been documented that home values increase when they are associated with a functioning and attractive riparian ecosystem.

LR Letter 03/07/03
YDP Comments to the Bureau

March 6, 2003

Mr. Robert Johnson Regional Director Lower Colorado River Region U.S. Bureau of Reclamation PO Box 61470 Boulder City, Nevada 89006-1470

By fax: (702) 293-8614

Dear Mr. Johnson:

Thank you for presenting the Bureau's most recent draft of Modifications to Projects of Title I of the Colorado River Basin Salinity Control Act (CRBSCA) (Public Law 93-320) on February 25, 2003. We write in response to that presentation and to reiterate our opposition to the Bureau's plan to request appropriations to upgrade and prepare the Yuma Desalting Plant (Desalter) for operations. We further emphasize our concern with the Bureau's failure to respond to Congress' request in the draft report presented this week.

The current version of the report to Congress includes a number of fallacies, inconsistencies and highly unlikely assumptions that overstate the economic feasibility of operating the Desalter and understate the feasibility of alternative measures for replacing the bypass flow. We again remind the Bureau that this report subjects the Secretary of Interior to a reprimand from Congress, which has legislated that:

The Secretary is authorized to provide for modifications of the projects ... to the extent he determines appropriate for purposes of meeting the international settlement objective of this subchapter at the lowest overall cost to the United States. 43 U.S.C. § 1574 (emphasis added).

Further, the Bureau has failed to produce the information requested by Congress concerning alternatives to operating the Desalter. Congress specifically requested a "report on alternatives to meeting Treaty requirements without the YDP, and actions the Bureau of Reclamation can take to reduce the high annual operation and maintenance costs." S. Rep No. 58, 106th Cong. 1st Sess. 80 (1999) (emphasis added).

We appreciate your correction of the estimated low-end cost of acquiring short-term leases of water, referred to in this draft as forbearance agreements, as well as the inclusion of the cost comparison table. However, to reiterate the other questions raised in our November 22 letter would be to virtually rewrite the entire letter. Therefore we refer you to our previous letter and again request answers to the questions and concerns therein.

In addition to the concerns already expressed, we request corrections to the current report and answers to additional questions as outlined in this letter.

Environmental Review

A complete environmental review of the impacts of re-operation of the Desalter or other alternatives must be completed prior to any implementation of actions to further the recommendations included in the report, including seeking congressional appropriations. We are concerned that the Bureau has already begun to channel funds towards preparation for reoperation without the benefit of environmental review, and without the benefit of analysis of fully developed alternatives.

The Bureau has also not yet secured a discharge permit for product water from the Arizona Department of Environmental Quality. Proceeding with appropriations requests and funding of Desalter readying activities without the appropriate environmental reviews would be pre-decisional.

Furthermore, we wish to point out that the language included in the current report and the cover letter from the Secretary which talks about assuring the operation of the YDP is pre-decisional in that it precludes a No Action alternative. Such language must be eliminated from the report and cover letter before transmittal to Congress.

Discussion of the Cienega de Santa Clara is incomplete, serves only to mask the importance of the wetlands to wildlife and humans, and retreats from the enhanced description in the previous draft. The Cienega de Santa Clara (not once referred to in full) provides habitat not only for migratory waterfowl and shorebirds, but also for threatened and endangered species. What is more, these species -- including the desert pupfish, Yuma clapper rail, and black rail -- have been listed pursuant to the U.S.'s and Mexico's endangered species statutes. Deletion of endangered species sustained by the Cienega does not eliminate the Bureau's obligations to endangered species, and what is more, the Bureau has glossed over a significant piece of information that we are sure Congress would appreciate having when weighing the costs and benefits of operating the Desalter.

Likewise, the reduced volume of water coupled with increased salinity of water reaching the salinity will degrade the ecosystem. This ecosystem is part of a Biosphere Reserve as designated by Mexico, is a major link in the Pacific Flyway and supports the vast majority of the Yuma clapper rail population. To claim that these effects "may" happen (p. 4) is deceptive and underestimates the impact to the environment that will most certainly occur as a result of operating the Desalter. Again, costs in the form of adverse impacts to the environment have been missed.

We also suggest you refrain from qualifying the Cienega as an "isolated" wetland. It is not, and this is a blatant attempt to minimize the size and importance of this wetland complex.

Economic Analysis

There are several fallacies and assumptions included in the economic analysis of operating the Desalter and implementing the alternatives. Many of the assumptions do not withstand the test of simple mathematical principles. Others are so optimistic as to be deceptive. In modeling projections, assumptions are necessary and in providing a

cost estimate range, optimistic assumptions can be utilized in predicting the low-end cost. If such assumptions are employed, however, equally pessimistic assumptions must be used in predicting the upper-end of cost ranges. This is not at all the case in the Bureau's analysis.

Without performing a full analysis of our own as yet, we cannot divine every fallacy in the Bureau's analysis. However, some of the more obvious are as follows:

- Including the Desalter ready-reserve maintenance expenditures in the cost of obtaining forbearance agreements is misleading and completely unacceptable. Including it in this analysis is an insult to Congress and to the public. Desalter maintenance and pursuit of forbearance agreements are completely unrelated processes; either can quite obviously exist without the other. Linking them for the purposes of economic analysis in this report falsely inflates the costs of alternatives to operating the Desalter.
- Including \$2.4 million in research in the \$5.1 million annual cost of keeping the Desalter in ready-reserve mode is erroneous. The Desalter could be kept in ready-reserve without doing extraneous research. This is at best poor math and at worst a blatant effort to delude Congress. It needs to be backed out of the equation.
- While the analysis includes extraneous unrelated costs to estimate forbearance costs, it fails to include estimates of environmental mitigation costs for Desalter operations. The Bureau fails to note that operation of the Desalter would degrade the Cienega de Santa Clara but references studies with these conclusions (p.16); it is therefore appropriate to include the potential costs of avoiding, minimizing, and mitigating such impacts within the total projected cost of Desalter operation.
- Even using the Bureau's unrealistic assumptions, the analysis does not provide the accurate cost of operating the Desalter in its five-year and ten-year scenarios. By the Bureau's estimates, the Desalter would have to operate at one-third to two-third capacity for four years. Yet the analysis calculates cost of product water using the admittedly impossible assumption of full capacity. Operations at one-third and two-thirds capacity produce water not at the stated cost of \$305/acre foot, but at an estimated cost of \$689/acre foot and \$325/acre foot respectively. The Bureau should revise the report to accurately reflect the increased costs associated with necessary maintenance and system downtime. Assuming two years of operations at one-third capacity and two years at two-thirds capacity, as suggested in the Bureau's Gantt Chart (per HJA Consulting) product water in the five-year scenario averages \$466/acre foot.
- The low-end estimate of \$32/MWh for power costs to operate the plant is unrealistic. The best price available for a strip of power (four quarters averaged) on the bulk power market today on the southwest grid is approximately \$44/MWh, even assuming the plant will be operating during less expensive shoulder hours. While the bulk power market is arguably volatile, this is not a liquid market. The Forward Curve for the market does not predict excesses of supply over demand, and with build-out time for power plants of five to ten years, the Curve tends to be accurate. The low-end estimate used in

this analysis is unlikely to be available for a long-term contract in the massive quantity needed for full capacity Desalter operations.

- The report fails to analyze a one-time cost of decommissioning the Desalter as an action the Bureau of Reclamation can take to reduce the high annual operation and maintenance costs of the Desalter. This alternative should be compared against keeping the Desalter in ready-reserve mode and/or operation of the Desalter at various partial or full capacity levels.

Operations Decision Criteria

The Bureau stated in its presentation that decisions on the percentage of capacity at which the Desalter would be operated would be made annually. Yet the Bureau was unable to adequately answer our question concerning what the decision criteria will be. Please answer the following questions regarding operating capacity and decision criteria: · What are all the elements of the decision criteria? · What will be the timing of determining percentage of capacity for operations? · Who beside the Bureau will participate in developing and applying the criteria? · Will the development of these criteria be subject to public review? We have similar concerns and questions regarding the replacement criteria (p.20).

Scientific Debate The report states that "Operation of the YDP would decrease the volume and increase the salinity of bypass water reaching the Cienega and may degrade its ecological value. Operation of YDP would be met with substantial controversy, and additional scientific debate." (page 5) The phrase "additional scientific debate" has not appeared in previous drafts: why was it included in this draft? The disruption of bypass flows to the Cienega in 1993, due to flood damage and subsequent repairs of the bypass canal, significantly degraded the Cienega. These impacts are clearly documented in the scientific literature. If, as we suspect, the Bureau is unable to document any "debate" about the expected degradation of the Cienega due to Desalter operation, then all references to "scientific debate" should be expunged from the report.

Federal Obligation Previously, we disputed the Bureau's apparent claim that the "interim period," in which the United States received credit for the Coachella Canal Lining Program, had ended. Given the Secretary's decision to reduce California water orders to 4.4 million acre-feet for calendar year 2003, we believe that this "interim period" has ended. Given that the Secretary authorized the delivery of some 200,000 acre-feet of additional Colorado River water to California's agricultural contractors last November – despite the existence of extraordinary drought throughout the basin – it is quite clear that the interim period was in effect through 2002. Further given that the Coachella Canal Lining Program salvages some 132,000 acre-feet per year, 24,000 acre-feet per year more than flows to Mexico via the Bypass Drain, and that there has not been a flood release from Hoover Dam since 1999, it is reasonable to assume that the United States has accumulated 72,000 acre-feet of bypass-flow credits, that can be applied to the current year's obligation. This federal credit should be noted in the report.

Water Supplies and Needs While we understand the concerns surrounding tightening water supplies, particularly those of Arizona contract holders, we do not trust in the

rationale that operation of the Desalter seeks to address those concerns (p.14). Were the Bureau truly interested in alleviating the pressures on Lake Mead storage and lower priority water users, this interest would be reflected in other Bureau proposals and policies – unfortunately, it is not. For example, in the FEIS for the Inadvertent Overrun and Payback Policy, the Bureau would allow any and all debt to be forgiven in the event of a flood control release. If the Bureau were aiming to maximize water storage, the agency would require full payback of all debt.

Thank you for the opportunity to comment. We hope these concerns will be accommodated in a new draft report. However, should you continue to include the elements that we find objectionable, we insist that you adjust the language of the report under “Consultation with Affected and Interested Parties” to remove any implication that we concur with the report as written. This could be effected by changing the last sentence at the end of that section to read, “This report of the Secretary of the Interior reflects the views and proposals of the Department after consideration of the comments and suggestions received in that review process. It does not reflect a consensus of the parties with which the Bureau of Reclamation consulted, nor does it represent a compromise between the different views expressed.” Should this report go forward with elements that we find objectionable and an implication that we concur with those elements, we certainly would not hesitate to contact members of Congress on our own to expose the deception being waged by the Department.

Please don’t hesitate to contact us if you have questions. Thank you.

Sincerely,

Kara Gillon
Wildlife Counsel
Defenders of Wildlife

Jennifer Pitt
Senior Resource Analyst
Environmental Defense

Lisa Force
Program Director
Living Rivers

Michael Cohen
Senior Associate
Pacific Institute

Steve Glazer
Chair, Colorado River Task Force
Sierra Club

Pamela Hyde
Executive Director
Southwest Rivers

cc: Commissioner Carlos Ramirez, IBWC
Commissioner Arturo Herrera, CILA

LR in the News 03/07/03

Writers on the Range: Lake Powell--Going, going, gone?
by John Weisheit

Who would have believed it? Water levels at Lake Powell have dropped to 50 percent for the first time since it filled in 1980. This draining is likely to continue to the point where the reservoir could vanish in the next three-to-four years.

With snowpacks below 25 percent of normal, and continued warnings from the U.S. Geological Survey, EPA and others that a severe and sustained drought should be anticipated, Lake Powell's days may be numbered. A 1995 study published by the American Water Resources Association predicted that a severe drought would lead to Lake Powell's draining within eight years. Things are right on schedule.

Now that Lake Powell is down by some 87 feet, three boat ramps have been closed: Antelope Point, Stateline and Hite. The National Park Service is working with a \$3 million emergency appropriation to extend other ramps as the reservoir continues to decline. But construction of the recently approved \$70 million Antelope Point marina complex is in limbo, because boats can't be launched from what has been revealed by drought to be a cliff.

Once Lake Powell drops an additional 28 percent, it will no longer generate hydroelectricity because Glen Canyon Dam's penstocks will be exposed, and water will no longer be able to turn the generators. There's also a problem with sediment, since fluctuating river flows that occur during low reservoir levels will speed the movement of sediment toward Glen Canyon Dam.

The U.S. Geological Survey says that major droughts of the past, such as the years from 1942 to 1977, went largely unnoticed. We notice this drought because the West has four times the population and we've been mining our groundwater.

Federal scientists have also informed us that the previous century was 20 percent wetter than normal. That means our ability to put water to work was helped by luck as much as it was by massive engineering projects. Even at those inflated levels, Colorado River water allocations are 20 percent above what the river delivered.

We've managed to avoid crises in the past because not all the Colorado River Basin states used their full allocations. Even so, the river reached the sea only twice in the past two decades. Add to all this a drought cycle that is predicted to last 25 years, and Lake Powell, along with every other reservoir in the upper Colorado River storage system, won't have water to store.

Vanishing bodies of water in the Western United States shouldn't surprise us: It's part of our legacy. In 1890, the Geological Survey's first professional paper discussed the principles of global climate change. The publication analyzed how a body of water that was once 800 feet deep -- Lake Bonneville -- had reduced itself into the briny and shallow Great Salt Lake.

In the 19th century, the physical geography of the planet provided undeniable evidence that humans can become victims of climate change. In the 20th century, we gained new tools, such as tree-ring data, that allowed us to reconstruct the climate of the last 400 years. This reaffirmed that the Earth's climate varies dramatically. Whether these changes result from the effects of greenhouse gases or from natural cycles, the results are the same.

Scientists have given us ample warning, but our water-management experts don't listen. At a recent gathering in Moab, Utah, John Keys, Commissioner of the Bureau of Reclamation, worked to calm the fears of those concerned that the Colorado River may soon be unable to provide for the 25 million people plumbed into his system.

"They (the reservoirs) are doing exactly what they were designed to do," he said. But when it was pointed out that these reservoirs are declining over 10 percent per year, and thus could empty in another five to six years, he had no plan for how the federal government would handle the shortages.

Certainly many of us will be pleased to see the uncovering of Glen Canyon. It will be nature's way of reminding us that we are not in control.

It would be truly unfortunate, however, if the warnings these declining levels represent are not heeded, and all those presently reliant on the overuse of Colorado River water get plunged into a crisis with no plan of action.

John Weisheit is a contributor to Writers on the Range, a service of High Country News in Paonia, Colorado (hcn.org). He is conservation director of the nonprofit group, Living Rivers, in Moab, Utah.

Take Action 03/07/03

Cienega de Santa Clara Needs Your Support!

Please read and respond to our summary of the Bureau of Reclamation's Draft 28 Modifications to Projects of Title I of the Colorado River Basin Salinity Control Act. If the proposal put forth in the BuRec document were to be accepted, the already imperiled Cienega de Santa Clara in the Colorado River Delta could be decimated.

Background: Under the Colorado River Basin Salinity Control Act of 1974 (PL 93-320) (CRBSCA), the United States has had to bypass the highly saline agricultural drainage from the Wellton-Mohawk district through the MODE canal, in order to meet the salinity requirements of the Act. The discharge inadvertently revived the Cienega de Santa

Clara, a rich 14,000-acre wetlands, home to several endangered species and an important stop for migrating birds on the Pacific flyway. The Cienega and 90% of the delta region in which it exists was destroyed when water diversions from the Colorado River by the United States and Mexico left nothing but unscheduled reservoir "spills" to water the formerly two million acre biologically diverse region.

The CRBSCA authorized building the Yuma Desalting Plant (YDP) to desalinize the agricultural drainage. But the plant was never operated at more than one-third capacity and for more than a few months because it was not economically viable. Water produced by the YDP would come at an estimated cost of \$400 - \$900 per acre foot. By comparison, farmers in the Yuma area pay an average of \$12 per acre foot.

Summary:

The draft report, Modifications to Projects of Title I of the Colorado River Basin Salinity Control Act, sets out the Bureau of Reclamation's (BuRec) case for operating the YDP, thereby reducing bypass flow to the Cienega de Santa Clara. At full operating capacity, the Cienega would receive only the intensely saline brine from the YDP process, which would completely destroy the wetlands.

The BuRec views the bypass flow to the Cienega as lost water because it does not count as part of the U.S. obligation of water delivery to Mexico. The amount of bypass flow is ~108,000 acre-feet per year and this bypass water has an average salinity on the order of 2800 ppm.. The YDP operations would treat Wellton-Mohawk agricultural drainage water and return it to the Colorado basin where it could be included as part of treaty obligation to Mexico at the Northern International Boundary.

The draft report exists as the basis from which BuRec can make funding requests to support forbearance agreements and request funds to ready YDP to operate at full capacity. The draft report states that the Cienega de Santa Clara has been created, but does not detail the Cienega's history of having been a component of the pre-dam wetland complex along the Colorado delta. As well, it offers no plan for supporting existence of the Cienega. The report states that the bypass drainage to the Cienega has been at the discretion of the U.S.

The next step for the BuRec after submitting this proposal to Congress is to "move forward with the expenditure of funds to implement" their proposed measures. In truth, BuRec has already increased its funding for the YDP in 2003, and is working to correct six areas of plant deficiencies by the end of the year. Further appropriations appear to have been requested and included in the 2004 appropriations draft.

The proposal finds its justification in this reasoning: "Because the drainage water in the bypass is not desalted and returned to the River, the [current] method of operation results in the release from Lake Mead of comparable quantities of water, which otherwise would not be needed if the bypassed water was delivered to Mexico as part of the U.S. Treaty delivery obligation." The Bureau argues that this aggravated water shortages in the Colorado reservoirs. The report notes that "tightening water supplies and increased demands has raised important concerns" especially from Central

Arizonan Water Conservation District, which operates the Central Arizona Project (CAP).

The 108,000 acre-feet bypass flow to Cienega represents less than one percent of the average annual flow of the Colorado River's 12 million to 15 million acre feet. The Cienega is an incredible wetland with a diverse vegetation structure that supports an equally diverse population of birds and animals including the federally listed endangered Yuma clapper rail and the desert pupfish. The result of operating the YDP would be to cutoff flows to the Cienega so that 108,000 acre feet more of the U.S. excess water reserves could stay in its impoundments, much of it to evaporate.

The draft report explains that a "thorough environmental review of the original EIS (which dates from 1975)" would be undertaken. However, the environmental review with regard to the effects on the Cienega is largely irrelevant since the Cienega is located in Mexico. In response to a lawsuit brought by Environmental Defense against the BuRec concerning Colorado River delta species, the agency claims it is not responsible for the impact its operations have on endangered species that exist across the international border. In addition to an environmental review, the draft report states that under Section 402 of the Clean Water Act, a discharge permit must be obtained to transfer desalted product water to the Colorado River.

The report includes a section on Environmental considerations relative to the bypass flow and discusses the Cienega and its Biosphere Reserve status (p.14). The document states that "reduction of current bypass flows will be met with substantial controversy." However the document says an environmental review will be conducted but makes no proposal for sustaining the Cienega. The reader is forced to assume that if this proposal is allowed to go forth, the Cienega's outstanding ecological value will be severely compromised. Biodiversity will receive a crippling blow.

In the report section subtitled "Potential Sources of Replacement Water to meet Title I objectives" (p.17) it stated that replacement supply for bypass flow to the Cienega must come from inside the Colorado River Basin. "The primary source of replacement water for flows in the Bypass Drain is expected to be from the Lower Basin agricultural water users, and recovery and return of Colorado River water that would otherwise be lost to Mexico as groundwater. About 4.9 million acre-feet per year of Colorado River water is used in the Lower Basin for agricultural purposes...(p.17)" The report states that this fact should yield "opportunity for the program and water agencies to acquire additional water."

The alternative most fully explored is forbearance, essentially short-term leases of water from area agricultural interests. The cost of forbearance agreements is estimated to be \$60 to \$309 per acre foot. Living Rivers research has shown the least valuable production of crops in the area to be worth \$53 per acre foot of water. The BuRec estimate of \$60 per acre foot is realistic. However, in order to make the YDP operations appear economically feasible compared to the environmentally responsible alternative of leasing water, the agency had to include a highly exaggerated higher cost estimate. In order to reach the \$309 per acre foot estimate, the agency included the cost of keeping the YDP in "ready reserve."

Since 1992, the YDP has been maintained on standby - or ready-reserve - at an annual cost of ~\$5.1 million. This cost includes \$2.4 million of general research concerning desalting plants. Keeping the plant in ready-reserve mode obviously has nothing to do with seeking water leases. Including the cost in alternatives to operating the YDP is a blatant lie.

The report mentions the alternatives of "extraordinary conservation" such as upgraded irrigation systems for farmers in the lower basin. It does not however develop these alternatives nor does it state even an estimated cost for these alternatives.

The draft report explains that the YDP operation would cost \$26-34 million yearly. The other effect the report mentions is that water flowing to the Cienega would be decreased to reject brine. According to report predictions, the flows would be reduced to 30,000 acre feet yearly with an average salinity of ~9000ppm . The annual amount of water the YDP is predicted to process is 60,700 acre-feet to 75,400 acre-feet. Then the BuRec would blend that product water with 10,000 acre-feet per year of untreated agricultural drainage water (p.15) yielding a complete return to the Colorado (when YDP is operating at full capacity) of 70,700 to 85,400 acre-feet.

The BuRec predicts that desalted product water from the YDP at full capacity operation will cost between \$305 and \$480 per acre-foot. The estimates are based on completely unrealistic assumptions including insanely low power costs, and do not take into account that the plant cannot operate at full capacity for at least four years. At one third capacity, even the BuRec's unreasonably optimistic estimates show a cost of \$689 per acre foot of product water.

The report concludes that BuRec intends to follow a two-pronged strategy of pursuing forbearance agreements and readying the YDP for operations.

Living Rivers and a network of other environmental groups in the US and Mexico do not intend to allow a thriving wetland to die. Nor should the phenomenal cost of operating the YDP be imposed upon taxpayers particularly in a time of national economic distress. We will be preparing comments to the BuRec report as well as our own report to Congress about the real economics of operating the YDP versus pursuing lower-cost and environmentally responsible options.

Please send the BuRec a message that their report to Congress is irresponsible and unacceptable in the fallacies it includes as well as in its erroneous conclusion. Send comments by March 31, 2003 to:

Mr. Robert Johnson, Regional Director
Lower Colorado River Region
U.S. Bureau of Reclamation
PO Box 61470
Boulder City, Nevada 89006-1470

By fax: (702) 293-8614

[To access the Bureau's full draft report to Congress, click here](#) [148k PDF File]

LR Event 03/13/03

Full Page Ad for Mill Creek Revival on Day of Action

On March 13, Living Rivers ran this full-page advertisement in the *Moab Times Independent* demanding action by the Grand County Council to aid in restoring flows to Moab's Mill Creek.

Download a copy [here](#) [284k PDF File]

Letter to LR 03/14/03

To Gale Norton Demanding Immediate Action on Colorado River Drought

Honorable Gale Norton
Secretary, United States Department of Interior
1849 C Street, NW
Washington DC, 20240
Dear Secretary Norton,

We are writing to seek your cooperation in averting the emerging social, economic and ecological crises related to Colorado River water availability. Although snow packs in the basin are improving, river flows are again predicted to be below normal for the fifth straight year. According to the National Oceanographic and Atmospheric Administration, the current El Niño event has, "reached its mature stage and is expected to weaken." Basin-wide storage is at an all-time low. With federal water allocations continuing to exceed natural deliveries, the region is quickly nearing the halfway point to catastrophe. It is vital that federal, state, Indian tribes and private groups begin developing a framework for revisiting Colorado River water allocations and the laws which govern them.

We fully appreciate the political, economic and legal complexities associated with re-opening discussions pertaining to the Colorado River Compact and the Law of the River. However, the warning signs of system collapse are apparent. Storage in reservoirs is less than 60 percent of capacity and declining at a rate of more than ten percent per year. The Geological Survey cautioned last year that Western water managers should be prepared for below average precipitation over the next several decades. They caution that "a repeat of the 1942 to 1977 drought could be catastrophic" given the Colorado Basin's increased population growth.

If precautionary mechanisms are not put in place shortly, a crisis of unquantifiable proportions could easily unfold. Ten percent of the nation's population relies on

Colorado River water, including the metropolitan areas of Los Angeles, Phoenix, Las Vegas, Salt Lake City, Albuquerque, San Diego and Denver. A \$1.5 billion agricultural industry and 4200 megawatts of the Southwest's energy supply could be severely impacted. Yet, Bureau of Reclamation Commissioner John Keys stated on February 13 that his agency has no plan for how to allocate water once major shortages occur.

Such complacency will not only burden the Southwest's economy, but the federal treasury and judiciary as well. Emergency funds will be sought to compensate irrigators who shift their water to municipal users. Major lawsuits will materialize as Western states and water users battle the federal government over control of water rights. Further compromises regarding in-stream flows will burden federal courts with additional environmental complaints. Unless timely, pro-active measures are taken, an extensive amount of federal, state and local resources will unnecessarily be poured into crisis management.

Such an atmosphere will exacerbate tensions amongst competing interests and further complicate efforts to establish realistic long-term Colorado River management strategies. Given the present allocation system, it is not a matter of if, but rather of when, the Colorado River storage system will be unable to meet demand. Scientists have determined that the actual average flow of the Colorado River at Lee's Ferry is 20 percent below the original Compact allocations. The data also reflects that the Colorado River flow during the current drought cycle has been 15 percent lower than during the first four years of the 1942-1977 drought. Additional reservoirs will not solve the problem; new strategies for water allocation and use must be developed as soon as possible. We seek your commitment toward helping to establish a dialogue amongst the basin states, water users and environmental groups in order to begin tackling this critical problem.

The federal government has primacy over Colorado River management; you are the basin's legally designated Water Master. The Colorado River is held in trust for the benefit of the public, and it has become obvious that its management can no longer be relegated solely to the basin states. Uniform leadership, authority and policy development must come from the Department of the Interior. Your action at the end of last year to limit California and Nevada's deliveries to their prescribed allocations was a positive first step. We now encourage you to begin a thorough overhaul of the Colorado River Compact--one that realistically reflects present use patterns and anticipated river flows. At a minimum, water allocations need to be reduced to reflect actual historical river flows.

Bringing the basin's water use into balance with natural flows will be much easier, far more efficient and certainly less costly than the monumental engineering works of the past have been. In fact, as was calculated by the late Walter B. Langbein, the Colorado River Basin's reservoirs' evaporation and seepage losses far exceed the benefits of the additional water storage they provide.

In order for the Department of the Interior to realize a reduction in water allocation, a top priority should be the establishment of water use efficiency standards for all irrigators under contract with the Bureau of Reclamation. These users consume more than 80

percent of Colorado River water not destined for Mexico; programs should be established to aid irrigators in replacing water-intensive feed crops, such as alfalfa, with produce crops that use significantly less water per acre. Such measures could reduce irrigation consumption in the Colorado River Basin by half, thereby freeing up more water than is presently being used by all the municipalities currently plumbed into the Colorado River system.

The historical theory underlying Colorado River law and management is that in years of below-average river flow the sixty million acre-feet of storage built into the system will act as an insurance policy against the effects of cyclical drought. But we are becoming increasingly aware that such insurance is not limitless. Increasing water use within the basin and changing climatic conditions are driving the system to the breaking point. This need not occur. A vast amount of additional water management understanding and experience has been accumulated since the Colorado River Compact was first crafted. The Colorado River can accommodate the future needs of the Basin states, Indian tribes and Mexico as well as the natural environment. This important goal will most effectively be accomplished when the Department of the Interior takes the lead in the evolution of management policies which recognize the Colorado River's inevitable constraints.

Thank you for your attention to the matter, and we look forward to your reply (transcribed below).

Sincerely,

Owen T. Lammers
Executive Director

cc: John Keys, Commissioner, Bureau of Reclamation

Commissioner Keys responds to LR letter United States Department of the Interior
Bureau of Reclamation
Washington, D. C. 20240
In Reply Refer To:
W-6333 June 17, 2003
ADM-13.00

Mr. Owen T. Lammers
Executive Director, Living Waters [Rivers]
P.O. Box 466
Moab, Utah 84532

Dear Mr. Lammers:

Thank you for your letter to Secretary of the Interior Gale A. Norton dated March 14, 2003, regarding Colorado River issues. The Secretary has asked that I respond to you

on her behalf. Similar to other Western rivers, the Colorado River Basin has experienced four dry years, some of which having been among the driest on record. With such a significant part of the nation dependent on water supplies from the Colorado River, it is truly fortunate that we continue to enjoy the benefits of our existing water supply facilities that help to mitigate to make up for these tough years of insufficient moisture.

As you point out in your letter, these issues are complex and sometimes contentious, and it gives me a perfect opportunity to mention the Secretary's new initiative, entitled Water 2025: Preventing Crises and Conflict in the West. Water 2025 recognizes the realities we face in dealing with water issues, such as explosive population growth, increasing needs for water for environmental and recreational uses, and the national importance of food and fiber production from Western irrigated agriculture. Water 2025 sets forth a strategic plan to facilitate a vigorous and educated public discussion in key Western communities, including those that rely on the Colorado River, where the likelihood for conflict and crises over water exists or can be predicted to occur by the year 2025. I invite you to attend and participate in any of the eight regional consulting sessions hosted by the Bureau of Reclamation. The information on these sessions is located on our website, www.doi.gov/water2025.

Again, thank you for your comments and concerns about Colorado River issues. The Colorado River has been and will continue to be a top priority for our agency, and I look forward to working with you and your organization in the constructive and positive manner set forth in Water 2025.

Sincerely,

John W. Keys, III
Commissioner

LR Press Release 03/14/03

Drought Watch campaign launched: demands immediate federal action to avoid catastrophe

Contact:

Owen Lammers (435) 259-1063

John Weisheit (435) 259-1063 or (435) 259-8077

**El Niño provides no Drought Relief
Colorado River Storage at lowest levels in history
"Drought Watch" Campaign demands Federal Action to Avoid Catastrophe**

The National Oceanographic and Atmospheric Administration reported on March 3, 2003 that the current El Niño event has, "reached its mature stage and is expected to

weaken." What was hoped to provide a break from several years of below average precipitation, has only brought snow packs to 80 percent of normal. The result: water use in the Colorado watershed will again outpace river deliveries, causing reservoir levels to decline for the fifth year in row.

As of today, levels in the Colorado watershed's primary reservoirs are at an all time low of 59 percent, declining at a rate of ten percent per year. Abundant historical evidence reveals that the present drought is far from unprecedented, and warnings from the United States Geological Survey one year ago urged water managers to be prepared for several decades of below average precipitation. They cautioned that "a repeat of the 1942 to 1977 drought could be catastrophic," given the Colorado Basin's increased population growth and water use. River flow during the current drought cycle has been 15 percent lower than those at the beginning of the 1942-1977 drought.

However, on February 14 Commissioner John Keys of the Bureau of Reclamation stated that his agency had "no plan" for how the federal government would handle water shortage once reservoirs began running dry. The Bureau of Reclamation has merely continuously revised its over-optimistic hydrologic forecasts for river flows. The most recent, on March 3, was a 25 percent downward revision for flows into Lake Powell, the principle figure for determining water availability for California, Arizona and Nevada. In October, 2002 BuRec predicted flows would be 10.14 million acre-feet in the water year of 2003. Now they are predicting only 7.44 million acre-feet, 62 percent of normal.

"This is nothing more than the beginning of an Enron event for the 25 million people reliant on the Colorado River water," said Owen Lammers, executive director of Living Rivers, the Colorado River's principal advocacy organization. "The Bureau of Reclamation puts out inflated projections to give the public a false sense of security, meanwhile the Basin's bank accounts are going down, down, down."

In a letter sent today to Secretary of Interior Gale Norton, on the occasion of the sixth International Day of Action Against Dams, and for Rivers Water and Life, Living Rivers demanded urgent action by the Colorado River's legally designated Water Master. As an initial step, Living Rivers is seeking the Secretary's commitment toward helping to establish a dialogue amongst the basin states, Indian tribes, water users and environmental groups, to begin tackling this critical problem.

The letter outlines two key challenges that need to be addressed.

- Bringing the basin's water use into balance with natural flows by re-negotiating the water allocations established in the Colorado River Compact. These allocations are 20 percent above what the river deliver in years of average flow.
- Establish water use efficiency standards for all irrigators under contract with the Bureau of Reclamation. These users consume more than 80 percent of Colorado River water, much of it for water intensive and low value crops, such as alfalfa and other feed crops for livestock.

"The Colorado River can accommodate the future needs of the Basin states and Mexico as well as the natural environment. This important goal will most effectively be accomplished when the Department of the Interior takes the lead in the evolution of management policies which recognize the Colorado River's inevitable constraints," the letter from Living Rivers states.

Living Rivers has established "Drought Watch" as an urgent campaign focus to provide the public with accurate information about the decline in water availability in the Colorado River watershed, and opportunities for the region's water users to alter their consumption patterns without jeopardizing the meeting of human needs, the economy or the environment.

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On the Web:

[Living Rivers Drought Watch Campaign](#)

[United States Geological Survey. Precipitation Survey of the Colorado Plateau Region](#)

[National Oceanographic and Atmospheric Administration Forecast](#)

LR in the News 03/16/03

Conservationists Bemoan Diversion of Water From Moab's Mill Creek

SALT LAKE TRIBUNE
BY LISA CHURCH

MOAB -- Grand County's water policies are destroying a sensitive riparian area and threaten to further damage the Colorado River watershed, water conservation activists say.

About 80 rallied Friday in Moab to protest those policies, an event that coincided with the sixth annual International Day of Action Against Dams and for Rivers, Water & Life.



Speakers at the rally, sponsored by Living Rivers, a Moab-based nonprofit group, accused the county of "putting greed before the welfare of the community." The activists contend the Grand County Water Conservancy District diverts too much water from Mill Creek, a stream that originates with runoff from the La Sal Mountains and flows more than 25 miles through Moab, emptying into the Colorado River. The water winds up in Ken's Lake reservoir, the main source of irrigation water for about 125 farmers and ranchers in the county's southern reaches.

"Water may be pouring off the La Sals, but by the time it makes its way into Moab, every drop has been diverted," said John Weisheit, conservation director for Living Rivers. "Mill Creek's ecology is being destroyed."

Last month, the district petitioned the federal Bureau of Land Management for permission to reduce by half the amount of water it leaves in the stream below Ken's Lake, a move Weisheit said would devastate Mill Creek's native plants and fish. The BLM denied the request. Meantime, the Grand Water and Sewer Service Agency, of which the district is a part, has approved a feasibility study on the cost of diverting Colorado River water to Ken's Lake. The agency owns rights to 10 cubic feet per second of water but has never exercised them because it had no way to get the water to the reservoir.

Increasing Mill Creek's flow is essential to maintaining a healthy riparian area, said Lee Goodman, of Moab.

"Mill Creek is everything people create in their myths as an idyllic place. When you've got something as gorgeous and as important to the human spirit, one shouldn't have to argue over how much water it can have," Goodman said.

Agency manager Dale Pierson said Friday that Grand County water districts encourage conservation. In recent years, he said, district users have reduced water consumption by 25 percent, the state water conservation standard, and last year water use was down by 28 percent from 2001.

"We're doing pretty well, but we can do better," Pierson said. "We want all our customers to be conscious of water use, and to conserve as much as possible."

He said the proposed \$20 million Colorado River plan would add additional water to Ken's Lake that the district would use to establish a separate valley-wide irrigation system. That way, customers who now use water from the culinary system to water lawns and gardens could save money and help the agency cut back on the amount drawn from its aquifer.

However, he said, "We won't build it if it isn't feasible for water customers."

The Articles

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Living Rivers Currents 03/19/03

Troubled Delta: Help Save What's Left

For the past year, Living Rivers has been working to stop the Bureau of Reclamation (BuRec) from destroying the most functional piece of Colorado River delta habitat, the Cienega de Santa Clara. BuRec is preparing to submit a report to Congress that recommends the diversion of Cienega water to BuRec's Yuma Desalting Plant. Public input is needed now to help influence this report before it is finalized, as well as letters to Congress once it is submitted.

This rich 14,000-acre biosphere reserve in Mexico receives the only constant flows in the entire two-million-acre delta region. As such, it provides critical habitat for a number of endangered species, and especially for waterfowl traveling the Pacific Flyway between Alaska and South America. The Cienega and 90 percent of the surrounding delta region was destroyed when water diversions from the Colorado River by the United States and Mexico began taking every drop. The Cienega has been revitalized, however, as a result of irrigation drainage from southwestern Arizona that has been diverted into Mexico. BuRec now wishes to capture all this drainage water, and divert it through its mothballed desalting plant in Yuma, Arizona.

BuRec's motive is to add an additional 108,000 acre-feet of water back into the Colorado River, so that a similar amount could be used by farmers upstream. Finally completed in 1992 at a cost of \$253 million, the Yuma Desalting Plant was slated to treat irrigation drainage water and to ensure that water delivered to Mexico met agreed upon water quality standards. However, given the plant's operation costs of \$36 million annually, it has been more economical to obtain the 108,000 acre-feet of water from California, and allow the drainage water to flow on down to the Cienega. Starting up the plant will have the reverse effect—an ecological disaster for the Cienega, and an unnecessary economic burden for US taxpayers.

On March 7, Living Rivers, Defenders of Wildlife, Pacific Institute, Sierra Club, Environmental Defense and Southwest Rivers jointly submitted a critique of BuRec's most recent draft report to Congress. Among the most blatant omissions were hardly any reference to the Cienega and the ecological impacts associated with the loss of its only water source. There was also no mention of the federally listed endangered species that would be affected by taking this water, including the Yuma clapper rail, desert pupfish and black rail.

To improve the economic picture, BuRec overestimated the desalting plant's output, causing the average price per acre-foot of water produced to be 33 percent lower than what would actually occur. A similar error was made in calculating the plant's primary operating costs: electricity. BuRec used a price of \$32 per megawatt hour, when the actual price is \$44. BuRec hopes that such faulty analysis will not be questioned by Congress, nor that Congress will ask for alternative methods of achieving the required water quality standards.

In fact, the draft report did not address long-term alternatives at all. Living Rivers' analysis reveals that water rights could be purchased or leased from Arizona irrigators at a cost of 75 to 85 percent less than the cost of desalting the drainage water via the Yuma plant. By not relying on the operation of the plant, it can be permanently decommissioned, saving tax payers an additional \$5.1 million annually.

Please join Living Rivers in demanding that a more thorough economic and alternatives analysis be undertaken by BuRec before they submit their report to Congress. Write to: Robert Johnson, Regional Director; Lower Colorado River Region, U.S. Bureau of Reclamation; PO Box 61470; Boulder City, NV 89006-1470; Fax: (702) 293-8614; Email: BJohnson@lc.usbr.gov.

Living Rivers Currents 03/19/03

Mill Creek: Microcosm of the Colorado River

In conjunction with the sixth International Day of Action Against Dams, and for Rivers, Water and Life, Living Rivers initiated a campaign to help revive a small tributary of the Colorado River running just 300 yards from its Moab offices. About 80 people turned out for the noon time rally on March 14.

Mill Creek drops 7,000 feet from the La Sal mountains to its confluence with the Colorado River, 25 miles away. Just like the Colorado, Mill Creek runs dry before reaching its final destination; can no longer support endangered native fish; sees most of its water diverted for taxpayer-subsidized alfalfa irrigation; and receives limited public involvement in decisions affecting its future.

Living Rivers' objective is the return of year-round stream flow by mobilizing public support to reduce the need for extensive diversions. On any given year, from 15 to 40 percent of the water diverted from Mill Creek is lost to leakage in the system's principal

reservoir, Ken's Lake. Additionally, the agency responsible for managing this facility often takes more water from the creek than is allowed by their water right. Merely correcting these problems would go a long way toward reviving Mill Creek.

More important are the implementation of programs to help farmers who are potentially interested in making the transition to more water-efficient, higher-value crops. For example, alfalfa can require four times as much water as grapes, and provides the farmer with a crop that yields only \$100 per acre-foot of water, whereas good quality grapes can yield \$7,500 per acre-foot. Living Rivers is advocating similar alternatives for those who use Mill Creek water for water-intensive ornamental landscaping—promoting a switch to drought-tolerant native plants to keep more water in the creek.

Living Rivers Currents 03/19/03

Lake Powell: Running Out of Reservoir

Lake Powell reservoir is down 91 feet from normal; it is officially half empty. The last time it was at this level was 30 years ago when the reservoir was first filling. According to a report that was published in October 1995 by the American Water Resources Association, should a severe and sustained drought similar to past events occur, Lake Powell reservoir is likely to stay empty for approximately eight years.

The National Park Service, which oversees the marina facilities at Lake Powell, has had to make several adjustments to keep the facilities operational since last summer. Despite these adjustments, three boat ramps are presently closed and the ferry service between two other marinas is also shut down.

Additionally, the recently approved \$70-million Antelope Point Marina Resort is in jeopardy of being built but never used. To be operational, this facility is totally dependent on having a full reservoir. Right now, at Antelope Point, the reservoir is confined between the sheer vertical cliffs of the original Colorado River canyon and is inaccessible. When considering the demand for water in the lower basin states of California, Arizona and Nevada, compounded by the growing realization that a severe and sustained drought is already upon us, it is possible that the resort may not be useable for decades.

At the top of the reservoir, where the Colorado River enters, major sediment problems are surfacing. The sediment deposits of the last 40 years have built a substantial delta forcing boat ramp and campsite closures, and will eventually engulf the concession facilities and the culinary water intakes.

This situation is also causing extensive complications for white water rafters whose multi-day trips through Canyonlands National Park end at Lake Powell. Their primary facility for getting off the water, Hite Marina, is effectively shut down due to sediment. It's difficult for land vehicles to get close enough to the water without getting stuck. This

could be a major problem for the multi-million-dollar commercial rafting industry that relies on this stretch of the Colorado.

It has been anticipated that the upcoming snowmelt, and the consequent reservoir rise, might bring some relief for the facilities. But a current projection supplied by the Bureau of Reclamation does not support such a hope and indicates lowering will continue through the middle of summer. The snowmelt will actually serve to aggravate the situation because the increased river flows will erode and mobilize the suspended sediments upstream, and then redeposit them at Hite Marina where the Colorado River delta is currently expanding.

Decreased recreation is not the only potential impact of the lowering reservoir. If the present drought does not relent, within three years Lake Powell will eventually drain to the level of the penstock tubes that spin the generators at Glen Canyon Dam.

This problem is not just indicative of Lake Powell. The entire Colorado River storage system has dropped from 92 to 59 percent over the past 40 months. In Arizona, a reservoir on the Verde River is completely empty. A reservoir on the Gila River is four percent full and Lake Roosevelt reservoir on the Salt River is 14 percent full. "Lack of access to flat water recreation is the least of our worries," says Owen Lammers, executive director of Living Rivers. "The Southwest plumbing system is headed for complete catastrophe and the Bureau of Reclamation, together with the seven states that use Colorado River water, have no disaster preparedness plan." For ongoing updates, visit "Drought Watch" at the Living Rivers web page.

Living Rivers Currents 03/19/03

Flaming Gorge: EIS to be Released

After nearly three years, the Bureau of Reclamation (BuRec) will soon be releasing its draft Environmental Impact Statement (EIS) for the reoperations of Flaming Gorge Dam. The purpose of this EIS is to recommend changes in dam operations to improve habitat for endangered fish along the Green River and in Dinosaur National Monument—the humpback chub, razorback sucker, bonytail chub and Colorado pikeminnow.

For a long time the operation of Flaming Gorge Dam has caused harm to native fish. The introduction of a successful fishery for non-native trout in the dam's tailwaters is a testament to the



conditions existing downstream of the dam that make the river inhospitable for native species, which require warmer water for successful spawning and survival. The reservoir traps vital sediments behind the dam, thereby inhibiting sandbar- and beach-building habitat necessary for protecting juvenile fish. The dam, which has no fish passage structure, forms a reservoir which is used and managed for a recreational sport fishery for several non-native species known to prey on endangered native fish. Conditions are marginal at best for endangered fish survival in the reservoir as well as downstream.

In 2000, Living Rivers formed a nationwide coalition to demand that BuRec fully consider the decommissioning of Flaming Gorge Dam as the most viable alternative to ensuring the recovery of native fish habitat in Dinosaur National Monument. Although a rather significant structure, Flaming Gorge Dam stores very little water, and generates an insignificant amount of hydroelectricity. Its decommissioning, along with that of the much smaller Fontenelle Dam upstream, would allow the Green River to again flow wild and free.

[Scoping Comments on EIS for Flaming Gorge Scoping Comments on EIS for Flaming Gorge Scoping Comments on EIS for Flaming Gorge Dam](#)

To obtain a copy of the draft EIS, write to: Beverly Heffernan; BuRec; 302 East 1860 South; Provo, UT 84606-7317; (801) 379-1161; Fax: (801) 379-1159; Email: bheffernan@uc.usbr.gov. Keep an eye on our web site for more detailed information once the draft EIS has been released.

Living Rivers Currents 03/19/03

Drought Watch! Demands Action to Avoid Crisis

Reservoir levels in the Colorado River watershed are at their lowest point in history. Over the past three years, they have been declining at a rate of ten percent per year and are now at 59 percent of capacity—an approximate three-year supply for the basin's 25 million residents and farmers. While historical evidence reveals that the present drought is not unprecedented and is likely to continue, the basin's water managers remain unconcerned.

The most recent sustained drought in the basin took place between 1942 and 1977. The regional climate was marked by less snow and fewer summer rains. No major crisis surfaced because Colorado River consumption was much lower than today. Last year the United States Geological Survey warned that a repeat of this drought could be "catastrophic." It is already shaping up to be much worse than the previous one. River flows during the first several years of the present drought are 15 percent below what they were when the 1942 drought began. Despite hopes that an El Niño event would

generate above-average precipitation this year, the most optimistic forecasts now call for snowpacks of 20 percent below normal.

When these issues were raised to Commissioner John Keys of the Bureau of Reclamation (BuRec) last month, he stated that his agency had "no plan" for how the federal government would handle water shortages once reservoirs began running dry. BuRec has merely continuously revised its over-optimistic hydrologic forecasts for river flows. Its most recent, on March 3, was a 25 percent downward revision for flows into Lake Powell. In October 2002, BuRec predicted flows would be 10.14 million acre-feet in the water year of 2003. Now BuRec is predicting only 7.44 million acre-feet—62 percent of normal.

According to Living Rivers' conservation director John Weisheit, BuRec is also overestimating the amount of available water in its reservoirs. "Their available water figures from Lake Mead and Lake Powell reservoirs do not fully account for the sediment which now occupies storage space. There are another two million acre-feet of storage losses, bringing the overall storage in the basin to 55 percent of capacity."

In a letter sent to Secretary of Interior Gale Norton on March 14, on the occasion of the sixth International Day of Action Against Dams, and for Rivers Water and Life, Living Rivers demanded urgent action by the Colorado River's legally designated Water Master. As an initial step, Living Rivers is seeking the Secretary's commitment toward helping to establish a dialogue amongst the basin states, Indian tribes, water users and environmental groups, to begin tackling this critical problem.

The letter outlines two key challenges that need to be addressed. First, bring the basin's water use into balance with natural flows by re-negotiating the water allocations established in the Colorado River Compact. These allocations are 20 percent above what the river delivers in years of average flow. Second, the federal government should establish water use efficiency standards for all irrigators under contract with the Bureau of Reclamation. These users consume more than 80 percent of Colorado River water, much of it for water-intensive and low-value crops, such as alfalfa and other feed crops for livestock.

LR in the News 03/20/03

Mill Creek Rally organizers say Grand County water agency puts greed before welfare of land

Times-Independent by Lisa Church

Moab, UT - Grand County's water policies are destroying a sensitive riparian area and threaten to further damage the Colorado River watershed, water conservation activists said at a protest rally Friday.

The Moab event coincided with the 5th Annual International Day of Action Against Dams and for Rivers, Water & Life, and also commemorated the founding of Living Rivers, a

Moab-based non-profit group that promotes water conservation and restoration of Western rivers, officials said.

Speakers at the rally also accused the water agency of "putting greed before the welfare of the community."

Representatives from Living Rivers and other conservation groups say the Grand County Water Conservancy District annually diverts too much water from Mill Creek into the Ken's Lake Reservoir. Mill Creek originates with runoff from the La Sal Mountains and flows more than 25 miles through Moab, emptying into the Colorado River. It is the main source of irrigation water for about 125 farmers and ranchers in the county's southernmost reaches.

"Water may be pouring off the La Sals, but by the time it makes its way into Moab, every drop has been diverted," said John Weisheit, conservation director for Living Rivers. "Mill Creek's ecology is being destroyed."

Last month, the district petitioned the U.S. Bureau of Land Management for permission to reduce by half the amount of water it leaves in the stream below Ken's Lake, a move Weisheit said would devastate Mill Creek's native plants and fish. The BLM recently denied the request, but activists point to it as an example of the agency's greed.

About 80 people gathered on the Grand County courthouse lawn to protest that request and a feasibility study approved by the Grand Water and Sewer Service Agency - the district's umbrella agency - to examine the cost of diverting Colorado River water to Ken's Lake. The agency owns rights to 10 cubic feet per second of water but has never exercised the right because it had no way to get the water to its reservoir.

Increasing Mill Creek's flow - the stream drops 8,000 feet through the mountains before reaching the Moab Valley - is essential to maintaining a healthy riparian area that is important to the community, said Moab resident Lee Goodman.

"Mill Creek is everything people create in their myths as an idyllic place. When you've got something as gorgeous and as important to the human spirit, one shouldn't have to argue over how much water it can have," Goodman said. "If you see your child being tortured right in front of you, it's important to stand up, to complain."

Agency manager Dale Pierson said Friday that Grand County water districts encourage conservation, and have been successful in promoting lower water use. In recent years, district users have reduced water consumption by 25 percent - the state water conservation standard - and last year, water use was down by 28 percent from 2001, he said.

"I think we're doing pretty well, but we can do better," Pierson said. "We want all our customers to be conscious of water use, and to conserve as much as possible."

He said diverting water from the Colorado River represents another step in reducing the amount of culinary water used by residents. The \$20 million plus project would add

additional water to Ken's Lake that the district would use to establish a separate valley-wide irrigation system.

"If this pipeline were built, customers who currently must use water from the culinary system to water lawns and gardens, could save money and help us cut back on the amount water drawn from our underground aquifer," Pierson said. "We won't build it if it isn't feasible for water customers."

Activists hope the public protest will promote dialogue between Grand County residents and water officials.

"We want to work within the community to create responsible water use and conservation with a goal of maintaining our rivers, streams, and ecosystems. But we must also look regionally to restore the balance because we share this area with Native Americans and their values, which are older than ours and more important actually," Weisheit said. "If we continue this way like other hydro-societies, we will lose it all."

LR Letter 03/20/03

Fossil Creek Restoration Threatened

March 20, 2003

Phil Smithers

Senior Designer

APS / Generation Engineering

P.O. Box 53933, m/s 3190

Phoenix, Arizona 85210

Dear Mr. Smithers:

RE: Concerns regarding the restoration of Fossil Creek as agreed upon in the Childs Irving Hydroelectric Project Settlement Agreement and Removal and Restoration Plan between Arizona Public Service and the Intervenor, dated September 11, 2000.

Thank you for submitting the "Childs-Irving Hydroelectric Decommissioning Update" dated February 03, 2003. We commend you for your work to support the decommissioning of the plants as agreed upon in the Offer of Settlement, Childs/Irving Hydroelectric Project, Project No. 2069 between the intervenors and Arizona Public Service, submitted September 15, 2000 and the Settlement Agreement (Agreement), dated September 11, 2000.

Your February 3, 2003 Update includes an item under "Ongoing issues related to decommissioning" which is of concern. It reads "Historical – The R & R plan for this project describes removal of the surge tank at the top of the Childs penstock and the removal of contents from the Childs powerhouse. SHPO has raised issues with both. We support leaving the majority of contents in the Childs powerhouse for historical purposes and never intended to gut the building. These are the only issues SHPO has at this time."

First, this is not an ongoing issue as the Agreement includes a Removal and Restoration Plan (Exhibit M) which was negotiated at length between the intervenors and APS, and for which input was received from the US Forest Service, SHPO and other agencies with a stake in the Proceedings. The Removal and Restoration Plan clearly states:

"The standpipe (30x30') shall be removed" (page 30); and "The Childs powerhouse shall remain as historical feature. All equipment, electrical, mechanical and maintenance will be removed" (page 31).

We will address the surge tank issue first. Leaving the surge tank in place is unacceptable.

Removal of the tank has already been negotiated and agreed upon as is stated in the Offer of Settlement (Offer) between APS and the Intervenor. SHPO and the USFS were both included in those discussions, as stated in the Offer (page 3), with the conclusion that the participants agreed to the Removal and Restoration Plan:

"These negotiations were designed to address the concerns of all interested parties, whether Intervenor in the relicensing proceeding or not. In fact, the settlement negotiations involved several additional parties that did not intervene in the relicensing proceeding, including ...the USFS,...State Historic Preservation Office...

"As a result of the collaboration discussed above, APS, the Intervenor and the Non-Intervenor have reached agreement for the surrender of the Project license and removal of the Project works, as described in the Childs/Irving Hydroelectric Plants Removal and Restoration Plan..."

The Agreement, Section 1.1 reads "The Participants have entered into this Agreement for the purpose of ...(b) approving the Removal and Restoration Plan..." (section 1.1) "The Participants agree that Project removal, under the terms and conditions of this Agreement, constitutes a reasonable resolution to the dispute between them..." (section 2.1)

Because the Agreement is in place and has been for more than two years, no further discussion of these items should be necessary. However, we will reiterate briefly, for the record why leaving the surge tank in place is unacceptable

The value of preserving the tank for historical interpretation is questionable. The surge tank is a simple symmetrical 30-foot by 30-foot pipe made of concrete. It includes no innovative design, no natural native materials and is of little visual interest or appeal. While a surge tank was important to the production of hydropower at this facility, the need to preserve the tank itself is highly questionable. The tank is physically located well away from the Childs plant where the bulk of historical information will likely be sought. The tank's design and purpose are easily depicted in photos, drawings or verbiage. Removing the tank will have no impact on historical depictions.

SHPO's record for preserving Native American sites is dismal, and it continues to ignore the requests of Native American stakeholders in this proceeding. The Yavapai-Apache,

stewards and residents of Fossil Creek long before the appearance of Euro-American settlers, have asked that the surge tank be removed. Yet SHPO continues to ignore them.

As stated by Vincent Randall, Tribal Chairman for the Yavapai-Apache Nation during the proceedings to FERC, September 21, 1999:

“Five-hundred years of stewardship on the land should serve as good cause for us to be acknowledged as real life stakeholders at the table. We believe the Nations voice should have official status along with the other participants when decisions are being made about such a traditionally significant place.”

In a letter of June 5, 2000, Vincent Randall stated:

“As we stated in the letter Chris presented on our behalf in May the Yavapai-Apache Nation was initially drawn to the process by the concept of full restoration for Fossil Creek....

“We believe the idea of full restoration is a noble one. Is the surge tank really intrinsic to the Euro-American experience in the west? ... The Yavapai-Apache Nation is pro preservation, but we see it as a matter of strict triage. Can the APS story be told without the actual surge tank? Yes, we believe it can. Will the touring public be diminished if the surge tank is removed? No, we believe it will not. Is the concept of returning the landscape to as close to the pre APS condition as possible a noble one? Yes, indeed it is. Is the skylined surge tank part of that condition? No it is not.”

Over and over, in the state of Arizona, ancient Native American sites have been photographed, at best, and then bulldozed with SHPO's blessing in the name of development. Now, the Yavapai-Apache are requesting one small concession from SHPO in this historical opportunity to restore a site that holds cultural and spiritual significance for their Nation.

We find SHPO's insistence on preserving the concrete tank, against the express wishes of the Yavapai-Apache Nation, shameful and appalling. We would hope that no admonition to the USFS concerning respect for the Nation in this matter is necessary.

The goal of the restoration plan is to return the area to its natural state as much as possible. The Introduction of the Removal and Restoration Plan reads, "The following plan is based on limiting damage to the surrounding environment while returning the environment as close as practicable to its native state." The native state did not include a three-story concrete tank. Moreover, the tank is a visual scar on the landscape and interferes with the enjoyment of a "natural" area.

The surge tank will be an obvious target for graffiti and will increase maintenance costs. With restoration, Fossil Creek will become a more desirable recreation destination, drawing larger crowds, and with potential historical signage regarding the surge tank, drawing them specifically to the tank. The USFS and SHPO should consider whether it has the funds to continuously remove graffiti and trash from the tank. Should the tank

be left in place, we will seek designation regarding who will patrol the tank area and how often the maintenance work will be performed.

The tank represents a liability The USFS and SHPO , as well as APS, should consider the safety and legal issues they may encounter given that the tank represents an "attractive nuisance". Again leaving the tank in place and perhaps including signage drawing people to the tank is irresponsible. Putting a fence around the tank will only add to the nuisance factor and certainly does not constitute "removal and restoration."

The next issue at hand is APS' request to leave the electrical, mechanical and other equipment in place in the Child powerhouse. We recognize that APS has and will continue to incur substantial costs in complying with the terms of the Agreement and with the Federal Energy Regulatory Commission's requests for information to support APS' Surrender application. We also appreciate the contention that the contents of the powerhouse may be helpful as a means of interpreting the historical production of hydroelectric power at the plants. As such, we do not intend at this time to object to leaving the majority of the contents in the Childs powerhouse.

Sincerely,

Lisa Force
Program Director

Cc: Mr. Jim Garrison
Arizona State Historic Preservation Officer
1300 W. Washington
Phoenix, AZ 85007

Ken Anderson
District Ranger
US Forest Service
P.O. Box 300
Sedona, AZ 86339

LR in the News 03/27/03

Water and Sewer Board irked by questions raised in letters and rally

Times-Independent by Lisa Church

Moab, UT - Recent protests and letters to The Times-Independent questioning the business practices and the fairness of the Grand Water and Sewer Service Agency (GWSSA) board structure prompted one board member to ask agency employees to develop charts and literature explaining how the agency is organized and operates.

Rex Tanner, a member of the agency operating committee, took issue with statements and statistics disseminated by Living Rivers - a Moab-based non-profit group that promotes water conservation and restoration of Western rivers - in news releases and at a rally two weeks ago protesting the agency's water management practices. Tanner

characterized as "outrageous" statements made by the group, and said a letter to the editor in the March 20 issue of The Times. The letter writer called the agency to task for holding "secret meetings" in reference to legally-allowed executive session discussions held by the board, clearly show that area residents do not understand the workings of the agency and the laws governing public boards.

"There's just so much misinformation floating around out there. The newspaper should not be telling people in this county what this agency is doing. The agency should be doing that," Tanner said.

But James L. Walker, a member of the Grand County Water Conservancy District Board, disagreed. Walker said groups like Living Rivers, and others in the community will choose to misinterpret the agency's actions in order to push their own agendas.

"Every time you give them more information they still interpret it however they want," Walker said. "All you do by giving them more information is to give them more ammunition to use against us."

Agency board president Gary Wilson questioned whether developing informational literature for the public is the best use of staff time. State and federal law require all public agencies to provide certain documents and information upon request by citizens, and Wilson said the agency always complies even though doing so often constitutes a drain on staff.

"It takes a tremendous amount of the staff's time to provide this information," Wilson said. "But we do it because we have to."

River News 03/27/03

RRFW Riverwire PEARCE FERRY RAPID UPDATE

The normally tranquil waters of the Colorado River are beginning to become turbulent at two points near Pearce Ferry, Arizona just past the western boundary of Grand Canyon National Park. This reach of the Colorado River is controlled by the water level of Lake Mead. When the lake is near full pool, a large lake with no current greets river runners departing the end of Grand Canyon. But with the 4th year of drought continuing, the unusually low level of Lake Mead has caused the Colorado River to entrench into the sediment deposited in the upper reaches of the lake. The river is flowing with strong current at the Ferry. The river no longer follows its historic channel and is now flowing over low gravel hills approximately one mile north of Pearce Ferry. Two new riffles have formed in this area.

The upper riffle, at approximately river mile 280, is a series of small standing waves stretching almost all the way across the river, which is about 150 feet wide at this point.

A fast channel has developed on the river right side of the riffle. The lower riffle is forming where the river is cutting through a saddle between two small hills.

At this time, these riffles pose no difficulty to river travelers, but have the potential to upset articles laid out on watercraft decks. Night floating through this area is not recommended. This area has the potential to form serious rapids as Lake Mead is projected to drop 12 to 15 feet in the next 4 months.

Photographs of these two riffles are at www.vishnutemplepress.com/pearceferry.html

LR in the News 03/30/03

West's water at risk as Utah lake shrinks

By Stuart Leavenworth Sacramento Bee Staff Writer Monday, March 31, 2003

LAKE POWELL, Utah -- When John Wesley Powell embarked on his historic trip down the Colorado River in 1869, he described a raging, foaming torrent of water, rapids "that reel and roll and boil ... making a wild music."

It is doubtful Powell would recognize the Colorado River now. As it enters the lake that bears his name, the river looks more like a creek than a cataclysm. Starved by four years of drought, the nation's second-largest man-made lake has dropped to its lowest point in three decades. It is the Amazing Shrinking Reservoir, and its rapid downsizing is sending ripples across the West, even up to Northern California.

Unsure about supplies from the Colorado, Southern California is buying water from Sacramento Valley rice farmers. Las Vegas also is scrounging for supplies. Environmentalists are saying "we told you so," and Lake Powell's major industry -- houseboating -- isn't floating like it once was.

On a recent weekend, boat owners Rob and Darcy Yates drove to the upper tip of Lake Powell and stood stunned by the miles of sunbaked mud flats before them.

"The environmentalists have wanted to drain Lake Powell for years," said Darcy Yates, a flight attendant from Lehi, Utah. "It looks like they will finally get their wish."

Normally holding 7.8 trillion gallons of water and stretching 180 miles into two states, Lake Powell is dropping a foot a week, slowly exposing the sinuous canyons that federal engineers flooded when they built Glen Canyon Dam in the early 1960s.

If the dry spell continues, officials of the U.S. Bureau of Reclamation will have to prepare for the unthinkable. Eventually, they say, the lake could drop so low it will stop feeding the hydroelectric penstocks that generate \$70 million in power yearly for 1.7 million people throughout the Southwest. At that point, the water supply of 25 million people in California, Nevada and Arizona would also be in jeopardy.

"We could witness the draining of Lake Powell in our generation," said John Weisheit, conservation director of Living Rivers, an environmental group based in Moab, Utah. "When a big drought comes on the Colorado, no amount of reservoirs will help."

Even federal officials, who rarely acknowledge their projects are vulnerable to nature's whims, say the next few years could be crucial.

"It is never too early to start getting a little concerned," said Rusty Gattis, deputy manager of Glen Canyon Dam. "You never know what the next day may bring."

Seen from the air, Lake Powell looks like a giant blue Rorschach blotch splattered across the red-rock moonscape of southeastern Utah. When full, the reservoir holds enough water to cover Pennsylvania a foot deep. Now, it has dropped to half its volume, leaving behind a white ring of calcified rock on its vast, 1,960-mile shoreline.

Scientists disagree on what is happening to Lake Powell and other depleted reservoirs of the Colorado basin.

Some say the watershed is experiencing a normal boom-and-bust cycle -- illustrated by the huge snowstorm that walloped the Rockies two weeks ago. Others say the region is undergoing a climatic shift that could lead to multiyear droughts unseen during this century.

Nowhere are the stakes higher than in Page, Ariz., a town of 9,000 near the Utah border that is entirely dependent on Lake Powell. Some 2.5 million people visit Page and the Glen Canyon National Recreation Area each year, spending an estimated \$400 million on houseboat and Jet Ski rentals, motel rooms, fishing gear, boat tours and countless gallons of sunblock.

Business leaders say despite the low water, Lake Powell is still the floating party it once was.

"The press keeps putting out the message that the lake is gone, or half-empty," said Joan Nevills Stavelly, director of the Page-Lake Powell Chamber of Commerce. "We like to say that the lake is half-full."

Even so, the drought has created some challenges, as Stavelly readily acknowledges. Already, three boat ramps are unusable because of the low water. The National Park Service is spending \$2.5 million to extend the boat ramps before the tourist season starts in May.

The drought also has complicated the task of reaching popular destinations, such as Rainbow Bridge, the world's largest natural rock arch.

Four years ago, tourists could boat within eyesight of Rainbow Bridge. Now, they must dock a half-mile away and walk along a floating gangplank and trail to the sweeping, 290-foot-high arch.

Velma Stoss, an Arizona native who now lives in Seattle, returned to Rainbow Bridge two weeks ago and was taken aback as she hiked up the trail.

"When you think about the amount of water that has been lost, it is staggering," said Stoss, gazing at the dried-up side canyon beneath Rainbow Bridge. "I guess it is going to California."

Stoss is partly right. Although Lake Powell provides recreation and hydropower, its main function is to convey water from the upper Colorado basin to states downstream. Under the 1922 Colorado River Compact, the four states of the upper basin -- Utah, Colorado, Wyoming and New Mexico -- must release 8.2 million acre-feet (or 2.6 trillion gallons) from Powell each year, no matter how much flows into the lake.

About half of that goes to Southern California.

In effect, Lake Powell serves as a massive security blanket for the upper basin states, which might otherwise have to tap their own reservoirs to send water downstream. But it hasn't come without a cost.

As Lake Powell filled Glen Canyon, it drowned miles of fern-lined canyons, Anasazi Indian ruins, petroglyphs and mysterious rock arches and chambers like the Music Temple and Cathedral of the Desert. The casual loss of this natural heritage angered artists and environmentalists, some of whom cling to a hope that Glen Canyon Dam will one day be decommissioned and the canyon eventually restored.

One of these is Rich Ingebretsen, a Salt Lake City emergency room doctor and an unlikely activist. A descendent of Brigham Young, Ingebretsen spent his youth rafting down the upper Colorado River. When Lake Powell started to submerge some of his favorite rapids, Ingebretsen saw his calling in life and founded the Glen Canyon Institute, one of several groups committed to draining the lake.

Wearing a cap that reads "Damn Dam," Ingebretsen recently rented a motorboat and went in search of some of Glen Canyon's lost wonders.

Heading south from Hall's Crossing marina, Ingebretsen rounded one sheer cliff after another, then turned right into the Escalante arm of Lake Powell, then left at a side canyon. Soon the boat was entering an increasingly narrow, curved chamber, wide at the bottom with a slender parabola of sunlight descending from above.

"This is the entrance to one of the most famous places in Glen Canyon," pronounced Ingebretsen as he entered a cavern called the Cathedral in the Desert. "We are going to see something people haven't seen in years."

A favorite haunt of early canyon explorers, the Cathedral has been called a masterwork of natural architecture. During its heyday, a slim waterfall fell from the lower part of the cavern; now the cascade is submerged. The bottom walls are discolored from years of high water, but still the Cathedral is an ethereal place, a water-carved amphitheater of streaked sandstone, shifting light and reverberating echoes.

For seven years, Ingebretsen has been trying to rally people around the idea of bringing back these jewels by draining Lake Powell. Some say his quest is quixotic. Others call him crazy.

Not surprisingly, Ingebretsen isn't a popular figure in Page, a town whose founders helped build Glen Canyon dam. The town stopped welcoming environmentalists in 1981, when a group of Earth First! activists climbed onto the dam and unfurled a banner that depicted a giant crack down the side.

Water managers in California and Arizona also scoff at the idea of draining Powell.

Dennis Underwood, a former Bureau of Reclamation commissioner, says the drought would be far more serious if the reservoir wasn't there. Without Lake Powell, he said, lower basin states would be close to exhausting the Colorado's downstream reservoirs, such as Lake Mead, backed up by Hoover Dam. "You'd have trouble meeting the needs of the lower basin," said Underwood, who now works for the Metropolitan Water District of Southern California.

Even with Lake Powell, the region's water prospects are hardly secure.

According to the U.S. Census Bureau, the combined cities of Phoenix, Las Vegas and Los Angeles are adding about 350,000 people every year. Las Vegas in particular is a major water consumer, using 307 gallons per person daily -- about twice as much as residents in Los Angeles.

In recent months, Las Vegas officials have started restricting the water pumped to golf courses, raising the ire of resort owners. The city is mulling other conservation measures, although critics such as Weisheit, of the environmental group Living Rivers, say the measures are mostly window dressing.

For several years, various California agencies have been haggling over a proposed water sale between the Imperial Valley and San Diego, aimed at securing Southern California's access to surplus water from the Colorado River.

Now, however, federal officials are unsure if there will be much surplus water in coming years. As a result, the Metropolitan Water District has been lining up backup supplies, such as the water it is purchasing from Sacramento Valley rice farmers.

Even the recent storm in the Rocky Mountains -- which dumped several feet of snow -- didn't help prospects much.

As it melts, much of that snow is expected to soak into the parched soil of the region, leaving little for reservoirs, said Barry Wirth, a spokesman for the Bureau of Reclamation. Lake Powell as a whole is expected to drop for a few more weeks, level off with spring runoff, rise a few feet and then starting dropping again this fall.

Ultimately, many water analysts say, the western United States will have to confront some root causes of the water crunch in the Colorado basin. When they divided up water supplies in 1922, the basin states overestimated the average yield of the river and went on to develop cities, farms and reservoirs based on an unrealistic estimate of nature's bounty.

Now, say Reclamation officials, the upper basin is struggling to send water downstream as a historic drought collides with a historic population boom.

"Everything is really tight," said Wirth, who works out of Salt Lake City. "As every year goes by, and another moving van moves into Grand Junction and Salt Lake, it gets a little harder."

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LR in the News 03/31/03

Colorado blizzard not helping drought

Kansas City Star
JUDITH KOHLER
Associated Press

DENVER - Colorado's worst blizzard in nearly a century fell on the wrong side of the Continental Divide for much of the drought-parched West.

The mountain snowpack that feeds river basins serving eastern Colorado rose to more than 100 percent of average levels after the storm. But the snowpack feeding the Colorado River basin, which provides water to seven Western states, rose only slightly.

Most states plan to keep in place voluntary or mandatory water restrictions and conservation measures, saying it is too early to tell what the summer will bring.

"There's not any meaningful change," said Wayne Cook, executive director of the Upper Colorado River Commission, based in Salt Lake City. "Maybe next time you could send (the snow) over in a truck or something, dump it over the top, let it run down this side of the hill."

A 1922 agreement allocates Colorado River water among the states. Colorado, Wyoming, Utah and New Mexico get water from the upper part of the basin and California, Nevada and Arizona get water from the lower basin.

Water agencies from Las Vegas to Santa Fe, N.M, closely track storms in the Colorado mountains, where snowpack is even more critical in drought years.

"What impacts us is snow in the Colorado Rockies," said Vince Alberta, spokesman for the Southern Nevada Water Authority, which serves Las Vegas.

The blizzard dumped up to 8 feet of snow in a 500-mile swath in Colorado and southeastern Wyoming the week of March 17, primarily falling on the east side of the Continental Divide.

In river basins serving eastern Colorado, the storm increased projected snowpack runoff from 61 percent of the historical average to 65 percent this year. That is up from the 14 percent recorded at the end of the spring melt last year.

The blizzard barely registered in the Colorado River's lower basin, where the projected runoff remained at about 62 percent, said Colleen Dwyer, spokeswoman for the U.S. Bureau of Reclamation in Boulder City, Nev.

The snowpack percentage is measured against a 30-year average. Melting snow contributes about 80 percent of the water in rivers, streams, lakes and reservoirs, which comprise much of Colorado's water supply.

The blizzard was encouraging but one good season won't wipe out four years of below-average snowpack, Alberta said. His water authority will maintain limits on outdoor watering and types of lawns and water recycling.

In Wyoming, the snow will help parched grasslands in the southeastern region where ranchers have struggled to keep their cattle fed. The rest of the state will benefit little, state climatologist Jan Curtis said.

"Having been in a drought for three to four years now, we are probably so far behind so far as moisture deficit that it would probably take seven of these types of storms to get back to normal," she said.

In the Denver area, paralyzed for days by hip-deep snow, initial glee about the storm's impact on the drought has turned into measured enthusiasm.

"How wonderful! This is really going to help us out," Peter Binney, utilities chief in the Denver suburb of Aurora, said when heavy snow started March 18. Reservoirs that feed Aurora are so low that there's a ban on new lawns and planting vegetables and new flowers.

A week later, Binney was still optimistic, but cautious. "I'd like to see a couple more of these in the next couple weeks," he said.

More snow and rain were predicted for the mountains and foothills, where spring can be the wettest time of the year. El Nino is credited with breaking the region's dry cycle this year.

Vivienne Fink still plans to tear out her Kentucky bluegrass lawn and replace it with ornamental grasses, boulders and native plants.

"I just really don't want to have to pay for watering a lawn that probably shouldn't be there in the first place," she said.

The moisture will allow farmers to delay irrigating for a couple weeks, but "it certainly doesn't end the drought crisis," said Bob Sakata, one of Colorado's largest vegetable producers.

Colorado's blizzard won't do much to relieve the drought in the West, said John Weisheit of the environmental group Living Rivers in Moab, Utah.

He said he is concerned that a wet spring will lead people to ease up on conservation. The Colorado River can't meet the area's growing demand even in good years because the water is overallocated, he said.

Wetter-than-normal seasons in the 1980s and 1990s helped mask that fact, Weisheit said.

"We've been lucky, is what we've been," he said. "Now our luck's run out."

River News 04/02/03

RRFW Riverwire

RIVER PLAN DRAFT NOW SET FOR OCTOBER RELEASE

Grand Canyon National Park planners have pushed back the release of the release of the Draft Management Plan for the Colorado River Management Plan to the fall of this year. RRFW has learned that the NPS is now looking for release of the Draft River Management Plan for no later than October 31, 2003.

RRFW has also learned that the reason for the delay is to allow Grand Canyon National Park planners to include advice from a National Park Advisory Board subcommittee made up of concessioners, nonprofit groups and others. RRFW has not yet discovered how this group will be formed, however we do know that among those pushing for the formation of this Advisory Board subgroup are Grand Canyon River Outfitters Association Executive Director Mark Grisham and GCROA consultant Destry Jarvis.

Besides releasing a Preferred Alternative, Grand Canyon National Park planners expect to have 5 to 6 other alternatives in the draft. One of the alternatives will be a motor-free alternative. Park planners are still looking to have a Final CRMP by December 31, 2004, so that river concessions contracts can be renewed in 2005. All 16 of the river concession contracts will terminate if not renewed on December 31, 2005.

River News 04/07/03

RRFW RIVERWIRE - CONCESSIONAIRES HIRE DC LOBBYIST

T. Destry Jarvis has recently been hired to lobby for the Grand Canyon River Outfitters Association, a trade association established to protect the economic interests of 16 Grand Canyon river concessionaires. Mr. Jarvis will be influencing the CRMP to benefit his employers, especially in Washington D.C., where he lives. Mr. Jarvis recently noted that powerboats on the Colorado River in Grand Canyon are "necessary for the future good condition of the park and the provision of high quality visitor river experience there." He also stated in a recent article for the Boatman's Quarterly Review (Spring, 2003), that "...all concerned should come to realize that the river experience is enhanced, and the park's resources are better conserved, with motors, while both the experience and the resource are diminished without."

Jarvis' position is that the exceptions to the Wilderness Act that have allowed motors shape the real application of it more than the Act's actual language. This is relevant since his various interpretations of the Wilderness Act appear to hinge on where his paycheck comes from. While employed as Federal Policy Director at National Parks Conservation Association, Jarvis wrote a letter defending the 1980 CRMP's proposed phase-out of motors in Grand Canyon National Park to NPS Director Russell E. Dickenson.

"...the decisions to ban motors in the Grand Canyon...were not made lightly, but only after years of discussion, study and consideration." he admonishes the Director. Mr. Jarvis went on to say, "The Service can not afford to allow additional years of contentious debate on these issues, if progress is to be made in any other of the many problem areas deserving your attention. NPCA urges you to stand firm on these important principles."

"What changed his mind? There have been no amendments to the Wilderness Act, no changes in the underlying spirit, values and principles of Wilderness. The intent of Zahniser and wilderness advocates and contemporaries Olaus Murie, Aldo Leopold, Supreme Court Justice William O. Douglas and Bob Marshall is clear. Time and again they wrote that motorized transportation is antithetical to Wilderness." notes Jo Johnson, co-director of River Runners for Wilderness.

Johnson went on to observe "If Jarvis is so sure powerboats are fine in Wilderness, why is it necessary for him to lobby legislators for a Grand Canyon Wilderness Bill that leaves its heart--the Colorado River--out? Why not just allow Congress to designate the entire Grand Canyon, with the River, Wilderness? Is it possible he isn't convinced and therefore must hedge his, or rather, GCROA's, bets?"

"Now more than ever, we need the peace and solace of motor free Wildernesses in Grand Canyon and elsewhere. The meaning of Wilderness was clear in 1964, it was clear at the time of Mr. Jarvis' 1980 impassioned plea to get rid of motors, and it remains clear now. If there is any place on Earth that deserves to be free of motors, it has to be Grand Canyon." Johnson remarked.

Regional News 04/10/03

Trying to make sense of current water controversy (part one)

Times-Independent

Moab, UT

by Lisa Church

contributing writer

Ask a dozen people in Grand County to explain how the Grand Water and Sewer Service Agency works, and you're likely to get a dozen different answers. Factor in the three individual water districts that have pooled their resources under the GWSSA umbrella and the confusion deepens to bewilderment.

In the West, where control of water wields considerable power, it is not surprising, then, that this complex organizational structure devised to manage and distribute culinary and irrigation water in Spanish Valley and throughout Grand County has become a lightning rod for critics who contend that too much water in the valley is now controlled by governing bodies representing the interests of too few county residents. Conversely, staunch defenders of the system maintain that the agency serves the interests of the public by protecting and preserving the valley's valuable water resources.

This great divide in public thinking is deeply rooted in the history of modern water development in Grand County and the chain of events that led to the creation of GWSSA in 1998.

First there was a dam: Creation of the Grand County Water Conservancy District

In the early 1970s, most water rights in Grand County were still privately owned, or were vested in the Moab Irrigation Company, a private corporation made up of individuals who elected to convert their water rights into shares of stock in the larger company. Because growth in any modern community is intrinsically tied to that community's ability to provide its residents with adequate water and sewer services, Grand County officials during this time recognized the need to begin developing a stable water system within the valley.

Their solution: form a water conservancy district that could acquire water rights, build infrastructure including a dam, storage and delivery system, and offer water services to farmers, ranchers and residents in Spanish Valley.

Under state law, water conservancy districts are formed by district courts, and are considered state, not county, agencies. The governor appoints the district's five board members, although the county may recommend names for appointment. However, state law requires a petition, signed by at least 20 percent of landholders within the district, be presented to the court requesting the court to create the conservancy district.

Like all state water conservancy districts, the Grand County Water Conservancy District, created by the 7th District Court in 1971, has the right to hold water rights, and to provide irrigation and culinary water service to customers within the service district. GCWCD's district includes all of Grand County, and 370 adjacent acres in the San Juan County portion of Spanish Valley.

When GCWCD was formed, the district immediately began work to develop the Mill Creek Project – a water storage system that includes constructing a dam to divert water from Mill Creek into a reservoir at Ken's Lake, and the lake's delivery system that now provides irrigation water to shareholders within the district.

To accomplish this massive project, the district needed financing. The State of Utah's Division of Water Resources agreed to provide a low-interest loan to pay for the project, but in order to receive financing, the GCWCD first had to acquire water rights, which

they purchased from the Moab Irrigation Company, to be held by the state as partial collateral for the loan.

The district's initial 1979 agreement with the state estimated the cost of the Mill Creek Project at about \$3.7 million, but construction delays, and the county's economic downturn in the early 1980s –largely a result of the demise of the uranium business – forced the district to seek an additional \$900,000 in funding over a period of several years.

To recoup part of the cost, the district elected to sell irrigation shares to valley farmers and ranchers. Today, about 125 individuals and corporations purchase irrigation water shares in Ken's Lake water, and the annual proceeds from the sale of those shares helps cover the annual loan payment to the state.

The district initially believed it could also generated revenue through the sale of industrial water to mining and other business entities. But as the mining industry went bust, those hopes dried up, said James Walker, president of the Moab Irrigation Company, and a current member of the GCWCD board.

Unfortunately, the water shares owned by GCWCD were strictly irrigation water, so in 1979, the district entered into an exchange agreement with local farmer George White that provided the district with a minimum of 625 acre feet of culinary quality water from White's numerous wells, in exchange for an equal amount of irrigation water from Ken's Lake. The district set about constructing a storage system and pipes to transport the water from White's wells to a storage tank that would eventually provide culinary water to Spanish Valley residents.

Delivering Culinary Water and Sewer Services: The creation of Spanish Valley Water and Sewer Improvement District

Because state law prohibits water conservancy districts from operating a sanitary sewer system, the county commission, in 1974, created the Spanish Valley Water and Sewer Improvement District. The district's boundaries were tightly drawn to encompass only Spanish Valley, and then, only that portion of the valley located within Grand County.

SVWSID is charged with the responsibility of building and operating a culinary water distribution system, storm drainage, and a sewer collection system to service Spanish Valley residents.

The district's five-member board, appointed by the Grand County Council, consists of individuals residing within the district's boundaries.

Since its formation, SVWSID has systematically built infrastructure to deliver culinary water, and sanitary sewer services to Spanish Valley, including the recent \$5.4 million expansion project that extended those services to outlying areas of the valley and created additional culinary water storage tanks that will hold water generated from new wells recently approved for partial development by the state.

Under the original agreement, SVWSID purchased culinary water at wholesale prices from GCWCD, then provided the water at retail cost to customers. Rather than incur the expense of building and maintaining a sewer treatment plant, SVWSID contracts with the city of Moab for sewer treatment, and recoups the cost through user fees.

Currently, SVWSID revenues pay a portion of three separate bonds incurred to cover costs of water delivery systems and development of culinary water and sewer services.

Financing: Creating the Grand County Special Service Water District

Developing water services and storage facilities is an expensive business. In Grand County, financing the host of projects dating to the original Mill Creek Project was a challenge that, like many other Utah counties, commissioners resolved by proposing creation of a special service water district. The Grand County Special Service Water District, approved by Grand County voters in 1977, possesses specific powers to raise funds through taxes and bonds – powers not bestowed upon GCWCD and SVWSID. The GCSSWD may also raise funds through various federal and state granting agencies.

The creation of GCSSWD enabled Grand County to acquire additional funding – through taxes and bonds – needed for the construction of the Mill Creek Project, as well as monies required for building a culinary water and sewer delivery system in Spanish Valley. The agency is an independent district but is governed by Grand County, which appoints the district's five board members.

Primarily a financing agency, GWSSA works in tandem with the Grand County Water Conservancy District, and with Spanish Valley Water and Sewer Improvement District, to secure funding and make payment on outstanding loans and bonds for Grand County water and sewer projects, said Grand County water planning administrator, Lance Christie.

Combining Resources: Creation of the Grand Water and Sewer Service Agency

As all three water-related agencies worked to develop their joint and individual projects, the issue of managing Grand County's water systems surfaced as a significant problem. From the beginning, the boards of GCWCD and GCSSWD met jointly and shared the same chairman and vice-chairman. The two districts were bound by an agreement, signed in 1979, that gave GCSSWD authority to act as the conservancy district's agent for construction of the Mill Creek Project, and making payments on the project loans.

In 1980, SVWSID and GCWCD agreed to share staff and office space. The conservancy district hired staff, and SVWSID paid a percentage of staff salaries and benefits through reimbursements to GCWCD. These districts were also bound through an agreement by which GCWCD leased culinary water and storage to SVWSID, which then distributed the water to Spanish Valley customers.

These confusing arrangements were, perhaps, not ideal, but as Christie points out, they were likely necessary.

"This complicated mess of agencies was required because of the limitations and powers in the Utah State Code which are extended to Water Conservancy Districts, Special Service Districts, and Water and Sewer Improvement Districts," Christie has said. "It may be a mess, but it's the best mess we could come up with."

In an effort to simplify matters, the three districts agreed in 1998 to create one management agency that would oversee the daily operations and ongoing financial management of Grand County's water projects.

The Grand Water and Sewer Service Agency has, perhaps, become the most contentious part of the county water puzzle. Many find the agency's organization difficult to understand, and some question whether it gives each individual district equal representation at the table.

But the agency's structure is fairly simple. The GWSSA board consists of all members of each of the individual district boards, and board members have equal voting power. However, the agency also has a seven-member operating committee, charged with overseeing the agency's day-to-day business. That committee, consisting of three members each from the boards of the GCWCD and SVWSID, and one member from the GCSSWD board, has no power to set budgets, and may not conduct elections, but the committee is empowered to approve agency expenditures up to \$10,000. The operating committee appears to hold no clear power over the agency's full board because any member of the agency's full board may vote on issues brought before the operating committee.

GWSSA manager Dale Pierson is empowered through the interlocal agreement signed by all three districts, to "perform and carry out the functions, activities, and responsibilities of improvement districts," and to act as the financial agent, disbursing debt payments and collecting annual revenues for the individual districts. Under the agreement, the individual districts retain ownership of all property, and resources, and they also remain responsible for any outstanding district debts.

Is GWSSA Here to Stay?

Those who support the GWSSA structure say it saves all the districts money by streamlining staff and operations, and has improved communications between districts that sometimes in the past appeared to be working at cross purposes.

But critics charge that GWSSA staff, originally hired by GCWCD, rarely has the interests of SVWSID users at heart. To illustrate, SVWSID board member Barb Morra points to the fact that the titles to culinary water rights purchased through the agency are always held by the conservancy district. Spanish Valley Improvement District, she said, has never been offered the chance to own water rights even though it has the largest and only culinary water customer base.

Resolving these issues may be the greatest challenge confronting GWSSA staff, and the boards of Grand County's individual water districts. In the next several weeks, the

Times-Independent will examine in-depth the inner-workings of GWSSA, and water issues facing Grand County's water districts.

Editor's Note: This is the first detailed installment of a series, a heavily researched series on how things operate in Spanish Valley's complex water and sewer agencies. The situation is critical to the future of Grand County, and needs to be understood. Though controversial, we believe it is essential.

Regional News 04/17/03

Umbrella agency may be causing confusion, conflict (part two)

Times-Independent
Moab, UT
by Lisa Church
contributing writer

When Grand County's three water districts agreed in 1998 to create an umbrella agency to oversee operations and management of culinary and irrigation water systems the plan was touted as a cost-saving measure for all water users in Spanish Valley.

Today, some Spanish Valley water users believe the arrangement has created an unwieldy financial structure that forces culinary water users to unfairly subsidize about 125 irrigation water users.

The plan to combine the districts seemed logical at the time, past board members have said. The three districts – Spanish Valley Water and Sewer Improvement District (SVWSID), Grand County Water Conservancy District (GCWCD), and Grand County Special Service Water District (GCSSWD) – already shared staff and office space, and the culinary and irrigation systems were dependent on one another because the Conservancy District, which built the Mill Creek Project and Ken's Lake Reservoir, owned the culinary water rights, storage tank and tank delivery systems and sold culinary water to the Improvement District, which provided drinking water to Spanish Valley customers but did not own substantial culinary water rights or storage facilities. The Conservancy District paid staff, then billed the Improvement District for the time staff logged working on Improvement District projects.

By creating the agency, many argued, districts had little to lose and everything to gain. Districts would still own all their property and resources, but revenues, except those from property taxes, would be billed by and paid directly to the Grand Water and Sewer Service Agency (GWSSA), and the agency, in turn, would issue payments for outstanding revenue bonds and other ongoing agency expenses. GWSSA staff would continue to oversee the daily operations of the culinary water and sewer system, and the Ken's Lake irrigation system, but could focus all their attention on work rather than spending valuable time tracking daily hours by project so the Improvement District could be billed separately.

"Some days I felt like I was spending more time writing down what I was doing that I actually spent doing the work," GWSSA manager Dale Pierson said. "Now, we can focus completely on our jobs."

Improvement District board member Barb Morra is not convinced.

"We don't know how their time is spent now. The Improvement District contributes four times the revenue of the Conservancy District, but are we getting four times the work? I don't know. And [agency staff] has no documentation," Morra said.

Pierson said the staff "probably spends that much more time" doing work for the Improvement District because maintaining culinary water and sanitary sewer systems is far more costly, both in time and money, than maintaining the Conservancy's irrigation system. In addition, he said, the Improvement District has grown, and the agency employs a staff member whose time is largely spent handling monthly billing for water and sewer service customers.

"The Improvement District is our primary focus," Pierson said. "There's health and human welfare involved there. If we have two jobs to do, and one is irrigation and the other is drinking water or sewer, the drinking water or sewer job takes top priority. It's that simple."

For critics, on-site staff accountability is but one of several problems with the agency arrangement. Morra says. In 2002, the Improvement District contributed more than \$1 million in revenues to the agency, compared to \$362,000 contributed by the Conservancy District. The agency budget shows that Improvement District Costs totaled \$910,000 – a gross profit of about \$100,000 – while the Conservancy District had \$360,000 in expenses.

"The whole thing about the agency is every time you try to figure out something fiscal, it's like trying to hit a moving target," Morra said. "We're contributing 90 percent to the agency while the other districts are contributing 10 percent. Where is our money going? I'd like to know specifically."

Spanish Valley resident Bill Love believes he knows. The agency, he charges, is using Improvement District revenues to "subsidize" the 125 irrigators who annually purchase Ken's Lake water.

In a detailed written statement to the Times-Independent, Love argues that the agency regularly uses Improvement District revenues to pay for work and maintenance of the irrigation water system and Ken's Lake Reservoir.

Love rightly points out that state-backed loans for the Mill Creek Project which created Ken's Lake are annually paid through property taxes charged to all Grand County taxpayers. That bond was approved by taxpayers in 1980, and will be completely paid in 2018. Love argues that through those property taxes, all Grand County residents are "subsidizing" the irrigation water users of Ken's Lake.

And it is true that the lake would likely not exist without the tax revenues. But Pierson points out that voters approved the bond, in part, because Ken's Lake is also a recreation area that is open to the public.

"A lot of people use Ken's Lake every year. A lot of people here see it as an amenity," Pierson said. "The lake isn't just for irrigators."

Love also believes recent water fees from Spanish Valley customers are being used by the agency to pay Conservancy District expenses.

"The fees from the culinary users and irrigation users are co-mingled to pay expenses of \$490,477 for the operations and maintenance of the irrigation system, the culinary water system, and debts. GWSSA claims that they are unable to identify which fee is used to pay which bill without extensive analysis," Love wrote.

And he charges that the water rate structure of Spanish Valley – a conservation-oriented structure that charges increased fees for higher water consumption – are unfair, compared to the rate structure for irrigation customers whose fees per acre-foot of water decrease with higher consumption. Irrigators pay between \$21 and about \$35 per acre foot, depending on use, Pierson said.

"The culinary water users are now completely unprotected from GWSSA using their fees to subsidize the 125 irrigation Ken Lake and the golf course," Love said.

Pierson said the rate structure for irrigation users is "typical" for Utah.

"There are a very few number of irrigation customers who actually try to make a living from farming," Pierson said. "We don't want the water to be so expensive we put them out of business."

Lance Christie, the water planning administrator for Grand County, said it is not uncommon in the West for drinking water customers to subsidize irrigators. But in many parts of the state, he said, the culinary water users pay much higher fees.

"It's a common practice. But from my research, the people in Spanish Valley are subsidizing at a much lower rate than in most other places," Christie said.

A 2001 report by the state's Division of Drinking Water backs up Christie's claim. According to that report, culinary water agencies in Utah charge, on average, \$1.39 per 1,000 gallons of water. In Spanish Valley, customers pay between \$.50 and \$1.25 per 1,000 gallons depending on how much water they use. The state report shows that the average Utah home customer pays \$33.89 per month for drinking water. Bills in Spanish Valley average about \$24 per month, GWSSA staff said. Sewer charges are billed separately.

For critics of GWSSA, the monthly cost of water is less important than whether the agency is properly managing the financial resources of the Spanish Valley Improvement District. Agency staff now view revenues from all districts – except tax revenues, which are kept in separate accounts – as agency revenues, not separate revenues from

individual districts. And supporters of the agency say the arrangement works to the advantage of all districts because all three are interconnected through the complex network of culinary and irrigation water supply lines and storage facilities.

"It may not be perfect, but things work a lot better now," said Conservancy District board member James L. Walker. "The idea here is for all the districts to work together. We all have the best interests of Grand County at heart."

Pierson puts it another way. "One district wouldn't exist without the other," he said. "It's that simple." Morra believes otherwise.

"I think the Improvement District would be better off as a separate district," Morra said. "The agency isn't doing us any favors."

Next week, this Times-Independent series will examine arguments for and against an agency plan to purchase wells and property that they currently lease, and which district should own the water rights if the purchase is completed.

Regional News 04/27/03

Exposed Upper Colorado River Deltas Rapidly Eroding Into Lake Powell

[Click here](#) to read this story by Lori Stiles of *University of Arizona News*

Regional News 04/27/03

Exposed Upper Colorado River Deltas Rapidly Eroding Into Lake Powell

The investigations of Professor John Dohrenwend

[Click here](#) to read this story by Lori Stiles of *University of Arizona News*

Regional News 04/28/03

How district got culinary water rights (part three)

Moab Times Independent by Lisa Church contributing writer

From their inception in the 1970s, Grand County's two main water districts have struggled with a serious dilemma – both had authority to provide culinary water to Spanish Valley, but neither district owned any culinary water rights.

Because the state had placed a moratorium on further water exploration in the valley more than a decade before, the county could only secure culinary water by purchasing or leasing existing water rights. In 1979, the Grand Water Conservancy District solved this massive problem by striking a deal with local rancher George White. In exchange for a maximum of 625 acre feet of irrigation water from Ken's Lake, White agreed to provide the district with an equal amount of culinary water from his wells.

That 50-year agreement between White and the Conservancy District enabled the district to provide wholesale culinary water to the Spanish Valley Water and Sewer Improvement District, which delivered the water at retail prices to customers in Spanish Valley. For some, the pact also marks the beginning of a water monopoly in the valley.

In recent years, district and county officials have mulled, with increasing concern, the county's prospects for securing culinary water rights beyond 2029 when the exchange agreement with White is set to expire. So when a pair of those wells came up for sale, board members of the Grand Water and Sewer Service Agency – an umbrella agency created by the districts in 1998 to oversee daily management of Grand County water projects – jumped at the chance to own them outright.

With the board's near unanimous blessing – two members opposed the purchase – GWSSA in February began efforts to secure a purchase agreement with White, and the financing needed to seal the deal. The sales price will remain undisclosed until final negotiations are completed, but Dale Pierson, GWSSA manager, has said the agency hopes to recoup much of the cost by selling land – about 130 acres – that is also included in the deal.

The plan approved by board members gives the agency staff authority to pursue the purchase, and places ownership of the White water rights and land in the hands of the Grand Water Conservancy District. That decision, some charge, gives the Conservancy District a monopoly on valley water, and forces Spanish Valley water users to remain forever dependent on the Conservancy District for its culinary water supply.

"There's no reason the [Spanish Valley Improvement] district should not own that water," said SVWSID board member Barb Morra. "If we purchase the water, we can become independent of the Conservancy District. But they don't want that to happen. Basically, we're allowing the Ken's Lake water users to control the agency, and that means they control where the water is going and how much Spanish Valley users pay."

For Spanish Valley resident Bill Love, the plan represents a "boondoggle" that gives the Conservancy District total control over Spanish Valley water users. Love said the agency should hold a public hearing before making a final decision about the purchase.

"This water is for the use of the culinary rate payers in Spanish Valley. The negotiations are controlled by the irrigators' board members," Love said in a letter to the Times-Independent. "The irrigators, per a June 6, 1979 agreement, can charge the culinary rate payers any fee they 'fixed from time to time' for the culinary water. If the new culinary water is given to the irrigators, they will have the ability to charge the culinary users any fee they decide is sufficient to pay all their expenses."

Morra points to the fact that agency board chairman, Gary Wilson, is “one of the largest users of irrigation water in the district,” as evidence that the members of the Conservancy District control the GWSSA board.

Wilson and other board members take issue with Morra’s characterization.

“To me, the whole purpose of this agency is for us all to work together,” Rex Tanner said at a recent meeting. Tanner, a Grand County Council member and a GCWCD board member, dismissed Morra’s allegations as “paranoia.”

“It’s not us against them here. It’s one pool that we’re working from,” Tanner said. “We started down this road to purchase this water because of the long-term goal to better serve the community. This seems like a good business deal to me, and I hope we go through with it.”

During several board meetings, Morra and Love have also repeatedly questioned why the Improvement District has not been given the option to purchase the White wells. Pierson said the decision is purely financial – banks view the Conservancy District as a “better risk” than the Improvement District because GCWCD has fewer outstanding debts.

Currently, SVWSID makes annual payments on eight outstanding revenue bonds totaling almost \$5 million– most associated with a recent system expansion – and one general obligation bond, paid through property taxes collected from Spanish Valley residents, totaling \$126,000 that will be paid off in 2006. The revenue bonds have payoff dates ranging from 2006 to 2040, depending on the specific bond, Pierson said.

The Conservancy District has one outstanding bond, Pierson said. That bond, a \$1.5 million general obligation bond paid through annual property taxes assessed all county property owners, will be paid off in 2018, he said.

“Either district could purchase the White property and wells. But from what our attorneys and the bank tell me, the Conservancy District is in a better position to borrow the funds,” Pierson said. “Banks want to be at or near the top as lien holders. In the case of the Improvement District, that just isn’t possible because they already have several outstanding revenue bonds.”

But Morra said that simply is not true.

“I’ve had conversations with the bank, and they’ve said we can buy the property,” she said. “I just don’t see what the problem is here.”

Pierson said bank representatives “prefer” making the loan to the Conservancy District for reasons stated earlier.

“The Improvement District may be able to secure financing, but it would be much more difficult, if it’s even possible,” Pierson said.

Some agency board members fear that the ongoing debate will derail the White purchase, leaving Grand County vulnerable in future years should the Whites sell the wells to someone else.

“Barb has some good points to make, but I think we need to move on this,” said James Walker, Conservancy District board member. “No one has ulterior motives with this purchase. But proven wells like this don’t come along often. We need to buy them while we can.”

The agency has yet to finalize a contract for the White well purchase, but Pierson said an agreement is “close.” So far, the board has not responded to Love’s call for a public hearing on the issue.

Next week, in the final installment of this series, the Times-Independent will explore the effectiveness of the GWSSA agreement, and examine arguments for and against dissolving the agency.

Letter to LR 05/02/03

Response from BuRec: Glen Canyon Dam's Adaptive Management

United States Department of the Interior
Bureau of Reclamation
Washington, D.C. 20240
In Reply Refer To: ADM - 2.00

Ms. Lisa Force
Program Director
Living Rivers
P.O. Box 1589
Scottsdale, AZ 85252

[Letter to Gabaldon \(January, 2002\)](#)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=234>

Dear Ms. Force:

Thank you for your participation as a member of the public in meetings of the Glen Canyon Dam Adaptive Management Work Group (AMWG). The AMWG was formed as a Federal Advisory Committee to make recommendations to the Secretary of the Interior on the operation of Glen Canyon Dam and the use of other management authorities to achieve the resource protection objectives of the Grand Canyon Protection Act and the Glen Canyon Dam Environmental Impact Statement (GCDEIS) Record of Decision (ROD). You have raised concern for many of the important resources downstream of Glen Canyon Dam, and have encouraged the AMWG to take action to protect these resources. We have integrated your specific comments into the areas of endangered

species protection, sediment conservation, administrative activities, and public outreach.

Endangered Species

Protection of endangered species is one of the paramount mandates of all Federal agencies, and the AMWG strategic plan is framed from that perspective. Many recent discussions within the Adaptive Management Program (AMP) have addressed the apparent decline in juvenile recruitment and adult population estimates of the humpback chub. The cause of this decline is unknown, but may be related to non-native competition and predation, parasitic infestation, habitat conditions, or adverse effects from handling and sampling. It is the current opinion of the Grand Canyon Monitoring and Research Center (GCMRC) that negative effects from non-native fish predation and competition overshadow other factors.

Collecting and addressing this type of new information and hypotheses is one of the strengths of adaptive management. At its January 2002 meeting, the AMWG passed the following motion calling for the control of non-native fish:

"In support of goal 2 (of the Strategic Plan), the AMWG recommends the following actions subject to environmental compliance to include assessing recreational use, Endangered Species Act (ESA), in consultation with the tribes and other affected state agencies.

- 1 . evaluate methods to remove non-native fish, except rainbow trout, from Bright Angel Creek in 2002,
2. evaluate methods to remove non-native fish from the LCR in 2002,
3. gather public input and conduct public education and environmental compliance on long-term removals in #1 and 2 above,
4. establish a Technical Work Group (TWG) ad hoc committee to develop a 2002 - 2006 research monitoring and management work plan for meeting MO 2.5 and 2.6 of the August 17, 2001, Draft of the AMP Strategic Plan. The TWG will report back to the AMWG at the next meeting,
5. using data from #1 - 4 above to make recommendations on future removal."

Through a combination of National Park Service and Bureau of Reclamation funding, appropriate environmental compliance, and approval by the Secretary of the Interior, these nonnative fish control efforts began this year. The authority and responsibility for these non-native control actions rest with appropriate Federal and State agencies, the National Park Service for the Glen Canyon National Recreation Area and Grand Canyon National Park and the Arizona Game and Fish Department for the State of Arizona. Results from initial evaluations will guide future decisions about management actions and dam operations.

Testing experimental dam releases to benefit the humpback chub is also an important part of the Biological Opinion (BO) on the Operation of the GCDEIS. The BO discusses implementing these test releases in low release years of approximately 8.23 million acre-feet (maf). Reclamation has agreed to implement such experiments through the AMP. Several years ago, GCMRC coordinated the preparation of a program of experimental flows to address this requirement. The resultant work product called for the establishment of baseline conditions, followed by a steady release with moderately high spring flows and low flows the remainder of the year. In fiscal year 2000, we tested these steady spring and summer flows, even though the annual water year release was greater than 8.23 maf. In water years 2001 and 2002, the dam made releases according to the GCDEIS ROD, and baseline data was collected. This baseline data will be compared with data from future experiments, the nature of which is still evolving among native fish experts through the AMP.

As described in more detail below, GCMRC followed this initial experimental design with a 2003-2004 experiment designed to benefit humpback chub and conserve sediment inputs. In all these adaptive management actions, the U.S. Fish and Wildlife Service (Service) has actively participated, and Reclamation has continually discussed with the Service the resulting effects to ensure that sufficient progress is being made toward removing jeopardy from the humpback chub and achieving the recently published U.S. Fish and Wildlife Service Recovery Goals for the humpback chub.

Sediment Conservation

The 1996 Beach Habitat Building Flow (BHBF) was highly successful in depositing sand above the normal maximum discharge stage. Subsequent wind and water erosion of these deposits was expected, as was the need for periodic redeposition of sediment. Since that time, additional research has indicated that the previous assumption of interannual sediment conservation of tributary sediment inputs is likely incorrect, indicating a relatively short residence time for the finer fractions of tributary inputs. As a result, the AMWG passed the following motion at the January meeting relating to further testing of BHBFs:

"In concert with Reasonable Prudent Alternative flows for native fish, during 2002-2003 request that the GCMRC, in consultation with the TWG, design an experimental flow sequence that tests hypotheses for conservation of sediment. Report to AMWG in April 2002 on the proposed flow sequence."

In response to this motion, GCMRC proposed an integrated experiment in February 2002, addressing specific assumptions and hypotheses for the humpback chub and sediment conservation. To counter the short residence time of fall tributary sediment inputs, this experiment tests two strategies to preserve these inputs until high flow tests can be conducted the following January. The fall flows of these tests are hypothesized to benefit the humpback chub and would complement the results of the 2000 Low Steady Summer Flow experiment. Nonnative fish control efforts during 2003-2004 are also expected to reduce the deaths of humpback chub from predation and competition. This experiment is now underway. In addition, GCMRC and the AMWG are now working

to develop an overall program of experimentation that addresses the ecosystem as a whole, including all the resources considered by the AMP.

Administrative Actions

During the past 2 years, the AMP has succeeded in developing a strategic plan, the completion of which has represented a significant increase in the ability of stakeholders to work together on common goals. We recognize that some reject the concepts of collaboration and consensus, but we believe that these approaches will produce more effective resource protection results than litigation and conflict. In addition to completing the strategic plan, the AMP has sequenced the strategic plan research information needs, which will guide future scientific work.

Reclamation and the GCMRC have restructured their websites to facilitate public access of AMP documents such as the GCMRC State of the Natural and Cultural Resources in the Colorado River Ecosystem report and the annual report to Congress required by the Grand Canyon Protection Act. These reports include results from the monitoring and research activities conducted as part of the AMP. The AMWG meeting minutes also contain scientific presentations at technical and management meetings on the status of resources.

Public Outreach

Public involvement is a key part of the AMP. Stakeholder membership on the AMWG was carefully selected to provide representation of public interests. It is important to note that any AMWG recommendation to the Secretary of the Interior is implemented only after completing appropriate National Environmental Policy Act (NEPA) compliance with applicable federal law (e.g., NEPA), a step that ensures additional public participation. In addition to inviting the public to AMP meetings, we have attempted to keep all information about the program visible and accessible. We recognize that to date, few outside public comments have been given at our meetings, and that the AMWG's response to your comments has been less than you desired. In future meetings, we will encourage AMWG members to continue their discussion after public comments are received to ensure understanding, prior to voting on recommendations. It would also likely be more effective for public comments to be received prior to any meeting to allow AMWG members time to consider comments. Since most of the issues addressed during the AMWG meetings are first discussed by technical and ad hoc groups, we would encourage you to become involved in the technical presentations and discussions which form the basis for AMWG recommendations.

In conclusion, we believe the AMP is a successful example of a collaborative, multi-stakeholder process. Moreover, we believe that this critical program is fulfilling the role envisioned by the Grand Canyon Protection Act, the 1996 Glen Canyon Dam EIS, and the Federal Advisory Committee Act. The Department of the Interior is taking action to address resource concerns revealed by scientific monitoring and have enlisted prominent scientific advisors and other forms of peer review to enhance the quality of analysis in this process. We appreciate your comments and welcome your continued involvement in all our meetings.

Sincerely,

Michael R. Gabaldon
Director, Policy Management
And Technical Services

cc: See attached list

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LR Letter 05/17/03

Lake Powell's 'new marina' another Park Service fumble

May 17, 2003 12:00 AM

Arizona Republic

Letter to the Editor

The May 5 article "New marina at Lake Powell 30 years in making" omitted two significant facts:

- Low reservoir levels make the marina unusable.
- The Diné will receive only low-level jobs, while profits go to non-Diné developers.

The Diné Medicinemens Association, along with Living Rivers and others, asked for a proper environmental impact statement. The concerns were disavowed by the National Park Service, which determined that this \$75 million project on virgin Diné land would have "no significant impact" on the human or natural environment.

The Diné leaders asked the Park Service to consider dedicating this spiritually significant site as a place for their people to be educated in the traditional ways of their cultural heritage. This alternative deserves a respectful response by the National Park Service.

The Park Service wants to provide economic opportunities for the Diné, yet it refused to study Living Rivers' proposal to allow the Diné to become the concessionaire at Wahweap Marina. Living Rivers also stressed that building another marina when visitation has been declining does indeed impact humans and the environment.

Antelope Point is perched on top of a canyon wall. To operate this facility the reservoir must be nearly full. Currently the reservoir is down 95 feet and the public boat ramp ends at the cliff's edge. Current high demands for an already over-allocated Colorado River, compounded by a present and future drought cycles, makes Antelope Point a boondoggle.

How can a facility that must face the hardships of natural topography and drought during a period of decreased visitation be considered without a study? The Park Service should be delighted to provide taxpayers with a thoughtful process, especially if it will demonstrate true benefit to the Diné.

John Weisheit Moab, Utah

The writer is conservation director of Living Rivers, an Arizona-based non-profit environmental organization.

LR Press Release 06/05/03

Secretary Gale Norton's 2025 Water Plan--propaganda to mask reality

Colorado River water users should prepare for the worst

Contact: Owen Lammers (435) 259-1063

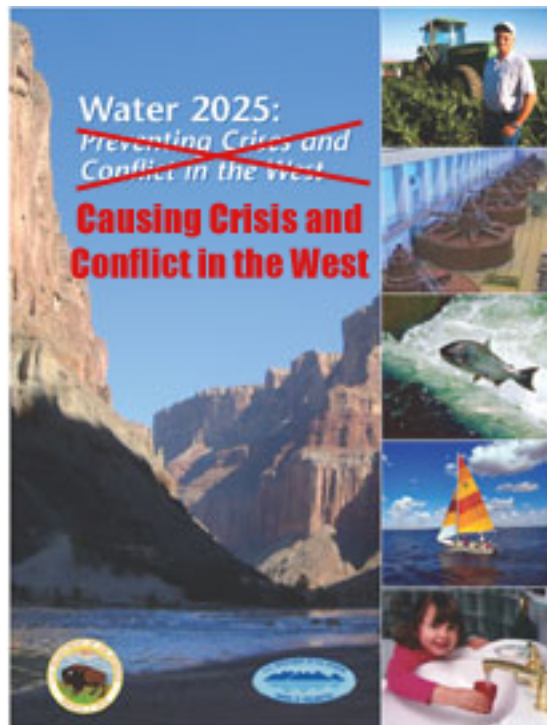
On Friday, June 6, Denver will play host to Interior Secretary Gale Norton and one of the greatest public relations charades in the history of western river management. At a time when many Western states are experiencing major problems with water allocation, the Department of Interior is selling the public "band-aids for gun-shot wounds," says the Colorado River advocacy group Living Rivers.

Secretary Norton's initiative "Water 2025 Plan: Preventing Crisis and Conflict in the West," is little more than a repackaging of management strategies Interior is already implementing combined with a heightened push for desalinization technology. It contains no proposals for how to substantively address major water shortages, such as those looming in the Colorado River watershed.

"Minor efficiency gains and conservation measures as Secretary Norton prescribes will bring about some savings, but these are merely drops in the bucket given that the Colorado River is providing barely half the water the Department of Interior is contracted to deliver," says Owen Lammers, Executive Director of Living Rivers.

Abundant historical evidence reveals that the present drought in the Colorado watershed is far from unprecedented, and warnings from the United States Geological Survey one year ago urged water managers to be prepared for several decades of below average precipitation. Lammers notes, "Water 2025 demonstrates that the Department of Interior is ignoring this responsibility."

- The Plan emphasizes Interior's long-standing tradition of acquiescing to the states for resolving disputes. However, as eighty years of conflict reveals, cooperation is rare, even in the best of



times. Moreover, as California recently demonstrated, reaching agreement amongst Colorado River water users within states is problematic. This internal dispute forced federal action in January to reduce Colorado River flows into California.

- The Plan's market-driven water banks and transfers from farmers to municipalities during times of shortages are laudable on a small scale, but there is no discussion of what will happen when the real crisis hits. Certainly, the 25 million people reliant on Colorado River water will not be deprived, but what will it cost? Farmers are becoming increasingly reluctant to make water transfers, as San Diego has recently experienced. Without strict federal guidelines and policies, municipalities like Los Angeles, Phoenix, Los Vegas and Salt Lake City will be forced into a cost environment not unlike what California energy utilities faced three years ago.
- Crop substitutions, which represent the greatest opportunities for water savings are completely ignored by the Plan. Nearly half of Colorado River water is used to grow water-intensive alfalfa and other forms of cattle feed. Much of this water could be saved by growing crops for human consumption.
- The Plan relegates environmental stewardship as merely aspects of conflict, not as an integral part of what society now demands of its river managers. Despite the fact that all the water referred to in the Plan comes from rivers integral to this continent's natural heritage, the Plan does not even mention or use the word river, other than when using place names. In describing its "Five Realities" the Plan completely ignores the reality that the riverine ecology throughout the watershed, such as in Grand Canyon National Park, Dinosaur National Monument and the Colorado River delta, has been dramatically altered, while the public is becoming increasingly vocal about reversing the damage.
- The Plan advocates maintaining and enhancing existing infrastructure. However, much of this infrastructure is responsible for the loss of up to 20 percent of the Colorado River's flow due to evaporation and seepage amongst its reservoirs. The draining of Lake Powell reservoir, for example, will eliminate enough water loss to service the municipal water needs of the state of Arizona.
- Not until the 25-page report's last 100 words does the term "drought" receive much attention. This should be Interior's main focus at this time. Questions Interior needs to be asking include: outlining specific federal management tactics it may employ; how farmers will be enticed or forced to release their water to preserve municipal economies, and will Interior enforce strict conservation strategies and efficiency standards?

"This report is all about carrots with no federal stick," adds Lammers. "Interior must begin developing water use standards and practices, as well as allocation strategies to

be implemented as this drought situation worsens. Absent this, crisis is inevitable, despite Secretary Norton's report and marketing strategy titled to prevent it."

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For more information:

[Living Rivers](#)

[Water 2025 Plan: Preventing Crisis and Conflict in the West](#)

[United States Geological Survey. Precipitation Survey of the Colorado Plateau Region](#)

LR in the News 06/16/03

A River, Saved: Wild Yampa and Green nearly went the way of Glen Canyon

A River, Saved: Wild Yampa and Green nearly went the way of Glen Canyon
By Judy Fahys The Salt Lake Tribune
THE YAMPA RIVER, Colo. -- This wild place might have been entirely different were it not for a fateful boat trip a half-century ago. Fifty years ago this month, David Brower fell in love with the Yampa, and the Green and the Colorado rivers downstream. In the years that followed, a time before the word "environmentalist" existed, the activist rallied the nation against two dams planned for canyons just below the Yampa, dams that would have forever changed the landscape into vast lakes. This history was unknown to Salt Lake City resident Bob Hausser when he signed up for a white-water rafting adventure this month. In fact, the retired Kennecott engineer wore his "Lake Powell" T-shirt as Brower's one-time aides talked about the significance of Brower's fight for wild rivers and urged listeners to follow the example of his spirit.



Hausser's trip leader was John Weisheit, who sipped all day from a plastic coffee mug that proclaims, "Just Drain It!" referring, of course, to the same Lake Powell beloved by Hausser. Weisheit is director of the Moab-based environmental

group Living Rivers, which through its Colorado Riverkeeper project organized the 50-year anniversary raft trip.

"We have things to do," Weisheit said at the outset. "We're going to get going again."

"Going," in this case, means reviving the broad-based conservation ethic that made it possible for activists such as Brower to help shape the modern West.

Brower, who died in 2000, took his trip in the U.S. Bureau of Reclamation's heyday, when it had more than 140 dams on its project list. And, after he drifted through Dinosaur National Monument's scenic redrock canyons, he made a career of harnessing American outrage over the destruction of national treasures for water and electricity intended to profit the bureau alone.

Two of the proposed dams would have braced against canyon walls visited on this month's Riverkeeper trip.

The bureau proposed one for below Echo Park, at the confluence of the Yampa and the Green. The other would have been more than 20 miles below at Split Mountain on the Green. If they had been built, the dams would have inundated 140 miles of canyon, up to Flaming Gorge on the Green and to Deerlodge Park on the Yampa.

"What happened here 50 years ago changed the world," said Rod Nash, the noted wilderness historian who joined the Brower commemorative trip in his dory, Canyon Dancer.

Brower fought dams with statistics that showed they would not conserve as much water, nor provide as much power, as the Bureau of Reclamation projected. When the bureau had finished building its Colorado River Basin dams, the two Dinosaur dams were not among them. "We have a living river here -- the Yampa is undammed," Nash told the 20 commemorative trip clients in one after-dinner talk. "It's a miracle in the American West." The guide: What might have been lost can be seen by anyone floating the rivers with Dee Holiday. He has been guiding for about 42 years, much of it with his wife, Sue, co-owner of their Holiday Expeditions, which hosted the commemorative trip.

Tall and wiry, Holiday probably knows the Yampa as well as a human can after spending roughly 2,000 days of his life on it.

He is the naturalist who can point out a chokecherry forest on the trail and tell about a woman named Josie whose chokecherry wine was the county's best. He is the oarsman who can pull a fast-moving raft away from the dangerous waves and dips of a rapid.

He is the historian who knows the story behind Pat Lynch, the hermit whose initials are chipped into canyon and cave walls. He can point out an unusual wild, desert orchid, rare spawning grounds for endangered fish and secret sea fossils captured in canyon stone.

Holiday is also the hiking guide who asks visitors to be respectful inside a cavern that holds ancient American Indian ruins.

"It's a real special place to me," he says, nearly whispering. "But it's sacred to the Native Americans."

The song and feel of rivers has always gripped Holiday, and its hold has only tightened with time.

"When you are younger, you do rivers for the experience," he said. "The longer you do it -- that's when I started to love the river." Slack water: To the activists, loving Western rivers means, in many cases, trying to undo the damage wrought by mankind. Where dam advocates point to the electricity Colorado Basin dams provide to 9 million people and the water they deliver to 30 million people, the activists see environmental havoc.

Wherever dams have been constructed, the surrounding ecology has fundamentally changed, usually harming the plants and animals around it. A good example is Glen Canyon, which was filled with water behind a dam built just outside the boundaries of Grand Canyon National Park, a dam Brower didn't fight but always wished he had.

Its riverbed spawning grounds for endangered fish species have been ruined by the dam flow's unnatural currents. And the trophy trout planted in the cold water below the dam are blamed for making meals of the federally protected humpback chub, flannelmouth sucker and the bluehead sucker.

More recently, the Bureau of Reclamation's renewed efforts to desalt the lower Colorado River have environmentalists worried about the fate of species-rich wetlands near the river's end, in Mexico and California.

Meanwhile, a near-war continues between the Grand Canyon's commercial rafting outfitters, who insist on using motorized boats to speed clients downriver, and wilderness advocates who say the Colorado, by law, should be motor-free in the park.

Weisheit's group has spearheaded the 4-year-old campaign to remove Glen Canyon Dam, which forms Lake Powell. Living Rivers charges that, besides imperiling or wiping out seven fish species, weak canyon walls and pressure from silt buildup will someday make the dam fail.

While dam supporters have laughed at the idea, Weisheit remains confident the dam will be removed and Lake Powell will be drained. "We can do it, and we can do it soon."

Kim Crumbo, a retired Grand Canyon river ranger and wilderness advocate, takes a starker, more ominous view.

"The victories are ephemeral," he says. "The defeats are forever." To dam or not to dam: Heady as the debates and history lessons might have been for the 20 paying customers on this trip, it was the wild Yampa that swayed their hearts.

Ranging in age from 7 to 70-something, they came from Portland, Ore., and Scottsdale, Ariz., and the nation's capital to run the Yampa and sections of the Green.

They saw how, because there is no dam, the Yampa's water is brown with silt and carries a forest of tree-size snags on its boisterous current. They observed migrating

pelicans and browsing deer. They might have seen small rabbits, snakes or the fossil remains of prehistoric life.

Still, they didn't always agree with the activist-leaders.

For instance, Denise Dion, a Maryland-based regulatory consultant and rafting enthusiast, agrees that motors should be restricted in the Grand Canyon, but not banned, because motorized rafts make the place much more accessible to the public.

"I want to go to pristine areas," she said. "But my aunt, she wants to see them, too. She's 70," and cannot get around easily without the help of paved paths and motorized conveyances.

Dion called the push for a motor ban "elitist."

"You have to think about how you can serve many masters," she said.

A retired political science professor on the trip commented: "For most people, wilderness is not having a flush toilet and a motel."

Hausser, meanwhile, has not lost any affection for his Lake Powell houseboat, although he did gain a new appreciation for conserving water and efforts to block future dams. He says activists are "unrealistic" about decommissioning Glen Canyon Dam.

"I love the idealism of the people on the trip," he said, "but they are not going to be able to take back what is done." "Don't give up": Some activists are optimistic that this, the latest effort to engage the public in the debate in the fight for the West's rivers, will succeed. Others have doubts.

Lisa Force, a project director for Living Rivers, predicts that the movement will not gain broad public support until society has a crisis, perhaps a fit of guilt over its wasteful use of the Colorado River and the ecological damage that is being left for future generations.

"The hope is we'll recognize humans are part of the Earth community," said Force, who serves on the Sierra Club's board of national directors.

Jeff Ingram, another speaker on the trip, reminded the group that Americans deeply value the places they have set aside in parks, wilderness and preserves such as the wild Yampa. Ingram is a mathematician and Grand Canyon advocate who has been described by Cadillac Desert author Marc Riesner as Brower's secret weapon in the fight against dams proposed for the Grand Canyon.

Recalling Brower's seemingly futile efforts to protect wild, Western rivers, he pressed listeners to hold fast to their ideals, think independently and pursue those ideals even in the face of what seems like hopeless odds.

Parks, wilderness and wild places are something that all Americans cherish, he said.

"You may get defeated, but don't give up."

fahys@sltrib.com

LR in the News 06/17/03

Water: BuRec to alter flows at Utah's Flaming Gorge Dam to protect endangered fish

April Reese

Land Letter Colorado correspondent

The Bureau of Reclamation is putting the finishing touches on a proposal to change the way it operates Flaming Gorge Dam on the Green River in Utah to help recover endangered fish downstream, agency officials say. While federal biologists say the new flow regime will go a long way to meet recovery goals, some environmentalists contend that decommissioning the dam is the only way to help the fish over the long run.

The forthcoming draft environmental impact statement, over three years in the making, will likely call for releasing more water from the dam in the spring, said Beverly Heffernan, environmental protection specialist in the BuRec's Provo, Utah office. Providing peak spring flows will bring sediment downstream, where it forms sandbars and replenishes beaches -- important nursery habitat for endangered fish.

"The proposed action is to change the way we operate the dam so it more closely resembles a natural river flow," Heffernan said.

The draft EIS, initially scheduled to be released this spring, is now expected to be issued in October. The delay is necessary to give the agency a chance to incorporate new water temperature data into the document, Heffernan said.

The dam, authorized by Congress as part of the Colorado River Storage project in 1956 and completed in 1964, was primarily built to create a 91-mile-long reservoir that would store water promised to users in the Upper Colorado River Basin as part of the Colorado River Compact. The dam -- the largest on the Green River, a major tributary of the Colorado -- also provides hydropower: The Flaming Gorge power plant's net generation in 2002 was about 217 million kilowatt hours (kWh).

But in the 1980s, federal wildlife biologists began to suspect that the dam was harming native fish downstream in Dinosaur National Monument. In 1992, FWS issued a biological opinion that found the dam was contributing to the decline of four species of endangered fish in the Green River: the razorback sucker, Colorado pikeminnow, humpback chub and bonytail.

That prompted BuRec, which operates the dam, to study how changing the operation of the dam might help the fish. The resulting flow recommendations, completed in 2000, provided the basis for the new proposal, Heffernan said.

Under the new plan, BuRec would allow as much as 11,900 cubic feet per second (cfs) of water to flow over the dam in the spring. Currently, flows below the dam fluctuate between 830 cfs and 4,000 cfs, peaking in summer and winter, when electricity demand

is greatest. But operating the dam to simulate natural flows will not have a significant effect on power generation, Heffernan said.

Larry Crist, a fisheries biologist with FWS who helped develop the 2000 flow recommendations in his previous position with BuRec, said that while altering the operation of the dam is "a big step forward," it's only part of the solution. "It's an important element, but it's not the only element in recovering these fish," he said. "You'll have to do that in conjunction with dealing with non-native species and reintroducing native fish in places where they're no longer found."

The Moab, Utah-based environmental group Living Rivers says altering flows is not enough to recover the fish. It has urged BuRec to consider decommissioning the dam, and hoped the agency would include dismantling as an alternative in the draft EIS. But Heffernan said taking out the dam is not an option. "We can protect fish while maintaining other functions of the dam," she said.

John Weisheit, conservation director for the group Living Rivers, is skeptical.

"It's not going to work, in my opinion," he said. "They're applying band-aids to stay out of court, to show they're trying to keep the fish alive. But as long as that dam is there, affecting temperature and sediment, recovery of those fish is not going to happen."

Crist acknowledged that a natural system would be "the most ideal situation," but he said the new flow regime is "a good compromise" considering the realities of demands for power, irrigation and recreation.

"When you deal with the Endangered Species Act and you deal with recovery, it doesn't mean returning all the way to natural conditions," he said. "I think endangered fish can tolerate a certain amount of development."

And with snowmelt still below average in some watersheds, Lake Flaming Gorge provides an important source of water for a growing population, Heffernan said.

"The current drought we're in shows the value of these reservoirs, for both water storage and endangered species. It provides a source of water for everybody in a period where there wouldn't be water otherwise," she said.

"Unless we can get everybody to not move to the state of Utah, (the dam) will continue to figure in our water needs substantially."

Complicating recovery efforts is the presence of an economically important blue-ribbon trout fishery below the dam. While the endangered razorback sucker, Colorado pikeminnow, humpback chub and bonytail require warm water, trout need cool water.

Crist said the new flow regime will create temperatures agreeable to both endangered fish and trout. But Weisheit sees that scenario as overly optimistic. "You can't manage for both endangered native fish and exotic fish in the same system," he said.

Letter to LR 06/17/03

Commissioner Keys responds to LR letter

United States Department of the Interior
Bureau of Reclamation
Washington, D. C. 20240
In Reply Refer To:
W-6333 June 17, 2003
ADM-13.00

Mr. Owen T. Lammers
Executive Director, Living Waters [Rivers]
P.O. Box 466
Moab, Utah 84532

Dear Mr. Lammers:

Thank you for your [letter to Secretary of the Interior Gale A. Norton dated March 14, 2003](#), regarding Colorado River issues. The Secretary has asked that I respond to you on her behalf. Similar to other Western rivers, the Colorado River Basin has experienced four dry years, some of which having been among the driest on record. With such a significant part of the nation dependent on water supplies from the Colorado River, it is truly fortunate that we continue to enjoy the benefits of our existing water supply facilities that help to mitigate to make up for these tough years of insufficient moisture.

As you point out in your letter, these issues are complex and sometimes contentious, and it gives me a perfect opportunity to mention the Secretary's new initiative, entitled Water 2025: Preventing Crises and Conflict in the West. Water 2025 recognizes the realities we face in dealing with water issues, such as explosive population growth, increasing needs for water for environmental and recreational uses, and the national importance of food and fiber production from Western irrigated agriculture. Water 2025 sets forth a strategic plan to facilitate a vigorous and educated public discussion in key Western communities, including those that rely on the Colorado River, where the likelihood for conflict and crises over water exists or can be predicted to occur by the year 2025. I invite you to attend and participate in any of the eight regional consulting sessions hosted by the Bureau of Reclamation. The information on these sessions is located on our website, www.doi.gov/water2025.

Again, thank you for your comments and concerns about Colorado River issues. The Colorado River has been and will continue to be a top priority for our agency, and I look forward to working with you and your organization in the constructive and positive manner set forth in Water 2025.

Sincerely,

John W. Keys, III
Commissioner

LR in the News 06/30/03

Colorado River basin unprepared for shrinking reservoir capacity

April Reese, Land Letter Colorado correspondent

PAONIA, Colo. -- The intricate plumbing system that has turned the arid Colorado River basin into a patchwork of irrigated fields and fast-growing cities is at risk of running dry if water managers do not focus more effort on keeping sediment from building up behind the river's dams, some water experts and river advocates warn.

The Colorado River stretches 1,450 miles from the Rocky Mountains to the Gulf of California and the Sea of Cortez, draining a 244,000-square mile basin. More than 30 million people in seven states depend on water stored in the basin's reservoirs to provide a steady and reliable supply for irrigation, hydropower and municipal water use. But while the dams allow large volumes of water to be stored and distributed, they also intercept sediment that would otherwise be carried downstream in the silt-heavy river. Sediment is slowing accumulating in the system's reservoirs, and eventually will render their usefulness for water storage obsolete, water experts say.

"If we allow those reservoirs to fill up with sediment, we'll have severe water shortages, and we will not be able to meet our water needs," said Ron Christensen, an independent water engineer based in Salt Lake City.

Scientists say siltation is affecting areas downstream as well: Reservoirs are collecting sediment that in a natural river system would flow downstream and replenish sandbars and riverbanks, resulting in erosion and a deepening of the river channel.

Barry Wirth, who handles communications for the Bureau of Reclamation's Upper Colorado River Basin office, said sedimentation "will present some challenges," but not until "many years down the road."

Wirth said it will take centuries for silt to have a major impact on water storage capacity in the basin's reservoirs. As an example, he cited Lake Powell, the reservoir created by Glen Canyon Dam in Arizona and one of the Colorado's largest. It will not silt up for another 500 to 700 years, he said, adding that that estimate is based "somewhat on conjecture."

But some water experts say that is an overly optimistic scenario that fails to take into account the vagaries of weather, climate change, water demand and other variables.

Christensen said capacity can shrink dramatically long before silt reaches the top of a dam.

For instance, "Lake Powell has gone from full to half empty," because of the current drought, he said. "If the reservoir was half full with sediment [when the drought hit], you'd be done today, basically. All the water you'd have is what's coming down the river

- there would be nothing in storage." Glen Canyon Dam and Lake Powell. Photo courtesy of BuRec.

John Weisheit, conservation director for the Moab, Utah-based group Living Rivers, said that BuRec's wait-and-see approach could backfire.

"It puts the entire system in jeopardy, and it's going to be embarrassing for them," he said. "They're in denial. They knew this was going to happen when the dams were built."

All of the dams -- including the massive Hoover Dam, built in the 1930s -- were constructed with extra storage capacity to account for sedimentation buildup, said Bob Walsh, Wirth's counterpart in BuRec's Lower Colorado River Basin office. Dam engineers estimated how much sediment was likely to build up behind the dam and expanded the reservoir's depth accordingly, Walsh said. For example, of Lake Mead's 32 million acre-feet capacity, 2.5 million acre-feet were set aside for sediment. (One acre-foot is the amount of water needed to cover an acre of land in one foot of water.)

"Some of the organizations that would like to see the dams removed would like to tell people the dams are going to silt up and be useless. But we've never seen anything that provides hard evidence of that," Walsh said. "The engineers that planned and built these dams knew the Colorado was a silty river and they took special precautions for that. These dams were built to handle sedimentation."

It's too soon to come up with solutions to a problem that isn't likely to surface for centuries, Walsh said. And when that day comes, "there will be ways to remove the sediment, if that's necessary," he said.

Wirth added that with the water supply for 30 million people -- and counting -- hanging in the balance, BuRec would not hesitate to address the sediment problem if the agency felt it was a pressing concern.

"It's to our advantage to do as thorough a job as we can, because it's in our best interest," he said. "We want to ensure the water is there to be allocated."

In the meantime, BuRec faces more immediate challenges, such as meeting the water needs of the current generation, Wirth said. "I just don't think in the year 2003, we can make an allocation decision for the people who will be here in 500 years. But we can do that for people who will be here in 2030," Wirth said. "Those dams were built according to what society wanted in those years. Now that we have 30 million people in the basin, how do we best utilize those resources?"

But as far back as the early 20th Century, before the dams were built, federal officials were expressing concern about sedimentation. In 1910, F. H. Newell of the Geological Survey, who later became the first Director of the Reclamation Service (now BuRec) wrote: "The upper ends of all reservoirs are rapidly filled with silt and it becomes an important question to the projectors of storage works as to how many years will elapse before the value of the reservoir is practically destroyed and whether its use can be restored in part by subsequent removal of some of this material."

Wirth said that as far as he knows, none of the reservoirs in the basin have plans for handling sediment buildup.

"I think that there are ways to wash the sediment out or stop it before it gets into the reservoirs. But no one's doing anything about it," Christensen said. "I think they ought to do it sooner rather than later because we need the water storage that we're losing to sediment," Christensen said. "We ought to be maintaining our storage capacity rather than letting it fill up."

As Colorado River-dependent cities like Tuscon, Salt Lake City and San Diego continue to grow, and demands on limited water supplies increase, maintaining full storage capacity in the system's reservoirs is becoming more crucial.

"Everybody's worried about how to get more water. Not nearly as many are worried about their reservoirs filling up with sediment," Christensen added. "And they're not going to worry about it until it becomes a problem."

Although BuRec and environmental groups have completed a handful of sedimentation studies of reservoirs in the basin, many are outdated or flawed, and "very little research is being done," Christensen said.

Water experts say the little research that has been done suggests that sediment is expensive to remove or control and difficult to dispose of.

But Weisheit said taking on the problem now, while it's still in the early stages, is preferable to waiting until diversion pipes are clogged with silt.

"A sediment survey for the whole Colorado River basin is an appropriate thing to ask for and accomplish," he said. "The longer they wait, the greater the amount of sediment they will have to deal with and the more it will cost to mitigate."

LR in the News 07/06/03

Water: Growing demand, dwindling supply

Shaun McKinnon The Arizona Republic Jul. 6, 2003

Lesson No. 1 about water in the West: There's never enough to go around, and no one's making any more.

Competition for what there is has intensified as growth and drought tighten the supply. The struggle threatens everything from economic development and tourism to agriculture and municipal water supplies.

Courts are deciding who can use the water and who can't. Cities are preparing to buy or lease from farmers or Indian tribes for 10 times the current cost.

If you go Phoenix will host the first of eight regional meetings to discuss issues raised by "Water 2025," Interior Secretary Gale Norton's blueprint for reventing water crises and conflict.

The half-day conference will be held from 1 to 5 p.m. Tuesday at the downtown Hyatt Regency Hotel.

Two sessions are scheduled, one to talk about specific Arizona issues and the other focusing on resolving conflicts. Participants include Herb Guenther, director of the state Department of Water Resources; Sid Wilson, general manager of the Central Arizona Project; Douglas Nelson of the Arizona Rural Water Association; and representatives from Indian tribes, environmental groups and local governments.

Additional sessions are scheduled throughout the summer in Las Vegas; Sacramento; Salt Lake City; Boise, Idaho; Billings, Mont.; Albuquerque and Austin.

Input from the sessions could help shape Water 2025 as well as other Interior Department water policies.

The Phoenix sessions are open to the public, but advance registration is required. Information is available by logging on to www.doi.gov/water2025/az/main.cfm.

And on the eve of a series of meetings aimed at quelling some of the unrest, the federal government lobbed its own bomb, ruling on Thursday that farmers in California's Imperial Valley are wasting water and will receive less beginning next year. Furious farmers are already preparing a legal challenge that will likely drag on for months and could eventually draw in Arizona and other states.

The escalating battles pushed Interior Secretary Gale Norton to step in and try to negotiate a truce. She introduced "Water 2025" in May as blueprint for preventing crisis and conflict and planned to begin discussing it with regional water leaders beginning Tuesday in Phoenix.

"When water crises and conflict pit neighbor against neighbor, species against species and business against recreation, when they threaten your way of life, we cannot afford to stand on the sideline," Norton said last month from Denver. "The consequences . . . are just too severe."

Critics have already dismissed Norton's plan as, among other things, "Band-Aids for gunshot wounds," as the environmental group Living Rivers called it. State and local water managers bemoan its puny budget, fearing more unfunded federal mandates. But some water experts believe it's a reasonable approach to a nearly unreasonable situation.

"The water supply is finite, and the demands are growing," said University of Arizona law Professor Robert Glennon, an authority on Western water issues. "There will be no new Central Arizona Project, no second era of dam building. That's just not going to happen. What the West is looking at is the fastest-growing section of the country, a population boom that's going on unabated. The question is, What's going to give?"

Among the issues that fuel the fiercest fights:

*Growth. More than 25 million people rely on the Colorado River, which is now controlled by dams and reservoirs for much of its 1,400-mile length. Nevada has exhausted its legal allocation of the river and is now searching for alternatives. Colorado lawmakers recently approved a plan to build a new pipeline that will carry more of that state's share of the river to its most populous cities east of the Rockies.

Related links

- * Saving Southwestern willow flycatcher
- * Special report: A long, dry streak

The story is similar on other rivers, which strain to serve growing populations. "Almost every major river in the West is overappropriated," said John Keyes, commissioner of the Bureau of Reclamation, the agency that operates most of the region's water delivery systems. In Arizona, the groundwater supply is at greater risk of depletion, especially in rural areas.

*Environment. Courts are increasingly siding with environmental groups who want water set aside for wildlife and natural habitat. Salt River Project must spend \$20 million to create and maintain a habitat for the Southwestern willow flycatcher, an endangered bird that moved into the drought-stricken edges of Roosevelt Lake. Another court ordered the Army to reduce its pumping near Sierra Vista, ruling that growth there was endangering the San Pedro River.

Just last month, a New Mexico court ruled that Albuquerque must take less water from the Rio Grande to accommodate the endangered silvery minnow. That decision is "huge," said Lisa Force, Arizona program director for Living Rivers. "It has the potential of impacting Western water law."

* Politics. Few issues have fueled the kind of political battles that water has in the West. And it has rarely been more evident than the past year in California, where the powerful Imperial Irrigation District has dug in to protect its huge water supply from San Diego, Los Angeles and the U.S. government.

Federal officials said Thursday that the district is wasting some of its allocation and will lose up to 9 percent of its water next year. Imperial holds the rights to more water than any single user on the river, more than the entire states of Nevada, Wyoming and New Mexico.

In Arizona, tribal water claims are crawling through Congress, the Legislature and the courts. The Navajo Nation earlier this year filed suit to force action on its claim to the Colorado and Little Colorado rivers, a move that could set off new skirmishes over who must give up water to satisfy any settlement.

If the tribes decide to lease water back to urban providers, they could demand premium costs. Valley cities that now pay roughly \$30 to \$100 per acre-foot could find bills topping \$1,000 per acre-foot, according to water experts. (An acre-foot equals 325,851 gallons.)

* Agriculture. Despite the urban growth explosion, farmers still use more water than anyone else in the West. The Imperial Irrigation District in southern California holds the largest single allocation on the Colorado River, larger even than all of Arizona's. That gives farmers power, but in many cases, it also gives cities a source of water for new growth. The battles will focus on how farmers will reduce their consumption and how much cities will have to pay them to do so.

* Drought and climate. The one pressure point out of anyone's direct control, drought has reshaped many of the arguments in recent years simply by reducing the amount of water available. Both the Colorado River and the Salt and Gila rivers in Arizona produced record-low runoff last year, forcing cities to draw heavily on reservoirs. Lake Powell is now at half-capacity, and Lake Mead dropped low enough to trigger limits on some states.

Drought cycle

University of Arizona hydrologist Julio Betancourt predicts the Southwest is headed into a long-term drought cycle that would choke the water supply for years or even decades. But that may be just the beginning, according to Tim Barnett, a researcher at Scripps Institution of Oceanography who is studying abrupt climate change.

Warming seasonal temperatures will shorten the snow-melting season in the West's high country and will reduce runoff by 17 percent to one-third on the Colorado River and other systems, leaving them unable to meet demands for the foreseeable future, Barnett asserts.

Those pressure points form much of the foundation for Norton's Water 2025 initiative, which begins with what she calls "the five realities:" growth, existing water shortages, conflicts caused by those shortages, aging water delivery and treatment systems, and ineffective crisis management.

From there, she proposes four tools to help stave off future crisis and conflict: improving water management through conservation, efficiency and water markets, such as Arizona's water bank; collaboration among cities, farmers, environmental groups and others who have a stake in the West's water; boosting supplies with technology such as desalinization of water that otherwise would be wasted; and adjusting policy and even law to more efficiently use existing supplies.

The proposal included an \$11 million appropriation for the first year, an amount reclamation chief Keyes acknowledges would barely address issues in Phoenix but still "money to get things started." The Interior Department will encourage state and local leaders to develop ideas and plans suitable for their specific situations.

Water experts say the plan falls short of addressing some of the most critical conflicts still looming. One potentially blockbuster showdown is brewing just over the border in Mexico, where environmental groups in that country and this one are trying to force their governments to restore the Colorado River Delta. That once lush riparian area most years now receives no water from the overtaxed river.

Restoring it would cost tens of millions of dollars and billions of gallons of water, which someone would have to give up at such a significant cost that few U.S. leaders will even consider it. Some delta advocates have tried instead to focus on minor successes that could lead to a long-term approach.

One such example is a tiny edge of the delta just south of Yuma, where runoff from farms has created a new riparian habitat that supports birds and other wildlife.

"The big lesson is that it is possible on very small water budgets to finally incorporate wildlife and the river itself into the way we manage the river," said Charles Bergman, whose book *Red Delta* chronicles the transformation.

The one hitch: The water that runs into the marshes is the same water that some officials want to treat and desalt, making more efficient use of it.

The only way around such conflicts is to settle feuds, set aside differences and cooperate, said Patricia Mulroy, general manager of the Southern Nevada Water Authority.

'This is all political'

"The consequences of not cooperating are very real and very immediate," Mulroy said. "If this drought continues, there is no way, given the current separatist approach of the lower basin states, that we can all make it through. This is all political. The hydrology of the river has made those politics more acute."

She said Arizona's willingness to bank water for Nevada is one sign that politics aren't forever. Norton actually cited the water bank in her initiative as an example of what should happen throughout the West.

"Long-lasting solutions will come from the people who must live with or learn to live without the water they need," Norton said.

"Doing nothing is an option, but only if we are willing to accept the drastic consequences that follow."

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LR in the News 07/12/03

Thirsty Colorado Is Proposing to Stick a 'Big Straw' Into Its Namesake River

July 12, 2003 LA Times Headlines

By Bettina Boxall, Times Staff Writer

GRAND JUNCTION, Colo. - It's an audacious - some say absurd - scheme: Take Colorado River water just before it slips over the Utah border, pump it east more than

200 miles, lift it 5,000 feet over the Rocky Mountains and deliver it to the state's burgeoning Front Range communities.

Nicknamed the "Big Straw," it is a big, old-fashioned kind of idea, reminiscent of the mega-water projects that greened the West in the 20th century. Estimates of its cost start at \$2.5 billion and climb. Opponents call it a giant boondoggle in the making that would suck water from some of Utah's most popular rafting spots and deplete flows needed by endangered fish.

The Big Straw's grand scope underscores Colorado's keen desire to protect its full share of the 1,400-mile-long river that cleaves the Southwest like a rusty saw. Downstream in California, the plan is seen as a harbinger of the future, when the rising demands of other states along the Colorado will inevitably staunch the bounteous surplus on which the Golden State has long depended.

The water hog of the Colorado, California has no choice but to stand by while other states move to tap their full entitlements meted out by Congress and a multi-state compact in the 1920s and '40s. "They have a right to develop their apportionment," said Dennis Underwood, vice president of the giant Metropolitan Water District of Southern California.

California's prodigious thirst looms large in Western water policy and is helping drive the Big Straw proposal. Politicians see it as a way to keep Colorado water in Colorado - and out of the swimming pools and sprinkler systems of Southern California.

"While Coloradans are carefully considering which day they are allowed to turn their home sprinklers on, California lawns are lush and green, thanks to Colorado's water," Gov. Bill Owens lamented during a water policy discussion this spring.

The Big Straw proposal is still in the earliest stages of review. A \$500,000 study, due out in the fall, will determine only if the project is worth pursuing, not whether it will be built.

Nobody can say at this point how much electrical power it would take to transport the water, how much the project would cost, who would pay for it, what the route of the pipeline would be, or how much treatment the water would require. Nor can anyone say precisely who would use the water, which is coveted more for the Front Range's future growth than current consumption.

But Grand Junction water attorney and Big Straw backer Gregory Hoskin believes there is a ready market, even if the water proves expensive.

"This is the desert. People can't stand the desert. They need trees. They need green," insisted Hoskin, a member of the Colorado Water Conservation Board. "I don't know what people will pay for water. But I know people with money will pay anything to water their lawn."

Were it not for a mismatch of geography, Coloradans would probably already be using their full share of the river. But the Colorado, like most of the state's water, is on the

western side of the Rockies, while most of its people - and growth - are on the eastern side in a stretch of development that runs from Colorado Springs to Denver and beyond.

Starting in the 1930s, the state and the federal Bureau of Reclamation developed a complex system of reservoirs, aqueducts and mountain tunnels to ship water to the eastern side of the Continental Divide. The Big Straw would reach farther, pulling water through a 10-foot-wide pipe all the way from Colorado's westernmost border. The pipeline would climb 4,000 to 5,600 feet over the Rockies, higher than California's most grandiose projects. Although the State Water Project in California sends water a greater distance - 600 miles south to Los Angeles from the Sacramento-San Joaquin Delta - its rise across the Tehachapi Mountains is no more than 2,000 feet.

By waiting to tap the river after western Colorado has used what it wants, the Big Straw would avoid many messy in-state water brawls. But removing at least several hundred thousand acre-feet of water annually - an acre-foot would supply two Southern California households for a year - could change the nature of the river in the downstream states.

There would be much less flow for the river's four endangered fish species, for the huge reservoirs that store water for the Lower Basin, and for the rafting outfitters who play a significant role in Utah's recreation economy.

"We think it's horrible. It could put the river-running industry at risk," warned John Weisheit, conservation director of Living Rivers in Moab, Utah, and a member of several river outfitter boards. "It is going to be a huge burden to the taxpayer, when the more reasonable alternative is conservation."

The proposal has its critics in Colorado as well. "I don't think average, everyday Coloradans want to pay through the nose for a project like this," said state Sen. Terry Phillips, a Democrat from the Denver suburb of Louisville who scoffed at the Big Straw as an extravagant fantasy when the Legislature appropriated funding for the preliminary study. "It's ridiculous."

At the Colorado Canyons National Conservation Area, manager Greg Gnesios fears the pipeline's massive infrastructure could blight the scenic red rock canyons of the 123,000-acre tract bordering the river at the state's western edge.

"It's almost like putting it through the national park," Gnesios said. "That could create some problems for the Big Straw folks."

Dan Luecke, a hydrologist who works for several Colorado environmental groups, doubts that the scheme will survive close scrutiny.

"I think an evenhanded study will drive a stake in its heart," he said. "It's a bad idea. It will be enormously expensive. It will require an enormous amount of energy to pump that water. It will have incredible water quality problems."

Born amid the 13,000-foot peaks of Rocky Mountain National Park, the Colorado is far from pristine when it hits the Utah border. Often it resembles a giant, murky irrigation ditch.

On its course down the western slope of the Rockies, the river picks up salts and selenium from the riverbed and farm runoff, as well as urban effluent. The river's salinity levels at the Utah border are 10 times greater than they are at its headwaters. Selenium levels at times exceed state standards. If pumped untreated to high-country reservoirs on its way to the Front Range, the border water would be warmer and dirtier than the supplies into which it is piped, lowering overall water quality.

"From our standpoint, that is the biggest concern," David Nickum, executive director of the Colorado Council of Trout Unlimited, said as he stood near a mountain reservoir that flows into a trout-fishing river. "If you envision taking a large amount of water out of the Colorado and bringing it up here, it's hard to imagine the magnitude of the change [in quality] or the magnitude of treatment."

Using more water in the Colorado's Upper Basin also means that less water would reach the Lower Basin, where California has been sucking more than its share from the river for nearly half a century.

It could do so because the other six Western states that draw from the Colorado didn't need their full allocations. But as the West grows, that is changing. Arizona and Nevada have both begun to use their full river entitlements in the last three years.

"Now the reason there are surpluses is because the Upper Basin states have not developed their allocations," observed Jerry Zimmerman, executive director of the Colorado River Board of California. "In the future, there will not be surpluses nearly as frequently."

Nor is there as much water in the Colorado as everybody thought when the river's flow was divvied up between the Upper and Lower basins in a 1922 interstate compact.

Hydrologists had figured that 18 million acre-feet of water a year spilled down the river's rock-walled canyons to the Gulf of Mexico. But that estimate, based on a wet period, turned out to be too high by about 3 million acre-feet a year. The average river flow is in fact less than the total legally allotted to the seven basin states and Mexico.

"If you have a river overcommitted, then the chances of getting shortages are there. That's why you need to look at more effective ways of doing things," said the MWD's Underwood.

Ironically, the Big Straw idea grew out of love of another river. Ralph Clark III, a private environmental planner, first proposed it in the late 1980s as a way of protecting the headwaters of the Gunnison River in western Colorado. Better, he thought, to take water from the Colorado at the state border than divert the upper reaches of his beloved Gunnison to the east side of the Rockies.

But even Clark is not yet prepared to endorse its construction. He thinks of the Big Straw, which he more mundanely calls the Colorado Aqueduct Return Project, as a last resort. * Times staff writer Doug Smith contributed to this report.

LR in the News 07/17/03

Reclamation chief won't drain Powell

Arizona Daily Sun

By PAUL FOY

Associated Press Writer

SALT LAKE CITY -- Advocates of draining Lake Powell and allowing the Colorado River to flow freely through southern Utah again pitched their idea Wednesday to the head of the Bureau of Reclamation, but he dismissed it out of hand, declaring: "That's never going to happen."

Reclamation Commissioner John Keys convened the fourth of eight regional conferences on Western water problems Wednesday in Salt Lake City.

Speaking to about 350 government and water district officials, Keys advocated conservation, collaboration and planning. He told officials they shouldn't look to the federal government for money as a solution.

"I didn't come here with a bag of money to solve everyone's water problems," Keys said.

Advocates of draining Lake Powell argued that four years of drought have left the huge reservoir on the Utah-Arizona border only about half full.

John Weisheit, director of the Moab group Living Rivers, said Lake Powell could be sucked dry in eight years if the drought continues. Keys disputed that, saying Lake Powell never would run dry. And he said it would be irresponsible to drain Lake Powell or Lake Mead, the two largest Colorado River reservoirs.

Weisheit said the reservoirs squander huge quantities of water to evaporation and seepage -- a loss Keys dismissed as the "cost of doing business."

Without Lake Powell or Lake Mead, Keys said, the 23 million people who depend on the lower Colorado River basin would have had only 40 percent of their normal water supplies last year.

"It's something that's never going to happen," he said in an interview of the idea of tearing out Glen Canyon Dam. "I won't spend a dollar studying it."

LR Press Release 07/22/03

House votes to destroy Colorado River Delta wetlands

Taxpayer money to be wasted on mothballed desalting plant; Senate yet to act

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Kara Gillion, Defenders of Wildlife * 824 Gold SW, Albuquerque * 505-248-0118

The U.S. House of Representatives voted last Friday to retool a defunct desalting plant near Yuma, Arizona. The Bureau of Reclamation (Bureau) estimates the cost of repairing the now obsolete plant technology at \$26 million. The decision was made despite the reality that operating the plant will destroy the majority of wetland habitat in the Colorado River delta region, and that far less costly measures are available to meet US treaty obligations for water delivery to Mexico.

"At a time when federal deficits are skyrocketing, it's unbelievable that Congress would consider throwing away taxpayers dollars to retool this plant, " says Lisa Force, program director for Living Rivers. "This is pork barrel politics at its worst."

The inclusion of the provision in the House report on the 2004 Energy and Water Appropriations bill allows for re-operating the Yuma Desalting Plant, a measure which the Bureau estimates will cost a minimum of \$36 million annually. Completed in 1992 at a cost of \$256 million to clean up brackish wastewater from farms in southern Arizona, the plant was shut down several months later due to extremely high operating costs. The Bureau of Reclamation has downplayed an alternative solution costing 33% to 85 % less--just \$6 million to \$26 million annually--involving paying willing sellers to lease water they presently do not need.

The agricultural wastewater that the plant would process is now funneled into the Cienega de Santa Clara, a 40,000-acre open water ecosystem in the Colorado River delta region. The desalting plant would remove the entire flow from the cienega and return only highly saline brine to the wetlands.

"This provision would destroy an extremely important wetland in Mexico that contains the largest remaining population of Yuma Clapper Rail in the world," says Bill Snape, Defenders of Wildlife Vice President for Law and Litigation. "It will be impossible to replace the value of the Cienega de Santa Clara to the Colorado River ecosystem."

The cienega is the largest remaining wetland in the southwest Americas and is home to fifty-six threatened, endangered and declining species. Several scientific studies funded by the Department of Interior confirm that the wetland would be completely destroyed by desalter operations.

"This is reminiscent of the days of old, when the Bureau wasted tax payer money left and right, leaving renowned habitat laid to waste," says John Weisheit, conservation director of Living Rivers and the designated Colorado Riverkeeper.

"We are disappointed that some members of Congress wish to move forward with such an expensive and destructive proposal. Congress mandated public involvement in Colorado River management but we fear the public is not being heard," says Steve Glazer, Chair of the Sierra Club Colorado River Task Force.

"We're fighting hard to ensure the Senate does not duplicate the folly of the House," adds Lisa Force. The U.S. Senate is expected to vote on the water and energy appropriations bill as early as this week.

LR Press Release 08/11/03

Sediment forces closure of Hite Marina

For immediate release
August 11, 2003

Contact: John Weisheit (435) 259-1063

Sediment makes access to Hite Marina impossible

Glen Canyon Dam hydropower at risk

As predicted two years ago by the environmental group Living Rivers in Moab, Utah, Colorado River sediment at Hite Marina has necessitated the removal of all reservoir conveniences such as the floating store, fuel docks, water and septic lines, boat rentals, and courtesy docks. With the blessing of the National Park Service the concessions operator, ARAMARK, has literally lifted anchor and towed their floating facilities down-reservoir to keep their investment from becoming engulfed in mud.

A "use at your own risk" boat launch currently remains open for the convenience of river runners and small, hard-hull boaters. Because Lake Powell reservoir is dropping fast, this primitive boat ramp will be completely unusable by the first of September, and will force river runners to go another 45 miles down-reservoir to exit instead at Bullfrog Marina.

The land-based facilities at Hite, which includes a store, gasoline, drinking water and a sewer clean-out, will remain open to service the needs of the residents and the traveling public.

In 1986 the Bureau of Reclamation determined that the delta for the Colorado River arm was located at Dark Canyon, which is 15 miles above Hite. The National Park Service and ARAMARK jointly authorized a sediment survey to be conducted by Mussetter Engineering of Denver in 2000. The engineers had determined that the delta advanced from Dark Canyon to the mouth of the Dirty Devil River at a rate of about one-mile per

year. At present the delta is just beyond Hite Marina where the original river channel is 245 feet below the full reservoir elevation of 3700 feet.

According to the 2000 survey, reservoir managers were given another 35 years of service at Hite Marina provided the reservoir could be maintained at full pool. "Such a projection is incredibly optimistic," says John Weisheit, conservation director of Living Rivers. "Considering the downstream demand for water, the present drought situation, and how the river erodes into the exposed sediment and feeds the delta, the facilities at Hite are basically history."

By April of 2004, Lake Powell reservoir is predicted to be 106 feet below normal. At this elevation, Bullfrog and Antelope Point marinas will also feel the effects of sustained drought. The boat ramp at Bullfrog is beginning to flatten out and the lack of incline will make it very difficult to load and unload boats--especially longer craft such as a houseboat and the highway department's ferryboat. Because Antelope Point is located on the rim of the original Colorado River canyon, the lowering reservoir level will perch this boat ramp high and dry. Already boat traffic is creating congestion problems at the narrows before Antelope Point and a no-wake designation is now being enforced to minimize hazards to navigation.

During the spring snowmelt, Lake Powell reservoir levels rose a mere 11 feet. Already the reservoir has returned to the levels of the previous winter. With no drought relief in sight, this continuing trend will eventually place power generation at risk too. The minimum storage level to safely produce electricity is set at 6 million acre-feet. Right now the reservoir is storing 12.7 million acre-feet of water at 50% of capacity. Power generation at Glen Canyon Dam could effectively end in two or three years under present drought conditions.

"This drought emphasizes the dubious nature of Lake Powell reservoir. By decommissioning Glen Canyon Dam we could restore five hundred miles of river to its natural habitat, which includes Grand Canyon National Park, while at the same time saving the water that is otherwise lost to evaporation," concludes Weisheit, who is also the designated Colorado Riverkeeper.

LR Letter 08/11/03

Proposed Modification to Mechanical Removal of Non-native Fish from the Colorado River in Grand Canyon Arizona, dated July 25, 2003

August 11, 2003
Mr. Dennis Kubly
Bureau of Reclamation
125 South State Street
Suite 6107
Salt Lake City, UT 84138-1107

Re: Proposed Modification to Mechanical Removal of Non-native Fish from the Colorado River in Grand Canyon Arizona, dated July 25, 2003

Via Fax and E-mail

Dear Mr. Kubly ,

Thank you for the opportunity to submit comments on Proposed Modification to Mechanical Removal of Non-native Fish from the Colorado River in Grand Canyon Arizona, dated July 25, 2003.

Living Rivers finds this proposed action constitutes improper science, thus an inappropriate deviation from the original objective. Living Rivers is also disappointed that this proposed action represents yet another example of how the Adaptive Management Program (AMP) is failing to address the long-term recovery needs for endangered fish, and merely perpetuating a reactive strategy with no demonstrated results.

1) No justification for altering the experiment

As noted in materials for the 13-14 August AMP meeting, it is clear that in-migration is occurring in the existing mechanical fish removal zone. The supplemental EA stated the contrary. (The EA should be re-written to reflect this new information, and released again for public comment.) Since there is no confirmation that the experiment is indeed permanently reducing non-native population to desired levels, there is no reason to contemplate any change in the experiment.

Second, while the experiment is certainly demonstrating that fish are being killed, there is no data to support the experiment is leading to improved Humpback Chub recruitment. It is improper to change the parameters of the experiment until such time as there is a demonstrated rationale to do so. Such is not the case at present, especially, as noted above, with migration now well underway.

Third, there has been no independent review of this proposal, a consistent recommendation by the National Research Council and the National Academy of Sciences of such GCMRC activities.

2) Demonstrated lack of focus on the long term objectives.

The investment of AMP resources in contemplating and studying the alteration of an incomplete, and so far, inconclusive experiment is yet another unfortunate example of poor leadership within GCMRC and the AMP. There is an extensive amount of work that needs to be undertaken to help recover Grand Canyon's native fish, the principle charge of the AMP. After nearly two decades, seven under the direction the AMP, the results have been abysmal. This is in no small part due to wasted resources, such as plans to alter an experiment with insufficient justification to do so.

A more appropriate investment in resources would be to begin studying and implementing mechanisms to address the need to reduce non-native fish with natural,

as opposed to mechanical approaches. An objective of the AMP is to reintroduce presently extirpated species, such as the Colorado Pikeminnow or Otter. Both such species would gladly feed on the non-native fish, likely at a much higher rate than the remaining natives.

With movement now by the AMP to address the need to warm the water, habitat conditions may be sufficient to support Pikeminnows. But the AMP need not wait until the temperature issue has been resolved to implement such a reintroduction, as it may petition to do so for experimental purposes, despite the fact that it is unlikely that the Pikeminnow can reproduce in the present system. However, if it appears that they are helping to significantly reduce the non-native population, with minimal impact to the native fish, and thus aiding in Humpback Chub recruitment, this would be cause to accelerate efforts to realize this species recovery as well.

While the Park Service has so far been resistant to Otter reintroduction due to inconclusive evidence regarding which sub-species dominated Grand Canyon habitat, it is clear that the increased interest and assumed need to increase predation on non-native fish, amplifies the call for implementation of a reintroduction plan.

Such nature-based proposals to mimic and rebuild the natural system should be the focus of the AMP, not short-term efforts to modify inconclusive experiments.

Thank you for your attention to these concerns.

Sincerely,

John Weisheit Conservation Director

LR Letter 08/13/03

Concerns regarding Glen Canyon Dam Adaptive Management Program

August 13, 2003

Mr. Michael Gabaldon Deputy Director of Operations U.S. Bureau of Reclamation
Department of Interior 1849 'C' Street, NW Washington, DC 20240

Re: Concerns regarding Glen Canyon Dam Adaptive Management Program

Dear Mr. Gabaldon,

The consistent message emanating from the Glen Canyon Dam Adaptive Management Program (AMP) is that it is failing in achieve its principal objective, the protection and recovery of endangered Humpback Chub (HBC). While the AMP and independent scientists debate how low HBC numbers are, all agree that they have declined considerably since the process began seven years ago. Living Rivers recognizes that AMP efforts are underway in an attempt to remedy this situation, but is very concerned that such efforts are not sufficiently comprehensive, nor do they justify hasty and inappropriate management practices.

Furthermore, Living Rivers believes that more than sufficient "new information" now exists to warrant the immediate undertaking of an entirely new, or supplemental, Environmental Impact Statement (EIS). Additionally, such new information also warrants an EIS be prepared for the planned Temperature Control Device (TCD) or the potential installation of generators on the dam's bypass tubes.

1. Emphasis on HBC numbers insufficient to address recovery needs

The AMP and Grand Canyon Monitoring and Research Center (GCMRC) focuses undue emphasis on yet conclusive approaches of counting of fish, and little to no resources on understanding their physical condition, nor the biological parameters necessary for their recovery. After nearly seven years of operation, all GCMRC has learned is that HBC populations are declining, but cannot determine by how much. The present estimate has an one hundred percent level of variability of 2,000 to 4,000 fish. Why has GCMRC yet to develop a mechanism to provided reliable fish counts, nor can the scientists within the AMP agree on whether the present counts constitute a crisis as far as the near extirpation of HBC in Grand Canyon?

The AMP's priority should not just be numbers of fish, but knowing their physical condition and what biological parameters must exist for preservation, and, as necessary, recovery. In 2000, Meretsky, et. al., published findings that indicated a possible decline in HBC condition since 1978. If true, such a trend would indicate that factors other than predation are effecting the HBC, and that undue emphasis on predation, as is presently occurring, won't address this problem. So far all reports and analysis by the AMP have focused on HBC numbers, and not their relative condition or health. While some of this data has been collected, there has not yet been any ongoing analysis of HBC condition factors as was recommended by Meretsky. Why?

Additionally, GCMRC has not developed sufficient information on HBC biological parameters. Such understanding is critical for making effective management decisions for the HBC future in Grand Canyon. At minimum, GCMRC should be investigating feeding habits, water quality, and recruitment and migration patterns for all periods of the HBC's lifespan. As the Little Colorado River presently represents the sole refuge for HBC in Grand Canyon, immediate emphasis should be placed on understanding the biological parameters to be persevered in this tributary to ensure this critical habitat is not disrupted.

Lastly, GCMRC must determine the population level, and changes in biological parameters, that would trigger a cessation of handling HBCs so as to avoid placing undue stress on the remaining population.

2. Inappropriate emphasis and approach to alien fish suppression

Scientist's are in agreement that predation by alien fish on HBC is limiting their recruitment, and thus suppression of these predators is warranted. While Living Rivers concurs, we find GCMRC's management choices are over-emphasizing this aspect of the problem, potentially to the detriment of the HBC recovery effort, and the scientific integrity of the AMP process.

First, the non-native fish suppression flows from Glen Canyon Dam represent a significant departure from the spirit of the EIS and the Record of Decision (ROD). While the flow levels themselves are within the ROD, they are being used in an attempt to affect non-native fish, not to directly affect native fish as was contemplated in the EIS. Any departure from the river's natural hydrograph is bound to have negative effects ecosystem-wide, not just the HBC. However, because the AMP has not sufficiently addressed the biological parameters for the HBC, it is not yet qualified to determine if, and to what extent, these alien fish suppression flows are impacting HBC recovery. It is also unclear if these flows have demonstrated any formidable change in trout populations. Plans to repeat these flows in 2004 are not prudent. Also, how could these increases in daily flows compliment a Beach/Habitat Building Flow planned for January if triggers are met? They seem at odds with each other.

Living Rivers is also concerned with the lack of independent review, and competitive bidding associated with contracts being let for monitoring the results of these experimental flows. When the AMP began seven years ago, it took pride in the independence afforded in the competitive bidding process for its science programs. Now, the vast majority of this work is being moved in house to GCMRC staff. When consultants are being used, as in the case of monitoring for these experimental flows, they are awarded without any competitive bid. This appears particularly suspicious in this case, since a contract was awarded to ECO PLAN Associates, which has been under contract with the Western Area Power Administration (WAPA). As these experimental flows would benefit WAPA and its customers by affording greater flexibility in power generation ramping, and that a variety of other consultants with greater experience in this area were not considered by GCMRC, AMP's appointment of ECO PLAN Associates has the strong appearance of industry bias.

Problems with the lack of independent oversight also appear to be surfacing with the mechanical fish removal program. The recent proposal to alter this program has been prematurely developed and submitted to the AMP without sound justification. The experiment has yet to demonstrate any impact on HBC recruitment, nor that in-migration is indeed not occurring in the target zone. Independent review of such proposals as recommended by the National Research Council should be standard procedure for such modifications to AMP activities to avoid such potential missteps in future.

A more appropriate and economically sustainable plan for non-native fish removal would be to study the reintroduction of natural predators. The management objectives of the AMP are to reintroduce presently extirpated species, such as the Colorado Pikeminnow or River Otter. Both aquatic predators species would gladly feed on the non-native fish, and likely not harm the native fish population.

The AMP could petition the US Fish Wildlife Service for an experimental release of the endangered Pikeminnow, despite the fact that it is unlikely that the Pikeminnow can reproduce in the present ecosystem. Thermal modification of the river could also provide the needed habitat for recruitment of these native predators. This scenario

would provide sustainable control of alien fishes in Grand Canyon while providing for the recovery of two native fish.

There has been resistance to studying River Otter reintroduction due to inconclusive evidence regarding which sub-species dominated Grand Canyon habitat. However, it is clear that the increased interest and assumed need to increase predation of alien fish, particularly trout, amplifies the call for a reintroduction plan. Such nature-based proposals to mimic and rebuild the natural system should be the focus of the AMP, not short-term efforts to modify inconclusive experiments.

3. Need for a Supplemental Environmental Impact Statement

The assumed environmental baseline associated with the Glen Canyon Dam EIS, and the launching of the AMP has little bearing on reality. Options allowed under the ROD have been attempted and have proven to be ineffective, leading to continued impairment to all significant downstream resources since the ROD was implemented. This is now placing the AMP in uncharted territory, as evidenced by the implementation of trout suppression flow not contemplated by the EIS or the ROD. Furthermore, the continued drought conditions are effecting reservoir levels, and soon, water temperature and dam operations in a manner not evaluated in the EIS. The AMP is effectively operating without a net, and must advise the Secretary of the Interior to call for a supplemental EIS to guide and inform its future programs.

The most significant changes are in HBC populations and sediment budgets. While the AMP has yet to agree on how bad the current HBC count is, there is no doubt that the population is in significant decline since the program began. Furthermore, there has been no movement on establishing a second population in the mainstem Colorado. Beach building efforts under the ROD have not worked in a sustained manner. The number and size of beaches in the Grand Canyon have experienced a significant decline since the AMP was put into place. Not only has this negatively effected the Canyons recreational experience, but has also impacted the river corridor's cultural resources which are now prone to erosion.

Anticipated upstream impacts associated with reduced elevations of Glen Canyon Reservoir (i.e. increased temperatures, modified nutrient dynamics, etc.) will have significant effects on the downstream resources in the Grand Canyon. As the drought situation persists, these effects will become most pronounced once reservoir levels fall below the elevation of the penstocks.

The key to reinitiating compliance with the National Environmental Policy Act, through a supplemental EIS, is if new data or impacts are recognized. Clearly in the case of Glen Canyon Dam and Grand Canyon National Park, significant new data (biological and sediment) indicate that the ecosystem needs to be reevaluated and assessed. The fact that new data on the HBC, sediment deposits, cultural resources, water quality, and reservoir levels show that decisions made on the original data from the Glen Canyon Environmental Studies is now in need of reassessment.

Thank you for your attention to these matters, and we look forward to your reply.

Sincerely,

John Weisheit Conservation Director

LR Press Release 08/15/03

Draining Update: 50 percent--forcing marina closures.

Marinas left high and dry, power generation next to go.

Contact:

John Weisheit (435-259-1063 or 435-259-8077)

Lake Powell reservoir is down 90 feet from normal, equating to a reservoir that is half full. The National Park Service, which manages marina facilities at Lake Powell, is at the beginning of shutting down marina's because they can no longer accommodate launch vessels. Meanwhile, Glen Canyon Dam is just two years away from no longer being able to generate hydroelectric power.

Now in the fourth year of an anticipated sustained drought, Lake Powell reservoir will soon be empty. Forecasters have informed the Park Service that the reservoir levels will only be getting lower. The reservoir is dropping faster than it can be replenished.

The United States Geological Survey 2002 report on Southwest climate change predicted that the Colorado Plateau would be heading into a 30-year period of below average river flows. Previous estimates by forecasters, on the impacts of such a sustained drought, calculated that Lake Powell would be drained within eight years. It's right on schedule. In July 1999, Lake Powell was at 90 percent. As of August 1, 2003, it was at 50 percent.

If the present drought does not relent, within two years Lake Powell will drain to the level of the penstock tubes that spin the generators at Glen Canyon Dam. According to a model that was published in October of 1995 in the Water Resources Bulletin, if a severe and sustained drought similar to the drought of the late 16th century appears, Lake Powell could stay drained for eight years.

"We're witnessing the end of Lake Powell right now," says Living Rivers' Conservation Director John Weisheit. "This was predicted, and nothing the National Park Service or the marina operators can do will change this."

- Two of Lake Powell's six boat ramps have been closed, and another will be closed by the end of the season. River sediment has brought an end to the marina at Hite at the top of the reservoir. At the other end of the reservoir, near Glen Canyon Dam, Antelope Point's marina facilities will soon be forced to again close because they will be perched atop a cliff being exposed as the reservoir lowers. This, just four years after construction in 1999.

- A \$3 million emergency appropriation was made in January to extend three other boat ramps at Bullfrog, Hall's Crossing and Wahweap marinas. But as the reservoir continues to lower, Bullfrog marina may also see its facilities shut down. Wahweap and Hall's Crossing will probably be able to stay open until the reservoir completely drains.
- A new \$75 million marina facility is supposed to be under construction at Antelope Point, but with a 500-foot cliff being exposed where the launch ramps are proposed, progress has stalled. Calls to Antelope Point Holdings and their engineers, revealed no comment to the feasibility of the project..
- The fate of the white-water rafting industry, which concludes trips at the top of Lake Powell, is also a major question. With sediment and mud clogging the marina and boat ramp at Hite, rafters will have a very difficult time getting off the water.

"As the drought persists, it is going to be very difficult, if not impossible, to conduct business as normal with the river and reservoir users. This includes the Grand Canyon river runners who will lose the large Glen Canyon Dam releases they need to run their large motorized boats through the canyon only to arrive at the sediment-choked Lake Mead," adds Weisheit.

Lake Powell is not the only problem. The entire Colorado River storage system has dropped from 92 to 60 percent over the past 44 months. "Lack of access to flat water recreation is the least of our worries," concludes Weisheit. "The Southwest plumbing system is headed for complete catastrophe, and the Bureau of Reclamation and the seven states that use Colorado River water have no disaster preparedness."

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Web pages on Southwest climate change:

[Severe and Sustained Drought for the Colorado River Watershed](#)

[Precipitation History of the Colorado Plateau](#)

[Latest News on the National Campaign to Drain Lake Powell and Restore Glen and Grand Canyons](#)

LR in the News 08/17/03

Colorado River Battle: 100 Years of Water War

Deal: Thirsty California, desperate for water, is willing to pay reluctant farmers billions to get some of their surplus.

By Alec MacGillis

Baltimore Sun National Staff

EL CENTRO, Calif. - Inch by inch, the life's blood of a large swath of the United States - Colorado River water - seeped across the desert. Or rather, across the desert that is now Mike Cox's cotton field.

For Cox, circling the field in his pickup truck to check on the water's progress, soaking his cotton is a routine procedure. Every 10 days during the summer, he uses 7.8 million gallons of water diverted by canals from the Colorado River to irrigate the 70-acre field, just a fraction of the 1,000 acres he farms in California's Imperial Valley.

But for the rest of the Southwest, Cox's routine watering represents something more significant. In this single irrigation of a tiny corner of a broad farming plain, Cox used about as much water as 50 households use in a year - as much as all their showering, toilet-flushing and dish-washing put together.

This is the explosive equation at the heart of the battle that, after gripping the Southwest for years, is now nearing a climax.

With the cities of the western Sun Belt booming, much of the water from the Colorado River, the main water source in a parched region, continues to be used by only a few hundred farmers in the Imperial Valley along the Mexican border.

The valley won the right to the water more than 100 years ago and has guarded it ever since. But in a historic shift, the Southwest is now on the verge of a landmark transfer of Colorado water from the Imperial Valley to San Diego.

The deal, which negotiators hope to seal by next month but which could still collapse, might help resolve a conflict that has been building for a century.

The war over Colorado water has pitted cities against farmers, fomented tensions among seven states, and dominated the attention of Native American tribes, environmentalists, federal officials and Mexico. The water wars have transformed a whole corner of the country, from the construction of vast cities on arid plains to the accidental creation of a sea in the middle of the desert.

For the 25 million Americans who rely on the river as it flows 1,400 miles from the snowpacks of the Rocky Mountains to its delta across the Mexican border, the outcome of the negotiations is nothing less than a matter of their region's survival.

"The big picture is that there are more rights to water from the Colorado than there is reliable water in the river," said Robert Glennon, a law professor at the University of Arizona. "We have a train wreck ahead of us."

Under the deal, San Diego would pay the Imperial Valley \$2.5 billion over 45 years to receive about 7 percent of the valley's share, water made available by more efficient irrigation. The water would compensate for the cutback California faces because of higher usage in Arizona, which now stores river water underground, leaving less for its western neighbor.

The deal, which also includes several smaller transfers within California, looks like a win-win arrangement. San Diego would get a reliable new source of water, while the Imperial Irrigation District would be able to sell water to San Diego at a rate 16 times what its own farmers pay.

But in the kind of twist so common to the water wars, a possible deal-breaker arose last year. Conserving water on Imperial farms, it turns out, would doom the Salton Sea, the giant lake in the middle of the desert at the valley's edge, imperiling millions of birds for which it is a key stop on the Pacific flyway.

Last week, amid the hoopla of the effort to recall Gov. Gray Davis, negotiators spent long days in Sacramento seeking a way to split the cost of protecting the sea and still salvage the transfer.

It is a surreal situation, with all the water machinations of the classic film Chinatown: Because of water being pumped into the Arizona sand, farmers in the California desert are being urged to sell water to a port city but are being held up by the danger of causing a landlocked sea to vanish from the Earth.

A century of change

It seemed simpler when farmer Cox's predecessors in the valley won rights to the water more than 100 years ago. Phoenix was a desert town of 5,000, San Diego a fledgling port city of 17,000 and the river water was the farmers' for the taking.

One century later, the farmers are not about to give up the water easily, no matter how many Beverly Hills lawns or Las Vegas casino gardens need to be kept a luscious green.

"It does take a lot of water, but I get a lot of production out of it," said Cox, 52, as he looked down his cotton furrows to monitor the water, which is drawn from an irrigation ditch by small siphon hoses and flows by gravity across the slightly slanted field. "Why is it OK for [cities] to use it in their fountains and spray it on their sidewalks? I think I have the right to use it for productive purposes."

But to many in the Southwest, such farmers' claims represent an entitlement the region can no longer afford. Phoenix, which has grown 75 percent in 30 years to 1.4 million people, will soon surpass Philadelphia as the fifth-largest U.S. city; Las Vegas, a railroad town of 5,000 in 1930, now has a metropolitan area population of 1.5 million.

This boom has caused the most problems for California, which uses more Colorado water than any other state. For years, California has taken more than its allocated share of the river because other states haven't used their full amount.

Now, with the Southwest growing fast and suffering a long drought, there's less extra water to go around, and California is under strict orders from the federal government to cut back.

The pressure on California is driven most by Arizona, which profoundly altered the region's water equation with the construction, in the 1980s, of a 336-mile aqueduct to carry Colorado water over the mountains and desert as far as Tucson.

This has allowed Arizona to claim its full share of river water, even though it doesn't actually use the full amount. Instead - in a tactic viewed as being unfair by some, brilliant by others - it pumps surplus water into the ground, reserving it for future use and thereby leaving no surplus for California.

Forcing California to cut back to its allocated share of the river would hit hardest in Southern California's sprawling cities, which have the legal right to far less than the state's farms, and therefore have been relying heavily on the leftover water.

That's where the deal comes in. By transferring Imperial water to San Diego, California can gradually wean itself from excessive use of the river.

Imperial Valley leaders were close to signing on to the transfer late last year when they balked, worried that the valley would be liable for the cost of restoring the Salton Sea, estimated to be as much as \$2 billion. The 15-by-35-mile sea, created when floodwaters on the Colorado broke an early canal to the Imperial Valley in 1905, depends on runoff from valley farms as its main water source.

Reducing runoff would rapidly shrink the sea, threatening the birds that, deprived of other wetlands, now rely on it.

As a penalty for pulling out of the deal, Interior Department Secretary Gale A. Norton cut the valley's river allocation by 10 percent last winter, saying that farmers were wasting water.

It was a major step: The Interior Department, which has the authority to withhold water if it's not put to "reasonable and beneficial use," had rarely invoked the right before. The valley sued in protest.

Unlike the backroom water deals in Chinatown, dealing over the transfer has played out in public view. In a region where residents face rising water bills and threats of rationing, water politics is front-page news.

If a deal is reached, it could be the blueprint for future transfers from farms to ever-thirstier cities, possibly spelling the decline of agriculture in the region.

The transfer is "a model for how historic distrust between urban and agricultural water interests can be overcome," said Dennis Cushman, assistant general manager of the San Diego County Water Authority.

But if the deal falls through and Imperial farmers are forced to give up water anyway, they say they'll defend their century-old rights to the end.

"If we have to fight them in the Supreme Court, that's what we'll do," said John Pierre Menvielle, a third-generation farmer who is running for the Imperial Irrigation District board, a paid, five-member panel elected by the voters of 140,000-resident Imperial

County. "We got some hard-headed people down here - maybe because we've been in the heat for too long."

The river's journey

Once a raging river, the Colorado now peters out in marshes well short of its outlet in the Gulf of California.

It barely makes it that far. Massive dams halt its flow for storage and power generation, and wide canals carry off its water like so many needles stuck in a blood donor.

Near Parker Dam, one aqueduct heads west carrying about 1.2 million acre-feet of water a year 242 miles to Southern California, while close by another carries 1.5 million acre-feet a year 336 miles east into Arizona. (An acre-foot is the amount of water needed to cover an acre of land at a depth of 1 foot. It is about 326,000 gallons and is roughly equal to what two households use in a year.)

Farther south, near the Mexican border, 3 million acre-feet of water a year are diverted into the All-American Canal, the 82-mile canal built in 1942 to carry water into the Imperial Valley. From the canal, the water flows into a network of smaller canals connected to irrigation ditches.

The broad reach of Colorado River water is extraordinary because it is not a particularly big current to begin with, with an average depth of only about 20 feet and an annual flow that is only 3 percent of the amount of the Mississippi River's.

Indeed, seen from the riverbank at Blythe, Calif., on the border with Arizona, the Colorado looks like any other medium-size river. A few small trees sprout on its bank. Children in life vests are paddled upstream in a canoe. A man on a jet ski roars up and down.

In effect, many say, the Colorado today is less a river than a glorified water main serving seven states - a main that happens to have carved out the Grand Canyon eons ago.

"The river is extremely generous - as a desert river it produces a lot of water," said Lisa Force, a program director for Living Rivers, a group seeking to reduce Colorado River water use. "But it was seen as inexhaustible, and it's not."

Valley of green

The mining of the river began in earnest more than 100 years ago when enterprising farmers made a discovery that would change the Southwest forever: The California desert near Mexico may look bleak, with less than 3 inches of rainfall a year, but sprinkle water on it, and it turns to gold.

The desert adjacent to the river was made of silt carried from the Grand Canyon and elsewhere upstream, deposited in a broad swath by the river's shifts in direction. When irrigated, this soil was extremely fertile. And with the warm climate, farmers had a far-longer growing season than those in the rest of the country.

Cox, who has farmed for 30 years, marvels at the founders' ingenuity every time he drives out of the valley and reaches the point where green fields stop and the brown desert resumes.

"I'm in awe of this valley," he said. "I'm in awe of the people who had the foresight to divert the water from the river."

Backing up the farmers' discovery was the law. When it comes to allocating natural resources, the East operates on riparian rights: You can use water your property abuts, as long as you're not taking from your neighbor's fair share.

Not so out West. Ever since the gold rushes of the mid-19th century, natural resources on the frontier were awarded on a first-come, first-served basis. By diverting water into the desert, farmers not only won themselves newly fertile land, but they also secured the Imperial Valley's place in a series of compacts and court rulings that make up the "law of the river."

In 1922, an interstate compact divided the river's annual flow in two portions: 7.5 million acre-feet to the upper basin states of Utah, Colorado, Wyoming and New Mexico; and 7.5 million to the lower basin states of California, Arizona and Nevada. In a 1944 treaty, Mexico won rights to 1.5 million acre-feet a year.

Shares among the lower basin states were settled by the Supreme Court in 1963: California got 4.4 million acre-feet, Arizona got 2.8 million, and Nevada got 300,000. Within California, the Imperial Valley and some smaller farming districts eventually were allocated 3.85 million acre-feet, while the Metropolitan Water District, which delivers water to 18 million people in Southern California, gets only 550,000.

After all the divvying up, the Imperial Valley receives about 3.1 million acre-feet a year. That's more than all of Arizona, and nearly one-fourth of the river's flow, which has averaged about 13 million acre-feet a year, far less than the 15 million assumed in the original divisions.

This worked well enough for years; California was able to take as many as 800,000 additional acre-feet a year left over by other states. But in the past decade, the arrangement has been badly strained. Not only have Arizona and Nevada started claiming their shares, but a four-year drought has further reduced river flow.

The crop debate

With supplies running short, scrutiny has fallen on the Imperial Valley's \$1 billion farming industry. Most of the valley's 470,000 acres is in water-guzzling field crops, mostly alfalfa and other grasses that feed the West's dairy and beef industries, as well as cotton, wheat and sugar beets.

Only about 55,000 acres are used for vegetables and melons, which use much less water per acre than field crops. The area's long growing season makes it ideal for winter vegetables, and its lettuce, asparagus, broccoli, cauliflower, onions and carrots are its most lucrative crops on a per-acre basis.

But many farmers prefer field crops: Their prices fluctuate less, due partly to federal price supports; they require less labor; and farmers say there is limited demand for vegetables.

"We have a huge amount of water being used in inefficient ways for crops that one might question why they're being grown in this area," said Joseph L. Sax, a law professor at the University of California, Berkeley who has consulted for the Interior Department. "It's a good place to grow avocados, but why we're growing cotton and alfalfa here is a question a lot of people have been asking for some time."

Meanwhile, having enjoyed a large share of river water for so long, valley farmers have seen little reason to limit use.

The valley's canals are unlined, allowing water to seep through their borders. Irrigating by gravity means that 15 percent of the water used runs out at the end of the field, runoff that goes into the Salton Sea. Some farmers, like Cox, now use pumps to recycle some of the runoff, but the pumps, and more costly conservation tools like drip irrigation systems, are relatively rare.

"They won't admit they're wasting water," said Adan Ortega Jr., vice president of the Metropolitan Water District. "Because they believe they have this God-given right to the water, they don't have any incentive to preserve it."

This kind of talk infuriates Imperial Valley farmers, who say they would use more efficient irrigation if they could afford it. Already, they say, they've spent thousands on tiles placed beneath their fields to keep salt from sinking too far into the soil.

Moreover, they say, it's their thousands of tons of field crops that fuel California's dairy industry (the largest in the country), feed the Southwest's cattle and help maintain America's cotton industry.

"Where's this agriculture going to go? It has to go someplace," said Steven A. Pastor, director of the Imperial County Farm Bureau. "You need your feed grown, your cotton. Do we want to rely on other countries to supply our food and fiber?"

Heidi Kuhn, an activist whose husband owns and runs one of the valley's largest farms, sums up the argument with a simple refrain for what she calls "the person sitting in Starbucks": "We're the latte in your coffee."

"We're not just doing this for our own health. We're doing it because there's a market need for it," she said. "I don't know if growing food is any less beneficial than having 112 golf courses in Palm Springs."

Hard-won success

On a tour of her family's 14,000-acre, 300-employee operation, Kuhn shows just how productive a single Imperial Valley farm can be. After passing field after field of the Kuhns' hay crops, she stops at the vast lot where the grasses are baled, compressed and stacked by the hundreds under long sheds.

Many of the bales, a grass variety called Sudan grass, will be loaded in containers to be transported to California ports by the train line running adjacent to the lot. There, they will be shipped to Japanese ranchers, who prefer Sudan grass for cattle feed but lack room to grow it.

Other bales will go to California dairies, but many stay with the Kuhns, to serve as feed at their own 4,000-cow dairy. The dairy's milk, in turn, goes across the street to a cheese-making plant that produces Muenster and Swiss cheese.

It's a thriving operation, but Kuhn says it's not hugely profitable, given slumping commodity prices and the cost of state labor and environmental regulations. Her family recently moved into her mother-in-law's old house, a three-bedroom rancher with a cracked tennis court. It's one of the nicer houses in El Centro, a struggling town of small bungalows and shuttered stores, but it's no mansion.

Indeed, many valley landowners resent the widespread notion that their big share of Colorado water has made them wildly wealthy.

"They see us driving nice pickups and cars and having a house in San Diego," said John Grizzle, a valley farmer since 1964, sitting in the office of his 7,000-acre operation. "They don't realize the hard work and the risk involved. The return on our investment is not large."

As they fend off critics, the valley's residents also face internal divisions.

There are disagreements about how to divide the \$2.5 billion San Diego would pay for the 200,000 acre-feet a year it would receive under the transfer. As the deal stands, the Imperial Irrigation District would distribute most of the money among the county's roughly 400 farmers, requiring much of it to be used for more efficient irrigation, while some would go toward the larger community.

A large faction of farmers, though, believes that the money, as well as any revenue from future transfers, should go directly to landowners, who in turn would give part of it to the community. This group has sued the irrigation district.

Others view this effort as a naked grab by farmers for the millions in water revenue.

"We better make sure that if the money comes in, it's applied to increasing efficiency, to insulate us against long-term attacks on our water use," said district board member Andy Horne. "If landowners are allowed to take the money and do whatever they want with it, including sticking it in their pocket and not doing anything toward efficiency, then we haven't accomplished that."

Farmers also disagree over whether to reduce their usage by investing in more efficient irrigation or by leaving fields fallow, which would mean lower crop yields and fewer farm jobs but would require less effort and leave more water for the Salton Sea than conservation would.

To valley outsiders, the ambivalence over the transfer is hard to fathom, given how much money is involved. The valley would get \$258 an acre-foot from San Diego for water that costs farmers \$16 an acre-foot.

"What they're not admitting is that these are the first farmers that will be allowed to sell water at market rates," said Ortega, of the Metropolitan Water District. "They're going to create a precedent that a lot of people in the valley can benefit from."

But this is just what alarms many in the valley - including some of the non-landowning Mexican immigrants who see the farms as the biggest source of employment in the county. Once farmers start selling water, they fear, it may be hard to stop; farmers will walk away rich, but the valley will have sold away its livelihood.

One thing unites the county residents: All see themselves as underdogs trying to keep their rights from being pried away by powerful California cities.

"We can see the handwriting on the wall: We have a very large water right, and there is a seemingly unquenchable thirst for this water around the southwestern United States," said district board member Horne. "We're such a small community facing such a huge population that doesn't care what happens to us in the future."

And all in the valley think the same thing when they hear urban critics question the wisdom of desert farming: Why doesn't the same argument apply to the cities of the arid Southwest?

"San Diego is as much of a desert as we are," Kuhn said. "Why is it any more logical for people to live there?"

Growing demand

It's a question that San Diego officials don't have the luxury of asking. Whatever the wisdom of its growth, the city is now the country's seventh largest, it lacks water of its own, and officials need supplies for 3 million area residents and counting.

The transfer deal with the Imperial Valley is the centerpiece of this effort, but it's not the only element. The San Diego County Water Authority is planning a desalination plant that would process enough ocean water, at great cost, to provide 15 percent of the county's demand.

In addition, the authority is about to finish a massive new dam in a box canyon in Olivenhain, 30 minutes north of the city, that will hold more than two months' supply of emergency water. The aqueducts that bring San Diego's water south from Los Angeles, a mix of Colorado River and northern California water, cross major fault lines, and the city's been at risk of running dry after an earthquake.

The new dam is visible proof of water's primacy in the Southwest. At 318 feet high and 250 feet long, it is designed to withstand an earthquake measuring a magnitude of 7.2. The reservoir, a giant cavity that will be filled over the coming year, is 2,552 feet long; 700,000 cubic yards of fill was blasted out of it.

"With the amount of water we have to deliver to people, we just have to build some amazing structures to do it," said project manager Jerry Reed as he oversaw work on a recent morning.

That is what happened hundreds of miles away in Arizona, where two decades ago engineers designed an aqueduct to carry 1.5 million acre-feet a year of Colorado River water as far as Tucson. The \$3.8 billion Central Arizona Project uses six 60,000-horsepower pumps to lift water 824 feet above the river.

Fourteen pumps along its 336-mile route lift the water high enough so it can run downhill to the next pump. At a control room north of Phoenix, two men sitting before a big screen regulate the flow on the 80-foot-wide, 16-foot-deep canal by raising or lowering gates at checkpoints every seven miles.

Things to come

The Arizona aqueduct represents more than just the driving force behind the pressure on California to reduce its river use. The project also offers hints of what might happen in California if the San Diego water deal sets a precedent for future transfers.

That's because in Arizona, transferring water from agriculture to urban use has been the policy for decades. Unlike their counterparts in the Imperial Valley, the cotton and alfalfa growers on the plains of central Arizona lack enshrined rights to the Colorado River, and have long relied on groundwater.

When the state built the aqueduct, it allocated two-thirds of the water to farmers - but with the understanding that their share of the water would decline as farmland was developed for homes, leaving most of the water for urban users. And indeed, large tracts of former farmland around Phoenix are sprouting dense subdivisions.

This sprawl has met with relatively little official resistance. Subdivisions may cause problems, officials reason, but they have one thing going for them: They require about half as much water as the farms they replace.

"We want to sustain agriculture as long as possible, but while making sure we have a sustainable water source" for residential use, said Dennis G. Kimberlin, a state water manager in Pinal County, an agricultural area south of Phoenix that is rapidly being developed.

Those farms that remain, meanwhile, have already taken many of the steps that California farms may face. Because water is at a greater premium in Arizona, costing farmers \$36 an acre-foot - more than double the Imperial Valley rate - there is incentive to conserve.

Dan Thelander, for instance, added an underground drip irrigation system four years ago at his 500-acre cotton field in Pinal County. It cost \$1,500 per acre, but his cotton now uses one acre-foot less per acre.

His neighbor, C.L. "Bill" Scott, long ago leveled many of his fields so that less tailwater runs out at the end. Instead of irrigating his fields at a steady stream for a full day as Cox does in the Imperial Valley, Scott sends a stronger stream across for only two hours, producing a more even level of saturation while using less water.

Scott happens to know the Cox family and isn't about to second-guess their techniques. He chalks up his conservation to market demands: His water costs more, so he must use less.

"There are a lot of things you can do to make better use of water," he said, driving a visitor across his 6,800-acre farm. "It's a matter of economics. It makes you do things that are cheaper."

Future battles

Even if the transfer from the Imperial Valley to San Diego is approved, few expect the deal to settle the water wars for good.

Other demands for water loom: The state of Colorado is discussing building its own version of the Central Arizona Project to carry its share of the river over the Rockies to Denver and other cities. This may be prohibitively expensive, but if it happened, it would remove 400,000 more acre-feet a year from the river, about 3 percent of its flow.

More immediate is a drive by environmentalists to allow more of the river to make it to Mexico, to start restoring the delta, at a cost of 150,000 acre-feet a year. And in Arizona, Native Americans winning rights to hundreds of thousands of acre-feet, forcing cities to buy water from them.

But the biggest fights ahead, many expect, will be continued clashes between cities that will need ever more water and farms that still use most of it.

Regional water officials admit they may eventually push the limits of their supply, even with the transfer. This, they say, will force higher water prices, constraining further growth, and may even raise the once-unthinkable prospect of "toilet-to-tap," treating wastewater for drinking use.

Aware of the growing needs of the cities, Imperial Valley farmers say they are bracing for the federal government, goaded on by the Metropolitan Water District, to return and pressure them to give up even more water. If the valley refuses to sell, they fear, federal officials will again declare it is wasting water and take the water for free.

"It's a slippery slope," said Pastor, the farm bureau director. "A lot of farmers worry this isn't going to end until all the water is shipped to San Diego or Los Angeles."

Valley landowners say they owe it to their forerunners on the land not to let that happen. Their critics may question the wisdom of having created a farming valley in a desert, they say, but the transformation happened, and it can't just be reversed, 100 years later.

"This place is not unworthy of being here. It's families who are proud to be here, who put roots here, who had kids here," said Kuhn, the activist. "It's not as simple as wiping us off the map to have more water for L.A."

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River News 08/19/03

PECOS RIVER MANAGEMENT PLAN UPDATE

An Environmental Assessment containing the Pecos Wild and Scenic River Forest Plan Amendment and Management Plan was sent out for public review on April 23, 2003 thirteen years after its declaration as a Wild and Scenic River. The proposed management plan banned all boating in the Wild and Scenic Corridor as it "can only be done in short sections along the river during periods of high water flow, which commonly does not occur. Prohibiting floating would therefore not be expected to displace many users and it would enhance fishing within the corridor."

The Pecos River was declared a Wild and Scenic River in 1990. Above Cowles (mostly in the Pecos Wilderness) is designated wild. From Cowles to Terrero is designated recreational. The section from Cowles past Terrero to Windy Bridge is runnable by kayak, canoe and inflatable kayaks during spring high water each year. This is a period of heavy boating use of other rivers in New Mexico and the Pecos serves as an alternative run for boaters looking for more solitude. Although there is development along the road to Cowles, the sections of the river away from the road retain much of the wilderness characteristics of the surrounding Pecos Wilderness. The run is unique for New Mexico due to the clear water and forested environs that are reminiscent of rivers further north in Colorado and Idaho. Although the area is very popular for fishermen, they generally prefer lower water levels when the river is unrunnable by boaters.

Tom Robey (River Runners for Wilderness) noticed the public comment period for the management plan and Tim Scofield (Adobe Whitewater Club) discovered the prohibition on boating. Enlisting the help of Jason Robertson (American Whitewater Association) they undertook a campaign during Memorial Day weekend to send in comments. An excerpt from the comments submitted by Tom Robey stated:

"...There is no reasonable basis that eliminating boating would enhance fishing. It is evident that there have not been any recreational surveys of boating use on the Pecos River. Have you done any surveys of fishermen about their encounters with boaters? Have you documented any adverse impacts of boaters upon fishing? My experience is that very few fishermen encounter boaters and that encounters between fishermen dwarf any such impacts. As fast as the Pecos is moving during high water (there are few eddys) it is ludicrous to suggest that boaters have any impacts on the fish or fishing. Therefore I suggest that the management plan allow boating and that the Forest Service gather data before even considering any management action regarding boating between Cowles and Terrero."

The first item of the Decision Notice issued July 31st stated:

"Revised the provision to allow floating use. The Standard now reads, 'The use of non-motorized rafts, boats, or other conveyances to float down the river is permitted. No additional facilities (put-ins, parking areas) will be constructed to facilitate floating' ",

The entire decision and other materials should be available at www.fs.fed.us/r3/sfe or upon request from the Pecos/Las Vegas Ranger District, PO Drawer 429, Pecos, NM 87552 (phone 505-757-6121).

LR in the News 08/20/03

Drought drying up boater fun

by Tom Wharton

The Salt Lake Tribune

Prolonged drought in the western United States, particularly Utah, has left boaters high and dry on launches at many major lakes and reservoirs.

At Lake Powell, water levels have dropped below boat ramp and marina access levels, forcing closures, especially in the upper end of the huge reservoir on the Utah-Arizona border. Visitation is down 13 percent from a year ago. And the lake level is expected to drop even farther, perhaps as far as 112 feet below capacity by April. Still, Barry Wirth of the U.S. Bureau of Reclamation said there are still 12.5 million acre-feet of water in the reservoir.

"That is an awful lot of water," he said. "It is important to note that that is a pretty nice half-full body of water."

Char Obergh, of the Glen Canyon National Recreation Area, said boaters have experienced few delays launching despite the closure of Hite Ramp and "use at your own risk" warnings at Stateline and Antelope Point, a precaution to boaters that they could get stuck in the muck, or worse.

She expects some launching delays to occur during the upcoming Labor Day weekend.

"It has been an interesting year," she said. "But there is a lot of lake to enjoy. It's just a different lake. We are asking people to be aware of that. We have done our best to maintain access. As it goes down this winter, we will be faced with additional challenges."

Because of low water at Lake Powell, Defiance House and Three Roof Ruins are no longer accessible by water. The Castle Rock Cut is closed. And vehicle access is not possible at Dirty Devil, Farley, White Canyon, North and South Bullfrog Primitive Camping Area and Crosby Canyon. Stanton Creek may be the best primitive vehicle camping area still available.

On the upper end of the lake, Hite Marina is out of service. The launch ramp there is closed, though river runners floating down from Cataract Canyon on the Colorado River are using a temporary dirt facility. All water-based marina facilities have been relocated downstream.

These developments have not gone unnoticed by environmentalists who would like to drain Lake Powell and decommission its dam.

"This drought emphasizes the dubious nature of Lake Powell reservoir," said John Weisheit of Moab-based Living Rivers in a news release.

"By decommissioning Glen Canyon Dam, we could restore 500 miles of river to its natural habitat, which includes Grand Canyon National Park, while at the same time saving the water that is otherwise lost to evaporation."

Low water apparently has not affected boating safety, either on Lake Powell or other reservoirs across Utah.

"We have had no safety problems out of the ordinary," said Obergh. "We do caution people if they have not been here for a while that it is a different lake and they need to boat with caution."

Ted Woolley, boating coordinator for the Utah Division of Parks and Recreation, said added congestion among boaters has not contributed to safety problems.

"It seems that when you get more people in there, they pay more attention to what is going on," he said.

Visitation has been down at some water-based state parks because of perceptions -- some real, some not -- that the drought is affecting boating. But Woolley said there are plenty of good boating opportunities if you know where to look.

"We have some areas in good shape and some that are in real poor shape," he said.

He listed eastern Utah reservoirs such as Starvation, Red Fleet, Steinaker and Flaming Gorge as good boating alternatives that, in some cases, have been underused this summer.

Closer to the Wasatch Front, Rockport, Jordanelle, East Canyon and the Great Salt Lake are relatively safe for boating.

Perhaps the biggest problem area is Willard Bay, where the south marina has been closed and the north marina is available for personal watercraft and smaller boats. But, Woolley said, boaters should use Willard Bay at their own risk because rescue boats are not available.

Yuba Reservoir has been drained for dam repairs, and Lost Creek Reservoir's ramp is not available. The main ramp at Deer Creek Reservoir State Park is out of the water, but boaters are still launching on the dirt ramp at the Island area. Trailer parking, however, can be a problem there.

Utah Lake's boat ramp has major problems, though some boaters are launching smaller craft. Bear Lake's marina is still OK for motor boats, but some sailboaters are experiencing problems. Echo Reservoir is about 50 percent of capacity but is still in use. Pine View reservoir is also low, but there is adequate water for launching.

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River News 08/25/03

Sediment Clogs River Runner Access At Former Hite Marina

Submitted by Tom Robey on Mon, 08/25/2003 - 23:00 August 2003.

Sediment at Hite Marina, the most upstream facility at Powell Reservoir, has necessitated the removal of all reservoir conveniences such as the floating store, fuel docks, water and septic lines, boat rentals, and courtesy docks. The concessions operator, ARAMARK, has towed its floating facilities down-reservoir to keep the facilities from becoming trapped in mud. The land-based facilities at Hite, which includes a store, gasoline, drinking water and a sewer clean-out, remain open to service the needs of the residents and the traveling public.

A primitive "use at your own risk" boat takeout area opposite the former Hite boat ramp can still be used by river runners for inflatable and small, hard-hull boats. Since Powell Reservoir continues to drop rapidly, this site could be completely unusable by September, which will force river runners to go another 45 miles down-reservoir to exit at Bullfrog Marina. Glen Canyon National Recreation Area currently has no plans to accommodate river runners by constructing an alternate ramp, despite spending over \$1 million earlier in the year to temporarily extend ramps for houseboats and power boats. A description of the takeout site is posted at Canyonlands National Park's Cataract Canyon website at <http://www.nps.gov/cany/river/lakepowell.htm>.

According to a sediment survey conducted by Mussetter Engineering of Denver in 2000, the Colorado River delta beginning at Dark Canyon and reaching to the mouth of the Dirty Devil River was advancing at a rate of about one mile per year. At present the delta is just beyond Hite Marina where the original river channel is 245 feet below the full reservoir elevation of 3700 feet. The survey predicted another 35 years of power boat access at Hite Marina provided the reservoir could be maintained at full pool.

"Such a projection is incredibly optimistic," says John Weisheit, Conservation Director of Living Rivers. "Considering the downstream demand for water, the present drought situation, and how the river erodes into the exposed sediment and feeds the delta, the facilities at Hite may never again be usable."

By April of 2004, Powell Reservoir is predicted to be 106 feet below normal. At this elevation, Bullfrog and Antelope Point marinas will be affected by the sustained drought. The lack of incline and shallow depth at the Bullfrog Marina boat ramp will make it very difficult to load and unload boats--especially longer craft such as houseboats and the Bullfrog-to-Halls crossing ferryboat--the only method of transporting land vehicles across the 186-mile-long reservoir. Because Antelope Point is located on a cliff at the rim of the

original Colorado River canyon, the dropping reservoir level will perch this boat ramp high and dry. During the spring snowmelt, Powell Reservoir levels rose a mere 11 feet and the reservoir has now returned to the levels of the previous winter, about 90 feet down from full-pool. With no drought relief in sight, this continuing trend will eventually place power generation at risk. The minimum storage level to safely produce electricity is set at 6 million acre-feet. Currently the reservoir is at 50% of capacity storing 12.7 million acre-feet of water. Power generation at Glen Canyon Dam could effectively end in two or three years under present drought conditions. "This drought emphasizes the dubious nature of Lake Powell reservoir. By decommissioning Glen Canyon Dam we could restore five hundred miles of river to its natural habitat, which includes Grand Canyon National Park, while at the same time saving the water that is otherwise lost to evaporation" observes Weisheit.

LR in the News 08/28/03

Hite Marina closure leaves Cataract Canyon outfitters high and dry

Times Independent

Moab, Utah

by Lisa Taylor, contributing writer

The end of a Cataract Canyon river trip usually involves motoring or rowing for miles from where Lake Powell effectively absorbs the Colorado River's current to the small marina at Hite. This year, with the lake receding to record lows, some commercial trips are having to motor right on to Hall's Crossing or Bullfrog, 45 miles to the south.

Lake Powell is currently about 100 feet below "full", and is expected to drop another 12 feet by next spring. Dropping water levels and rising sediment have acted as pincers, squeezing away the usable access at the marina on Hite's eastern shore. In July, concessionaire ARAMARK got approval from the National Park Service to move its floating facilities down-lake, and in mid-August towed them completely clear of the area. The facilities include a floating store, fuel docks, water and septic lines, boat rentals, and courtesy docks. Hite's land-based store, gas, water and sewer services are still open.

Commercial and private boaters can use an "at your own risk" launch area, but as water levels continue to drop, the primitive ramp is barely usable, and at least one outfitter, Sheri Griffith River Expeditions, has opted to continue to Hall's Crossing, another 11 hours farther if the weather cooperates.

Tag-a-Long Expeditions president Bob Jones is frustrated that the Park Service didn't heed outfitter warnings about the marina going dry. "They should have been ready, because we met with them in March and outlined almost to the day when they'd have to find a solution. I'm discouraged they're not responding to the public."

Until the Park Service officially deals with the problem, Jones is improvising. "We've opened up another road [the NPS] allowed to the old marina site on the east side,

where the water is pretty close. We've simply taken down our Snow-cat, to take people and boats across that dry mud." The dry mud he's referring to is a 150-yard-wide band of compacted silt, webbed with cracks up to two inches across and two feet deep. Vehicles and pedestrians would have trouble with it on a dry day – if it rains, forget it.

Jones says the access he's using won't work for everyone, but argues that it wouldn't cost much to upgrade it, and with the Colorado River's original channel closest to the west side, "we're where the water will always be." Tag-a-Long has about 12 more trips this season, and Jones isn't interested in bypassing Hite. "The alternative – to go to Bullfrog – is 12 to 14 hours of motoring on a calm day, but if you get into wind and waves, rafts don't go like hard-hull boats, they go all over the place."

As to the environmental impact of restoring river access on the western shore, Jones points out, "We're talking about moving silt that's not supposed to be there anyway. Any environmental assessment will tell you to get rid of it."

An ARAMARK/Park Service sediment survey done in 2000 showed that the Colorado River delta, effectively the "top" of the lake, had crept four miles downstream in four years, and was about 11 miles north of Hite.

The survey allowed the marina 35 years of use provided the reservoir held steady at 3,700 feet, an "incredibly optimistic" projection according to John Weisheit, conservation director of environmental group Living Rivers. "Considering the downstream demand for water, the present drought situation, and how the river erodes into the exposed sediment and feeds the delta, the facilities at Hite are basically history."

Even Jones, with a vested interest in Hite's recovery, guesses it will take at least five years to restore the facilities, provided there's a break in the drought and the reservoir can recharge. In the meantime, a 2003 NPS/ARAMARK survey showed the delta had already crept past Hite, and new dock and pumping-station closures pop up on the official Glen Canyon National Recreation Area website every week. Lake Powell businesses are insistent that there are still unlimited activities on the water – the trouble for the foreseeable future is how to get out there.

LR Press Release 08/28/03

Drought could cause Lake Powell Reservoir to drop as low as 39% next year

For immediate release
August 27, 2003

Contact: John Weisheit (435) 259-1063

Drought could cause Lake Powell Reservoir to drop as low as 39% next year.

Recreation access to be cut substantially.

Federal forecasts for the operation of major dams in the Colorado River system indicate that if drought conditions continue as anticipated, Lake Powell could see another significant drop to as low as 39 percent over the next 12 months. System-wide storage could drop from 57 to 48 percent as water users in the basin continue to use water at pre-drought rates.

Using data from the past 30 years, the Bureau of Reclamation's (BuRec) "2004 Draft Annual Operating Plan" forecasts a range of inflow scenarios for Lake Powell reservoir from 3.8 to 15.6 million acre feet. This would equate to a range of reservoir levels from 39 to 83 percent.

The lower level would represent a near repeat of 2002, when flows into Lake Powell reservoir were 75 percent below normal. Normal flows as estimated by BuRec are approximately 12 million acre-feet. The upper level would represent flows not seen since 1997.

"As federal scientists continue to forecast that drought conditions will last several decades, water managers and the public should not count on any high flows," says John Weishiet, Conservation Director for Living Rivers. "During the drought of 1942 to 1977, flows were off by 19% percent. Taking into account increased diversions above Lake Powell reservoir since that time, which now are approximately 4.7 million acre-feet per year, it's easy to see why Lake Powell continues to drop."

Over the past four years, inflows into Lake Powell have averaged just 50 percent of normal: 62, 59, 25 and 54 percent respectively from 2000 to 2003. Even last year's forecasted El Niño conditions, which generally result in well above average precipitation, yielded a snowpack of just 84 percent of normal. Due to the significantly dry soil conditions from three straight years of well below average precipitation, Lake Powell received just 54 percent of its average inflow of 12 million acre-feet.

Simulating a significant drought event, as the region is now experiencing, the American Water Resources Association estimated that it could take just eight years of drought for Lake Powell reservoir to be emptied of its store of water. "They're right. It's been four years, and we're half way there," adds Weisheit.

Presently, Lake Powell reservoir is reported to be at 51 percent capacity, down from 59 percent last year and 95 percent at the beginning of 2000. The actual amount of available water is 50 percent, as BuRec is not compensating for 500,000 acre-feet of storage lost to sediment since its last sediment inventory was conducted in 1986.

When full, Lake Powell reservoir can store 24.3 million acre-feet. An acre-foot of water represents 326,000 gallons, or enough for two urban families per year.

If inflows into Lake Powell reservoir continue to average 50 percent of normal, or about six million acre-feet per year, this would result in the reservoir level dropping an additional eight percent next year, to 10.7 million acre-feet, or 44 percent of capacity.

This would bring the reservoir elevation down 140 feet from full. Only two of the reservoirs six marinas would be operational. Commercial and private Colorado River

rafting trips, which normally end at Lake Powell reservoir, would have no way to get off the reservoir, short of rowing or motoring their rafts more than fifty miles to the nearest functioning marina.

"This is a multi-million dollar industry that we are about to lose," adds Weisheit. "First they killed the rafting industry through Glen Canyon when they built Glen Canyon Dam, and now they're stopping us from running the rivers upstream too."

In addition to Lake Powell dropping eight percent, the systems other major reservoir, Lake Mead, will also drop. In water year 2003 (October 2002-September 2003) Lake Mead will have dropped from 66 to 60 percent. 2004 will see a repeat of this six percent reduction. Lake Mead's primary input comes from releases from Glen Canyon Dam which are only 8.2 million acre-feet per year. Hoover Dam is scheduled to discharge 9.4 million acre-feet for its users downstream, which combined with evaporation and reservoir withdrawals will draw the reservoir down to 54 percent of capacity next year.

###

Additional information

[Draft Annual Operating Plan](#)

[Severe and Sustained Drought for the Colorado River Watershed](#)

[Drought Conditions in Utah During 1999-2002](#)

[Precipitation History of the Colorado Plateau](#)

[Living Rivers's Drought Watch Campaign](#)

River News 08/29/03

GLEN CANYON DAM UPDATE

Operations

Releases from Glen Canyon Dam will be lower in September than August. Releases in August averaged about 14,600 cubic feet per second (cfs) with a total of 900,000 acre-feet released. In September, releases will average 8,000 cfs with a total of 476,000 acre-feet scheduled to be released. On Mondays through Saturdays (except for Labor Day) in September, daily fluctuations due to load following will likely vary between a low of 5,000 cfs (during late evening and early morning off-peak hours) to a high of 10,000 cfs (during late afternoon and early evening on-peak hours). On Sundays (and on Labor Day), releases will be 5,000 cfs from 7 pm until 7 am, and 8,000 cfs from 7 am until 7 pm.

Releases from Glen Canyon Dam in October and November of 2003 are currently scheduled be 492,000 acre-feet and 476,000 acre-feet respectively, with the same load following pattern as September.

Because of the draw down condition of Lake Powell, releases from Lake Powell in water year 2003 are being scheduled to meet the minimum objective release of 8.23 million acre-feet. This is consistent with the requirements of the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs.

Basin Hydrology

Drought in the Colorado River basin continues. Inflow volumes have been substantially below average this year with water year 2003 being the 4th consecutive year with below average inflow to Lake Powell. April through July unregulated inflow to Lake Powell in 2003 was 3.91 million acre-feet, only 49 percent of the 30 year average. Total unregulated inflow for water year 2003 will likely be about 51 percent of average.

Snow accumulations in water year 2003 were again well below average levels. Additionally, what snowpack there was in the Upper Colorado River basin this year melted earlier than normal, with the runoff for the most part, being completed by late June. This has resulted in very low summer flows. Inflow to Lake Powell in July tallied up to only 350,000 acre-feet or 22 percent of average. Summer thunderstorms can help augment river flows in the summer, but thus far there has been only limited monsoonal precipitation in the Upper Colorado River basin. Unregulated inflow to Lake Powell in August will likely be only 24 percent of average. Inflow to Lake Powell on August 28, 2003 was 4,800 cfs, 50 percent of what is usually seen in late August.

Total unregulated inflow into Lake Powell in water years 2000 and 2001 was 62 and 59 percent of average, respectively, and only 25 percent of average in 2002. Inflow in 2002 was the lowest ever observed since the completion of Glen Canyon Dam in 1963. These low inflows have reduced water storage in Lake Powell. Lake Powell reached a low water surface elevation this spring at 3605 feet (95 feet from full pool) on May 1, 2003. The lake then rose in response to snowmelt-runoff, reaching a peak on June 23, 2003 at 3616.6 feet. The current elevation of Lake Powell is 3,604.8 feet (95.2 feet from full pool). Current storage is approximately 12.2 million acre-feet (50 percent of capacity). The water surface elevation at Lake Powell will likely continue to decrease for the remainder of the year. Under expected inflows, Lake Powell will likely be near elevation 3600 feet on January 1, 2004.

This release courtesy Tom Ryan.

Living Rivers Currents 09/01/03

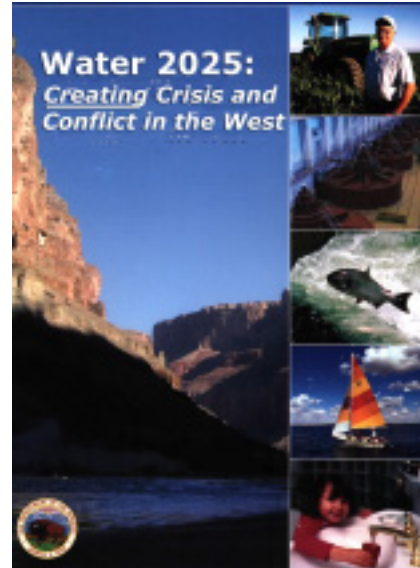
Water 2025: A Crisis in the Making

Throughout the summer the Department of Interior, through the Bureau of Reclamation (BuRec), has been orchestrating another of its legendary public relations charades. At a time when most Western states are experiencing major problems with water allocation, BuRec is responding with a long-term management plan which completely ignores the problem. It is dubbed "Water 2025: Preventing Crises and Conflict in the West," and is

little more than a repackaging of existing management strategies combined with a heightened push for desalinization technology. It contains no proposals for how to substantively address major water shortages, such as those already manifesting in the Colorado River watershed.

"Minor efficiency gains and conservation measures as Secretary Norton prescribes will bring about some savings, but these are merely drops in the bucket given that the Colorado River is providing barely half the water the Department of Interior is contracted to deliver," says Owen Lammers, executive director of Living Rivers.

Abundant historical evidence reveals that the present drought in the Colorado watershed is far from unprecedented, and warnings from the United States Geological Survey one year ago urged water managers to be prepared for several decades of below average precipitation. Lammers notes, "Water 2025 demonstrates that the Department of Interior is ignoring this responsibility."



- * The Plan emphasizes Interior's long-standing tradition of acquiescing to the states for resolving disputes. However, as 80 years of conflict reveals, cooperation is rare, even in the best of times.

- * The Plan's market-driven water banks and transfers from farmers to municipalities during times of shortages are laudable on a small scale, but there is no discussion of what will happen when the real shortages occur. Certainly, the 25 million people reliant on Colorado River water will not be deprived, but what will it cost? Farmers are becoming increasingly reluctant to make water transfers. Without strict federal guidelines and policies, municipalities like Los Angeles, Phoenix, Las Vegas and Salt Lake City will be forced into a cost environment not unlike what California energy utilities faced three years ago.

- * Crop substitutions, which represent the greatest opportunities for water savings, are completely ignored by the Plan. Nearly half of Colorado River water is used to grow water-intensive alfalfa and other forms of cattle feed. Much of this water could be saved by growing crops for human consumption.

- * The Plan advocates maintaining and enhancing existing infrastructure. However, much of this infrastructure is responsible for the loss of up to 20 percent of the Colorado River's flow due to evaporation and seepage amongst its reservoirs, but there are no capital improvements planned to reduce these losses.

Not until the 25-page report's last 100 words does the term "drought" receive much attention. This should be Interior's main focus at this time. Areas that Interior should be addressing include: outlining specific solutions for federal management to employ; how farmers will be enticed or forced to release their water to preserve municipal economies;

and how Interior will enforce necessary conservation strategies and efficiency standards.

"This report is all about carrots with no federal stick," adds Lammers. "Interior must begin developing water use standards and practices, as well as allocation strategies to be implemented as this drought situation worsens. Absent this, crises is inevitable, despite Secretary Norton's report and marketing strategy titled to prevent it."



Living Rivers Currents 09/01/03

Volume 3, Number 2, September 2003

The Articles

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- [Water 2025: A Crisis in the Making](#)
- [Riverkeeper: On the Yampa, Green and Grand Canyon](#)
- [Glen Canyon Dam: LR Demands Supplemental EIS](#)
- [Powell Reservoir: Draining Recreation](#)
- [LR Drought Watch: No Relief In Sight](#)

PDF Version Download

[LRC V3, N2, September 2003](#)

Living Rivers Currents 09/01/03

Riverkeeper: On the Yampa, Green and Grand Canyon

From June 2-6, Living Rivers' Colorado Riverkeeper program, in conjunction with Holiday River Expeditions, honored the 50th Anniversary of the first Yampa/Green river trip organized to stop the inundation of Dinosaur National Monument from Echo Park Dam. It's purpose included drawing attention to the slow death of Dinosaur National Monument's river corridor due to the operations of Flaming Gorge Dam upstream. This month the Riverkeeper program will return to the Green River. It will spend nine days in Desolation Canyon, the most remote wilderness- quality river corridor in the continental United States. Like those in Dinosaur National Monument, native fish in this stretch suffer from the impacts of Flaming Gorge Dam. This critical habitat is being ignored by federal researchers developing re-operation plans for the dam.

In October the program will undertake a 12-day science trip down the Colorado River through Grand Canyon National Park. Participants will assist researchers from Northern Arizona University in collecting data to evaluate how the food base of Grand Canyon's

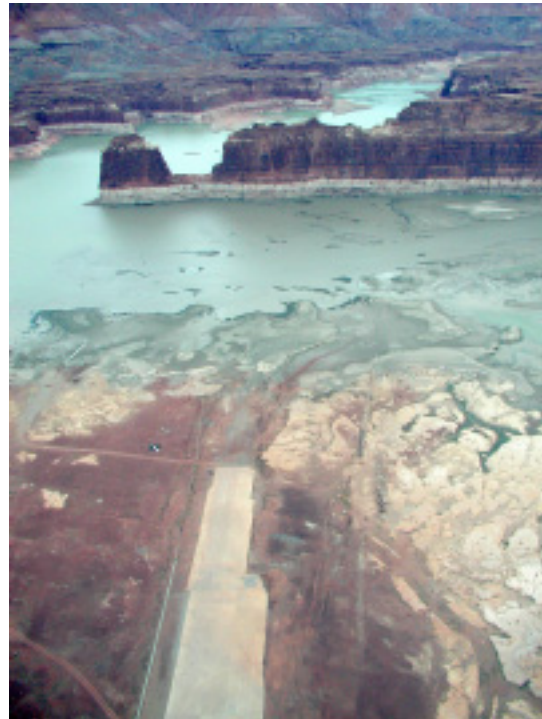
river ecosystem has changed due to the operation of Glen Canyon Dam. Federal scientists are considering ceasing financial support for such research, despite its vital role in understanding the steps needed to recover endangered fish species in the Grand Canyon National Park.

Living Rivers Currents 09/01/03

Powell Reservoir: Draining Recreation

The reservoir-draining drought is again revealing canyon walls not seen in 30 years. For example, the National Parks Service's marina facilities at Antelope Point near Glen Canyon Dam will be perched on a cliff's edge this Autumn.

The situation at Hite Marina at the top of Lake Powell reservoir is already disastrous, where a vanishing reservoir has exposed a sediment plug that backs up the Colorado River Arm for 30 miles. Because of the thick, gooey mud, the Hite concessions operator, ARAMARK, has literally pulled anchor and moved their floating docks 50 miles downstream to the marina at Hall's Crossing. Hite Marina is looking like a ghost town of thick mats of non-native weeds and obnoxious tamarisk trees.



Colorado River runners who previously finished their trips at Hite, now have no place to exit. Thoughts of pushing rafts through a choppy reservoir 50 miles further to Bullfrog or Hall's Crossing marinas are not welcomed. Bullfrog's boat ramp is about to become unusable itself, and Hall's Crossing is too small to accommodate all of the visitors now that these other facilities are closing. In desperation, river outfitting companies are attempting to forge a road across the sediment themselves at a location across the reservoir from Hite.

In a letter to the superintendent at Glen Canyon National Recreational Area, Living Rivers has reminded the National Park Service that the money targeted for capital improvements at Hite Marina must immediately be shifted toward mitigating the impacts from sediment on the river running public, who typically have to endure the National Recreation Area's bias to the powerboat industry. In 2003, power boaters have received \$3 million dollars in boat ramp improvements, and river runners have received none.

Living Rivers Currents 09/01/03

LR Drought Watch: No Relief In Sight

Federal forecasts for the operation of major dams on the Colorado River indicate that if drought conditions continue, Lake Powell could see another significant drop to 39 percent in one year. Basin-wide storage could drop from 57 to 48 percent as water users continue to use water at pre-drought rates.

BuRec's "2004 Draft Annual Operating Plan" forecasts a range of inflow scenarios for Lake Powell reservoir from 3.8 to 15.6 million acre-feet. This would equate to a range of reservoir levels from 39 to 83 percent. The lower level would represent a near repeat of 2002, when flows into Powell reservoir were 75 percent below normal. Normal flows estimated by BuRec are approximately 12 million acre-feet, flows not seen since 1997.

"During the drought of 1942 to 1977, flows were off by 19 percent. Taking increased diversions above Lake Powell reservoir since that time, which are now approximately 4.7 million acre-feet per year, it's easy to see why Lake Powell continues to drop, " says John Weishiet, conservation director for Living Rivers.

Since year 2000, inflows into Lake Powell have averaged just 50 percent of normal: 62, 59, 25 and 54 percent respectively. Presently, Lake Powell reservoir is reported to be at 51 percent capacity, down last year from 59 percent. The actual amount of available water is 50 percent, as BuRec is not compensating for .5 million acre-feet of storage lost to sediment since its last inventory was conducted in 1986.

If inflows into Lake Powell reservoir continue to average 50 percent of normal, or about six million acre-feet per year, this would result in the reservoir level dropping an additional eight percent to 10.7 million acre-feet, or 44 percent of capacity. This would bring the reservoir elevation down 140 feet from full. Only two of the reservoirs six marinas would be operational. Commercial and private Colorado River rafting trips, which normally end at Lake Powell reservoir, would have no way to get off the reservoir, short of rowing or motoring their rafts to the nearest functioning marina.

"This is a multi-million dollar industry that we are about to lose," adds Weisheit. "First the Bureau of Reclamation killed the rafting industry through Glen Canyon when they built Glen Canyon Dam, and now they're stopping us from running the rivers upstream too."

Living Rivers Currents 09/01/03

Glen Canyon Dam: LR Demands Supplemental EIS

In a letter submitted this month to Michael Gabaldon, chair of the Adaptive Management Program (AMP) for Glen Canyon Dam, Living Rivers outlined the justification for the Department of Interior initiating a new Environmental Impact Statement (EIS) for Glen Canyon Dam. This would would compel the federal government to examine decommissioning Glen Canyon Dam as a means of recovering endangered species habitat lost in Grand Canyon National Park as a result of the dam's operations.

Completed in 1996, the existing EIS for Glen Canyon Dam prescribed a set of operational criteria for the dam in an effort to halt the Bureau of Reclamation's violation of the Endangered Species Act in Grand Canyon. So far, all these efforts have failed.

- * The decline of the Humpback Chub population from 8,000 to 2,000 fish, and the inability to establish a second location in the river corridor for Humpback Chub to live.

- * The inability to provide enough sediment for the preservation of beach habitat. The number and size of beaches in the Grand Canyon have experienced a significant decline since the AMP began. This negatively effected the Canyon's recreational experience, but has also impacted the river corridor's cultural resources, which are now prone to erosion.

- * Unanticipated impacts resulting from reduced elevations of Glen Canyon Reservoir, such as increased temperatures and modified nutrient dynamics, could have significant effects on the downstream resources in the Grand Canyon. As the drought situation persists, these effects will become more pronounced.

The key to reinstating National Environmental Policy Act compliance, through a supplemental EIS, is if new data or impacts are recognized. Clearly in the case of Glen Canyon Dam, significant new data (biological and sediment) indicate that the system needs re-evaluation.

More Information:

[Letter demanding Supplemental EIS](#)

Living Rivers Currents 09/01/03

Delta Deficit: Wasting Money and Habitat

Congress is about to fund the start-up of a defunct desalting plant on the Colorado River near Yuma, Arizona, dooming critical habitat in the delta region. The Bureau of Reclamation (BuRec), which has recommended that Congress authorize the desalter's repair, is downplaying the results of its own analysis, which reveals far less costly and less environmentally damaging measures to meet US treaty obligations for water delivery to Mexico.

"This is reminiscent of BuRec of the past," says Lisa Force, Living Rivers program director. "At a time when federal deficits are the largest in U.S. history, it's unbelievable that Congress would consider throwing away taxpayers' dollars to prop up this boondoggle." "There are cheaper and less destructive ways to save Colorado River water than running the Yuma Desalting Plant," added Myra Wilensky, regional organizer at the National Wildlife Federation.

BuRec's objective is to produce about 108,000 acre-feet of water from the plant of sufficient quality to help meet its 1.5 million acre-feet annual obligation to Mexico. Taxpayers will be required to pay \$26 million to replace obsolete technology-plus a minimum of \$36 million in annual operating costs for the plant.

Completed in 1992 at a cost of \$256 million (a five-fold increase in projected construction costs) to clean up brackish wastewater from farms in southern Arizona, the plant was shut down several months later due to extremely high operating costs.

Another option ignored by BuRec for the 108,000 acre-feet involves paying willing sellers to lease water they presently do not need, at just 15 percent the cost of starting the Yuma plant. "The Department of the Interior has already proposed an alternative that could save \$30 million every year. Not only does Interior's alternative have great economic advantages, it will also save enough electricity to supply 25,000 people," says Jennifer Pitt of Environmental Defense.

International water expert and director of the Pacific Institute in Oakland, Dr. Peter Gleick, said "Despite the Department of Interior's much ballyhooed 'Water 2025 Plan' claiming a new era in western water management, the decision to reopen the expensive and environmentally damaging Yuma desalter shows that federal water policy is really business as usual - spending taxpayer money for unsustainable water projects."

The agricultural wastewater that the plant would process now flows into the Cienega de Santa Clara, a 40,000-acre open water ecosystem in the Colorado River delta region. The desalting plant would remove this flow from the Cienega and return only highly saline brine to the wetlands.

"This provision would destroy an extremely important wetland in Mexico that contains the largest remaining breeding population of Yuma Clapper Rail in the world," says Bill Snape, Chief Counsel for Defenders of Wildlife.

"It will be impossible to replace the value of the Cienega de Santa Clara to the Colorado River ecosystem."

The Cienega is the largest remaining wetland in the Southwest and is home to 56 threatened, endangered and declining species. Several scientific studies funded by the Department of Interior confirm that the wetland would be completely destroyed by desalter operations.

River News 09/12/03

MOTOR RIG STRANDED IN UNKAR RAPID

Grand Canyon National Park

A Wilderness River Expeditions 36 foot motorized tour boat ran aground in Unkar Rapid on the Colorado River in Grand Canyon Thursday afternoon. The boat was part of a two-boat trip of 41 people. National Park Service technical rescue personnel used a helicopter to short-haul 6 people off the stranded raft late yesterday afternoon. This type of rescue involves lifting two people at a time off the boat by a 100-foot line from the

helicopter. Rescue personnel acknowledge this is the most dangerous type of rescue the park performs. Darkness halted the rescue operation of the remaining boat occupants around 7:00PM. The remaining passengers spent last night on the boat. The short-haul operation resumed this morning.

The river trip was scheduled to exchange passengers at Phantom Ranch before noon today. Concessions passengers hiking into the canyon to join the river trip are being told they can expect the arrival of the boats late this afternoon.

Flows from Glen Canyon Dam have been between 5,000 and 8,000 cubic feet per second. This flow is considered very low for motorized tour boat travel through the park. During low water flows in 2000, the NPS conducted 3 short-haul operations for motorized tour boats stranded in the rivers rapids. Drought conditions in the Colorado River Basin continue, with Powell Reservoir above Glen Canyon Dam at 50% capacity.

It's been a busy period over the last 30 days for National Park Rescue teams responding to commercial river trip calls for evacuations. There have been two rescues of passengers with broken arms, a number of rescues of passengers with Norwalk Virus-like gastrointestinal distress, and one passenger sustained a de-gloving injury to his hand when he caught his wedding ring on boat rigging as he jumped off the boat into the river.

River News 09/17/03

RRFW Riverwire - USFS TO TRASH WILDERNESS ON MIDDLE FORK

The Salmon Challis National Forest has released a Finalized Environmental Impact Statement (FEIS) which proposes to reduce the number of days that parties can remain on the Middle Fork of the Salmon river. The idea is to reduce the impacts of boaters on the river corridor, while at the same time the analysis would allow for an increase in jetboat numbers on the wilderness mainstem Salmon River.

The boiled down synthesis goes something like this: Public parties of 21-24 members, and commercial parties of 21-30 customers, would be limited to a maximum of 6 days on the river. Parties (both commercial and public) of 11 -20 members would be limited to 7 days on the river. Only those groups of 10 or less would be allowed to remain on the river for the current use limit of 8 days.

Lloyd Knapp, with North West Rafters Association, notes that most commercial trips don't stay on the river for 8 days due to quick turnaround times. This new ruling will not affect commercial outfitters, but it will fall onto the backs of self-outfitted recreational boaters, who typically take longer trips through the area. While the intent of the plan is to reduce the wear and tear on the Frank Church River of No Return Wilderness, Lloyd notes that in doing quick-turnarounds, the commercial outfitters are pouring more people down the river than trips that moving at a slower pace. Knapp notes "I would say that the river is not over-used. It does get a lot of use, but the Summer float season is relatively short. It's not at all like the Gauley in West Virginia, or other rivers that are loved to death."

Knapp also points out that the river also raises a substantial fortune in the contested Recreation Fee Demonstration program. "There is no evidence that the Forest Service has spent a dime of this money on the river. If there is over use in certain areas, then the Fee Demo money should be used for repairs and maintenance."

Jo Johnson, co-director of River Runners For Wilderness, notes there are clear flaws in this management plan. "Increasing motorized use and speeding up river travel through the wilderness do nothing to promote wilderness character. This plan continues the now outdated concept of allocating river use between the public and a small oligopoly of middlemen. This model has outlived its usefulness, especially in light of a continued growth in public rafting and ongoing declines in demand for guided river running services."

The FEIS has been issued, and the deadline for comments is October 27, 2003. A summary version of the FEIS is available at the website below. This is a Forest Service publication known as Frankly Speaking (a reference to Frank Church).

www.fs.fed.us/r4/sc/recreation/fcronr.htm

Your comments strongly opposing this plan are needed. Quite simply, there is very little justification for this type of wilderness river use. It's discriminatory against public river users, and doesn't do anything about the commercial interests, who carry very large groups of people quickly through while putting most of the use on the wilderness.

Comments can be submitted to:

Ken Wotring Supervisor's Office Salmon Challis National Forest 50 Highway 93 South Salmon, Idaho 83467

Comments can also be e-mailed to:

comments-intermtn-salmon-challis@fs.fed

RRFW encourages you to mail a hardcopy. It's a lot harder to lose a hardcopy than it is to press a delete button.

RRFW thanks Lloyd Knapp for information supplied in this Riverwire

River News 09/18/03

PARK AIRLIFTS 17 PEOPLE OFF STUCK RAFT

By Brad Fuqua Editor, Grand Canyon News

A 37-foot motorized raft, operated by Wilderness River Adventures, became pinned on a rock at Unkar Rapid September 11, 2003. Unkar Rapid is at river mile 72.5. "At approximately 2 p.m., the motorized raft experienced engine failure upon entering the rapid," incident commander K.J. Glover said in a report. "It traveled to the left side and got lodged on rocks towards the base of the rapid." For the next three hours, the boatman and crews from two other Wilderness River Adventures' boats attempted to

free the raft. The NPS received a satellite call for assistance at 5 p.m., after the self-rescue attempts failed. But SAR [search and rescue] personnel had less than two hours of daylight left for the operation.

Two rangers were inserted onto the boat via short-haul, a technique of moving rescuers utilizing a 100-foot rope attached to the helicopter. Six passengers were evacuated before nightfall, but air operations had to be suspended at dusk due to safety protocols. "Rangers stayed on the boat with the remaining passengers throughout the night," Glover reported. "In the morning the passengers were short-hauled to safety." There were no reports of injuries. Some of the 17 were able to get onto other river trips and hike out from Phantom Ranch.

Following the helicopter operation, rescuers and boatmen remained on the raft to assist with efforts to free it from the rock. Attempts to free the boat Friday proved unsuccessful. However, the boat was moved with a "Z rig" from the initial point of entrapment to a location 10 feet downstream. The boat also rotated 180 degrees. On Saturday morning, park rangers returned to Unkar Rapid to assist with freeing the boat. The raft finally broke free utilizing engine power. The boat then continued down river without further incident.

A photo of the stranded boat is at <http://www.grandcanyontourguide.com/> click on "Grand Canyon Newspaper".

River News 09/29/03

GRAND CANYON SLIDESHOW TOUR

Tom Martin, Co-Director of River Runners for Wilderness, will be presenting a slideshow on the Colorado River Management Plan and on his book Day Hikes from the River: A Guide to 100 Hikes from Camps on the Colorado River in Grand Canyon National Park. The CRMP-Hikes slideshow will be shown in Grand Junction, Boulder, Denver, Fort Collins and Colorado Springs, Colorado. See beautiful vistas illustrating Grand Canyon hikes you can do from the river and exciting river running shots. Tom will cover the latest news on the controversial Colorado River Management Plan now in progress for Grand Canyon National Park, and how this plan will affect your boating access. Tom will be signing books, the sale of which will benefit River Runners for Wilderness. Round up your boating buddies, and catch one of these free shows:

Grand Junction Wednesday, October 8th, 7PM - 9PM White Water West 418 South 7th St Hosted by W.A.T.E.R.

Boulder Thursday, October 9th, 7PM - 9PM The Dairy Center 2590 Walnut St. Plenty of free parking in Dairy Center's Walnut St lot

Ft. Collins Tuesday, October 14th, 7PM - 9PM REI 4025 S. College Ave. Hosted by REI

Denver Downtown Wednesday, October 15th, 7PM - 9PM AAA Inflatables 3264 Larimer St. Hosted by High Country River Rafters

Colorado Springs Thursday, October 16th, 7PM - 9PM Sports Page 965 Summer Games Dr. Hosted by Pikes Peak River Rafters

All shows are free and open to the public. For more information or for scheduling a show in your area, contact Jo Johnson at jojohnson@rrfw.org or 303-443-1806.

River News 10/01/03

GLEN CANYON DAM UPDATE

Operations

Releases from Glen Canyon Dam will be nearly identical in October to what they were in September. In October, releases will average 8,000 cfs with a total of 492,000 acre-feet scheduled to be released. On Mondays through Saturdays in October, daily fluctuations due to load following will likely vary between a low of 5,000 cfs (during late evening and early morning off-peak hours) to a high of 10,000 cfs (during late afternoon and early evening on-peak hours). On Sundays, releases will be 5,000 cfs from 7 pm until 7 am, and 8,000 cfs from 7 am until 7 pm.

Releases from Glen Canyon Dam in November of 2003 are currently scheduled be 476,000 acre-feet (an average releases of 8,000 cfs), with the same load following pattern as October.

Because of the draw down condition of Lake Powell, releases from Lake Powell in water year 2003 were scheduled to meet the minimum objective release of 8.23 million acre-feet. This is consistent with the requirements of the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs.

Basin Hydrology

Drought in the Colorado River basin continues. Inflow volumes have been substantially below average this year with water year 2003 being the 4th consecutive year with below average inflow to Lake Powell. April through July unregulated inflow to Lake Powell in 2003 was 3.91 million acre-feet, only 49 percent of the 30 year average. Total unregulated inflow for water year 2003 will be 53 percent of average.

Inflow into Lake Powell picked up somewhat in September, 2003. Significant amounts of precipitation fell in the Colorado River Basin, particularly in the Four Corners region, in the first two weeks of September. Unfortunately, a drying trend followed. There has been almost no precipitation in the Colorado River Basin in the latter part of September. Total unregulated inflow in September will end up at about 453,000 acre-feet, or 95 percent of average. Inflow on September 29, 2003 was 5,600 cfs, about 60 percent of what is usually seen in late September.

Total unregulated inflow into Lake Powell in water years 2000 and 2001 was 62 and 59 percent of average, respectively, and only 25 percent of average in 2002. Inflow in 2002 was the lowest ever observed since the completion of Glen Canyon Dam in 1963. These low inflows have reduced water storage in Lake Powell. Lake Powell reached a

peak elevation in 2003 on June 23 at 3616.6 feet. The current elevation of Lake Powell is 3,603.8 feet (96.2 feet from full pool). Current storage is approximately 12.1 million acre-feet (50 percent of capacity). The water surface elevation at Lake Powell will likely continue to decrease for the remainder of the year. Under expected inflows, Lake Powell will likely be near elevation 3600 feet on January 1, 2004.

Experimental Flows

Daily high fluctuating releases from Glen Canyon Dam, as part of the Glen Canyon Dam experimental flows, were completed on March 31, 2003. From January through March 2003 releases ranged between a high of 20,000 cfs to a low of 5,000 cfs each day. These same high fluctuating releases are scheduled to be repeated in January through March of 2004.

The January through March high fluctuating releases were intended to benefit the endangered humpback chub. Scientists have recognized that the humpback chub population has been in general decline since highly fluctuating flows were curtailed in November of 1991. Those flows helped keep the non-native fish, especially the rainbow and brown trout, in check. The trout are thought to prey upon and compete with native fish such as the endangered humpback chub.

The experimental flows from Glen Canyon Dam received environmental clearances in December 2002. The flows were analyzed in an environmental assessment in accordance with the National Environmental Policy Act. The experimental flows are the result of ongoing studies by scientists from the United States Geological Survey and were recommended by the Glen Canyon Dam Adaptive Management Work Group, a Federal advisory committee. The experimental flows address the decline of two key resources in the Grand Canyon: sediment and population viability of endangered humpback chub. The Finding of No Significant Impact on the experimental flows can be found at http://www.uc.usbr.gov/amp/flow_fonsi.pdf.

This release courtesy Tom Ryan.

River News 10/06/03

COLORADO RIVER ECOSYSTEM SYMPOSIUM

The Glen Canyon Dam Adaptive Management Program and the Grand Canyon Monitoring and Research Center will be hosting a symposium on the Colorado River in Grand Canyon. The symposium will be held in Tucson Arizona, October 28-30, 2003, and is open to all interested persons (public and students welcome!). The symposium will address questions such as:

Was the Low Steady Summer Flow in 2000 good for the river? How can conditions for the endangered humpback chub be improved? Are the new flows and experimental removal of non-native fish working? What is the role of experimentation under the Record of Decision?

Registration is free, but please register your attendance online using the website link below so organizers have enough meeting materials and light refreshments available. The program will run from approximately 8:30 a.m. to 5 p.m. each day, with a special poster session the evening of October 28th.

The program and flyer are available at <http://www.gcmrc.gov/symposium/2003/symposium.html> The Symposium will be held at the Sheraton Tucson Hotel and Suites, 5151 E. Grant Road, Tucson, AZ 85712. For further information, contact Serena Mankiller, USGS/BRD, Southwest Biological Science Center, Grand Canyon Monitoring and Research Center, 2255 N. Gemini Dr., Flagstaff, AZ 86001, Ph: 928/556-7094, E-mail: smankiller@usgs.gov

River News 10/06/03

BOULDER, GRAND JUNCTION SLIDESHOW REMINDER

Grand Canyon enthusiasts in Boulder and Grand Junction, Colorado: Don't forget the free upcoming Day Hikes from the River slideshow and CRMP update this week at the following locations.

Grand Junction Wednesday, October 8th, 7PM - 9PM White Water West 418 South 7th St Hosted by W.A.T.E.R.

Boulder Thursday, October 9th, 7PM - 9PM The Dairy Center for the Arts 2590 Walnut St.

If you can't make it to one of those, you have more opportunities in Fort Collins, Denver and Colorado Springs.

Fort Collins Tuesday, October 14th, 7PM - 9PM REI 4025 S. College Ave. Hosted by REI

Denver Downtown Wednesday, October 15th, 7PM - 9PM AAA Inflatables 3264 Larimer St. Hosted by High Country River Rafters

Colorado Springs Thursday, October 16th, 7PM - 9PM Sports Page 965 Summer Games Dr. Hosted by Pikes Peak River Rafters

Additional shows are tentatively scheduled in Colorado for Salida, December 2nd and Durango, December 4th, and in Salt Lake City. For more information on any of the shows, contact jojohnson@rrfw.org or at 303-443-1806.

River News 10/09/03

RIVER RUNNERS WANT LARGER SHARE OF CANYON

By Chris Barge, Boulder Daily Camera Staff Writer

So let's say you're a hard-core paddler who wants to lead your own trip down the Colorado River through the Grand Canyon. Now, pretend you want to do that some time in the next decade. Good luck. Under the current wait-list system, you'd have to buy a Day Planner for the year 2023 before finding a page to pencil in a trip. The wait list for recreational paddlers is about 20 years long. If you want to go this year, cash in those stocks: A spot is waiting for you on a commercial trip with one of the many outfitters that share 68 percent of the trip allocations. A woman from Boulder and a man who spends most of his time near the Grand Canyon are trying to rally the public behind a movement to change the status quo.

Jo Johnson of Boulder and guide book author Tom Martin co-founded River Runners for Wilderness one year ago. Martin will present a slide show tonight to promote their organization and his updated guidebook, "Day Hikes from the River: 100 Hikes from Camps on the Colorado River in Grand Canyon National Park." The book, an expanded version of his first guide, points out fun side hikes from the river for the 32 percent of river runners who are going it on their own. He says he hopes the book warms people to the idea of joining his and Johnson's cause.

Together, Johnson and Martin are trying to get the public engaged as the National Park Service develops a new Colorado River Management Plan. "There has been 30 years of stagnation down there to the benefit of an oligopoly of concessionaires," Martin said. "Fixed allocations don't work." The Park Service is scheduled to publish a draft environmental impact statement for the plan this fall. It will address the allocation system, as well as whether to continue allowing motorized boats on the river.

Commercial outfits in the canyon like using motor boats because they allow them to offer customers longer river trips over fewer days. Johnson says, in addition to being expensive, fast trips rob visitors of the true immersive psychological experience that the Grand Canyon can provide.

Hooey, says Mark Grisham, executive director of the Grand Canyon River Outfitters Association, which represents the concessionaires. Go to Minneapolis or Dallas and fill an auditorium with people who would seriously consider taking a river trip through the Grand Canyon, he said. Then, ask for a show of hands to these questions: Who wants to book an outfitter for a one- to two-week trip? Now, who wants to round up their own gear, own group and all the time off necessary to do the trip on their own? "We don't think that show of hands would be 50-50," Grisham said. "We think it would be more like 95-five."

Grisham said he and Martin disagree on how many commercial boats should run the river. It's the right mix, Grisham said. It's the antiquated wait-list system that needs to change. He suggests introducing a lottery. Both sides agree that the current method for private boaters to get on the water needs improvement. "That's why people are so pissed off," Grisham said. "They feel like the Park Service has let them down, so we become the for-profit bad guys."

The Grand Canyon River slide show and park plan update will be from 7 to 9 p.m. today at the Dairy Center, 2590 Walnut St., Boulder. For more information, call Johnson at

(303) 443-1806. Martin's book is available at www.vishnutemplepress.com. For more information on the Colorado River Management Plan, visit www.nps.gov/grca/crmp/. Contact Chris Barge at (303) 473-1389 or bargec@dailycamera.com. Copyright 2003, The Daily Camera. All Rights Reserved.

River News 10/13/03

RRFW Riverwire – RIVER OF NO RETURN MANAGEMENT PLAN UPDATE

The final environmental impact statement (FEIS) has been released for the Frank Church River of No Return Wilderness Management Plan by the Salmon Challis National Forest. This plan will guide management of the Main and Middle Fork of the Salmon River for years to come. The wild character of this area has degraded significantly in the past 20 years and that trend will actually increase under the new plan. Please take a few minutes to write a letter to the Forest Service asking them to protect the wilderness character of the Frank Church - River of No Return Wilderness. Comments must be submitted by October 27, 2003.

The final plan allows unlimited expansion of aircraft and motorboat use, continued degradation around campsites, lakes, streams and trails, serious impairment of the opportunity for a wilderness experience on the Middle Fork Salmon and Main Salmon rivers, and an unfair quota system that has commercialized much of the access to these rivers. While the draft EIS included 11 alternatives for consideration, the final EIS has been reduced to a final five (A to E). Though none of these alternatives are optimal to preserve Wilderness character and values, Alternative B comes closest. We endorse Alternative B, but only with the following changes:

(1) Managing use on the Middle Fork and Main Salmon rivers: Alternative B is the only alternative that caps use at a level that protects Wilderness character and opportunities for a wilderness experience. However, because this alternative continues an outdated and unfair allocation system (60 percent of use is for commercial trips), and allows for overly large party sizes (19 per group) it unnecessarily limits the number of public boaters who can float these rivers. The Forest Service should cap river use at the level set in Alternative B, but increase the number of trips available to the public by reducing group size limits to 12 per trip, and by allocating a much larger percentage of the launches to the public, rather than commercial users. The opportunity to experience Wilderness should not be based on one's willingness to pay a commercial outfitter.

(a) Jetboats: The plan allows virtually unlimited motorboat use on the Mail Salmon. Jetboat use has grown dramatically since 1978, much of it for "jetback" shuttles, which bring rafters upriver to their cars. Urge the Forest Service to prohibit jetbacks, and to cap motorboat use at 1978 levels.

(b) Painter Bar Road: The Painter Bar road is a primitive route that was used to access a private inholding within the Wilderness and Wild Salmon River corridor. The Forest Service has acquired the inholding. The FEIS proposes to leave this road open to ATVs and 4-wheel drive traffic. The Wilderness Act prohibits permanent roads and the Wild

Scenic Rivers Act prohibits roads along Wild Rivers. Urge the FS to close the Painter Road in the final plan.

(2) Aircraft Use: The Forest Service estimates that 5,500 aircraft land on airstrips in the Wilderness each year. Most of the use is not for wilderness dependent activities but part of a new fad where pilots "bag" airstrips to prove their competence, or engage in an airplane version of car camping. All of the alternatives the Forest Service developed allow aircraft use to increase without restriction. Urge the Forest Service to limit the number of aircraft landings to pre-Wilderness designation levels, and to implement a permit system that allows access for legitimate Wilderness dependent activities only.

In addition, and without agency approval, pilots have converted four Wilderness meadows into landing strips, referred to as the Dewey Moore, Mile-Hi, Simonds, and Vines "landing strips". The Forest Service preferred alternative proposes to maintain these strips for "emergency use," though landing at other times would not be prohibited. Urge the Forest Service to permanently close the Dewey Moore, Mile-Hi, Simonds, and Vines landing strips.

(3) Backcountry: Urge the Forest Service to implement specific management strategies to reduce crowding and on-site physical impacts by reducing group size limits from the current 20 people/20 head of stock, to 10 people/10 head of stock.

(4) Outfitter Camps: The plan would continue the practice of reserving over 80 camps for commercial land-based outfitters. The camps include permanent structures such as corrals, tent logs and fences. All Wilderness users should be required to meet the same rigorous leave-no-trace standards. Urge the Forest Service to require that outfitter camps be temporary and removed at the end of each season.

(5) Livestock grazing, fire control, fish stocking: These three important ecological issues are not addressed in the plan despite the fact that each has a significant effect on natural conditions in the Wilderness. Urge the Forest Service to adopt standards that promote naturally functioning ecosystems. Natural fires should be allowed to burn, stocking non-native species should cease, and strict controls should be incorporated into livestock allotment plans.

Send your comments to: Ken Wotring, FC-RONR Wilderness Coordinator, Forest Supervisor's Office, Salmon-Challis National Forest, 50 Highway 93 South, Salmon, ID 83467. Phone: (208) 756-5131, Fax: (208) 756 - 5151, email: comments-intermtn-salmon-challis@fs.fed.us

River Runners for Wilderness thanks Wilderness Watch www.wilderness.org for gathering the information contained in this release.

River News 10/21/03

RRFW Riverwire - Update on the CRMP Planning Process

To: All Interested Persons From: Planning Team Leader, Colorado River Management Plan

Subject: Update on the CRMP Planning Process Grand Canyon National Park is making considerable progress in developing a Draft Environmental Impact Statement for revising the park's Colorado River Management Plan (CRMP). We have developed a full range of reasonable draft alternatives (including the current situation which is the No Action alternative), which is now undergoing preliminary impacts analysis. The planning team has carefully considered and addressed input including the following:

- * Extensive comments the park received during the public scoping period in 2002,
- * Input from the stakeholder workshops and expert panels,
- * Consultation with Native American Tribes,
- * Interagency consultation,
- * Provisions of the 2002 lawsuit settlement agreement,
- * Extensive data and other information gathered by the planning team, and
- * Laws, policies, and principles guiding plan development (on the CRMP website at www.nps.gov/grca/crmp).

The next steps in the CRMP planning process will include:

- * Add mitigation measures to the alternatives, as necessary, to address any major impacts identified in the preliminary impacts analysis. The mitigated alternatives will then undergo additional impacts analysis. All of this is scheduled for completion in early November.
- * Review the draft alternatives and draft impacts analysis, make any necessary changes, and select a preferred alternative. The preferred alternative will be the agency's proposal for a revised CRMP; it may be one of the draft alternatives, the No Action alternative, or a new alternative developed during the preferred alternative selection process.
- * Publish a Draft CRMP/EIS for public review and comment (after any additional revisions and analysis).

We will not know the exact timing for publishing and public review of the Draft CRMP/EIS until the preferred alternative selection process has been completed. Once that process is completed, we will announce the schedule in a note to the CRMP email list, and on the CRMP website.

When the Draft CRMP/EIS is published, the park will issue a Notice of Availability in the Federal Register, a press release, and a note to everyone on the CRMP mailing list. We have begun planning for extensive public review opportunities, including public meetings, and we will keep you informed as we develop the details.

Please send any comments or questions concerning this note or the process to grca_crmp@nps.gov (please be sure to use an underscore to make grca_crmp). Thank you for your interest in Grand Canyon National Park and the Colorado River Management Plan. Rick Ernenwein CRMP Planning Team Leader.

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River News 10/21/03

NOROVIRUS UPDATE

River trip illnesses down from last year By Brad Fuqua, September 24, 2003 Grand Canyon News Editor

One year after a series of norovirus outbreaks on the Colorado River, things appeared to be pretty much back to normal this summer as river runners made their way through Grand Canyon. Last year, dozens of river trip passengers fell sick to the gastrointestinal illness, the same strain that ran rampant on cruise ships. This summer at Grand Canyon, only one trip reported three or more sick passengers. The infected trip launched from Lee's Ferry on Sept. 1 and a passenger became sick the following day. As a result, there is a theory that the person may have arrived for the trip already carrying the virus.

"The first person got sick on the 2nd, so our wildest guess is that it was brought in," said Michael McGinnis, Grand Canyon National Park river sub-district ranger. "The Coconino County Health Department actually has the toilets ... they took samples and are testing for norovirus. That's what they think it is, they don't know for sure." McGinnis said it appears 13 people got sick from the incident. Two people were flown out and taken to the hospital in an evacuation done above Crystal Rapid. Last year's problems with the illness were traced to discharges from Glen Canyon Dam's water-treatment plant. This year, McGinnis said "they did testing and did not find it," so that problem has seemingly been solved.

In addition, the National Park Service, commercial river runners and public boating groups met in a series of meetings to go over sanitation practices. Out of those meetings came a policy that private or commercial boating groups must report three or more illnesses immediately via satellite phone. That happened just the one time this year.

If fewer than three people become sick with contagious gastrointestinal illness on a river trip, the boaters are not required to report it until the end of the trip. That happened 12 times this summer, including one person who had to be flown out.

According to the Centers for Disease Control, symptoms of norovirus usually include nausea, vomiting, diarrhea and some stomach cramping. Sometimes people additionally have a low-grade fever, chills, headache, muscle aches and a general sense of tiredness. The illness begins suddenly is usually brief, with symptoms lasting only about one or two days, the CDC reports.

River News 10/23/03

UPDATE ON CRMP PLANNING

Released October 21, 2003 To: All Interested Persons From: Planning Team Leader, Colorado River Management Plan Subject: Update on the CRMP Planning Process
Grand Canyon National Park is making considerable progress in developing a Draft Environmental Impact Statement for revising the park's Colorado River Management Plan (CRMP). We have developed a full range of reasonable draft alternatives (including the current situation which is the No Action alternative), which is now undergoing preliminary impacts analysis. The planning team has carefully considered and addressed input including the following:

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River News 10/25/03

RIVER CONCESSION SALE POSSIBLE

Grand Canyon, AZ

A Grand Canyon river concessionaire has initiated the process of being purchased by another rafting concession, according to park officials. The river concession contract, owned by High Desert Adventures, has two years left on its present contract extension. The purchaser, if approved by the park, will be Arizona Raft Adventures. High Desert Adventures has 3,323 user days, while Arizona Raft Adventures has 10,368. There are currently 16 river concessions contracts today, with one company holding two contracts. If the sale is approved, there will be 16 contracts held by 14 companies. The contract period is now up to 10 years, with three-year extensions allowed beyond the 10-year period. All river concessions are presently operating under an extension that will expire December 31, 2005.

Grand Canyon National Park will be renewing the river concession contracts based on the Colorado River Management Plan (CRMP), now in the midst of an Environmental Impact Statement review. The final management plan will set the stage for river use for another 10 years.

Jo Johnson, River Runners For Wilderness Co-Director, is hoping for a change in the way the park distributes these permits. Johnson notes that 21 businesses become river concessionaires in the fall of 1971, with the initiation of 5-year contracts. At that time, all government agencies were to be following the National Environmental Policy Act, known as NEPA. Though federal law requires public review and scoping of such activities, these have never been conducted, and river concessions contracts have since been awarded based on requirements found in the CRMP. "Today, the split-allocation system has resulted in the do-it-yourself river running public waiting in a projected 20 year backlog of permits for river access while river concessionaires are slashing prices on river trips to assure their river trips fill." Johnson adds "We question the continued usefulness of a split allocation system."

According to Johnson, there are only two ways to shift user-days from the river concessions back to the public. The first is if the CRMP identifies a decreased need for commercial concessionaire services as they are presently offered. "The other way would be for the CRMP to adopt an allocation-free access system like the one at Boundary Waters or at Grand Canyon for backpackers. This completely eliminates the need for concessions to have a fixed allocation base." Johnson points out that de-regulating the concessions would move them from an oligopoly with fixed subsidies to an oligopoly "that could compete for market share. The park could terminate the concessionaire contracts and award any number of qualified Incidental Business Permits for guided river services."

"A number of businesses have been thriving for over a decade servicing the non-commercial river running public without any allocations whatsoever" Johnson noted. "These businesses provide a wide array of great services at low cost to the public. Allocation-free access plans hold the only hope for a contention free future for the river."

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LR in the News 10/29/03

Interior Dept. favors more Canyon flooding

By Mitch Tobin ARIZONA DAILY STAR

Tucson, Arizona - Despite initial resistance, the Bush administration favors continued experimental floods meant to restore the Grand Canyon's ecology, a senior official said in Tucson on Tuesday.

Assistant Secretary of the Interior Bennett Raley, the administration's point man on water issues, spoke to 60 scientists at the start of a three-day meeting on how Glen Canyon Dam affects the Colorado River.

Researchers explained how they're using lasers, underwater cameras, century-old photos and experimental flumes in Minneapolis to learn how sand grains and Volkswagen-sized boulders move through the Canyon's rapids and eddies.

Raley urged the scientists not to politicize their work and to remember that "science is not the only input factor for management of the Colorado River."

"If scientists are sloppy and mix advocacy with science, you will end up with the same public perception of integrity that lawyers have," said Raley, a lawyer by training.

Glen Canyon Dam, completed in 1963, dramatically altered the Colorado's flow. Before the dam, the warm, muddy river roared with spring snowmelt. Sediment was lifted onto beaches and sand bars, creating wildlife habitat and backwaters vital to native fish, such as the endangered humpback chub. The beaches are still important campsites for boaters.

After the river was plugged to stabilize the Southwest's water supply, it ran colder and clearer below the dam, which trapped 90 percent of the silt. But dam releases--which often fluctuate with the Sunbelt's electricity demands--have also caused the Colorado's baseline flow to double downstream. As a result, much of the silt and gravel deposited by the Grand Canyon's 740 tributaries gets whisked into Lake Mead downstream.

"It wasn't that we just lost the spring floods, which redeposited sand," U.S. Geological Survey researcher Ted Melis said, "we lost the low-flows the rest of the time, which were low enough to retain those inputs for use during the high-flows. We're getting hit on both ends."

The result is an ecosystem transformed by a dam that helps supply water and power to 25 million people.

Tucson is becoming increasingly dependent on the Colorado, whose water comes here via the Central Arizona Project's 336-mile canal.

After passage of the 1992 Grand Canyon Protection Act, the Clinton administration tried to replicate the river's natural flows. With much fanfare, Interior Secretary Bruce Babbitt opened the dam's floodgates in 1996; another flooding experiment was tried in 2000.

Despite initial claims of success, scientists now say the results were minimal. A lack of sediment in the river made it tough for sandy areas to expand, and many gains were quickly washed away.

Scientists want to create more floods and time them when the Paria River is dumping sediment into the Colorado.

But the drought has caused that tributary, 15 miles below the dam, to deposit less silt in the past three years than any time in recorded history.

Raley said at first he was "deeply, deeply skeptical about the experimental flow program." But, after talks with scientists on a river trip, Raley accepted it was "good science and it was worth taking the political risks to move forward."

"We know when we're being gamed. Had we sensed that, we probably would have slow-walked, ducked, evaded and done everything not to move forward," he said.

John Weisheit, an environmentalist with the group Living Rivers who would like to see Glen Canyon Dam removed, was encouraged by Raley's words. But he said the Interior Department still isn't spending enough money to restore the Grand Canyon.

In the past 30 years, researchers have flip-flopped on whether the Canyon was losing or gaining sediment, said Jack Schmidt of Utah State University. Some thought the lack of floods created a surplus of silt and there was enough sand in the river to form new beaches.

"What we've learned in the Grand Canyon is, the system may be in sediment deficit all the way to Lake Mead," he said.

* Contact Mitch Tobin at 573-4185 or mtobin@azstarnet.com.

River News 10/31/03

RRFW Riverwire - PUBLIC TO BE BYPASSED AGAIN

Grand Canyon National Park October 31, 2003

River Runners for Wilderness has learned that a Recommendation for Wilderness Proposal has been submitted to the park by Representative George Radanovich (R-CA, Chairman, Subcommittee on National Parks, Recreation and Public Lands).

Chairman Radanovich is proposing a wilderness recommendation which excludes the Colorado River. Grand Canyon National Park staff are responding to a request from the NPS Directorate to prepare the necessary documentation. Representative Radanovich and committee staff members intend to introduce this alternative through the congressional process as a wilderness bill.

"Here we go again." commented Tom Martin, Co-Director of River Runners for Wilderness "We are in the middle of a public process dealing with the river-wild, where the public, as it has for over 30 years, is clamoring for preservation of the wilderness character of the river, and in steps Congress to bypass the public. In fact," Martin notes, "we are possibly only two months away from seeing the release of the long awaited preferred alternative for the Colorado River Management Plan Environmental Impact Statement. Just like this spring, the summer of 2001, and in 1980, we're seeing an attempt to muzzle the public process. This recommendation not only shuts down the public process," he continues, "but it flies in the face of a court ordered settlement from two years ago to include a wilderness alternative."

Grand Canyon Superintendent Joe Alston and staff are in the process of producing a map that reflects the Chairman's intent, which excludes the river from Wilderness designation. The park is providing narrative explanation that delineates further exclusions besides the river, as defined in the 1993 Final Wilderness Recommendation. RRFW has also learned that the 1993 recommendation will also be included for reference purposes. These documents will be submitted to the NPS Office of Congressional Affairs for final drafting services. The information is being provided as a service to the Chairman and Subcommittee staff, who will then handle all further liaison activities with the Congressman's office relating to the proposed recommendation.

"The river rafting public has discovered that wilderness rivers are an incredibly unique and scarce resource. This recommendation eliminates 240 miles of the best wilderness river running in the world. There are no motorized boats on the river for three months of the year, and no jet-boats at all. The loss of wilderness protections will change all that." remarks Jo Johnson, also of River Runners for Wilderness. "Most importantly, allowing 80% of the public river access to be given to park rafting concessionaires, 75% of which use motorized tour boats to run through the canyon, while the do-it-yourself paddler waits in a 20 year backlog for access, is inconsistent with wilderness management. Thirty years of access wars over the character of the river have taught us that outdated fixed allocations are not what wilderness river running is supposed to be all about."

This recommendation will result in a reduction in wilderness acreage at Grand Canyon National Park. The 1993 Final Wilderness Recommendation proposes 1,139,077 acres. By excluding the river, the amount is reduced by 12,190 acres to 1,126,887 acres of wilderness. RRFW has learned that Grand Canyon National Park has taken no position on this recommendation at this time.

All river runners are encouraged to contact the following congressmen and ask to speak with the environmental staffer. Politely request that the Radanovich Grand Canyon Wilderness recommendation not be introduced while a public process to sort these issues out is ongoing. Even if the listed congressmen below are not in your district, you are all encouraged to contact them as this is a National Park, and therefore a national issue.

Rick Renzi 202-225-2315 Mark Udall 202-225-2161 Tom Udall 202-225-6190 Raul Grijalva 202-225-2435 George Radanovich 202-225-4540 John McCain 202-224-2235

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River News 11/02/03

RRFW Riverwire - GLEN CANYON DAM UPDATE

Updated October 31, 2003

Operations

Releases from Glen Canyon Dam in November will be nearly identical to what they were in October. In November, releases will average 8,000 cfs with a total of 476,000 acre-feet scheduled to be released. On Mondays through Saturdays in November, daily fluctuations due to load following will likely vary between a low of 5,000 cfs (during late evening and early morning off-peak hours) to a high of 10,000 cfs (during late afternoon and early evening on-peak hours). On Sundays, releases will be 5,000 cfs from 7 pm until 7 am, and 8,000 cfs from 7 am until 7 pm.

Releases from Glen Canyon Dam in December of 2003 will likely be higher than November. The volume releases in December is likely to be 600,000 acre-feet (an average release of about 10,000 cfs).

Because of the draw down condition of Lake Powell, releases from Lake Powell in water year 2004 are being scheduled to meet the minimum objective release of 8.23 million acre-feet. This is consistent with the requirements of the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs.

Basin Hydrology

Severe drought conditions in the Colorado River Basin continue. As we move into a new water year there are no signals of the drought easing. Water year 2004 began on October 1, 2003 and the first month of our new water year was much warmer and drier than average. Basinwide precipitation in October was only about 30 percent of average. Soil moisture levels throughout the basin are very low, and as we move into winter it appears likely that the snowpack will be building upon these very dry soils. The scenario is not favorable for next spring's runoff, as much of the melting snow will be absorbed by the dry soil. Reclamation is estimating that with average snowpack conditions this winter, runoff next spring would be about 75 percent of average.

The Colorado River Basin is now in its 5th year of drought. Inflow volumes have been below average for 4 consecutive years. Unregulated inflow in water year 2003 was only 53 percent of average. Unregulated inflow in 2000, 2001 and 2002 was 62, 59, and 25 percent of average, respectively. Inflow in 2002 was the lowest ever observed since the completion of Glen Canyon Dam in 1963.

The trend of low inflow continues. Unregulated inflow in October, 2003 will end up being only 55 percent of average. As of October 31, 2003 observed inflow to Lake Powell is about 6,000 cfs, about 58 percent of what is usually seen in late October.

Low inflows have reduced water storage in Lake Powell. The current elevation of Lake Powell is 3,602.0 feet (98.0 feet from full pool). Current storage is approximately 11.9 million acre-feet (49 percent of capacity). The good news is that even after 4 years of

severe drought, Lake Powell is still storing a large volume of water (nearly 12 million acre-feet).

Experimental Flows

Daily high fluctuating releases from Glen Canyon Dam, as part of the Glen Canyon Dam experimental flows, were completed on March 31, 2003. From January through March 2003 releases ranged between a high of 20,000 cfs to a low of 5,000 cfs each day. These same high fluctuating releases are scheduled to be repeated in January through March of 2004.

The January through March high fluctuating releases were intended to benefit the endangered humpback chub. Scientists have recognized that the humpback chub population has been in general decline since highly fluctuating flows were curtailed in November of 1991. Those flows helped keep the non-native fish, especially the rainbow and brown trout, in check. The trout are thought to prey upon and compete with native fish such as the endangered humpback chub.

The experimental flows from Glen Canyon Dam received environmental clearances in December 2002. The flows were analyzed in an environmental assessment in accordance with the National Environmental Policy Act. The experimental flows are the result of ongoing studies by scientists from the United States Geological Survey and were recommended by the Glen Canyon Dam Adaptive Management Work Group, a Federal advisory committee. The experimental flows address the decline of two key resources in the Grand Canyon: sediment and population viability of endangered humpback chub. The Finding of No Significant Impact on the experimental flows can be found at http://www.uc.usbr.gov/amp/flow_fonsi.pdf.

This release courtesy Tom Ryan.

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River News 11/03/03

Endangered Species: Interior mulls warming Colorado River to help humpback chub

April Reese, Land Letter Southwest correspondent

This story is the first of a series on management of natural resources in the Grand Canyon.

GRAND CANYON NATIONAL PARK, Ariz. -- Almost 40 years after Glen Canyon Dam plugged the Colorado River, one of the river's oldest inhabitants is struggling for

survival. But as the debate swirls over recovering the endangered humpback chub while meeting human water demands, the river's federal caretakers have devised a new solution: warm up the river.

The chub, which ranges in size from 5 to 20 inches and can live up to 30 years, evolved in the Colorado River basin 3 million to 5 million years ago. Once numbering in the millions throughout the watershed, the fish has been reduced to a couple thousand, although scientists disagree over just how many remain. While small groups of the fish persist in the upper Colorado River basin, the only surviving lower basin population is in the Little Colorado River, near its confluence with the mainstem in Grand Canyon National Park.

[The largest known population of humpback chub is in the Little Colorado River in the Grand Canyon, where there may be up to 10,000 fish. Photo courtesy of the Fish and Wildlife Service/John Rinne.]

Scientists attribute the species' decline primarily to Glen Canyon Dam, built in 1963 to provide water and power to the interior West. While many credit the dam and its reservoir, Lake Powell, with turning the arid region into a land of verdant farms and booming cities, the project also has drastically changed the ecosystem downstream. The Colorado River, which historically ran muddy and warm, turned clear and cool with the closing of the floodgates.

As incoming water pools behind the dam, its sediment load settles, and the water released through the dam's penstocks is drawn from the cool depths of the reservoir. Water temperatures that once fluctuated seasonally from about 80 degrees in summer to almost freezing in winter now average 46 degrees year-round, according to the Bureau of Reclamation. Biologists suspect the chub and other native fish that have disappeared from the river altogether have difficulty tolerating the cool, clear waters that now flow through the Grand Canyon.

[The picture on the left shows the clear-running Colorado River in the Grand Canyon above the confluence with the Little Colorado River; the other picture shows the murky Little Colorado. Photos by April Reese.]

On a recent data-gathering trip funded by the U.S. Geological Survey, Joe Shannon, a Northern Arizona University-based aquatic ecologist who has been monitoring the Grand Canyon ecosystem for 15 years, pointed out the contrast between the murky Little Colorado and the mainstem river. A recent storm had loaded the Little Colorado with sediment, and its milk-chocolate flow muddied the crystalline main stem where the two rivers meet in Grand Canyon National Park, about 75 miles downstream from the dam.

"That's how the Colorado should look," he said, pointing to the river, which has grown murky under the influence of its temporarily muddy tributary. "It's not supposed to be clear."

It was a rare glimpse of the river as the humpback chub saw it for millions of years, before the construction of the dam 40 years ago. But a quick splash of the hand in the cloudy waters is a reminder that this is still a "designer ecosystem," as Shannon calls it. The water is cool -- too cool for humpback chub to reproduce.

Warming the river

The Bureau of Reclamation, which owns and operates the dam, hopes to improve those conditions by using a "temperature control device" (TCD) to release warmer water into the river. Dennis Kubly of BuRec's Environmental Resources Division said the agency wants to send water from the reservoir's warm surface layer downstream instead of drawing from the deep, cold waters of the lake.

The impetus for the project was a biological opinion issued by the Fish and Wildlife Service in 1994. The agency recommended that BuRec investigate using temperature control technology, which up to that point had only been used to enhance conditions for game fish, to help recover the humpback chub.

In August, the proposal received an endorsement from the Glen Canyon Dam Adaptive Management Work Group, comprised of 25 stakeholders representing the park service, BuRec, FWS, power interests, environmental groups and others. This week, the group formally asked Interior Secretary Gale Norton to give BuRec the green light to go forward with the project. Norton is expected to make a decision on the proposal within the next few weeks.

But several biologists question whether the water drawn from the top of the reservoir will be warm enough to significantly benefit the chub. While BuRec's proposal to increase water temperatures in the river is partly in response to FWS' recommendations, some biologists are concerned that warming the river could benefit non-native fish that prey on the chub as well. For instance, channel catfish -- one of several species, including striped bass and carp, introduced to the Colorado River by fishery managers -- respond to increases in water temperature by speeding up their metabolism, which causes them to eat more food, including chub, Shannon said.

"Right now, those fish may be suppressed by cold water temperatures," said Sam Spiller, Lower Colorado River coordinator for the Fish and Wildlife Service. "There might be more damage if we warm the water." Even so, the increase in temperature could help control cold water species like trout, he added.

Even if the TCD succeeds in boosting chub numbers, it's likely to fall short of federal recovery goals for the species, said David Haskell, a former director of Grand Canyon National Park's Science Center. "The recovery plan calls for [establishing] another major, viable population," he said. "The TCD would not do that."

Shannon was more optimistic. "I think the TCD can work, but only if there's a total reworking of dam operations," so that water releases would more closely mimic historic fluctuations in flows, Shannon said. "Recovery efforts have to be on a big scale, because the dam and its impacts are so big."

If the project goes forward, Kubly said it will probably be implemented in small steps so federal managers can monitor the effects on both native and non-native fish and adjust the plan accordingly.

"In a sense, it's a one-arm-behind-your-back approach," he said. "Not everyone trusts one another, so this makes sure we don't move too far too fast."

It also costs less to go slow, Kubly noted. The initial two-penstock plan will cost about \$25 million; to alter all eight, the cost would be about \$100 million, he said.

The agency has used temperature control devices with some success on other dams, including Shasta on California's Sacramento River, Hungry Horse on Montana's Flathead River and Flaming Gorge on Utah's Green River, Kubly added.

"There aren't any known disasters out there," he said. "By and large, the system responses have either been positive or neutral."

Recovering the chub

But Haskell, who was also a ranger at Glen Canyon National Recreation Area in the 1970s, said the only way to restore native fish -- and the rest of the ecosystem -- is to decommission the dam. He compared the TCD project to "tinkering while Rome is burning."

"If there wasn't a dam, the trout would be dead real quick, because they can't take a lot of this," said Haskell, gesturing toward the murky water.

According to the Fish and Wildlife Service, the chub will be considered for removal from the endangered species list "when five viable, self-sustaining populations have been restored ... and when the fish's habitat has been protected."

With one of the river system's biggest dams just upstream from the largest population of the chub, that's a tall order, say Haskell and other decommissioning advocates.

In addition to the TCD proposal, federal managers have launched a program aimed at killing non-native fish. But that effort, too, is fraught with uncertainty. Some biologists are worried that reducing the numbers will only give the remaining non-native fish more room -- and more resources -- to thrive. The question, Shannon said, is, "How do you kill all the bad fish and grow the good fish?"

Complicating recovery efforts are conflicting management objectives in the same ecosystem, Shannon added. "The park is killing non-native fish, but [state managers] are still stocking them upstream," he said.

Debbie Felker, a spokeswoman for FWS' Upper Colorado River endangered fish recovery program, said the agency is working with state game and fish officials to scale back stocking programs that conflict with endangered species recovery.

The challenge of recovering the humpback chub is part of a larger debate over how to protect the park's resources while meeting water delivery mandates.

Lake Powell is one of several reservoirs that are part of the Colorado River Storage Project, which provides water for seven states: Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming. About 85 percent of the water is used for irrigation; the rest is allocated for residential, commercial and industrial use. Balancing those demands with the protection of an extensively altered river ecosystem is a daunting task, observers say.

Meanwhile, the stakes are becoming increasingly higher for the chub in the Grand Canyon, Shannon said. "If we lose the base flow of the Little Colorado River because of drought, it's all over," he said. "We're talking at most another 20 years."

River News 11/06/03

RRFW Riverwire CONDOR CHICK FLIES!

Grand Canyon National Park

Biologists from Grand Canyon National Park and The Peregrine Fund have confirmed the fledging of the first California Condor nestling in Arizona in perhaps over a century. The flight was observed at 1:30 p.m. on Wednesday, November 5. The chick jumped out looking like it wanted to land but there was nothing there. It ungracefully circled and landed 500 - 600 feet below its cave in a remote canyon. The California Condor was included on the first Federal Endangered Species List in 1967.

"It was spectacular!" announced an excited Sophie Osborn, Field Manager of The Peregrine Fund. "It was not the graceful flight we had envisioned, more like a controlled fall and our hearts were in our throats as it dropped 500 to 600 feet below the nest cave. Minutes after the chick landed it started to explore its environment, tugging on a yucca plant and hopping from boulder to boulder. We waited and hoped so long for this to happen that being part of it was indescribable!" she added.

"Our biggest worry after the chick left the cave was how long it would take for the parents to find it," remarked Chad Olson, Raptor Technician for the National Park Service. "Both parents were away from the area when the chick fledged. To our great relief, female 127 flew to the nest about two hours after the chick fledged, realized the chick was not in the nest cave, immediately found it, and dropped down to feed it. Since fledging is such a dangerous time for the chick it is tremendous to be past this and on to another exciting phase." Olson said.

The chick is healthy and alert to its surroundings. Biologists are planning to attach telemetry equipment and assess overall health issues. The bird will be closely monitored.

"A fledgling condor chick spreads its wings and flies into the wild, and not just the parents share in the pride. The partners who have worked for decades to rescue this species from the brink of extinction see it as a great cause for hope," observed Interior Secretary Gale Norton.

"I have watched adult condors soaring above the spectacular beauty of the Grand Canyon. The birth and flight of this young condor creates optimism that condors will flourish in the Canyon for many generations to come," Norton added.

Biologists first suspected that Condors 123 and 127 were incubating an egg in March 2003. Daily observations were made, with assistance from a group of "Nestwatch" volunteers. The parents became very attentive to the nest in early May. The existence of the chick was confirmed on August 18 after biologists made an arduous 24-mile hike in 100 degree heat down to below the nesting cave. Daily monitoring continued.

"We are very pleased about this new step in the recovery of the California Condor species," stated Joseph Alston, Superintendent of Grand Canyon National Park. "We are proud to be a part of this highly anticipated and monumental event for both the park and the Colorado Plateau. We look forward to working with our partners in order to ensure the well-being of this new arrival to the condor population and to ensure continued success in the program."

Three pairs of California Condors produced eggs in Arizona in 2003 (one in BLM's Vermilion Cliffs National Monument and two in Grand Canyon National Park). Two of the eggs did not hatch, which is not uncommon for California Condors during their early breeding years. In fact, this was the second egg laid by Condor 127 and the third laid by Condor 119. In California this year, one egg was laid and hatched in early May, but, unfortunately, the chick did not survive.

As Roger Taylor, Arizona Strip Field Manager for the Bureau of Land Management (BLM) states, "We have been anxiously awaiting this bird's first flight. With the good condor viewing opportunities that are typically available along the Vermilion Cliffs, perhaps the public will have an opportunity to view the young condor this winter."

"The significance of the first wild-hatched condor in Arizona is tremendous. While captive-bred condors have exceeded our expectations, it is this chick and others like it in the future that ensure condor recovery in Arizona," says Arizona Game and Fish Director Duane Shroufe.

"The partners have watched this chick prepare to fledge with as much anticipation as any natural parent might," said H. Dale Hall, Southwest Regional Director of the U.S. Fish and Wildlife Service. "We all wish the best for this fledgling and look forward to further successes."

The historic Arizona reintroduction is a joint project among the U.S. Fish and Wildlife Service, the National Park Service, The Peregrine Fund, the Arizona Game and Fish Department, the Bureau of Land Management, Southern Utah's Coalition of Resources and Economics, and others. Funding for the project is being provided by The Peregrine Fund, U.S. Fish and Wildlife Service, Arizona Game and Fish Department, Peter Pfendler, National Fish and Wildlife Foundation, Nina Mason Pulliam Charitable Trust, Disney Wildlife Conservation Fund Awards, Steve Martin/Natural Encounters, Grand Canyon National Park Foundation, Bureau of Land Management, Grand Canyon National Park, Kearney Alliance, Grand Canyon Trust, Patagonia, Turner Foundation,

Globe Foundation, Earth Friends, Arizona Public Service, Wallace Research Foundation, Mattie Wattis Harris Foundation, Arizona Community Foundation, and Oracle Corporation Grand Canyon Conservation Fund, and others.

Images and other information may be obtained from the following websites:

The Peregrine Fund: www.peregrinefund.org/press/condor_chick_fledges_2003.html

The Grand Canyon National Park Foundation: www.gcnpf.org, Grand Canyon National Park: www.nps.gov/grca

The California Condors are being released as a "non-essential/experimental population" under section 10(j) of the Endangered Species Act. Section 10(j) provides that the species can be released in an area without impacting current or future land use planning. However, in Grand Canyon National Park condors are provided full protection as federally protected threatened species. This authority has been spelled out further in an innovative agreement between the U.S. Fish and Wildlife Service and local governments. This "Implementation Agreement" spells out a positive working relationship between the Federal government and the various local governments.

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River News 11/07/03

Study: Global warming to 'substantially affect' California in 20 years

Associated Press

Sacramento, Calif.

Global warming will substantially affect California in about 20 years, experts say, warning that the state is more vulnerable because of its coastline, its climate and its dependence on Sierra Nevada snowpack for water and hydroelectricity.

"It's going to affect all of us," said Robert Wilkinson of the University of California, Santa Barbara, School of Environmental Science and Management, who wrote a 432-page treatise on the impact on California.

It means a shorter ski season in the Sierra, and poorer habitat for endangered salmon in lower streams. It may mean more wildfires and more floods. Extreme heat waves, easier spread of diseases and increased air pollution all could imperil health.

Oceans that rose 4 inches to 8 inches over the last century could rise up to 3 feet this century, swamping San Francisco Bay estuaries and endangering pumps sending freshwater from the Sacramento-San Joaquin River Delta to the Bay Area, San Joaquin Valley and Southern California.

It will mean more fights over water throughout the West.

"Climate change is upon us. In 20 to 25 years, we really will be working with a different climate," said Michael Dettinger, a U.S. Geological Survey research biologist and researcher with the Climate Research Division at Scripps Institution of Oceanography.

Every scientific model predicts warmer temperatures, with the bulk projecting an increase in the range of 3 degrees to 6 degrees by 2100. But the computer models split on whether California will become wetter or drier.

Either way, warmer temperatures mean a shift in California's water cycle.

The Sierra snowpack that functions as the state's largest reservoir could shrink by a third by 2060 and to half its historic size by 2090. Runoff that fills reservoirs will start in midwinter, not spring. And rain falling on snow will trigger more flooding, scientists said Thursday at a seminar hosted by the Water Education Foundation.

Models projecting a drier California predict a sharp increase in critically dry periods, said Alan Hamlet, a water resources engineer with the University of Washington.

"We're going to have exacerbated conflicts over water, both in California and the Colorado Basin" that also supplies six upstream states, he said. Fortunately for California, it is rare -- but not unheard of -- for the Sierra and the Rockies to have a simultaneous drought, so usually there is substantial water for Southern California from one or the other.

The trends are already in play.

Spring temperatures have increased 2 degrees to 3 degrees since 1950, peak spring snowmelt comes two to three weeks sooner, and vegetation blooms one to three weeks earlier and stays green longer, scientists earlier told a state Assembly committee on water and climate change.

While more dams and reservoirs could capture vital runoff and control flooding, there are substantial questions where or if to build them given the uncertain long-range weather pattern forecasts. Experts predicted the state will have to rely more on conserving and reusing water, desalinization, groundwater storage, and water trades and transfers between regions.

As with the ebb and flow of the Ice Age, warmer temperatures mean grass and oak woodlands and chaparral will grow higher into the mountains over the next 100 years, while conifer forests can grow above the current tree line, said Susan Ustin, an environmental and resource science professor at the University of California, Davis.

But 100 years is a blink in geologic time, and the relatively quick change will disrupt ecosystems that need millennia to adapt, she said. Invasive species that already threaten native plants and animals may be quick to fill that void.

Earlier snowmelt means less spring runoff for salmon, and water could get too warm for them to spawn. Already, runoff into the Sacramento River has dropped 11 percent over the last century.

But warmer weather means longer growing seasons, which could help agriculture -- as long as there's enough water for irrigation, said Rick Snyder, a biometeorologist at UC Davis. While many of California's crops could benefit, its famed wine grapes need a precise combination of temperatures and could suffer, said Snyder and Wilkinson.

The effect could come down to "if you're talking white wine or red wine," said Wilkinson. "Is that a great research project, or what?"

LR in the News 11/07/03

Dry state will fight to restart desalter

Shaun McKinnon

The Arizona Republic

Nov. 7, 2003 12:01 AM

YUMA - Down along the final, gasping miles of the Colorado River, on the edge of a desert too dry to notice the drought, an unusual skirmish has erupted over a plan to squeeze more water from the West's already over-tapped supply.

The battleground is a water desalination plant on this city's west side, a \$280 million white elephant that operated for all of nine months a decade ago, before floods and design flaws forced it into hibernation. The plant was designed to recycle agricultural runoff water that was otherwise too polluted and salty.

Now Arizona wants to restart the desalination plant as a hedge against the drought and has asked the federal government to spend \$30 million to bring it back on line and an additional \$24 million to \$30 million a year to keep it running. Without the plant, Arizona officials say, Phoenix and Tucson could someday face crippling water shortages.

Critics question that claim and say the desalter is a failure best left idle. Even other Colorado River states, sympathetic to Arizona's effort to reclaim the lost water, shy away from the plant's enormous cost and the relatively meager return, about 25 billion gallons of desalted water a year, or roughly 0.6 percent of the Colorado River's total flow. But the fiercest opposition comes from environmentalists, who say that operating the desalter would destroy a thriving Mexican wetland and spoil the first real success story in the struggle to restore the Colorado River Delta. That argument frames a larger one, not about who should use the water or how, but whether it should be used at all.

'Very perplexing'

"There are tough issues," admits Herb Guenther, director of the Arizona Department of Water Resources. "It could be quite a tug of war down there. But if we don't operate the plant, there is a potential for water shortages and Arizona is the one to feel the impact. . . . This is a very perplexing problem."

Perplexing barely begins to describe what's happening here. This is, after all, a story about a desalination plant in the middle of the desert. And it asks a sort of chicken-and-egg question of whether the government should take water from a wetland that was the unintentional creation of that plant in the first place. Racing through it all is a gnarly tangle of issues: the environment, border politics, public money and, gnarliest of all in the West, water and how it should be managed.

"There is a taxpayer issue and an environmental-impact issue," said Lisa Force, Arizona program director for the advocacy group Living Rivers. "But the bigger issue is about the Bureau of Reclamation continuing to operate in an old-fashioned way. Re-operating the desalination plant is more of the same old pork-barrel politics, continuing to throw away taxpayer dollars on unsustainable water projects. "There are so many other options to create new water."

30 years of history

As odd as it sounds here at the end of the mighty Colorado, creating new water - or at least wringing every last drop from the water that already exists - is where this story started three decades ago when Mexico complained that the water flowing out of Arizona was too salty.

Mexico is entitled to 1.5 million acre-feet per year from the Colorado, about 489 billion gallons. Because Mexico is last on the river, it sometimes has had to settle for the dregs, often irrigation runoff from farms around Yuma and across the border in California.

Mexico finally complained that the water it was receiving was too salty, unfit to irrigate crops. Although the Colorado River originates half a continent from an ocean, it's one of the saltiest freshwater rivers in the country. It picks up minerals along its rugged 1,400-mile route, along with runoff from thousands of acres of irrigated farmland. In all, the river carries 9 million tons of salt a year, the equivalent of nearly 250 full railroad cars a day. To reduce the salinity of the river as it crossed the border, the United States decided to build a desalination plant at Yuma. The plant would take heavily polluted water from farms in the Wellton and Mohawk valleys to the northeast - water that had been running back into the Colorado and down to Mexico - treat it and return it to the river, in effect using it twice by recycling it.

"The plant is just a tool for salinity on the Colorado river," said Jim Cherry, who oversees the desalination plant as Yuma-area director for the Bureau of Reclamation. "It's just one of the tools. It won't change the salinity of the river significantly - it's almost like running a hose into the swimming pool - but it's a good amount of water we save (by recycling)."

The bureau fired up the plant in late 1992 at one-third capacity. It operated for about nine months, then shut down after a flood on the Gila River washed out one of the delivery canals. A chain of frustrating design flaws kept the plant inactive and a series of wet years in effect rendered the plant unnecessary. Enough water was flowing down the Colorado to fill Mexico's orders.

That changed this year. The drought sucked up all the surplus water and forced the Bureau of Reclamation to draw about 35 billion gallons of water from Lake Mead.

Although the reservoirs are nowhere near running out of water, many scientists predict that drought conditions will persist for years. Both Utah and Colorado are considering plans to use more of their river allocations. If the river can't deliver enough water, Arizona - specifically the Central Arizona Project, which supplies Phoenix and Tucson - is the first to have its flow halted.

Water shortage risks

"The desalter is important to Arizona because it reduces our long-term risk for shortages," said Tom Carr, who oversees Colorado River issues for the state Water Resources Department. "Reducing the water in storage on the river is a significant issue." So is time, Carr said. Fixing the remaining design flaws and preparing the desalination plant for full-scale operation would take four to five years. An environmental-impact study could stretch that timetable. Congress will have to appropriate up to \$30 million just to fix the design flaws and prepare the plant to operate.

State officials worry that the price tag could hold up their request. The annual operating budget would likely top \$29 million, about \$311 per acre-foot delivered to Mexico, or about 30 times what Yuma farmers pay. But they say a long-term water shortage in Arizona could run up damages of more than \$300 million in lost crops and money spent to find alternate sources.

Shifting money to the desalter would probably mean taking it from other uses, said Bob Johnson, regional director for the Bureau of Reclamation in Boulder City, Nev. Although the agency is moving ahead with an environmental-impact study and repairs to the desalination plant, officials also are exploring other ideas.

Most often mentioned is leasing water from farmers along the river or paying them to leave croplands unplanted. "My guess is if you packed something correctly, you could probably get some water out of there at a lesser cost and with less of an environmental impact than operating the plant," Johnson said. Other states along the Colorado have expressed limited support for Arizona, but they also suggest there may be better alternatives.

"It's been in storage a long time and the technology has changed tremendously. We need to know if it is cost-effective to upgrade it," said Kay Brothers, deputy general manager of the Southern Nevada Water Authority in Las Vegas.

Arizona officials say the other options are even more expensive. Leasing water or paying farmers to fallow land could cost nearly \$54 million a year, the state estimates. A plan to bank surplus water underground to allow more water to flow down the river could cost nearly \$40 million.

Water leases or purchases are equally troublesome, said Carr of the Water Resources Department. If an irrigation district, for example, agrees to give up some of its water, other users on the river, such as California or the CAP, could claim the water first, leaving the state and the bureau no better off than before.

"Arizona pays the price no matter what," said Larry Dozier, deputy general manager of the Central Arizona Project. "It's pretty apparent if there is land fallowed, it would be in Arizona. And if they use system water, well, we're on the short end of the stick, so if you give up system water, you give up CAP water."

Dozier said if the bureau would upgrade the desalter's technology, it could increase output and feed more water into the system.

Far more troublesome for Arizona and the bureau are the claims raised by environmental groups that the desalter would destroy the Cienaga de Santa Clara, a wetland about 50 miles south of Yuma in Mexico that supports hundreds of species of birds, fish and other wildlife.

The wetland is, in a way, a byproduct of the desalter. While the plant was under construction, the agricultural runoff it would someday treat was diverted south toward what was then a mostly dry corner of the Colorado River Delta.

Because the plant only operated for nine months, the water continued to flow into Mexico. Over the years, it formed the wetland, in effect restoring a sliver of the delta. It is home to dozens of endangered species.

"The delta is coming back by itself," said Michael Cohen, a senior associate for the Pacific Institute, a water research and advocacy group. "They added water and it came back. Vegetation springs up in response to water. It's pretty clear-cut. There are studies that show when they took the water out in the '90s, it dried up. Here's a benefit that has occurred just because people added water."

Three strikes?

If the government restarts the desalting plant, that water will be taken away again. Using existing technology, the desalter can recover as much as 75 percent of what it treats. The remaining 25 percent would be returned to the diversion canal and sent south to the wetland, but it would be up to six times saltier than before.

"They reduce the amount of water, that's strike one," said Steve Cornelius, a Colorado delta specialist for the Tucson-based Sonoran Institute. "The water that does get there will be higher in salinity. That's strike two. The cattails there are pretty resilient, but they're not going to be able to survive that change."

Arizona officials concede that the wetland could suffer some damage if the desalination plant is restarted and the flow of runoff water is altered. But they say the plant's construction was responsible for the wetland's almost accidental creation, an accident that was never meant to happen.

"The original environmental study acknowledged there would be a temporary wetland down there," said the CAP's Dozier. "It would evolve into something different once the plant was started." The fact that the marsh grew over the years is unfortunate, Dozier said, but doesn't alter the original assessment.

Contentious times

That argument peeves conservation advocates: "They did create the wetland area by mistake, but in order to do that they had to destroy it first," said Force, with Living Rivers. "That was a much more biodiverse area before. It did have wetlands, and it also had riparian corridors, estuaries and much more complex ecosystem that died when they filled the reservoirs."

Instead of trying to drain the river dry with a recycling plant, water managers should confront the issue of whether cities and farms should claim every drop of water in the river, Cornelius said. "The river itself needs water," he said, enough to restore flow all the way to the Gulf of California. Returning the freshwater mix to the gulf would not only benefit wildlife habitat, but fisheries along the coast that have been devastated by the loss of the delta.

"It was fortuitous that the cienaga became what it was today," he said. "We ought to be looking at this as a positive thing instead of a mistake."

Both the state and the environmental groups are preparing for a contentious study period. Carr plans to meet with a conservation advocates in the coming weeks and pledged to listen to their concerns and their ideas. He'll get an earful

"When you take on anybody on water in the West, it's tough," Force said. "Everybody's very protective of the old way of doing things. But we have a diverse group this time, taxpayer groups, environmental groups, even farmers who want to lease water. It's going to be a tough battle, but it's going to be worth it."

River News 11/09/03

RRFW Riverwire - WILDERNESS UPDATE AND THANK YOU!

Thanks to all the folks who called into your elected officials about Representative Radanovich's (R-CA) river-less "wilderness" proposal. The wilderness documents, with the Colorado River omitted, were requested from Grand Canyon National Park by the representative's office. RRFW has learned that these documents are being forwarded to his staff, but the representative has not yet submitted a bill based on this material. Your congressional leaders heard you loud and clear, and it helped! It turns out many congressional members do not take kindly to this sort of back door approach to wilderness management, especially at a place like Grand Canyon National Park. Indications are that a member of congress will submit a counter bill with the river

included. This will be done in the event a bad river-less wilderness bill is introduced, to stop the bad bill so that the public process is allowed to continue.

The Radanovich spurn-the-river proposal would circumvent the public management plan that has already generated over 50,000 comments. The clear signal from congress is that the on-going Colorado River Management Plan should be allowed to run its course without pressure from the park's own river concessionaires to bypass the public process. "There is no doubt we will need to keep up the pressure with more phone calls in the future" notes Jo Johnson, River Runners for Wilderness co-director. "We are grateful to Grand Canyon lovers who have been responsive to this issue. Circumventing the process allows the nightmare of fixed allocations to continue while trashing park wilderness values."

RRFW will continue to keep you informed of developments as they happen.

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LR in the News 11/09/03

Eco Fighting for Rivers: Living Rivers keeps David Brower's legend alive

Paddler Magazine

By Matt Hansen

November/December 2003

It's a warm June morning on the Yampa River and 66-year-old river guide Dee Holladay stands in the shade of Mantle Cove, a magnificent alcove of sandstone in Dinosaur National Monument that harbors ruins from the ancient Fremont civilization. While his guests quietly peruse the alcove, Holladay watches swifts dart back and forth among the high cliffs. The birds are making a ruckus but only a few others notice them. "Look," he says, using his stained coffee mug as a pointer, "they're fighting."

The same could be said about many of Holladay's floatmates this week--although they're not fighting each other, they're fighting for rivers. The nonprofit Living Rivers--an environmental group primarily focused on draining Lake Powell--has gathered river and wilderness advocates to float the canyons of the Yampa and Green with Holladay's Holiday River Expeditions. The trip's purpose is to celebrate the life of David Brower, who first floated through Dinosaur in 1953 as the head of the Sierra Club. Afterward he singlehandedly defeated two dams that had been proposed for the monument. In doing so, he launched the modern conservation era but forsook Glen Canyon, which now sits below the motor-heavy waters of Lake Powell. It was a decision that haunted Brower the rest of his life. A cunning fighter for wilderness, he died in 2000 at the age of 88, but his fight presses on through Living Rivers, which he helped found just before his death.

Those floating with Holladay in June included Roderick Nash, whose 1967 book *Wilderness and the American Mind* has been noted as one of the most definitive pieces ever written on wilderness; Jeffrey Ingram, an activist characterized in Marc Reisner's book *Cadillac Desert* as Brower's "most valuable" asset in successfully fighting off dams proposed for the Grand Canyon in the 1960s; Kim Crumbo, former Grand Canyon river guide and activist with the Arizona Wilderness Coalition; and former river guide John Weisheit, who serves as Living Rivers' conservation director. They're all fighting for more responsible water usage, specifically fewer dams and eliminating motorized vessels on the Colorado in the Grand Canyon. "This is not a happy river," says Ingram of the Colorado. "Outfitters spend hundreds of thousands of dollars to defend themselves against outside interests. Private floaters are angry because of the grievances they go through to get on the river and because they're discriminated against. And people like me have been angry for 30 years because we think it should be wilderness."

Among those present, the 49-year-old Weisheit is these days the one most often tangling with the Bureau of Reclamation and Western politicians. The Los Angeles native first met Brower in the early 1990s, when he told Brower that he hated him for not fighting Glen Canyon Dam. Brower responded by asking for forgiveness, and for help. So that's what Weisheit did. And it's Glen Canyon Dam that he has in the crosshairs, although there are others on his agenda (see sidebar). "We can't manage our rivers this way," he says. "We have sacrificed our natural heritage for short-term gain."

But for these activists, going after Glen Canyon Dam is akin to a mosquito trying to suck a bison dry. The Glen Canyon National Recreation Area and Lake Powell are visited by more than 2 million people annually--making it one of the National Park Service's most popular sites. The Bureau of Reclamation says the reservoir ensures water for millions of Southwest residents. Perhaps more important, however, the Bureau sees Glen Canyon Dam as a symbol of its ability to fundamentally change the desert landscape. Giving up Lake Powell would require the Bureau to turn its back on nearly a century of dogmatic belief that the Colorado River must be harnessed in order to make it valuable. Indeed, this summer Bureau Commissioner John Keys was quoted by *The Associated Press* as saying the decommissioning of Glen Canyon Dam "is something that's never going to happen. I won't spend a dollar studying it."

Barry Wirth, public affairs officer for the Bureau's Upper Colorado Office in Salt Lake City, says furthermore that if Glen Canyon were drained, there would have to be someplace else for that water to be stored. That reservoir, he says, is simply too important to the well-being of the seven states that depend on the Colorado River. "The current drought has clearly driven home the importance of Glen Canyon Dam," he says, adding that the Bureau's focus is how to balance the needs of agricultural and industrial interests, the public and conservation groups.

Given such statements, Ingram, 66, says being an activist is like "banging your head against a 710-foot concrete wall," which, incidentally, is the height of Glen Canyon Dam. But Weisheit, like Brower before him, doesn't belch anger despite his fanatical belief that Glen Canyon Dam wastes water and is killing the Grand Canyon. He speaks softly

and fluidly, smiling often. He sees children as his inspiration, hoping to give them the chance to visit the former Glen Canyon with their own children.

Despite the enormous task, Weisheit believes he will see Glen Canyon drained. "Congress built these dams and said we'd worry about the problems later" he says. "Well, later is now, and the public needs to know there are alternatives." One of Lake Powell's primary problems is the loss of water due to sediment buildup, seepage and evaporation. According to Scott Miller's 2000 report titled "Undamming Glen Canyon," published in the Stanford Environmental Law Journal, some 65 million tons of sediment fills Lake Powell each year, reducing storage capacity. Evaporation accounts for the second highest consumptive use of Lake Powell's waters, behind only irrigation. Bank seepage accounts for 350,000 acre-feet of water being lost each year. The hydropower produced by the dam provides electricity for only 3 percent of the region, according to Miller. And the cold, clear water being sent through the Grand Canyon harms endemic fish that have evolved over millennia in warm, silty water. "These systems are going to fail before our mortgages are paid," says Weisheit. "And I don't want to pass our poor planning on to future generations. It's unacceptable and it's embarrassing."

Weisheit also points out that this year Lake Powell was only half full due to the drought. He says if the current drought persists, the reservoir will be empty in two years, rendering the dam useless for water storage and power generation. Of removing the dam, he says, "people are beginning to believe that it's not impossible."

On the day that Holladay and his group float into Echo Park, the confluence of the Yampa and Green and approximate site of one of the two proposed dams Brower defeated, he asks everyone to stay silent, allowing their senses to take in the canyon's immensity and the power of two rivers becoming one. Overhead a turkey vulture rides a thermal, floating gently among the 500 foot high canyon walls. Cliff swallows dart back and forth looking for insects. On the bank a lone deer grazes quietly. The sun is warm and the Yampa's muddy waters sparkle beneath an unspeakably blue sky. Other than the sound of the oars plying the river, it is silent. As Roderick Nash floats his dory through these spared canyon walls, he reflects on the significance of Brower's fight. "The only reason why we're not on a lakeshore right now," he says, "is because somebody cared."

Sidebar

Glen Canyon Dam isn't the only bull's-eye being targeted by Living Rivers. The several-hundred-member-strong group promotes large-scale river restoration, habitat preservation and responsible water use. Among the many issues on its agenda, the group has asked the Bureau of Reclamation to decommission Flaming Gorge Dam in northeast Utah. Flowing cold and gin clear from the dam, the Green River here is the best tailwater trout fishery in the country, but Living Rivers contends that the cold water coming from the reservoir is killing the warm-water-loving and endangered humpback chubs as well as the riparian habitat downriver in Dinosaur National Monument. Living Rivers is also trying to preserve a permanent water flow into the Colorado River Delta in Mexico's Gulf of California. In addition, the group opposes the Big Straw, a proposal to

siphon water from the Colorado River near the Utah-Colorado border and pump it back to the Front Range of the Rockies to fuel urban growth. "As these depletions continue, we'll find fewer rivers to run because we can't seem to lose our addiction for irresponsible water use," says Living Rivers' John Weisheit.

River News 11/14/03

RRFW Riverwire - Interior Dept. Favors More Canyon Flooding

By Mitch Tobin, ARIZONA DAILY STAR

Despite initial resistance, the Bush administration favors continued experimental floods meant to restore the Grand Canyon's ecology, a senior official said in Tucson on Tuesday.

Assistant secretary of the Interior Bennett Raley, the administration's point man on water issues, spoke to 60 scientists at the start of a three-day meeting on how Glen Canyon Dam affects the Colorado River.

Researchers explained how they're using lasers, underwater cameras, century-old photos and experimental flumes in Minneapolis to learn how sand grains and Volkswagen-sized boulders move through the Canyon's rapids and eddies.

Raley urged the scientists not to politicize their work and to remember that "science is not the only input factor for management of the Colorado River."

"If scientists are sloppy and mix advocacy with science, you will end up with the same public perception of integrity that lawyers have," said Raley, a lawyer by training.

Glen Canyon Dam, completed in 1963, dramatically altered the Colorado's flow. Before the dam, the warm, muddy river roared with spring snowmelt. Sediment was lifted onto beaches and sand bars, creating wildlife habitat and backwaters vital to native fish, such as the endangered humpback chub. The beaches are still important campsites for boaters.

After the river was plugged to stabilize the Southwest's water supply, it ran colder and clearer below the dam, which trapped 90 percent of the silt. But dam releases - which often fluctuate with the Sunbelt's electricity demands - have also caused the Colorado's baseline flow to double downstream. As a result, much of the silt and gravel deposited by the Grand Canyon's 740 tributaries gets whisked into Lake Mead downstream.

"It wasn't that we just lost the spring floods, which redeposited sand," U.S. Geological Survey researcher Ted Melis said, "we lost the low-flows the rest of the time, which were low enough to retain those inputs for use during the high-flows. We're getting hit on both ends."

The result is an ecosystem transformed by a dam that helps supply water and power to 25 million people. Tucson is becoming increasingly dependent on the Colorado, whose water comes here via the Central Arizona Project's 336-mile canal.

After passage of the 1992 Grand Canyon Protection Act, the Clinton administration tried to replicate the river's natural flows. With much fanfare, Interior Secretary Bruce Babbitt opened the dam's floodgates in 1996; another flooding experiment was tried in 2000. Despite initial claims of success, scientists now say the results were minimal. A lack of sediment in the river made it tough for sandy areas to expand, and many gains were quickly washed away.

Scientists want to create more floods and time them when the Paria River is dumping sediment into the Colorado. But the drought has caused that tributary, 15 miles below the dam, to deposit less silt in the past three years than any time in recorded history.

Raley said at first he was "deeply, deeply skeptical about the experimental flow program." But, after talks with scientists on a river trip, Raley accepted it was "good science and it was worth taking the political risks to move forward."

"We know when we're being gamed. Had we sensed that, we probably would have slow-walked, ducked, evaded and done everything not to move forward," he said.

John Weisheit, an environmentalist with the group Living Rivers who would like to see Glen Canyon Dam removed, was encouraged by Raley's words. But he said the Interior Department still isn't spending enough money to restore the Grand Canyon.

In the past 30 years, researchers have flip-flopped on whether the Canyon was losing or gaining sediment, said Jack Schmidt of Utah State University. Some thought the lack of floods created a surplus of silt and there was enough sand in the river to form new beaches.

"What we've learned in the Grand Canyon is, the system may be in sediment deficit all the way to Lake Mead," he said.

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River News 11/15/03

RRFW Riverwire - Free Grand Canyon Slideshow Comes To Durango

Author Tom Martin will be in Durango at the Abbey Theater at 6:30 p.m., Nov. 30, to update local boaters on the controversial Colorado River Management Plan (CRMP) now in progress for Grand Canyon National Park, and how this plan will affect the boating public. Tom will illustrate his talk with a slide show on the Grand Canyon based

on his book, *Day Hikes From The River: A Guide to 100 Hikes from Camps on the Colorado River in Grand Canyon National Park*.

The highly controversial CRMP, which was stopped by the Park in 2000, was restarted as part of a settlement agreement in a lawsuit filed by river running groups and individuals. The public comment period during the past summer gathered over 50,000 comments. "The wait for do-it-yourself river runners is so long, those at the bottom of the list will wait an incredible 20 years to get permission to run the river" said Martin, who notes that "you can book a commercial trip tomorrow for next summer, if you can afford it. This process is of vital interest to all Colorado boaters, as more Coloradoans are waiting for a permit to boat the Colorado River in Grand Canyon than river runners from any other state."

The free slide show will be open to the public and features beautiful vistas illustrating Grand Canyon hikes you can do from the river and exciting river running shots. Tom will be signing books, the sale of which will benefit River Runners for Wilderness, a non-profit group which is sponsoring the event. RRFW represents the interests of the boating public. Taxpayers for the Animas River and the Weminuche Group of the Sierra Club are co-sponsoring the event locally.

Following the slide show, there will be an 8:30 p.m. screening of the movie, "The Same River Twice." This award winning independent film is about a group of friends who re-ran Grand Canyon 25 years after their first trip. There will be an admission charge for the movie.

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LR in the News 11/20/03

Feds gear up for new round of test flows to aid Grand Canyon

April Reese, Land Letter Southwest correspondent

GRAND CANYON NATIONAL PARK, Ariz. -- Seven years after releasing a torrent of water from behind Glen Canyon Dam to provide a much-needed ecological boost to the Grand Canyon, federal water managers are preparing to try it again. But while the dam's gatekeepers hope this experimental flood will bring back some of the river's wild characteristics, some scientists and river advocates say those good intentions may not be enough.

The Colorado River once raged and whimpered through the Grand Canyon in accordance with the seasons, swelling during the monsoons and laying low during dry periods. Those changeable flows alternately carried huge amounts of sediment into the canyon and deposited it in the river channel and on the banks, creating sandbars and

beaches. The muddy river also provided prime habitat for several species of native fish (Land Letter, Oct. 30).

Glen Canyon Dam, completed in 1963, drastically altered the historic flow regime and reduced the amount of water -- and sediment -- transported downstream. According to federal estimates, about 90 percent of the sand and silt carried by the upper Colorado River now settles in Lake Powell, the reservoir created by the dam.

The result has been a sediment-starved canyon with fewer and smaller sandbars and beaches, less backwater habitat for native fish and a clearer river that is alien to native fish accustomed to murky water.

Now, the Bureau of Reclamation is poised to open the floodgates in an attempt to deliver some of the sediment that is so crucial to the ecosystem -- and to boaters who camp on the canyon's beaches.

BuRec spokesman Barry Wirth said the agency, which operates the dam, plans to release water from the dam at a rate of about 45,000 cubic feet per second for two days. The volume of water will be about the same as it was in the 1996 flood, but the tap will be shut off six days earlier this time. Scientists and managers monitoring the earlier flood found that continuing the high flows after two days brought no additional benefit, said Bob Hart, a hydrologist with the U.S. Geological Survey in Flagstaff, Ariz.

"Within the first couple of days, the goal was reached," Hart said.

Building the beaches

But the biggest change this time around will be in the timing, Wirth said. The surge of water will be released after the Paria River, a tributary of the Colorado just downstream of the dam and above the park, is running high and thick with sediment. The hope is that timing the rush of water from the dam to coincide with high sediment loads in the Paria will bring more sand and silt into the canyon, where it will build sandbars and beaches and muddy up the river for the endangered humpback chub.

With the dam trapping most of the Colorado's sediment, the Paria River is crucial for delivering what little sediment the canyon receives, said Utah State University professor Jack Schmidt. "The Paria River is the only major source of sediment for the first 60 miles of the Grand Canyon," Schmidt said. "So it's the only significant natural source that the canyon has. It's everything."

A USGS study found that an August 1992 flood of the Paria River delivered 544,000 tons of sediment -- primarily sand -- into the Colorado in less than 24 hours. Typically, flows of that size occur on the Paria about every two years, according to USGS. In all, the Paria dumps about 1 million tons of sediment downstream during the monsoon season in late summer and early fall.

But this year is not a typical precipitation year. BuRec, the National Park Service and USGS have signed off on the necessary environmental studies for the project, and it has the blessing of the Bush administration. The only thing missing is rain.

"We're just not getting the floods during the monsoon season that we need," Wirth said. "The big key is having enough sediment flowing out of the Paria River to justify having the experiment." Without a roiling Paria, there cannot be experimental flows, he said.

A sense of urgency

Nikolai Ramsey of the Grand Canyon Trust said he is supportive of the test flows, but cautioned the canyon may not be able to wait for the drought to recede. "If the weather helps us, we're in good shape for an experiment. If it doesn't, we're still stuck with a sediment-starved system," Ramsey said.

A more timely idea, Ramsey said, is to move the sediment that is building up behind the dam -- at a rate of 6 centimeters annually, by some estimates -- downstream. While that solution may come with its own set of issues--including the potential for carrying heavy metals into the canyon and a price tag of up to \$500 million--it would guarantee a dependable supply of sediment to the canyon, he said. That, in turn, would head off difficult questions about whether to decommission the dam, Ramsey added.

"The ecosystem in the Grand Canyon would recover, and power and water supplies would be secure," Ramsey said.

Wirth said that option is not on the table. "It's never been studied from a scientific viewpoint," he said. "Maybe some day. Right now we're focused on that which is probably more realistic."

The experimental flows come at a crucial time because there simply is not much sediment left to manipulate, Schmidt said. "We're losing the beaches in the Grand Canyon and continue to do so. Either this will work, or we'll know it's impossible."

If it does not work, federal managers could be left with some tough choices, he added. "Basically, we'll either have to come up with a radical new solution, or announce to the public that we've raised the bar too high--that the price paid for the construction and operation of Glen Canyon Dam is the progressive deterioration of the ecosystem of Grand Canyon National Park," Schmidt said.

John Weisheit, conservation director for the advocacy group Living Rivers, supports decommissioning the dam as the only long-term solution. "These experiments are going to show that the dam does need to come down because the sediment the canyon needs is above Glen Canyon Dam," Weisheit said.

"They're going to have a sediment deficit as long as the dam is there."

But decommissioning is highly controversial and would involve major changes in how water tagged for downstream states is stored and distributed. Lake Powell is one of several reservoirs in the Colorado River Storage Project, which provides water for Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming. About 85 percent of the water is used for irrigation; the rest is allocated for residential, commercial and industrial use. Removing the dam would also eliminate a power source for Southwest cities, critics add.

For now, federal water managers are waiting to open the floodgates and see what happens when the sediment-rich water pulses through the Grand Canyon.

"We're ready to do it," Wirth said. "I think we're going to show, over time, some positive results."

River News 11/26/03

RRFW Riverwire - THE NEXT GENERATION GRAND CANYON RIVER GUIDEBOOK

River Runners For Wilderness is pleased to announce the imminent release of a "next generation" Grand Canyon guidebook written by boaters for boaters! Preview copies have gotten rave reviews for the wealth of information presented in a easy-to-use format. It's been called the definitive Grand Canyon river guide.

Tom Martin, author of Day Hikes from the River, & Duwain Whitis, publisher of RiverMaps map books, have teamed up to write a new guidebook titled Guide To The Colorado River In The Grand Canyon - Lees Ferry to South Cove. This is the only guidebook to the canyon with USGS topographic map backgrounds, printed at their original scale, with additional map detail added in an easy-to-read format. In addition, it is the only guide with maps extending to South Cove in Lake Mead. Each map shows campsite locations, rapids, scout points, river miles and other points of interest. The accompanying mile-by-mile text describes all campsites on the park inventory (and some not on the inventory), with campsite pull-in information, geological, botanical and historical points of interest. All of the significant hikes, rapids and scouting points are also described, with color photographs on almost every text page. The Guide is 8.5" X 14" spiral-bound to lay flat. The 108 pages are printed on tough water proof and tear resistant synthetic paper. Published by Vishnu Temple Press.

RRFW is pleased to be able to take advance orders for titled Guide To The Colorado River In The Grand Canyon - Lees Ferry to South Cove. The cost of this river guide is \$29.00 (\$25.00 each, plus \$4.00 shipping and handling per Guide), with a tentative shipping date of February 27, 2003. Checks or money orders only please. Advance guidebook sales will benefit River Runners For Wilderness, a not-for-profit organization seeking equitable access to a wilderness river running experience in Grand Canyon. Please send your order to:

River Runners For Wilderness PO Box 17301 Boulder, CO, 80308-0301

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Living Rivers Currents 12/01/03

WAPA Blues: Hydro Not Missed

The ongoing drought is seriously effecting hydroelectric power production on the Colorado River. Colorado River Storage Project (CRSP) dams are experiencing an overall reduction of 25% from normal. The Western Area Power Administration (WAPA), the agency which distributes federal hydropower, must now purchase electricity from private sources to meet their long-term obligations to their customers.

The Bureau of Reclamation has emphatically stated that the region could not survive without power from Glen Canyon Dam. The drought has demonstrated this to be untrue, with surplus power from non-federal projects easily making up the shortfall. Should the pattern of drought continue for another two years, Lake Powell reservoir will lower to the point where Glen Canyon Dam's powerplant will become inoperational.

This situation will effect US taxpayers. Congress mandated that hydropower revenues must repay the loans used to build CRSP projects. Lower reservoir levels mean less power and less revenue to meet these loan obligations. Additionally, power purchased by WAPA to replace the difference comes at premium price, further effecting loan payments which are scheduled for full payment in about fifty years.

According to WAPA spokesperson LaVerne Kriss, this is not yet a problem. "When we have cash flow problems, we use a pool called the Colorado River Basin Fund to float us through times of shortage, and we make up the difference when the reservoirs recharge and surplus water becomes available again."

"Not true," says Living Rivers' conservation director John Weisheit. "That fund has been near zero for some time, and with persistent drought it's not going to be replenished anytime soon."

This will also cause further strains for WAPA-supported recovery programs, which are designed to mitigate the negative impacts from CRSP operations on the critical habitat of endangered species. The failure of these recovery programs will only drive the budget up further and will undermine WAPA's payback schedule over time. "WAPA will never break even. In fifty more years they will be forced to mitigate other impacts such as sediment removal from the reservoirs. When this occurs the taxpayers will have to contribute to unprecedented subsidies to keep these projects operational," concludes Weisheit.

The Articles

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Living Rivers Currents 12/01/03 **Science Performs: Management Ignores**

Scientists meeting in Tucson this past October were criticized by the Department of the Interior for expressing little confidence in federal efforts to mitigate the downstream impacts of Glen Canyon Dam operations on the Colorado River ecosystem in Grand Canyon National Park.

“Advocacy positions belong to lawyers,” said assistant Secretary of the Interior, Bennett Raley, to the assembled scientists, many who have expressed frustration that their research is being ignored.

Dr. Jack Schmidt, a geologist who’s worked in Grand Canyon for 15 years, stressed that scientists have done their jobs well in reporting accurately to Interior’s Adaptive Management Working Group (AMWG) and then asked, “When is AMWG going to act upon this knowledge?”

Raley stated that Interior could “drag it’s feet” if it did not like what was being recommended. Raley, a water attorney by profession, who has asked Congress to repeal the Endangered Species Act, openly advocated to the scientists the concerns of water and power suppliers, and that these interests maintain superior political and legal positions as compared to environmental interests. He argued that the Grand Canyon Protection Act should be subservient to prior Colorado River laws, and river

management policy should therefore follow such a doctrine. Nonetheless, scientists should “continue to support” the adaptive management process.

Dr. Richard Valdez, a senior researcher of endangered fish, gave strong recommendations to AMWG concerning the endangered Humpback Chub by saying, “If you are not going to address the threats to their critical habitat, then you will continue to have endangered species in Grand Canyon.” Humpback Chub populations have declined 75% to just 2,000 adult fish over the past eight years.

Although this gathering was organized specifically for AMWG, very few of its members actually attended. The program is presently facing increased criticism as it was established to recover endangered species in Grand Canyon, but native species diversity has actually declined under their management.

Hydrologist William Vernieu reported on the impacts of drought on Lake Powell reservoir and the downstream implications for Grand Canyon’s water chemistry, which has so far been ignored by AMWG. The reservoir is currently experiencing a decrease in available oxygen along with increases in phosphorus, nitrates and salt. Such changes in water quality will exacerbate the decline in the river’s native food base for endangered fish.

The meeting illustrated that the political situation regarding Grand Canyon’s management is deteriorating as rapidly as its ecology. Several scientists admitted privately that absent some form of litigation, there will be little chance of recovering the natural and cultural heritage of Grand Canyon before these resources are lost forever as a result of operations at Glen Canyon Dam.

Living Rivers Currents 12/01/03

Grand Canyon Management: Stepping Backwards

In 1986 the Department of the Interior requested that the National Academy of Sciences review their science program for the Glen Canyon [Dam] Environmental Studies (GCES). While many of the Academy’s recommendations were applied by science managers in the Grand Canyon, and continued by subsequent program managers, politics and budget considerations are once again compromising the integrity of science. The National Research Council of the Academy encouraged the GCES to “solicit scientific talent for the work based on a research plan [through a peer-reviewed request for proposals],” and to “use merit competition to select researchers, including a peer-review system outside the agency or agencies conducting the study.”

David Wegner, former director of science for the Bureau of Reclamation, informed Living Rivers that, “The advice the Academy gave GCES was very helpful to the science community. We are very proud of the programs that later developed, which continued on through the EIS process of the early 1990s.” Even after the Environmental Impact Statement this attitude prevailed during the research and monitoring phase under the

auspices of the Grand Canyon Research and Monitoring Center (GCMRC), which is administered by the US Geological Survey in Flagstaff, Arizona.

Living Rivers has recently cautioned members of the Adaptive Management Program (AMP) that research programs are reverting back to old ways. This turn of events is gaining the attention of scientists who are fearful that heavy administrative costs will hinder their results. Additionally, a lack of competitive bidding and sufficient peer review will also detract from the quality and quantity of the monitoring undertaken.

For example, GCMRC recently decided to use in-house staff to undertake mechanical removal of trout in Grand Canyon. Bruce Taubert of Arizona Game and Fish Department (AGFD) pointed out to AMP members that “GCMRC may do this at a cost of \$500,000, while AGFD could hire a consultant to do the same work for \$365,000. There would be a savings of \$135,000 that would return money back to the science programs in Grand Canyon.”

Living Rivers Currents 12/01/03

Drought Forecast: Situation Unchanged

A barrage of reports and media advisories continue to come forth from scientists about the persistent drought in the Colorado River basin. The public has been reminded that the region experienced droughts of similar intensity before, notably 1901-1904 and 1953-1956. However, the year of 2002 was singled out as the driest year ever in recent history.

While common forecasting techniques allow for predictions of 3 to 6 months, scientists are beginning to observe two patterns of sea surface temperatures that provide a degree of confidence in predicting long-term droughts, notably the warming of the North Atlantic ocean with the cooling of the tropical Pacific ocean.

By obtaining tree ring data, scientists have reconstructed the climate of past centuries with tested credibility. The analyses of both instrumental and tree ring precipitation records should allow scientists to project drought conditions beyond a mere seasonal forecast. By comparing the data sets, the analyses demonstrate that a drought can persist for one or two decades and, in a few cases, even longer. Additionally, the data can be linked with the aforementioned ocean temperatures and thus provide the indicators necessary to forecast a persistent drought.

In 1998 observers were prompted to anticipate the current drought situation and the conditions remain unchanged and will likely persist into the coming decade. “In the context of shifting ocean climate, the current drought should give water and other resource managers in the Rockies and Southwest little cause for optimism about the drought ending any time soon,” said Julio Betancourt of the US Geological Survey.



In a recent report Betancourt and others stated the implications, "It is always prudent to be conservative about water and other resources vulnerable to drought; it is particularly prudent now. ...Societal demands on surface water are on the increase. ...Clearly, the context for long-term drought is different now than it has been in the past."

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[Patterns and sources of multidecadal oscillations in drought-sensitive tree-ring records from the central and southern Rocky Mountains](#)

Living Rivers Currents 12/01/03

Colorado Riverkeeper: All Hands on Grand Canyon

In October, Living Rivers' Colorado Riverkeeper undertook a 12-day science trip through Grand Canyon National Park. Our assignment was to aid in documenting the status of the river's food supply for endangered native fish. Ten volunteers witnessed first hand how the river ecosystem is affected due to climate change.

"Because Lake Powell's reservoir capacity has been reduced by 52%, the chemical and temperature output from the dam is further altering the food web in ways that we have never observed before," said the Colorado Riverkeeper, John Weisheit. Given this recent turn of events in Grand Canyon, Living Rivers and the Colorado Riverkeeper are now devoting the majority of their resources toward mobilizing national support to save what's left of the canyon's native ecosystem. "If the public can't support protection of this world heritage site, there's probably little hope for the rest of the river," concludes Weisheit.

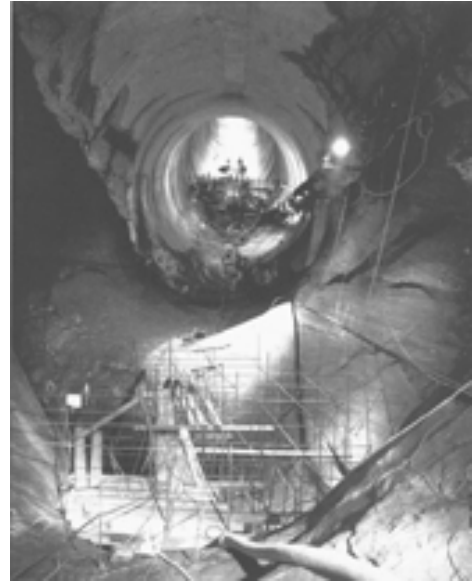
The first obvious observation was a warmer than usual Colorado River. The volunteers knew from experience that the discharge from Glen Canyon Dam normally originates from the chilly depths of the reservoir. While sampling, the volunteers were amazed with the abundant zooplankton found. This indicates that the water used to generate power is coming from the warmer water zone near the reservoir surface, an area containing many exotic life forms, including pathogens and parasites. "It's only a matter of time before these exotic species from Lake Powell become competitors for the available food that endangered native fish must have to survive. This new condition will become a serious issue for the stakeholders of Grand Canyon," said volunteer David Haskell, retired science director of Grand Canyon National Park.



Tatiana Lawson, a river guide from Moab, was intrigued with the organisms now existing in the river. "A flatworm is something I expect to see in my biology class at school," said Lawson, "not in the Colorado River system. But these newly introduced New Zealand Mud Snails are especially worrisome for me. Tiny as they are, by the millions they are effectively over-grazing the river bottom and depleting the food supply."

Joe Shannon, a Northern Arizona University aquatic ecologist who has studied the river's food base for 14 years, supervised the volunteers and staff. "The ecosystem here has changed since I first arrived," remarked Shannon. "This river was loaded with algae called *Cladophora* and an invertebrate called *Gammarus*. Now there is another suite of algal types and *Gammarus* numbers have declined. The flows from Glen Canyon Dam are not managed consistently and consequently the food web is in constant flux." Shannon laments how managers continue to be unresponsive to the sound recommendations of his fellow scientists who support flows that mimic the natural flows of the Colorado River. "They continue to manage the dam for hydropower revenues first, with the management mandates of our National Park coming last," adds Shannon.

"It's unbelievable how bad things are down here in the Grand Canyon," remarked Michelle Harrington, coordinator for the Center for Biological Diversity. "The river ecosystem here has completely changed from its unique and natural condition because of Glen Canyon Dam. If the public was fully aware of this condition, I think they would respond in the same way as they have for protecting the Arctic National Wildlife Refuge, and would demand river management alternatives that include the decommissioning of Glen Canyon Dam."



Living Rivers Currents 12/01/03

Access Denied: No Release of Inundation Maps

The public has no right to know who might be in the flood path should Glen Canyon or Hoover Dam fail. Using national security risks as their trump card, the Bureau of Reclamation was able to convince Judge Tena Campbell to deny Living Rivers' appeal for their inundation maps, effectively ending the 18 month effort to obtain this information.

If Glen Canyon Dam fails an estimated 500-foot wall of water would race through the narrow parts of the Grand Canyon toward Hoover Dam. Even if Hoover Dam withstood the initial impact of the flood, a waterfall over the top would last 11 days and would destroy the water delivery infrastructure and communities downstream.

"The funny thing about all this, is that some of this information is already in circulation, we had just hoped to obtain it through official channels," says Living Rivers' executive director, Owen Lammers.

Until the trial the Bureau's arguments for withholding the information had nothing to do with national security. They now claim this information is exempt from disclosure based on things like arrest procedures, or the design of the President's limousine; something that aids criminals in completing a crime. This is certainly not the case with inundation maps.

Since the 9/11 political scene, the government is using national security as a means to keep information from environmental groups. Living Rivers has been told that this case is being used to equip federal attorneys in fighting Freedom of Information requests. In this political climate Living Rivers does not feel it likely that an appeal would overturn the verdict and is not pursuing the matter further.

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LR in the News 12/01/03

'Securing' the Public With Secrets

The News Media and the Law

Published by the Reporters Committee for Freedom of the Press

By Rebecca Daugherty

Judicial deference to the government's widespread claims of national security is keeping unclassified records from public view

Wanting to know what would happen if the Glen Canyon Dam in Arizona burst, a small environmental group filed a freedom of Information Act request in September 2001 for the federal government's projections as to where the renegade waters would go. If the dam should falter, its downstream flow would not only jeopardize the nearby Hoover Dam but waterworks beyond, flooding or destroying communities along the way.

But the Bureau of Reclamation, which creates the "inundation maps" projecting what might happen, denied the request. And in March, the federal district court in Salt Lake City upheld the denial.

Judge Tena Campbell ruled that the government could withhold the unclassified maps under an exemption to the FOI Act for "law enforcement" records because terrorists might make use of the information. One arm of the law enforcement exemption protects

against release of information that might help anyone circumvent the law, which Campbell said applied here.

That decision is one of three since the events of Sept. 11, 2001, that defer to the government's pleadings that "national security" interests excuse agencies from giving out records—even when they cannot use the exemption to the FOI Act that is specifically designed to protect national security, or the other far-reaching protection for national security information, a law that protects intelligence sources and methods.

The first FOI Act exemption only covers records that are properly classified in the interest of national security or foreign policy. To classify records, the exemption requires agencies to follow a set of formal procedures laid out in an executive order.

Yet in these three cases the government has used a "national security" excuse to invoke the law enforcement exemption to the FOI Act, denying information that would have likely been released if the government had not played the "terrorist" card to justify use of the exemptions.

Together they demonstrate the breadth of denials in which national security trumps government transparency due to the tenor of the times. With no end in sight to the war on terrorism, the judiciary's deference to administrative secrecy could conceivably trouble FOI requesters for some time to come.

Photo caption: Unclassified information about what would happen if the Glen Canyon Dam in Arizona burst can be withheld from the public based on the government's claims of national security interests, a federal court in Salt Lake City ruled in March.

Examining the U.S. Customs Service

In 1998, Coastal Delivery Corp. successfully sued a warehouse for breaking a contract that made the trucking company the exclusive carrier of its cargo which had to be delivered to a U.S. Customs Service examination station at the Los Angeles/Long Beach port. But in order to recover damages, Coastal Delivery needed to know how often the agency's contraband enforcement team examined containers.

The company asked for the records in October 2001 for use in its complaint, but never got them. Coastal Delivery brought suit against the Customs Service, and again walked away empty-handed.

Coastal Delivery could not have the information, U.S. District Court Judge Matthew Byrne in Los Angeles wrote in March, because "terrorists and others could use the information to discover the rate of inspection and then direct their containers to vulnerable ports." Knowing where the government is lax in its examinations, Byrne reasoned, might tell terrorists how vulnerable some seaports are.

The parties in Coastal Delivery Corp. v. U.S. Customs Service agreed that the purpose of the request made no difference in determining whether information would be available. A reporter hoping to evaluate how thoroughly the Customs Service checked

containers would also not be able to see the records under this decision, which was not appealed.

Secretly Detained

Twenty-one public interest and human rights groups have petitioned the U.S. Supreme Court to hear arguments that the government should be required to release the names of hundreds of detainees jailed after Sept. 11, 2001.

The Center for National Security Studies, an advocacy and research group in Washington, D.C., has taken the legal lead on behalf of the organizations, including The Reporters Committee for Freedom of the Press, that are suing the government for the records.

In its request for review, the groups wrote the purpose was "to make clear that a national security crisis is no justification for courts allowing the Government to evade so easily its responsibilities under FOIA--and that courts cannot ignore the vital countervailing interests at stake such as the individual rights petitioners here seek to enforce."

For the divided appeals panel in *Center for National Security Studies v. Department of Justice*, decided in June 2003, Judge David Sentelle wrote that the judiciary would defer to the government's expertise in a "national security" probe. The Justice Department is in a better position than the court to know what should be withheld in a terrorism investigation, the judge wrote, in reversing a lower court. His opinion triggered a lengthy and pointed dissent by judge David Tatel.

The majority's approach "drastically diminishes, if not eliminates" the judiciary's role in FOI cases involving national security, Tatel said.

Fighting an Upstream Battle

"If we had gone forward on this prior to 9/11 it would have been a slam dunk," said Owen Lammers, executive director of the environmental group Living Rivers in Utah and Arizona.

What public interest groups throughout the nation are quickly learning, however, is that policies resulting from the never-ending war on terrorism have done significant damage to the idea of public accountability.

Lammers says his organization wanted copies of the Bureau of Reclamation's inundation maps because it hoped to show the value of decommissioning certain dams in Arizona. The structures are inherently unsafe, he said, and they are far more expensive to maintain than to decommission.

To highlight his point, Lammers says the Glen Canyon dam nearly failed in 1983, as rainfall almost caused the reservoirs to top off and spillways were damaged. Because there are a number of dams along the Colorado River, catastrophic failure of one can

affect others. Water from a breached Glen Canyon Dam could flow downstream, flood Lake Mead and possibly breach the Hoover Dam, which holds back the lake.

"It would be quite a scene," Lammers said.

But the government had little interest in allowing Living Rivers to make the projections public. In *Living Rivers v. the Bureau of Reclamation*, the court deferred to the government's claim of national security interests in not releasing the unclassified material. Living Rivers did not appeal, but that does not mean the organization agreed with the rationale.

Photo caption: Environmental groups say the Glen Canyon Dam should be decommissioned, but it's difficult to make a compelling case when public records about the dam are withheld.

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"We are trying to point out that a couple of these facilities could fail on their own," he said. "Most states require that inundation maps be public. But the federal government says that it doesn't have to give these out."

Furthermore, says Living Rivers attorney Joro Walker, if people knew the risks, they could better equip themselves against future danger. Instead, notes Walker, the government is saying, "You don't have to worry about it, we have a plan."

Sidebar: Petitioning for Supreme Court Review

The petition to the U.S. Supreme Court by the Center for National Security Studies and others asks the high court not only to find that the government has misused the exemptions to the FOI Act to deny information about the hundreds of people detained since Sept. 11, 2001, but that the First Amendment requires the government to make the information available.

The First Amendment prohibits secret arrests and detentions except in the most compelling circumstances, the groups wrote. In *Richmond Newspapers, Inc. v. Virginia*, the high court first examined what was to become a test for a First Amendment right of access: If the information was traditionally open, and openness served a purpose in democracy, then the First Amendment requires public access to the information.

That test should apply here, the petition says. Public scrutiny is vital, as it is the public's only restraint on the government's awesome power to arrest and detain people in these situations.

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River News 12/02/03

RRFW Riverwire - HOW DID WE GET IN THIS MESS?

River Runners For Wilderness is pleased to announce the imminent release of *Hijacking A River, The Political History of the Colorado River in the Grand Canyon*, by Jeff Ingram. *Hijacking A River* tells the whole story of "How did we get in this mess?": A pummeled government agency, intransigent businessmen and their political allies, apathetic environmentalists, and disorganized river runners; these are the characters who have made a mess of Colorado River management in Grand Canyon National Park. From the first steps to usher in a wilderness river to the Goldwater-Garn-Hatch Rider of 1980, Ingram unfolds the activities of such players as Fred Burke, Steve Carothers, Kim

Crumbo, Fred Eiseman, Marvin Jensen, John McComb, Joe Munroe, Bo Shelby, Gaylord Staveley, Sam Steiger, Merle Stitt, Morris Udall, and many others. Surprisingly, a number of the players in the 1970s are still active in today's Colorado River Management Plan revision.

The book follows the changes in Grand Canyon river running from the 1960s onward, while answering all those persistent questions river runners have been asking for over a decade. With humor and wit, Jeff Ingram answers questions like "Why is it the public now waits 13 years for a self-guided permit to raft the Colorado River in Grand Canyon?" The book also clearly spells out why there is no congressional Wilderness designation for Grand Canyon National Park to this day. Step by step, year by year, Ingram tells the "how and why" behind Grand Canyon river concessionaire's seeming lock on river travel in the Canyon.

Colorado River crusader and historian Jeff Ingram has, since 1964, been fighting for the Canyon and the public. David Brower hired Ingram as the first Southwest Representative for the Sierra Club, and together they successfully fought the proposed dams in Grand Canyon in the 1960s. Ingram worked with then-writer/environmentalist Martin Litton for a Grand Canyon National Park Wilderness bill, until Litton turned...but you'll have to read about it in the book! Ingram documented events, meetings, legislative and legal moves and tells us about the on-going battle of protecting the Grand Canyon for the people of the world, with personal interviews and painstaking research from a number of archives.

If you want to truly understand the supercharged issue of Grand Canyon's wilderness designation (the lack thereof), the denial of public boaters access rights to the river in the park, and the politics behind Grand Canyon National Park management, *Hijacking a River* is a must-read.

RRFW is pleased to be able to take advance orders for *Hijacking A River*, 496 pages, including maps, readers guide, and index. The cost of this book is \$20 (\$17.95 each, plus \$2.05 shipping and handling per book), with a tentative shipping date of January 15, 2003. Checks or money orders only please. Advance book sales will benefit River Runners For Wilderness, a not-for-profit organization seeking equitable access to a wilderness river running experience in Grand Canyon. Please send your order to

River Runners For Wilderness PO Box 17301 Boulder, CO, 80308-0301

If you'd like to place an order for that special Christmas someone, just let us know with your order and we'll send an announcement card before Christmas, letting them know they will be receiving a gift from you soon.

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River News 12/05/03

RRFW Riverwire - CRMP STAKEHOLDER WORKSHOP VIDEOS AVAILABLE

Grand Canyon National Park is making available to the public the audiotapes from the general session of the stakeholder workshop in June 2003, and the videotapes from the stakeholder workshop in January 2003. The costs for these products covers the duplicating and shipping cost. It will be \$28 for the videotapes. Audiotape prices are not yet available. The order form for the videotapes is below. If you are interested, contact Julie Graham at BJ Communications, (602) 277-9530, ext 229, or julie@bjc.com. If you would like to purchase a copy of the expert panel series and/or the stakeholder workshop for the Colorado River Management Plan revision, please fill-out the form below and send it along with a check or money order for the appropriate amount to:

BJ Communications Attention: Julie Graham 340 East Palm Lane, Suite 280 Phoenix, AZ 85004. If you have any questions, don't hesitate to contact Julie at 602-277-9530 ext. 229 or julie@bjc.com.

Name: Organization: Address (where tapes should be mailed): City, State, Zip: Phone:
Email: Please check the box to indicate the event/s you would like to purchase.

*****Expert Panel: Carrying Capacity, Group Size and Seasonality Wednesday, January 29, 2003 [] VHS Cost: \$28.00 includes tax and shipping

*****Expert Panel: Allocation of Recreational Use Among User Groups Friday, January 31, 2003 [] VHS Cost: \$28.00 includes tax and shipping

*****Stakeholder Workshop Thursday, January 30, 2003 [] VHS Cost: \$28.00 includes tax and shipping TOTAL COST: \$_____

Thank you for your interest in the Colorado River Management Plan revision process. RRFW thanks Mary Orton, mary@maryorton.com for the above information. ###
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River News 12/09/03

RRFW Riverwire - PARK FREEZES ADDITIONS TO WAITING LIST!

Grand Canyon National Park News Release
For Immediate Release December 9, 2003 Dawn O'Sickey

Hold Placed on Adding Names to Noncommercial River Permit Waitlist

Grand Canyon, AZ - Grand Canyon National Park is placing a hold on adding new members to the noncommercial river permit waitlist. As part of the current Colorado

River Management Plan (CRMP) planning effort, park staff and planners are carefully examining and considering alternatives to the current waitlist permit system. An overwhelming majority of public comments stated the opinion that the permit system should be overhauled. With this in mind, park management does not want to perpetuate the current system while other alternatives are being considered. There are now over 8,000 people on the waitlist, and more than 1,000 are typically added each year. In the event that the current system is selected as part of the final CRMP decision, to be completed by December 31, 2004, the system for allowing additions to the waitlist would simply be reinstated.

Until a record of decision is made for the CRMP, current waitlist members will be served in the same manner as they have been in the past. They will soon receive the familiar annual letter regarding waitlist procedures, the schedule of release dates, and other topics. The River Permits Office may be contacted at 1-800-959-9164 or 928-638-7843.

Please go to www.nps.gov/grca for more information regarding Grand Canyon National Park. Information about the Colorado River Management Plan may be found at www.nps.gov/grca/crmp.

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River News 12/14/03

RRFW Riverwire - LAKE MEAD UPDATE

Lake Mead elevation is currently at 1140 feet, having dropped 14 feet since March, 2003. The lake is forecast to drop to 1129 feet by June, 2004, subject to the winters snowfall and outflow requirements to California, Arizona and Nevada. Lake Mead full pool elevation is 1220 feet.

Colorado River current continues to flow past Boundary Point, as the sediment cone and river channel pushes out into Iceberg Canyon. End of current is now at North Howland Cove, roughly half way through Iceberg Canyon. The channel runs down the west side of Iceberg Canyons western cliffs. The Lake is still 90 feet deep at Devils Cove, just above Sandy Point. The river may be fairly clear at Separation Canyon (River Mile 240), but becomes more turbid by Burnt Spring, so much so that by Columbine Falls the river is brown with moving silt. There are lots of beach areas to camp on below South American Point, downstream of Pearce Ferry. Hydraulics at Lava Point continue but no rapid has formed there yet.

The upper rapid by Pearce Ferry has cut into the right river bank sediments. The run here is to the right, with exposed rock on the left. The lower riffle still has a strong eddy on the right and a strong wave train. A new sandbar has formed on river left below the lower riffle, and river runners will need to go to the right of this sandbar. Pearce Ferry will remain closed to all boating into the foreseeable future due to low reservoir levels.

Sandbar Alley, an area of shallow water with many sandbars, is now extending from just below the Bat Caves upriver to Mile 253, but there are several sandbars above that up to Surprise Canyon. Dry Canyon corner has a large bar on river right that extends all the way down to the Bat Caves. The current is on the left. There are lots of sandbars in the channel near the Oriental Tours boat landing. Just upstream of there, at Burnt Canyon, there is a big bar on the left, and just above that there is a large bar on the right. There is good access to the Burnt Canyon campsite, with a big sandbar ½ mile above that on the right.

South Cove is not going to be impacted by the draw down this year and remains open. All river runners taking out at South Cove are supposed to use the gravel area on the south side of the concrete ramp. River runners are asked to be patient in the de-rig area as Hualapai, concessions and public rafters are all taking out in the same area. River runners are encouraged to maintain as small a take-out footprint as possible, and try to de-rig as quickly as possible. Early take-outs are recommended in the high use seasons of late spring, summer and early fall, to avoid late afternoon river traffic. Maintenance work on the South Cove asphalt ramp has been completed. Dumpsters at South Cove are not for downriver use at this time per trip permit regulations.

National Park Service Rangers note that no camping is allowed on the South Cove ramp and take-out area, or the public swimming area just north of the concrete ramp. Camping is allowed outside the harbor area, and is available one-quarter mile downstream (south) of the concrete ramp below the rock jetty just downstream of the take out. The Mead View Scat machine is closed for the winter, and will tentatively re-open in March.

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River News 12/15/03

RRFW Riverwire - Commercial Bookings Continue as NPS Freezes Public Access

On December 9, 2003, Grand Canyon National Park announced it will no longer allow the public to seek boating permits for the Colorado River. River Runners For Wilderness Co-Director Jo Johnson called the move "shocking and premature. Now people wishing to reserve a future trip are forced to use expensive commercial services as they can no longer add their names to the permit list. The Park Service cites the failure of the current system without offering any remedies for public relief except the option of purchasing access from a park river concessionaire."

Grand Canyon officials noted that an overwhelming majority of public comments requested an overhaul of the present permitting system, and offered this as their reasoning for disallowing new applicants to the non-commercial permit system to float

the canyon. "Granted, Grand Canyon National Park has a serious problem with the non-commercial permit system," says Johnson. "Our own review of the public comments has shown that an overwhelming majority of the public would like to see the access methods and allocation between the public and the river concessions changed. There is a backlog of 130,000 people already waiting years to raft the canyon without paying the high concessions fees. So why add fuel to that fire?" says Johnson, who is quick to point out that "We want the Park to be thinking about changing the access and allocation method to one that reflects real public demand and shows no favoritism."

Johnson brings up another point: "Freezing the waiting list removes an indicator of public demand for river trips, the only indicator NPS has. Now the park has no way of measuring demand at all. Vigorous advertising by commercial operators to fill trips and lack of demand for those same trips-many of which have gone unfilled the last few years-indicates an oversupply in their allocation. This is in stark contrast to the multi-year wait those 130,000 paddlers face.

One solution for the park that would be responsive to public demand is to introduce a Universal Permitting system. The trip leader gets a permit, then uses whatever commercial services they desire once they have a permit. "We look forward to the park's soon-to-be released draft alternatives for the Colorado River Management Plan" says Johnson, who points out that "If the park does not put forward the idea of an allocation free concept along with other possibilities, then this freeze is a signal that the future of access to our National Parks is in serious jeopardy."

"The Park has given no indication of what will replace the waiting list for public access" notes Jeff Ingram. Ingram's new book on the politics of access to the Colorado River in Grand Canyon, titled *Hijacking A River*, details how the current problem developed. "The Park started with a First-Come, First-Served system after 92% of the river access was assigned to the commercial operators. The public didn't like that, so the Park used a lottery from 1976 to 1980. This also failed. The Park then started the waiting list. It doesn't work, either, but the 20-year stagnated "status quo" of river management has not changed. Given the Park's attempts at various access systems, we are hoping the park releases a robust spectrum of alternatives, including a Universal Permit system, to get a serious public discussion as a basis for a sound access method."

"Trip opportunities are only open to anyone with the thousands of dollars needed to buy seats on commercial trips, but forbidden to anyone wishing to do it on their own." said Tom Martin, also with River Runners for Wilderness. "This commercialization of our parks is a chilling trend we have seen in this administration, with similar moves at Yellowstone National Park toward privatization of access."

Martin notes that allocations, if they exist at all, need valid indicators of demand so that allocations can shift yearly as needed. "We have heard that the river concessions had 18 trips worth of unused allocation this season. While we are glad to hear that the park will be transferring these unused commercial trips to public boaters for use this winter and next spring, we are amazed that the park does not immediately shift some allocation from the 14 river concessions back to the public. Given the public's huge

backlog, if this isn't a clear indicator that the current management system is a failure, and not reflecting real demand, I don't know what is."

###

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River News 12/17/03

RRFW Riverwire - Park Turns 18 Unused Concessions Launches Over To The Public

Officials at Grand Canyon National Park confirmed today the release of 18 additional launches to perspective permittees on the Park's non-commercial waiting list. These permits have been made available as a result of the 2002 lawsuit agreement between Grand Canyon Private Boaters Association with others, and Grand Canyon National Park. The settlement stipulates that unused summer commercial allocation will be turned over to non-commercial launches for the following off-peak season. The dates are limited to the spring of 2004 season: March 1, 3, 4, 7, 10, 11, 13, 15, 18, 20, 23, 26, 29, 31 and April 3, 6, 7, 8.

According to the Continuing Interest Newsletter mailed December 16, 2003 to those on the non-commercial waiting list, during the week of January 5, 2004 to January 9, 2004, the River Permits Office will be releasing 18 launch dates through the cancellation line. Those with a waiting list number assignment of 03#00001 to 03#01499 may call in on Monday, January 5, those with numbers from 03#00001 to 03#02999 may call in on Tuesday, January 6, those from 03#00001 to 03#04499 can call on Wednesday, January 7, those with a number of 03#00001 to 03#05999 on Thursday, January 8, and those holding any number may call on Friday, January 9. Call the River Office cancellation line between 8:00 a.m. to 12 noon and 1 p.m. to 5:00 p.m. at (928) 638-7883. Launch dates will be given out on a first call, first served basis to eligible callers.

The letter goes on to note that many winter launch dates released in past years were not claimed until the very last call-in day. Provided this trend continues, callers who are eligible to call in the first few days should have a good choice of available dates.

The newsletter assures current waiters on the list that their position on the list is not affected by the recently announced hold on new additions to the non-commercial permit waiting list.

Park officials also noted that self guided trip scheduling during the normal year has included a 12% overbooking of non-commercial river trips. This overbooking has all but

eliminated the need to release additional launches to the cancellation line, while assuring self guided river trips used all the available user days each season.

Our thanks to Steve Sullivan, Grand Canyon National Park, for this information.

RIVERWIRE is a free service to the boating community from River Runners for Wilderness. Membership is FREE! Send your e-mail address to riverwire@rrfw.org and we'll add you to the RRFW RIVERWIRE e-mail list. To join, visit our website at www.rrfw.org and click on the "membership" link. RRFW is a project of Living Rivers.

River News 01/04/03

RRFW Riverwire - EXPERT PANEL AND STAKEHOLDER WORKSHOP DATES SET

The dates, times and locations for the next step in the Colorado River Management Plan have been announced. This step will involve stakeholder workshops and expert panels. The stakeholder workshops will cover the noncommercial trip permit system, and the spectrum of services to be provided to the public. Certain designated attributes (e.g. flexibility, simplicity, fairness, etc.) of a permit system and types of services will be rated against each other to understand what different segments of stakeholders consider to be important considerations. The Park and its CRMP contractor, SWCA, will use this expanded information in addition to scoping comments already received to craft the new CRMP.

The original concept included 10 designated stakeholder groups. Each group was to be comprised of 4 stakeholder representatives. These representatives would then participate in each of the interactive workshops. Some of the 10 stakeholder groups identified for inclusion were: non-commercial boaters, river outfitters, commercial clients, outfitting guides, wilderness groups, scientists, Native American Tribes, and ecological groups.

River Runners for Wilderness (RRFW), the Grand Canyon Wilderness Alliance, business interests and other stakeholders have voiced concerns about a lack in depth of the representation of the non commercial segment at the stakeholder workshops. While commercial boating stakeholder groups include river concessioners, commercial passengers, and river guides for a total of 12 stakeholder seats, non commercial boaters who include permit holders, passengers, non-commercial river running advocate groups and non-commercial support services all vied for a total of 4 stakeholder seats. Mary Orton, the contractor arranging these meetings, has acknowledged the noncommercial community may be underrepresented and is exploring options to address this concern raised by RRFW.

The expert panels' topics will cover allocation of user days among user groups--sure to be a lively topic--as one, and physical, social and ecological carrying capacity, group size and seasonality of recreational use of the river for the other discussion.

All expert panels and stakeholder workshops will be held at the Arizona State Capitol building in the Governor's Protocol Room, 1700 West Washington, in downtown Phoenix, and video-conferenced to a room--as yet unspecified--at Northern Arizona University in Flagstaff.

Expert Panel #1 will be held on Wednesday, January 29, 2003 from 2:00pm to 5:00pm and 6:00pm to 9:00pm. The two Stakeholder Workshops will be held Thursday, January 30, 2003 at times to be announced. The second Expert panel will held on Friday, January 31, 2003, and be from 8:00am to 11:00am and 1:00pm to 4:00pm. In addition, the sessions will be videotaped and made available to interested persons not able to attend the Arizona meetings.

All events will be open to the public, and the Expert Panels will allow for questions by the audience. More information will be coming your way as it is made available.

RIVERWIRE is a free service to the boating community from River Runners for Wilderness. Membership is FREE! Send your e-mail address to riverwire@rrfw.org and we'll add you to the RRFW RIVERWIRE e-mail list.

To join, visit our website at www.rrfw.org

Take Action 01/22/03

Join Living Rivers to Save Grand Canyon Fish, January 28-29

The Glen Canyon Dam Adaptive Management Program (AMP) will be holding its next meeting Tuesday, January, 28 and Wednesday, January 29 in downtown Phoenix. For the past year, Living Rivers has been encouraging the AMP to be more aggressive in its efforts to bring about the recovery of endangered native fish in Grand Canyon National Park. Unfortunately, the AMP continues to drag its heels, so the plight of native fish in the Canyon continues to worsen. Humpback Chub populations have declined 80 percent to just 2,000 adult fish. Razorback Suckers have now joined the Bonytail, Roundtail Cub and Colorado Pikeminnows on the extinction list. Take some time to lend your voice to call for more urgent action!

Glen Canyon Dam Adaptive Management Program
Bureau of Indian Affairs Offices
Two Arizona Center
400 N. 5th Street, 12th Floor
Conference Rooms A&B
Phoenix AZ
9:30 a.m. - 5:00 p.m., Tuesday, January 28
9:30 a.m. - 11:30 a.m., Wednesday, January 29

[Agenda](#) [65k PDF File]

Additional Information

Information on Living Rivers efforts to restore Grand Canyon, part of our:

[Canyon's of the Colorado Campaign.](#)

[Living Rivers comments on proposed AMP experiments at Glen Canyon Dam.](#)

Letter from Living Rivers to U.S. Bureau of Reclamation, October 30, 2002

[Living Rivers Coalition demands action by the Glen Canyon Dam Adaptive Management Working Group to follow the law and restore Grand Canyon.](#)

Living Rivers letter to Michael Gabaldon, Deputy Director of Operations U.S. Bureau of Reclamation, January 18, 2002

[Minority opinion of Glen Canyon Dam Adaptive Management Working Group on censorship of Living Rivers coalition's comments of January 18, 2002.](#)

Letter from Southwest Rivers et.al. to Michael Gabaldon, Deputy Director of Operations U.S. Bureau of Reclamation, January 28, 2002

[Groups Call for Action to Save Colorado River in Grand Canyon National Park](#)

Living Rivers Press Release, July 18, 2002

[Canyon Changes are Crucial](#)

Arizona Republic: January 16, 2002

[Grand Canyon: Living Rivers Calls for Immediate Action](#)

Living Rivers Currents, January 2002

[Electroshock in the Grand Canyon](#)

Living Rivers Currents, January 2002

[Native Fish: Recovery or Rhetoric?](#)

Living Rivers Currents, January 2002

[Grand Canyon Native Fish: Going, Going, Gone?](#)

Living Rivers Currents, December 2001

[Grand Canyon Fish at Risk of Extinction](#)

Living Rivers Press Release, December 10, 2001

[Living Rivers Comment Letter on Endangered Colorado River Fish to US Fish and Wildlife Service, December 10, 2001](#)

[Environmental groups criticize plan to rescue endangered fish](#)

Associated Press, December 11, 2001

[Download PDF of January 18, 2002 Save the Grand Canyon" Rally Flyer
Flap over Endangered Fish](#)

Rocky Mountain News, December 11, 2001

[Resolution of the Desert Fishes Council on Colorado River Endangered Fish Recovery,
November 18, 2001](#)

[Decline of the aquatic food base in the Grand Canyon](#) Northern Arizona Aquatic Ecology
Research Laboratory

River News 01/27/03

RRFW Riverwire – GRAND CANYON RELEASES AIRCRAFT NOISE STUDY

The National Park Service at Grand Canyon has released a report titled, Aircraft Noise Model Validation Study, dated January 2003. The report completes a study to determine which of four computer models best calculates tour aircraft audibility in the Grand Canyon. The results of the study are important because computer models are the only practical means to assess progress in meeting the requirements of Public Law 100-91 to substantially restore natural quiet at Grand Canyon National Park. Audibility is the measurement used to define substantial restoration of natural quiet. The report was prepared by Harris Miller Miller & Hanson Inc., a leading acoustics consulting firm, for the National Park Service.

In the report, which can be found on the park's website at www.nps.gov/grca, and its attached appendices, the reader will find a detailed step-by-step description of all methods, data, and results of the study. This is a highly technical scientific report prepared by experts primarily for experts. Readers are strongly encouraged to start with the Executive Summary and Study Summary at the beginning of the report.

As detailed in the report, the study methodology was developed by consultant firms with comments, advice, and review by staff from federal agencies and a team of recognized experts in acoustics, statistics and scientific methods. In the Acknowledgements section, however, the authors carefully point out that the final interpretations and words in the report are those of the authors, Harris Miller Miller & Hanson Inc., and not those of any of the other study participants.

For additional information regarding this report, please contact Dr. Kenneth Weber, Grand Canyon Science Center, at (928) 638-7753 or Maureen Oltrogge, Public Affairs Officer, at (928) 638-7779.

Maureen Oltrogge Public Affairs Officer Grand Canyon National Park (928) 638-7779

Canyon's Recovery Must Rest on Science

The Arizona Republic OpEd

The Republic's January 19 editorial "Fish fight: saving chub must be more than just killing trout" is a good introduction to the plight of our state's most valuable natural wonder, the Grand Canyon. However, continuing to allow the Glen Canyon Dam Adaptive Management Program (AMP) to control the Grand Canyon's fate, as the Republic recommends, will only speed the current death spiral of the canyon's native ecosystems.

From its inception, the AMP has opposed implementing U.S. Fish and Wildlife Service recommendations to mimic the Colorado River's natural flow regime, thereby propping up the Grand Canyon ecosystem. Ninety-five percent of the vital sediment and nutrients that would be deposited by a free-flowing river system are now trapped behind Glen Canyon Dam. Without sediment deposition, species go extinct and beaches for mammals, native vegetation and human recreation erode away. Four native fish species have already disappeared, along with river otters, muskrats and every single native insect species that formed the base of the food chain. Yet the AMP has proposed no viable plan for moving the necessary amounts of this sediment into the Grand Canyon.

Instead, AMP has undertaken a handful of experiments to try to build beaches by moving around the meager sediment that deposits downstream of the dam. The result of AMP's efforts to date is a precipitous eighty percent decline in the humpback chub population--the principle endangered fish species AMP is supposed to be recovering.

Because of these declines the AMP is now considering stocking the Grand Canyon with hatchery fish. This is not recovery. This is a zoo. Recovery implies self-reproducing native populations, not manufactured fish which cannot reproduce and which must be constantly restocked as they die off in their unnatural and inhospitable habitat.

Had the AMP been dominated by science as was presumably intended, it might have been a worthy process, capable even of achieving its objective. The AMP boasts stellar scientists producing good ideas for restoring the Canyon. Scientists, however, have taken a backseat to AMP politics, restricting recommendations to those that are politically acceptable, else risk having AMP's funding cut.

Dominated as it has become by state water engineers, industrial irrigators, and hydroelectric merchants, the AMP has been unwilling to support the changes in Glen Canyon Dam operations necessary to reverse Grand Canyon's ecological decline. The AMP players that are truly concerned with environmental restoration are simply politically outmuscled by those who wish to retain the status quo of abusing the Colorado River system for water and energy profits.

While society has an array of technologies to meet water and energy needs, we have only one Grand Canyon. If this natural wonder is going to be protected, the AMP must be replaced with a purely scientifically-based advisory panel. Its first task must be to produce an Environmental Impact Statement considering a full range of alternatives for Glen Canyon Dam operations, including those which will be truly effective in recovering Grand Canyon's native habitats. Only through such unbiased research and recovery programs driven by scientists rather than politicians will Grand Canyon's ecosystem have any hope of salvation.

The AMP participants convene here in Phoenix this week. At the January 2002 AMP meeting, the environmental group Living Rivers exercised their right to become involved in this taxpayer-funded process by presenting a document requesting some specific definitive actions on behalf of the collapsing Grand Canyon ecosystems. A full year later AMP leaders have still not replied. Arizonans, this is our Canyon, our tax dollars and our opportunity to demand results. Attend the AMP meeting this year and insist on real protection for the Grand Canyon.

Lisa Force, Program Director, Living Rivers For more information on the AMP meeting: www.livingrivers2.org

River News 01/28/03

RRFW Riverwire – COMMENT ON PWC USE IN GLEN CANYON NRA

This is a second comment opportunity on proposed PWC use in Powell Reservoir. The Bush Administration has proposed a rule which allows personal watercraft (PWC) operation on nearly all of Glen Canyon NRA. The ruling was published on January 17th. The administration made this decision despite the fact that the NPS' recent environmental review of PWC use at Glen Canyon found that the thrillcraft damage park resources and wildlife.

Also, there is a disproportionate acreage of the NRA open to PWC use, which is simply unfair to the majority of visitors who come to the recreation area to enjoy more contemplative forms of recreation like swimming, hiking, fishing, canoeing, kayaking, and wildlife viewing. The ruling comes despite continued overwhelming comments against personal watercraft (Jetski®) use at the National Seashore and various Parks, including Glen Canyon National Recreation Area.

PWC recreation causes significant damage to air and water quality, visitor enjoyment, public health and safety, natural soundscapes, and wildlife. At Cape Hatteras, PWC operation was the number one source of visitor complaints before the machines were finally banned there. In some instances, PWC activity and its proven threat to personal safety pushes other forms of recreation such as swimming or bird watching off a waterbody.

This is discriminatory. If you feel a full ban on PWCs in Glen Canyon NRA is the only appropriate action, please send your comments to Kitty Roberts, Superintendent of Glen Canyon National Recreation Area, and tell her that you support protecting the irreplaceable resources and wildlife of Glen Canyon from personal watercraft.

Letters should be sent to glca_pwc@nps.gov or to the address below. Superintendent Kitty Roberts Glen Canyon NRA PWC Rule-Making Box 1507 Page, Arizona 86040 RE: RIN 1024-AC90, Comments on Draft PWC Special Regulations Had a close call or negative experience with PWCs after an otherwise idyllic Cataract Canyon trip? Include that in your letter to Supt. Roberts, along with other personal observations.

River News 02/04/03

RRFW Riverwire - LAKE POWELL DRAINED 50%

LAKE POWELL DRAINED 50%--FOUR YEARS TO GO! MARINAS LEFT HIGH AND DRY, CONCESSIONAIRES CONTEMPLATE PULLING OUT

Lake Powell reservoir is down 86 feet from normal, equating to a reservoir that is half full. The National Park Service, which manages marina facilities at Lake Powell, is busy trying to make adjustments with the hope that they can still accommodate visitors at some locations. Meanwhile, the recently approved \$70 million Antelope Point Marina project is in jeopardy of never being used.

Now in the fourth year of an anticipated sustained drought, Lake Powell reservoir will soon be empty. Forecasters have informed the Park Service that the reservoir levels will only be getting lower. The reservoir is dropping faster than it can be replenished. Even when the snow begins to melt this spring, the reservoir is not expected to rise any higher than where it is right now. By July, the reservoir will again start dropping.

The United States Geological Survey 2002 report on Southwest climate change predicted that the Colorado Plateau would be heading into a 30-year period of below average river flows. Previous estimates by forecasters, on the impacts of such a sustained drought, calculated that Lake Powell would be drained within eight years. It's right on schedule. In July 1999, Lake Powell was at 90 percent. As of February 1, 2003, it was at 50 percent.

If the present drought does not relent, Lake Powell will eventually drain to the level of the penstock tubes that spin the generators at Glen Canyon Dam. According to a model that was published in October of 1995 in the Water Resources Bulletin, if a severe and sustained drought similar to the drought of the late 16th century appears, Lake Powell could stay drained for eight years.

"We're witnessing the end of Lake Powell right now," says Living Rivers' Conservation Director John Weisheit. "This was predicted, and nothing the National Park Service or the marina operators can do will change this."

o At present three of the concrete boat ramps have been closed: Antelope Point, Stateline and Hite Marina. For Stateline, the concrete ends where the wet sand and mud begins; it was officially closed on February 3. For Hite Marina, river sediment closed the concrete ramp and an alternative ramp on gravel began in the autumn of 2002. This alternative ramp too is now closed due to sediment fill from the Colorado River. Antelope Point's ramp was the first ramp to close last year, just three years after construction in 1999.

o A \$3 million emergency appropriation was made in January to extend boat ramps at Bullfrog, Hall's Crossing and Wahweap marinas. It is unclear, however, how far these ramps will be extended, or if additional funding will be sought to extend them all the way to the bottom as levels continue to drop.

LR Press Release 02/04/03

Living Rivers Welcomes New Outreach Coordinator

High-Profile Environmental Group Hires Outreach Coordinator To Target Colorado River Delta Issues as Drought Situation Worsens

As declining reservoir levels and water scarcity concerns multiply across the state and into Mexico, Living Rivers is pleased to announce the arrival of Michelle Pulich Stewart to the Arizona office, based in Scottsdale.

Before joining Living Rivers, Ms. Pulich served in a variety of non-profit, academic and government roles pertaining to resource management and habitat restoration, including: Lady Bird Johnson Wildflower Center, Texas Parks and Wildlife Dept, Maricopa Community Colleges, Sierra Club, Center for Biological Diversity and Sierra Madre Alliance.

"I'm pleased to be bringing both my research and on-the-ground organizing experience to the mounting ecological crises and restoration needs of the Colorado River here in Arizona and across the border into Mexico," says Ms. Pulich. "Even should drought conditions persist, there is more than enough water to meet the state's human and ecological needs, but the public has not been exposed to the river management options available to achieve such a balance. I look forward to helping make that happen," adds Ms. Pulich.

Her formal education includes both a B.A. from Rice University and a Master's degree in Environmental Resource Management from Southwest Texas State University, although she has found, streambeds, canyons, prairies, and prescribed burns to be striking repositories of knowledge.

"We are certainly excited about adding Michelle to our team," says Lisa Force, Living Rivers' Program Director. "Her teaching experience and activism history will be valuable

assets to our efforts to bring about sustainable Colorado River management here in Arizona as well as delta restoration."

Ms. Pulich also enjoys backpacking, yoga, gardening, and of course, floating down rivers. Ms. Pulich will be married to Alex Stewart in late May of this year.

Living Rivers works to mobilize people to protect and restore the integrity of rivers and watersheds.

LR Press Release 02/04/03

Lake Powell drained 50%--four years to go!

Marinas Left High and Dry, Concessionaires Contemplate Pulling Out

Contact:

John Weisheit (435-259-1063 or 435-259-8077)

Lake Powell reservoir is down 86 feet from normal, equating to a reservoir that is half full. The National Park Service, which manages marina facilities at Lake Powell, is busy trying to make adjustments with the hope that they can still accommodate visitors at some locations. Meanwhile, the recently approved \$70 million Antelope Point Marina project is in jeopardy of never being used.

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- A \$3 million emergency appropriation was made in January to extend boat ramps at Bullfrog, Hall's Crossing and Wahweap marinas. It is unclear, however, how far these ramps will be extended, or if additional funding will be sought to extend them all the way to the bottom as levels continue to drop.
- Potable water is becoming a problem at Hite Marina. The site draws its drinking water directly from the reservoir, treats it and then stores it in tanks for consumption. But the intake buoy is about to go aground and needs to be extended into deeper water. Besides being expensive to modify the intake, there is no assurance that deep water can be maintained as Lake Powell's delta continues to advance beyond the bay at Hite.
- The planned marina at Antelope Point will find a 500-foot cliff being exposed where the second launch ramp is proposed. Calls to Antelope Point Holdings and their engineers, revealed no comment to the feasibility of the project. According to the National Park Service, construction was supposed to begin in March, but it has now been delayed to at least May.
- The problems at Hite Marina are causing the concessionaire, Aramark, to question whether they should shut their Hite operation down altogether. To preserve the marina may require moving it, a cost Aramark may not wish to incur. No decision has yet been taken. With visitation through Glen Canyon National Recreation Area dropping by 10 percent per year, Aramark may be looking to pull out of the other marinas as well.
- The fate of the white-water rafting industry, which concludes trips at the top of Lake Powell, is also a major question. With sediment and mud clogging the marina and boat ramp at Hite, rafters will have a very difficult time getting off the water.

"As the drought persists, it is going to be very difficult, if not impossible, to conduct business as normal with the river and reservoir users. This includes the Grand Canyon river runners who will lose the large Glen Canyon Dam releases they need to run their large motorized boats through the canyon only to arrive at the sediment-choked Lake Mead," adds Weisheit.

Lake Powell is not the only problem. The entire Colorado River storage system has dropped from 92 to 60 percent over the past 40 months. "Lack of access to flat water recreation is the least of our worries," concludes Weisheit. "The Southwest plumbing

system is headed for complete catastrophe, and the Bureau of Reclamation and the seven states that use Colorado River water have no disaster preparedness."

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Web pages on Southwest climate change:

[Severe and Sustained Drought for the Colorado River Watershed](#)

[Precipitation History of the Colorado Plateau](#)

River News 02/07/03

RRFW Riverwire – NO WILDERNESS BILL WITHOUT THE RIVER

WILDERNESS COALITION DISCOURAGES LEGISLATION By Brad Fuqua Grand Canyon News Editor Sunday, February 02, 2003

As the next phase of the Colorado River Management Plan process gets ready to begin today in Phoenix, the Arizona Wilderness Coalition believes there could be something happening behind the scenes in Washington. Kim Crumbo, Grand Canyon regional coordinator for the Arizona Wilderness Coalition and former National Park Service river guide, said the federal agency's congressional liaison office in Washington has wilderness designation legislation on its docket, although "not signed off."

"The only way a wilderness bill would pass this Congress is to eliminate the river from wilderness consideration or grandfather in motorize use," Crumbo said Thursday. "All this should take place in the planning process ... why the Park Service is considering wilderness legislation at this time makes us suspicious. We're asking them to just pull it; let's wait until the appropriate time."

Grand Canyon National Park sources, including CRMP planning leader Rick Ernenwein, said they were not aware of any legislative activity in Washington. Therefore, they could not comment on AWC's information.

In a press release dated Jan. 22, the AWC claims the potential legislation "could blindside the American people with a 1.1-million-acre wilderness proposal that removes the Colorado River from wilderness protection, thereby ensuring continued ecological damage from large crowds and pollution from motors." "We just want all that to stop until the public involvement process is completed," Crumbo said. "It's inappropriate to be pursuing this before the public process runs its course."

The AWC supports recommendations to not decrease use on the river, but spread it out over a longer time period while eliminating motors. At the same time, Crumbo said commercial allocations could remain the same while the cost of a river trip could become more affordable and available to more people.

River outfitters have a different set of recommendations on the issue to support their beliefs and Crumbo said they "have the best arguments." "We'll see what transpires," Crumbo said. "It should go on for another full year." In the meantime, the AWC planned to encourage people to attend this week's expert panels and workshops in Phoenix and Flagstaff.

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River News 02/14/03

RRFW Riverwire – LAWSUIT FILED TO START DESCHUTES COMMON POOL

A group of Deschutes River users filed suit Thursday, February 13th against Oregon's Department of Parks and Recreation (OPRD) and director Mike Carrier. The suit contends that the OPRD has violated Oregon law with its current role and stance in delaying implementation of a "common pool" permit system, that provides equal access to all, as called for in the Lower Deschutes River Management Plan (LDRMP). The motion was filed by the Northwest Rafter's Association (NWRA), and Mark Shuholm representing the general public. This action is also being supported by National Organization for Rivers (NORS), River Runners for Wilderness, and the American Canoe Association (ACA).

The Plaintiff's position is that full implementation of the LDRMP will insure the greatest level of access to the Deschutes River by the general public for generations to come. A failure to immediately implement the LDRMP, as currently written and required by Oregon Law, jeopardizes future access by the general public to this public resource.

Under the guidelines of Oregon State Statute ORS 390.934, the LDRMP and its supplement were developed over several years with input from the OPRD, BLM, The Confederated Tribes of the Warm Springs Reservation, other government agencies – as well as the general public. The Lower Deschutes River Management Plan was finished in 1993 and the supplement in 1997. Both the LDRMP and the supplement were adopted by the OPRD under administrative rule OAR 736-040-0070. The LDRMP and its supplement call for implementation of a limited access "common pool" permit system once certain trigger levels of use have been reached for various segments of the river. A "common pool" system offers equal access to all parties – without preference given for any specific group or interest. If and once these trigger levels of use are reached for any year, then a "common pool" permit system is to be implemented the following year. Levels of use that would trigger implementation of the "common pool" permit system were reached in 1997, 1998, 1999, 2000, 2001, and 2002. Although the LDRMP has therefore called for implementation in each of the years 1998, 1999, 2000, 2001, 2002, and 2003, the OPRD has not taken the legally required action relating to implementation of the system.

Further, the OPRD is currently promoting an agenda counter to that outlined by the LDRMP. At a November 14th meeting of managers from the various agencies, the OPRD proposed a 3 year further delay in implementation of the "common pool" permit system - as well as re-introducing the topic of a "split allocation" permit system - a system that would guarantee access to commercial interests by limiting access to the general public.

The Suit asks that the OPRD be found to have unlawfully refused to act and unreasonably delayed taking action in implementation of the LDRMP - and that the OPRD be compelled to implement the "common pool" permit system for the 2003 season.

LR in the News 02/16/03

From panic to denial on water: Reactions to crisis disparate in Four Corners states' plans

By Michael Booth

Denver Post Staff Writer

Sunday, February 16, 2003 - The multiyear drought in the Four Corners states has brought sacrifice to some cities and recreation areas, and a mere shrug of the shoulders from others.

From Salt Lake City to Aurora, and Albuquerque to Phoenix, water managers and their constituencies react to the absence of snow with the full range from panic to denial. Some scramble to prop up reservoir levels at all costs; others argue the definition of "reservoir" is a bank of water that gets drawn to zero in dry times.

Phoenix will exhaust its local reserves this summer.

Yet Rocky Mountain snowmelt coming down the Colorado River means the largest city in the Southwest has no lawn-watering curbs. Well-soaked residents even plant a winter variety of seed over their dormant summer bluegrass to ensure green color all year.

At half-full Lake Powell, the water playground for millions of Westerners, boaters this summer might want a taxi to get from the marina to the fast-receding Colorado River water. But the lucrative tourist season looms, and National Park Service officials contemplate blowing up a rock formation uncovered by the drought at the Arizona end so this summer's demanding boat traffic can avoid a 7-mile detour.

The Southwestern approach to drought is "definitely head-in-the-sand," said Owen Lammers of Utah-based environmental group Living Rivers, which is sharply critical of how federal dams and what it calls greedy cities rearrange Western water flows. "We're



characterizing this as the Enron of water management. The government keeps saying lake levels will get better, and the reality is that things are going down, down, down."

The wide variance in public water restrictions can deflate conservation efforts by prompting complaints of unfair treatment and downstream waste, water experts said. And even if downstream draws from the Colorado River are legal, they may injure streams or lakes in a way that everybody has to pay for in the future.

"The river that many of these states depend on is being overtaxed, so despite what your rights are, there are reasons here to be concerned," said Bart Miller, water projects director for Land and Water Fund of the Rockies. "It strikes the average citizen as unfair or strange when others are using much, much more water."

Cities with looser water policies defend the lack of rules as a benefit of well-secured supplies.

"All these decades of planning for water resources and storage have paid off," said Ken Kroski, spokesman for the Phoenix water supply, where the main reservoir for the perpetual boom city is down to 14 percent of capacity. As Aurora tells people they can't plant a single flower this spring, and Denver ponders a year-round shut-off of lawn sprinkling, Phoenix is still in Stage 1 of its drought plan, asking for voluntary 5 percent cutbacks in home water use with no rules for what days to water.

Knowing there will be no water available from Arizona snowmelt or rain this summer, Phoenix is confident its share of Colorado River water coming down the cement channels of the Central Arizona Project will be more than enough for city lawns in 2003.

Checking in with other cities shows just how disjointed Western water policy can be - while Denver, Phoenix and Salt Lake City watch their reservoirs drain, Albuquerque will switch from more predictable well water to a new reservoir system over the next three years.

Santa Fe drivers can't drive through a car wash more than once a month. Tourists to the high- desert jewel won't get their hotel sheets changed until their fourth day.

Currently in Albuquerque, "when it's dry, we just pump more from the aquifer," Mayor Marty Chavez said. "But we're depleting the aquifer. We can get away with it for a summer or two, but not in the long term."

Realizing the underground supply may be used far faster than it is recharged by runoff, Albuquerque sought voluntary water savings last summer - of only 3 percent to 5 percent, a far cry from Denver's goal of cutting use from a normal year by 30 percent.

Around the Four Corners, these cities and recreation areas hope for snow with varying degrees of fervency:

Phoenix: Open taps in the desert

Phoenix has some of the lowest water rates in the West, and the only mandatory cut in effect right now is a 5 percent slice from government use.

"A lot of people automatically and incorrectly associate the desert with no water," Kroski said.

But the free-flow philosophy permeating Arizona does frustrate some water officials, including Phoenix's conservation coordinator, Tom Babcock.

"There really hasn't been a debate on more restrictions," he said. "It's ludicrous when you consider we're in the Sonoran Desert."

Phoenix did try a stair-stepped system for water rates, raising the fee per 1,000 gallons every time homeowners reached certain benchmarks. (Denver operates under that system, with drought surcharges added on top.) It didn't work for Phoenix, Babcock said, putting a disproportionate burden of the rates on lower-income residents with large families "and the crummiest plumbing."

The city is now back to a seasonal rate, charging more in summer for water than the winter base rate.

Even without water dribbling down from Arizona sources, Phoenix claims it has plenty of supply in the next few years because it draws a major allocation from Colorado River dams under federal interstate compacts. Siphoned off from Lake Havasu at the Central Arizona aqueduct project, most of the water for Phoenix this year will be Colorado snowmelt.

Salt Lake City: Bracing for the worst

Salt Lake City ends up with some water from the Colorado River basin, pumped across the Wasatch mountain range, but relies most heavily on snowfall in its famous ski areas to melt and flow down Deer Creek. Until late last year, Salt Lake had avoided the more severe droughts seen in neighboring states.

Now the city is preparing for the worst, water spokeswoman Stephanie Doerr said. Last year, it made up for shortfalls in its own basin through water purchases from the Central Utah Project, which brings Colorado River basin water under the Wasatch mountains. "That water just isn't available this year, because no one else has water, either," Doerr said.

Preparing for a hot summer, Salt Lake expanded the months for its higher summer water rates, recognizing what Denver saw last year in people watering heavily from May through October. The city also wants a stepped rate structure this summer, charging more for higher use, and will also start water meters "from the first gallon" rather than allowing a free minimum on each bill.

"We're nowhere near cracking this drought," Doerr said. "There is no winter. It's just not happening."

Lake Powell: Scrambling to stay afloat

Lake Powell has fallen to levels the massive Utah and Arizona reservoir hasn't seen since it was still filling up in May 1973. Last year, for the first time, Lake Powell did not rise at all in the spring: Because the reservoir had to keep releasing water downstream to satisfy calls in California and Arizona, snowmelt running in added nothing to the pool. The same is likely to happen this spring, meaning the recreation pool starts low and will get lower.

Lake Powell is shutting some boat launch ramps and extending others with gravel, while considering what to do with entire marinas left too high and dry. At the southern end, the Castle Rock cut allowing boaters from the Wahweap marina to save 7 miles of travel now juts up above water, and the Park Service is debating whether earthmovers or explosives should be used to reopen the channel.

Environmentalists heckle the idea of going hard-rock mining to find more water, calling it typical of the way governments have deformed Western waterways in catering to jet skis and lawn sprinklers.

"In the name of emergencies, they'll do that kind of thing and ask questions later," said Lammers of Living Rivers. "Given the climatic conditions, we're going to be looking at a major crisis very soon."

Other cities need to think twice, though, before pointing fingers at Phoenix or Lake Powell management, said Barry Worth of the U.S. Bureau of Reclamation's Glen Canyon Dam office. If it weren't for water-banking systems such as Powell and Mead, upper Colorado River states such as Colorado and Utah would have to let far more river water go by their land this summer to satisfy compacts guaranteeing flows to California, Arizona and Mexico.

"Sometimes people will say, why does somebody in Colorado or Wyoming care about Lake Powell, because it's long gone from our state," Worth said. "It just happens to be where their insurance account resides."

Santa Fe: Cracking down on users

Santa Fe got serious about drought response before many Southwestern cities knew they had a problem, implementing its current severe stage of curbs on April 10.

Restrictions there include no new plantings of perennials and flowers, delaying hotel sheet changes, no washing of cars at home and only once a month at a commercial wash, one-day-a-week lawn watering and heavy surcharges. While Denver charges \$1.90 on each 1,000 gallons of water over 20,000, Santa Fe charges \$25.

Also in Santa Fe, water caught fleeing the scene of a crime - a leaky or misdirected lawn sprinkler - is officially dubbed "fugitive water" and can cost the homeowner a hefty ticket.

City reservoirs are 29 percent full, compared with 65 percent in the comparable season of an average year, spokesman Juan Rios said.

A major portion of Santa Fe water comes from wells mining the aquifers connected to the Rio Grande, but depleting those is a major concern, Rios said. Two more months of drought will force the City Council to consider a complete watering ban or even a building moratorium, he said.

"We started out the winter very well. But it seems El Nino dried us up and left us hanging," Rios said.

Albuquerque: Switching philosophies

Albuquerque is overhauling both its physical and cultural approaches to water.

Over the next three years, the city will switch from well water to surface water, captured in reservoirs near the New Mexico-Colorado border and brought down the Chama-Rio Grande river systems. That means Albuquerque residents will be praying just as hard for Colorado snowfall as the residents of Denver do, Mayor Chavez said.

Environmental groups, however, question the new draws from the Rio Grande because they may further endanger the silvery minnow and other river life.

The cultural overhaul will take longer, Chavez added. "For years our building codes required X minimum amount of grass. We've changed that, but the cultural shift has been a little slow. It's hard to tell businesses to plant grass, then two years later say, take out your grass. Getting there takes time," Chavez said.

Las Vegas: Light on the restrictions

Las Vegas doesn't fall under the Four Corners moniker, but draws 88 percent of its water from the all-important Colorado River system through Lake Mead.

But one river doesn't make one uniform policy - under current drought restrictions, Las Vegas homeowners can water lawns every other day this coming summer, even though natural rainfall at 4 inches a year is less than one-third of Denver's.

The Las Vegas conservation program focuses on stopping water waste although a citizens advisory committee is considering small drought surcharges for this summer's water rates, said spokeswoman Tracy Bower.

Denver Post staff writer Michael Booth can be reached at mbooth@denverpost.com or 303-820-1686.

LR Event 02/23/03

Hear the Echo...

50th Anniversary Yampa & Green River Trip, June 2-6, 2003

In June, 1953 Living Rivers' co-founder, the late David R. Brower, launched the modern-day river advocacy movement with a trip down the Yampa and Green Rivers in Dinosaur

National Monument. His objective, which was achieved, was to raise awareness to defeat the proposed Echo Park Dam and to save the Monument from inundation.

Join Living Rivers and the Colorado Riverkeeper, in association with Holiday River Expeditions and other leading Colorado watershed advocates, as we relive this historic trip and launch a new initiative to save Dinosaur from the much slower death caused by Flaming Gorge Dam upstream. The trip is limited to 25 people, so act quickly. The cost is \$1,000.

Participants in this river trip will include activists and naturalists who will openly share their river knowledge with you and your friends. We will discuss the river campaigns of the past and the present, and keep our river ecosystems healthy and our national parks protected. These respected members of the river community include:

Dr. Roderick Nash, who wrote the conservation classic *"Wilderness and the American Mind,"* will row his beautiful wood dory through the towering sandstone cliffs of the Yampa River. The most remarkable cliff face is called Tiger Wall, where tapestries of desert varnish color the surface like the fur of a Bengal tiger.

Jeff Ingram was hired by David Brower when he was the executive director of the Sierra Club, and specifically to help him with the campaign to keep dams out of the Grand Canyon. Mr. Ingram is currently writing a book about this successful campaign and will share this knowledge around the evening campfires after a satisfying dinner.

Dee and Sue Holladay founded Holiday River Expeditions in 1965 and have completed hundreds of river trips in Dinosaur NM. They will share their intimate knowledge of the human and natural history of Dinosaur National Monument as we hike to places of interest.

Kim Crumbo is a famous Colorado River boatman and professional river guide. He is also a passionate advocate of wilderness protection for the river corridors of the Colorado River basin. He is also a respected historian and naturalist, and the author of an excellent river guide that focuses on the human history of the Grand Canyon.

John Weisheit is the trip leader of this expedition and another long-time river guide of the Colorado, and a strong advocate for a free-flowing Green River. He has co-authored



a book about the Colorado River in Canyonlands National Park, which will be issued soon by the University of California at Berkeley. The Waterkeeper Alliance recently designated John as the Colorado Riverkeeper for his dedication to protect this endangered watershed.

For more information contact [John Weisheit](#) at (435)259-1063.

[Holiday River Expedition's home page](#)

[Holiday River Expedition's Yampa River trip](#)

[Maps of Dinosaur National Monument](#)

[Living Rivers' scoping comments on the Flaming Gorge Dam EIS](#)

[PDF of Hear the Echo flyer](#) [592 PDF File]

The History of the Echo Park Dam Controversy and the Birth of the River Protection Movement



The Bureau of Reclamation (the Bureau) became a very bold bureaucracy after the completion of Hoover Dam on the lower Colorado River. With the construction of that high dam, the Bureau was transformed into a government-owned business that provided electricity for the consumer market, which was a deviance from its original mission to provide irrigation water for farmers. This set a precedent for the United States government, because it could now compete with private industries and with its infrastructure subsidized by the US taxpayer.

In later years that boldness took another step, just like an expanding corporation, in the form of a search for new dam sites and with the assistance of western, pork barrel politicians. The Bureau tested the waters, so to speak, by proposing that a dam be

built in Glacier National Park, which, as all national parks are, protected by the Organic Act of 1916. That cornerstone Act mandates that park values be forever left "unimpaired by man." That plan rightfully met stiff opposition and the Bureau immediately acquiesced, but did not relent. They decided to try their luck with Dinosaur National Monument, which is protected under the Antiquities Act of 1906.

A certain professor at Harvard University, who had received the Pulitzer Prize for a history novel, steamed under his collar when he heard about the Bureau's continued aggression on our national treasures. His name was Bernard DeVoto, born and bred in Ogden, Utah, and he wrote a scathing article in 1950 for the *Saturday Evening Post* and sparked a movement to save river ecosystems that continues to this day.

In 1952 the Sierra Club hired its first executive director, David Brower, from Berkeley, California. Brower went to work immediately to further build the grassroots campaign that DeVoto started. He formed a coalition of conservation groups that included the Wilderness Society and the Issac Walton League. He involved another professor and Pulitzer Prize winning author from Stanford University, Wallace Stegner, to edit a book called *This is Dinosaur*, that would eventually end up in the hands of every member in Congress. Brower also organized week-long river trips to show Sierra Club members and supporters what was to be destroyed should the Bureau's dam be built. The campaign was successful by using all these organizing components and, by 1956, a vexed Congress killed the authorization to build Echo Park Dam.

Undaunted, the Bureau continued in their relentless campaign to build dams and power plants at the sacrifice of river ecosystems and taxpayers. In 1959 Floyd Dominy, from Wyoming, was appointed as the Bureau's commissioner and would match the organizing skills of David Brower, but in a contrary, top-down fashion. Audaciously, he envisioned building dams in the Grand Canyon, the most sublime canyon on the planet. Since dams could not be built in lands protected by the National Park Service, Floyd would build them above and below these protected lands. At that time Grand Canyon was a smaller national park, centered at Grand Canyon Village near the south rim.

Brower didn't waste any time and countered Dominy at every turn to successfully stop these two dams from being built and by using the same grassroots organizing skills as before. But a new twist was added to the campaign, which included a full-page ad in the *New York Times* and the *San Francisco Chronicle*. The ad's headline said, "Should we also flood the Sistine Chapel so tourists can get closer to the ceiling?" In 1975, Grand Canyon Park was enlarged and brought under the protection of the Organic Act.

Unfortunately, Brower was not successful in stopping the construction of Glen Canyon Dam. Before he died, in November of 2000, he launched yet another grassroots campaign to decommission this dam before its scheduled 100-year life span is completed; when sediment reaches the intakes of the emergency bypass tubes. On March 14, 2000, on the third "International Day of Action Against Dams, and for Rivers, Water and Life" held at Glen Canyon Dam, Brower, participants and 60 other environmental groups signed the "Glen Canyon Declaration." This document promises to restore the Colorado River in Glen and Grand Canyons to their full natural heritage by means of a grassroots campaign, that includes doing river trips.

Please consider your attendance on our Yampa River expedition, June 2 – 6, 2003, to commemorate a fantastic and exciting future for river restoration.

John Weisheit
Colorado Riverkeeper

Living Rivers Director Runs for Sierra Club Board

Living Rivers and the Sierra Club have long shared some common goals, primary among them the restoration of Glen Canyon and the preservation of the currently threatened Grand Canyon ecosystems. So when the Sierra Club's nominating committee asked our own Lisa Force to run for a seat on the Club's national board of directors, it seemed a natural fit.

Ms. Force accepted the honor and is on the ballot for the 2003 Sierra Club Board of Directors. She is running with four other candidates on a slate which promotes an aggressive conservation agenda. The five candidates on Ms. Force's slate will be running against eleven other candidates for the five open board seats.

The other candidates on the slate are: Connie Hanson Gordon LaBedz Nancy Rauch Don Young

Please watch for your ballot statement from the Sierra Club, via mail or email, in the first week of March, and vote to save the planet!

Ms. Force's ballot statement is below. To access the statements of the other four candidates, please see www.johnmuirlives.org.

Sierra Club Ballot Statement:

LISA B. FORCE

Residence: Scottsdale, Arizona

Occupation: Program Director, Living Rivers

Contact: 480-990-7839; LForce@LivingRivers.org

Current Member since: 1998

Background:

Originally from Colorado, I've lived in Arizona for 15 years where I've worked for two leading environmental organizations, fighting for protection of endangered species and restoration of the Grand Canyon, Glen Canyon and the Southwest's wild rivers.

- Previously, owned a successful management consulting business for 8 years
- Longtime Sierra Club activist on sprawl, wilderness, energy and water issues
- Led grassroots activists in anti-logging campaigns
- Defeated state anti-wildlife referendums
- Successfully negotiated with government agencies for river and wildlands restoration
- Launched a Western Grazing Reform program
- Featured in National Geographic and BBC documentaries highlighting US/Mexico environmental issues

- Education: MBA; Bachelor of Science.

Endorsements include current Board members Marcia Hanscom, and Ed Dobson – who says: "Lisa Force is the fastest rising star in the Sierra Club's firmament. She has the skills, passion, and tact to excel at the most demanding of Club positions. We are blessed that she is ready and willing to serve."

Statement: My success in grassroots activism, plus strong business experience, will be assets to the Board. I need and appreciate your vote! Key committees in the new Congress are now chaired by stalwart allies of polluting industries, taking deadly aim at our forests, the Arctic, Yellowstone and more of our last wild places. We must unite now to stop Bush's attack on the environment. We must recruit more Sierra Club members, strengthen our legal tactics and promote aggressive on-the-ground activism. I'll champion Club efforts to defend hard-earned achievements, while creating and taking advantage of new advocacy opportunities at Chapter and National levels.

I'll help the Club achieve a groundswell of action to awaken and motivate the American people to:

- Aggressively protect our parks and wilderness areas;
- Uphold and strengthen environmental legislation;
- Protect public lands from development;
- Promote sustainable agriculture; and
- Create livable, sprawl-free communities.

I'll use my environmental advocacy skills, extensive fundraising background and experience as a successful businesswoman to promote a national agenda that will make the Sierra Club an even more powerful force by:

- Making sure Chapters and Groups get the resources they need. We must use every dollar more efficiently.
- Mobilizing all environmentally concerned citizens to support Club efforts, through expanded grassroots activism and media campaigns.
- Maintaining our strong Outings Program.
- Listening and responding to our members.

I want to hear from you how I can help make the Club work for you. Please contact me!

LR in the News 02/27/03

The Lake Effect

by Christopher Smart

The Salt Lake Tribune

BULLFROG -- Tourism promoters as well as environmentalists who despise Utah's largest reservoir agree on one thing: This is the year to visit Lake Powell.

Thanks to record-low lake levels, new beaches and eye-popping sandstone formations hidden underwater for years have surfaced.

The Lake Powell recreational experience, tourism promoters boast, is as breathtaking as ever. And this year promises to be the best bass-fishing year since 1996 along the reservoir's 2,000 miles of shoreline, say state fisheries biologists.

Meanwhile, environmentalists who favor decommissioning Glen Canyon Dam and draining the Colorado River water it impounds say chances to visit Powell are dwindling. If the drought continues for four more years, they contend, there will not be a Lake Powell. So those wishing to visit the lake should not wait any longer.

Boat ramps at Bullfrog in Utah and at Wahweap in Arizona have been lengthened to reach the receding waters. Now at a record low of 3,612 feet above sea level (equivalent to the low mark set 10 years ago), Lake Powell still provides excellent boating and fishing and superlatives still cannot describe its natural wonders.

However, the lake does not snake up its many narrow canyons as far as it did last summer, according to Morris Christensen, Bullfrog boat-rental manager. In the past, boaters navigating Forgotten Canyon could dock just below the Anasazi ruin known as Defiance House. This year visitors must hike a half-mile up the canyon to reach the ruin.

"It's so weird to come to a place where you were swimming last summer and now there's no water," Christensen says.

In the creek bed below Defiance House, green grass stands in bright contrast to the red rock walls and the 86-foot-high whitish bathtub ring that defines the drought and the diminished waters.

At Hite, where the Colorado River enters the reservoir, acres of mucky silt have sprouted weeds. The boat ramp has been moved several times, but the National Park Service and Lake Powell marina operator ARAMARK are just about out of moves until the water rises. In addition, pumps that supply the Hite community with culinary water from the lake must be moved before the silt clogs them. Boat ramps at Stateline and Antelope Point are closed.

But Dan Resmondo, the director of operations for ARAMARK's North Lake Powell marinas, says it is business as usual. "It's normal operation for us to follow the lake up and down," he says. "We're seeing the same levels we saw in February 1993."

"From a recreation standpoint, it gives a different perspective," Resmondo says. "The canyons look different. If you haven't been here for a while, it will look quite different and provide a new experience." Certainly Bullfrog does not look like it did four years ago, when the lake was at a record high of 3,698 feet. What once was a narrow waterway between Bullfrog and Halls Creek now appears as a hill. Four years ago, the dock was not far from the marina store. Now, it's a quarter-mile away and looks to be sitting in an empty redrock basin surrounded by dusty buoys.

The Lake Is Open: The National Park Service will spend about \$2 million refurbishing and lengthening boat ramps at Bullfrog, Wahweap and Halls Crossing, says spokeswoman Char Obergh.

"We want people to know the lake is open," she says. "There may be some delays in launching, but we're doing everything we can to make it a good experience."

Lake Powell consistently ranks as the second- or third-most-popular Utah tourist attraction. Last year visitation dipped to 2.1 million from 2.3 million in 2001, says Jon Kemp, Utah Travel Council research analyst. He blamed the downturn on the aftermath of 9-11, as well as a perception that the lower water level hinders boating and the scenic experience.

However, the 200,000-visitor drop did little damage to the state's \$4 billion tourist economy, Kemp explained. "It's almost impossible to quantify any economic impact" from the 9 percent drop in Powell visitors.

All that could change, argues John Weisheit of Living Rivers, an environmental organization that favors draining Lake Powell. If the severe drought persists for four more years, he notes, the reservoir will effectively be drained -- dam or no dam.

"It's going to continue to drop. And it's going to drop dramatically. The boat ramps are going to run out of topography," he says.

That may sound like a wild claim, but it is not out of the question, concedes Andrew Gilmore, hydraulic engineer for the U.S. Bureau of Reclamation. "It's conceivable that we could run out of water at Lake Powell. If we had another four years [of drought], we'd be awfully close," he says.

According to bureau calculations, the lake level will fall until the spring snow runoff, when the water will begin to rise, Gilmore says. "Our current inflow forecast has Lake Powell dropping another seven feet until April, when it will begin to fill up."

But unlike 10 years ago -- when the lake level jumped by 60 feet during a spring with substantial snowpack across the Colorado River drainage system -- this year's melt will be modest. "The snowpack is fairly meager across the whole basin," Gilmore says. "Our forecast is for 58 percent [of normal] runoff."

Periods of low precipitation are the reason Glen Canyon Dam was built, Gilmore says. "We look at it like it's performing its job. In a drought, Lake Powell is doing its job," he says of its water-storage capabilities.

At 53 percent full, Lake Powell now holds about 13 million acre-feet of water, Gilmore says. The forecast calls for the reservoir to gain about 4 million acre-feet in runoff. But under the Colorado River Compact signed by the seven states in the Colorado River drainage, Lake Powell must deliver annually 8.23 million acre-feet of water downstream, where it is impounded at Lake Mead.

"In these drought years, more goes out than comes in," Gilmore says.

No one is sure whether the drought will continue. But a study in the Feb. 11 edition of Geophysical Research Letters tracking ocean temperatures and tree rings anticipates the drought will linger, according to one of its authors, Julio Betancourt.

A research scientist for the U.S. Geological Survey and an adjunct professor at the University of Arizona, Betancourt explains that the last time the South Pacific was as cold as it is now and the North Atlantic was as warm, the Colorado River drainage experienced the drought of the 1950s, which lasted 25 to 30 years in some places. "We are now in a megadrought," Betancourt says, "in that it stretches from Montana to New Mexico and involves several seasons."

Good for the Fish: Analysis of tree rings during a 750-year period in the region revealed that dry and wet patterns do not occur at regular intervals. "You can't predict drought by time. The tree rings show that droughts don't occur cyclically," he says.

Whether Lake Powell eventually turns into a mud puddle remains the stuff of conjecture. But in the short term, the drought is good for the warm-water fishery, according to Wayne Gustaveson, a biologist with the state Division of Wildlife Resources.

"We need these low periods to re-establish habitat and nutrients,"

LR Press Release 03/03/03

Living Rivers to Target Mill Creek Revival on March 14

We've seen it every summer: a dried-up creek along our beautiful Mill Creek Parkway, the most blatant example of the growing ecological crisis occurring along this much appreciated drainage. Water may be pouring off the La Sals, but by the time it makes its way into Moab, every drop has been diverted. As drought and water demands persist, it's unlikely this situation is going to change without community support to bring our beloved Mill Creek back to life. Living Rivers will be kicking-off a new campaign to aid in the Creek's defense on Friday, March 14, the Sixth Annual International Day of Action Against Dams, and for Rivers, Water and Life.

The festivities begin with a noon rally and picnic on the lawn at the County Courthouse. Longtime environmental musician Peter Neils will help set a festive mood while a host of concerned citizens present information on how and why we need Mill Creek's flow. A set of recommendations for the County Council consideration will also be presented, along with ways in which the community can become involved in promoting them.

That evening, beginning about 9:00 P.M., Living Rivers will be hosting the "Mill Creek Revival & Colorado River Fiesta" at the MARC (100 North and 100 East). This free party will emphasize a revival spirit with dancing, costumes and games. There is no admission charge and refreshments are free. Also at the MARC that evening, beginning at 7:00 P.M., is a free film "U.S. Foreign Policy: The War Against the Third World" sponsored by Moab Citizen's for Peace and Global Justice.

Mill Creek's ecology is being devastated. Native fish, such as the flannelmouth and bluehead suckers, depend on a flowing Mill Creek. Other critters, like beavers and muskrats, need Mill Creek too. The most critical habitat of Mill Creek is near the mouth, which provides a refuge and food source for the endangered and threatened fish species of the Colorado River.

"What's happening here in Grand County is emblematic of the larger problem affecting the entire Colorado River watershed," says John Weisheit, Living Rivers conservation director. "Despite nature's warnings that we are using far too much water, we continue to focus on getting more and not on conservation."

Last month the Grand County Water Conservancy District asked the Bureau of Land Management for permission to reduce by half the amount of water it leaves in Mill Creek below the diversion for Ken's Lake. This request will likely be denied. But the search for water continues as an expensive proposal to pump Colorado River water into Ken's Lake moves forward.

Evaporation and seepage losses to Ken's Lake alone amount to 30 to 70 percent of the water diverted from Mill Creek. Increasing this storage efficiency could go a long way towards helping to get water back into the creek.

Additionally, many of those irrigating with Mill Creek water are given no incentive to conserve. Their water rights are often based on what is known as a "use it or lose it" principle. If irrigators do not use the amount of water the state of Utah believes is necessary for them to grow their particular crops, they can lose their right to this water. Some farmers have stated that they would be glad to leave some water in the creek, if a system could be put in place to allow this to occur. For example, The Nature Conservancy has received approval to transfer water rights to the Utah Division of Wildlife Resources for increasing stream flow.

Most of the water diverted from Mill Creek is used for alfalfa, which, if not irrigated efficiently, can be a very water intensive crop. However, no help is available for those who are potentially interested in making the transition to more water efficient, higher value crops. For example, alfalfa can require four times as much water as grapes, and provides the farmer with a crop that yields only \$100 per acre-foot of water, whereas good quality grapes can yield \$7,500 per acre-foot. Implemented properly, such programs could not only aid in improving Mill Creek, but also increase the economic output of the community. It has also been documented that home values increase when they are associated with a functioning and attractive riparian ecosystem.

LR Letter 03/07/03

YDP Comments to the Bureau

March 6, 2003

Mr. Robert Johnson Regional Director Lower Colorado River Region U.S. Bureau of Reclamation PO Box 61470 Boulder City, Nevada 89006-1470

By fax: (702) 293-8614

Dear Mr. Johnson:

Thank you for presenting the Bureau's most recent draft of Modifications to Projects of Title I of the Colorado River Basin Salinity Control Act (CRBSCA) (Public Law 93-320) on February 25, 2003. We write in response to that presentation and to reiterate our opposition to the Bureau's plan to request appropriations to upgrade and prepare the Yuma Desalting Plant (Desalter) for operations. We further emphasize our concern with the Bureau's failure to respond to Congress' request in the draft report presented this week.

The current version of the report to Congress includes a number of fallacies, inconsistencies and highly unlikely assumptions that overstate the economic feasibility of operating the Desalter and understate the feasibility of alternative measures for replacing the bypass flow. We again remind the Bureau that this report subjects the Secretary of Interior to a reprimand from Congress, which has legislated that:

The Secretary is authorized to provide for modifications of the projects ... to the extent he determines appropriate for purposes of meeting the international settlement objective of this subchapter at the lowest overall cost to the United States. 43 U.S.C. § 1574 (emphasis added).

Further, the Bureau has failed to produce the information requested by Congress concerning alternatives to operating the Desalter. Congress specifically requested a "report on alternatives to meeting Treaty requirements without the YDP, and actions the Bureau of Reclamation can take to reduce the high annual operation and maintenance costs." S. Rep No. 58, 106th Cong. 1st Sess. 80 (1999) (emphasis added).

We appreciate your correction of the estimated low-end cost of acquiring short-term leases of water, referred to in this draft as forbearance agreements, as well as the inclusion of the cost comparison table. However, to reiterate the other questions raised in our November 22 letter would be to virtually rewrite the entire letter. Therefore we refer you to our previous letter and again request answers to the questions and concerns therein.

In addition to the concerns already expressed, we request corrections to the current report and answers to additional questions as outlined in this letter.

Environmental Review

A complete environmental review of the impacts of re-operation of the Desalter or other alternatives must be completed prior to any implementation of actions to further the recommendations included in the report, including seeking congressional appropriations. We are concerned that the Bureau has already begun to channel funds towards preparation for reoperation without the benefit of environmental review, and without the benefit of analysis of fully developed alternatives.

The Bureau has also not yet secured a discharge permit for product water from the Arizona Department of Environmental Quality. Proceeding with appropriations requests and funding of Desalter readying activities without the appropriate environmental reviews would be pre-decisional.

Furthermore, we wish to point out that the language included in the current report and the cover letter from the Secretary which talks about assuring the operation of the YDP is pre-decisional in that it precludes a No Action alternative . Such language must be eliminated from the report and cover letter before transmittal to Congress.

Discussion of the Cienega de Santa Clara is incomplete, serves only to mask the importance of the wetlands to wildlife and humans, and retreats from the enhanced description in the previous draft. The Cienega de Santa Clara (not once referred to in full) provides habitat not only for migratory waterfowl and shorebirds, but also for threatened and endangered species. What is more, these species -- including the desert pupfish, Yuma clapper rail, and black rail -- have been listed pursuant to the U.S.'s and Mexico's endangered species statutes. Deletion of endangered species sustained by the Cienega does not eliminate the Bureau's obligations to endangered species, and what is more, the Bureau has glossed over a significant piece of information that we are sure Congress would appreciate having when weighing the costs and benefits of operating the Desalter.

Likewise, the reduced volume of water coupled with increased salinity of water reaching the salinity will degrade the ecosystem. This ecosystem is part of a Biosphere Reserve as designated by Mexico, is a major link in the Pacific Flyway and supports the vast majority of the Yuma clapper rail population. To claim that these effects "may" happen (p. 4) is deceptive and underestimates the impact to the environment that will most certainly occur as a result of operating the Desalter. Again, costs in the form of adverse impacts to the environment have been missed.

We also suggest you refrain from qualifying the Cienega as an "isolated" wetland. It is not, and this is a blatant attempt to minimize the size and importance of this wetland complex.

Economic Analysis

There are several fallacies and assumptions included in the economic analysis of operating the Desalter and implementing the alternatives. Many of the assumptions do not withstand the test of simple mathematical principles. Others are so optimistic as to be deceptive. In modeling projections, assumptions are necessary and in providing a cost estimate range, optimistic assumptions can be utilized in predicting the low-end cost. If such assumptions are employed, however, equally pessimistic assumptions must be used in predicting the upper-end of cost ranges. This is not at all the case in the Bureau's analysis.

Without performing a full analysis of our own as yet, we cannot divine every fallacy in the Bureau's analysis. However, some of the more obvious are as follows:

- Including the Desalter ready-reserve maintenance expenditures in the cost of obtaining forbearance agreements is misleading and completely unacceptable. Including it in this analysis is an insult to Congress and to the public. Desalter maintenance and pursuit of forbearance agreements are completely unrelated processes; either can quite obviously exist without the other. Linking them for the purposes of economic analysis in this report falsely inflates the costs of alternatives to operating the Desalter.

- Including \$2.4 million in research in the \$5.1 million annual cost of keeping the Desalter in ready-reserve mode is erroneous. The Desalter could be kept in ready-reserve without doing extraneous research. This is at best poor math and at worst a blatant effort to delude Congress. It needs to be backed out of the equation.

- While the analysis includes extraneous unrelated costs to estimate forbearance costs, it fails to include estimates of environmental mitigation costs for Desalter operations. The Bureau fails to note that operation of the Desalter would degrade the Cienega de Santa Clara but references studies with these conclusions (p.16); it is therefore appropriate to include the potential costs of avoiding, minimizing, and mitigating such impacts within the total projected cost of Desalter operation.

- Even using the Bureau's unrealistic assumptions, the analysis does not provide the accurate cost of operating the Desalter in its five-year and ten-year scenarios. By the Bureau's estimates, the Desalter would have to operate at one-third to two-third capacity for four years. Yet the analysis calculates cost of product water using the admittedly impossible assumption of full capacity. Operations at one-third and two-thirds capacity produce water not at the stated cost of \$305/acre foot, but at an estimated cost of \$689/acre foot and \$325/acre foot respectively. The Bureau should revise the report to accurately reflect the increased costs associated with necessary maintenance and system downtime. Assuming two years of operations at one-third capacity and two years at two-thirds capacity, as suggested in the Bureau's Gantt Chart (per HJA Consulting) product water in the five-year scenario averages \$466/acre foot.

- The low-end estimate of \$32/MWh for power costs to operate the plant is unrealistic. The best price available for a strip of power (four quarters averaged) on the bulk power market today on the southwest grid is approximately \$44/MWh, even assuming the plant will be operating during less expensive shoulder hours. While the bulk power market is arguably volatile, this is not a liquid market. The Forward Curve for the market does not predict excesses of supply over demand, and with build-out time for power plants of five to ten years, the Curve tends to be accurate. The low-end estimate used in this analysis is unlikely to be available for a long-term contract in the massive quantity needed for full capacity Desalter operations.

- The report fails to analyze a one-time cost of decommissioning the Desalter as an action the Bureau of Reclamation can take to reduce the high annual operation and maintenance costs of the Desalter. This alternative should be compared against keeping the Desalter in ready-reserve mode and/or operation of the Desalter at various partial or full capacity levels.

Operations Decision Criteria

The Bureau stated in its presentation that decisions on the percentage of capacity at which the Desalter would be operated would be made annually. Yet the Bureau was unable to adequately answer our question concerning what the decision criteria will be. Please answer the following questions regarding operating capacity and decision criteria: · What are all the elements of the decision criteria? · What will be the timing of determining percentage of capacity for operations? · Who beside the Bureau will participate in developing and applying the criteria? · Will the development of these criteria be subject to public review? We have similar concerns and questions regarding the replacement criteria (p.20).

Scientific Debate The report states that "Operation of the YDP would decrease the volume and increase the salinity of bypass water reaching the Cienega and may degrade its ecological value. Operation of YDP would be met with substantial controversy, and additional scientific debate." (page 5) The phrase "additional scientific debate" has not appeared in previous drafts: why was it included in this draft? The disruption of bypass flows to the Cienega in 1993, due to flood damage and subsequent repairs of the bypass canal, significantly degraded the Cienega. These impacts are clearly documented in the scientific literature. If, as we suspect, the Bureau is unable to document any "debate" about the expected degradation of the Cienega due to Desalter operation, then all references to "scientific debate" should be expunged from the report.

Federal Obligation Previously, we disputed the Bureau's apparent claim that the "interim period," in which the United States received credit for the Coachella Canal Lining Program, had ended. Given the Secretary's decision to reduce California water orders to 4.4 million acre-feet for calendar year 2003, we believe that this "interim period" has ended. Given that the Secretary authorized the delivery of some 200,000 acre-feet of additional Colorado River water to California's agricultural contractors last November – despite the existence of extraordinary drought throughout the basin – it is quite clear that the interim period was in effect through 2002. Further given that the Coachella Canal Lining Program salvages some 132,000 acre-feet per year, 24,000 acre-feet per year more than flows to Mexico via the Bypass Drain, and that there has not been a flood release from Hoover Dam since 1999, it is reasonable to assume that the United States has accumulated 72,000 acre-feet of bypass-flow credits, that can be applied to the current year's obligation. This federal credit should be noted in the report.

Water Supplies and Needs While we understand the concerns surrounding tightening water supplies, particularly those of Arizona contract holders, we do not trust in the rationale that operation of the Desalter seeks to address those concerns (p.14). Were the Bureau truly interested in alleviating the pressures on Lake Mead storage and lower priority water users, this interest would be reflected in other Bureau proposals and policies – unfortunately, it is not. For example, in the FEIS for the Inadvertent Overrun and Payback Policy, the Bureau would allow any and all debt to be forgiven in the event of a flood control release. If the Bureau were aiming to maximize water storage, the agency would require full payback of all debt.

Thank you for the opportunity to comment. We hope these concerns will be accommodated in a new draft report. However, should you continue to include the elements that we find objectionable, we insist that you adjust the language of the report under "Consultation with Affected and Interested Parties" to remove any implication that we concur with the report as written. This could be effected by changing the last sentence at the end of that section to read, "This report of the Secretary of the Interior reflects the views and proposals of the Department after consideration of the comments and suggestions received in that review process. It does not reflect a consensus of the parties with which the Bureau of Reclamation consulted, nor does it represent a compromise between the different views expressed." Should this report go forward with elements that we find objectionable and an implication that we concur with those elements, we certainly would not hesitate to contact members of Congress on our own to expose the deception being waged by the Department.

Please don't hesitate to contact us if you have questions. Thank you.

Sincerely,

Kara Gillon
Wildlife Counsel
Defenders of Wildlife

Jennifer Pitt
Senior Resource Analyst
Environmental Defense

Lisa Force
Program Director
Living Rivers

Michael Cohen
Senior Associate
Pacific Institute

Steve Glazer
Chair, Colorado River Task Force
Sierra Club

Pamela Hyde
Executive Director
Southwest Rivers

cc: Commissioner Carlos Ramirez, IBWC
Commissioner Arturo Herrera, CILA

LR in the News 03/07/03

Writers on the Range: Lake Powell--Going, going, gone?

by John Weisheit

Who would have believed it? Water levels at Lake Powell have dropped to 50 percent for the first time since it filled in 1980. This draining is likely to continue to the point where the reservoir could vanish in the next three-to-four years.

With snowpacks below 25 percent of normal, and continued warnings from the U.S. Geological Survey, EPA and others that a severe and sustained drought should be anticipated, Lake Powell's days may be numbered. A 1995 study published by the American Water Resources Association predicted that a severe drought would lead to Lake Powell's draining within eight years. Things are right on schedule.

Now that Lake Powell is down by some 87 feet, three boat ramps have been closed: Antelope Point, Stateline and Hite. The National Park Service is working with a \$3 million emergency appropriation to extend other ramps as the reservoir continues to decline. But construction of the recently approved \$70 million Antelope Point marina complex is in limbo, because boats can't be launched from what has been revealed by drought to be a cliff.

Once Lake Powell drops an additional 28 percent, it will no longer generate hydroelectricity because Glen Canyon Dam's penstocks will be exposed, and water will no longer be able to turn the generators. There's also a problem with sediment, since fluctuating river flows that occur during low reservoir levels will speed the movement of sediment toward Glen Canyon Dam.

The U.S. Geological Survey says that major droughts of the past, such as the years from 1942 to 1977, went largely unnoticed. We notice this drought because the West has four times the population and we've been mining our groundwater.

Federal scientists have also informed us that the previous century was 20 percent wetter than normal. That means our ability to put water to work was helped by luck as much as it was by massive engineering projects. Even at those inflated levels, Colorado River water allocations are 20 percent above what the river delivered.

We've managed to avoid crises in the past because not all the Colorado River Basin states used their full allocations. Even so, the river reached the sea only twice in the past two decades. Add to all this a drought cycle that is predicted to last 25 years, and Lake Powell, along with every other reservoir in the upper Colorado River storage system, won't have water to store.

Vanishing bodies of water in the Western United States shouldn't surprise us: It's part of our legacy. In 1890, the Geological Survey's first professional paper discussed the principles of global climate change. The publication analyzed how a body of water that was once 800 feet deep -- Lake Bonneville -- had reduced itself into the briny and shallow Great Salt Lake.

In the 19th century, the physical geography of the planet provided undeniable evidence that humans can become victims of climate change. In the 20th century, we gained new tools, such as tree-ring data, that allowed us to reconstruct the climate of the last 400 years. This reaffirmed that the Earth's climate varies dramatically. Whether these changes result from the effects of greenhouse gases or from natural cycles, the results are the same.

Scientists have given us ample warning, but our water-management experts don't listen. At a recent gathering in Moab, Utah, John Keys, Commissioner of the Bureau of Reclamation, worked to calm the fears of those concerned that the Colorado River may soon be unable to provide for the 25 million people plumbed into his system.

"They (the reservoirs) are doing exactly what they were designed to do," he said. But when it was pointed out that these reservoirs are declining over 10 percent per year, and thus could empty in another five to six years, he had no plan for how the federal government would handle the shortages.

Certainly many of us will be pleased to see the uncovering of Glen Canyon. It will be nature's way of reminding us that we are not in control.

It would be truly unfortunate, however, if the warnings these declining levels represent are not heeded, and all those presently reliant on the overuse of Colorado River water get plunged into a crisis with no plan of action.

John Weisheit is a contributor to Writers on the Range, a service of High Country News in Paonia, Colorado (hcn.org). He is conservation director of the nonprofit group, Living Rivers, in Moab, Utah.

Take Action 03/07/03

Cienega de Santa Clara Needs Your Support!

Please read and respond to our summary of the Bureau of Reclamation's Draft 28 Modifications to Projects of Title I of the Colorado River Basin Salinity Control Act. If the proposal put forth in the BuRec document were to be accepted, the already imperiled Cienega de Santa Clara in the Colorado River Delta could be decimated.

Background: Under the Colorado River Basin Salinity Control Act of 1974 (PL 93-320) (CRBSCA), the United States has had to bypass the highly saline agricultural drainage from the Wellton-Mohawk district through the MODE canal, in order to meet the salinity requirements of the Act. The discharge inadvertently revived the Cienega de Santa Clara, a rich 14,000-acre wetlands, home to several endangered species and an important stop for migrating birds on the Pacific flyway. The Cienega and 90% of the delta region in which it exists was destroyed when water diversions from the Colorado River by the United States and Mexico left nothing but unscheduled reservoir "spills" to water the formerly two million acre biologically diverse region.

The CRBSCA authorized building the Yuma Desalting Plant (YDP) to desalinize the agricultural drainage. But the plant was never operated at more than one-third capacity and for more than a few months because it was not economically viable. Water produced by the YDP would come at an estimated cost of \$400 - \$900 per acre foot. By comparison, farmers in the Yuma area pay an average of \$12 per acre foot.

Summary:

The draft report, Modifications to Projects of Title I of the Colorado River Basin Salinity Control Act, sets out the Bureau of Reclamation's (BuRec) case for operating the YDP , thereby reducing bypass flow to the Cienega de Santa Clara. At full operating capacity, the Cienega would receive only the intensely saline brine from the YDP process, which would completely destroy the wetlands.

The BuRec views the bypass flow to the Cienega as lost water because it does not count as part of the U.S. obligation of water delivery to Mexico. The amount of bypass flow is ~108,000 acre-feet per year and this bypass water has an average salinity on the order of 2800 ppm.. The YDP operations would treat Wellton-Mohawk agricultural drainage water and return it to the Colorado basin where it could be included as part of treaty obligation to Mexico at the Northern International Boundary.

The draft report exists as the basis from which BuRec can make funding requests to support forbearance agreements and request funds to ready YDP to operate at full capacity. The draft report states that the Cienega de Santa Clara has been created, but does not detail the Cienega's history of having been a component of the pre-dam wetland complex along the Colorado delta. As well, it offers no plan for supporting existence of the Cienega. The report states that the bypass drainage to the Cienega has been at the discretion of the U.S.

The next step for the BuRec after submitting this proposal to Congress is to "move forward with the expenditure of funds to implement" their proposed measures. In truth, BuRec has already increased it's funding for the YDP in 2003, and is working to correct six areas of plant deficiencies by the end of the year. Further appropriations appear to have been requested and included in the 2004 appropriations draft.

The proposal finds its justification in this reasoning: "Because the drainage water in the bypass is not desalted and returned to the River, the [current] method of operation results in the release from Lake Mead of comparable quantities of water, which otherwise would not be needed if the bypassed water was delivered to Mexico as part of the U.S. Treaty delivery obligation." The Bureau argues that this aggravated water shortages in the Colorado reservoirs. The report notes that "tightening water supplies and increased demands has raised important concerns" especially from Central Arizonan Water Conservation District, which operates the Central Arizona Project (CAP).

The 108,000 acre-feet bypass flow to Cienega represents less than one percent of the average annual flow of the Colorado River's 12 million to 15 million acre feet. The Cienega is an incredible wetland with a diverse vegetation structure that supports an

equally diverse population of birds and animals including the federally listed endangered Yuma clapper rail and the desert pupfish. The result of operating the YDP would be to cutoff flows to the Cienega so that 108,000 acre feet more of the U.S. excess water reserves could stay in its impoundments, much of it to evaporate.

The draft report explains that a “thorough environmental review of the original EIS (which dates from 1975)” would be undertaken. However, the environmental review with regard to the effects on the Cienega is largely irrelevant since the Cienega is located in Mexico. In response to a lawsuit brought by Environmental Defense against the BuRec concerning Colorado River delta species, the agency claims it is not responsible for the impact its operations have on endangered species that exist across the international border. In addition to an environmental review, the draft report states that under Section 402 of the Clean Water Act, a discharge permit must be obtained to transfer desalted product water to the Colorado River.

The report includes a section on Environmental considerations relative to the bypass flow and discusses the Cienega and its Biosphere Reserve status (p.14). The document states that “reduction of current bypass flows will be met with substantial controversy.” However the document says an environmental review will be conducted but makes no proposal for sustaining the Cienega. The reader is forced to assume that if this proposal is allowed to go forth, the Cienega’s outstanding ecological value will be severely compromised. Biodiversity will receive a crippling blow.

In the report section subtitled "Potential Sources of Replacement Water to meet Title I objectives" (p.17) it is stated that replacement supply for bypass flow to the Cienega must come from inside the Colorado River Basin. “The primary source of replacement water for flows in the Bypass Drain is expected to be from the Lower Basin agricultural water users, and recovery and return of Colorado River water that would otherwise be lost to Mexico as groundwater. About 4.9 million acre-feet per year of Colorado River water is used in the Lower Basin for agricultural purposes...(p.17)” The report states that this fact should yield “opportunity for the program and water agencies to acquire additional water.”

The alternative most fully explored is forbearance, essentially short-term leases of water from area agricultural interests. The cost of forbearance agreements is estimated to be \$60 to \$309 per acre foot. Living Rivers research has shown the least valuable production of crops in the area to be worth \$53 per acre foot of water. The BuRec estimate of \$60 per acre foot is realistic. However, in order to make the YDP operations appear economically feasible compared to the environmentally responsible alternative of leasing water, the agency had to include a highly exaggerated higher cost estimate. In order to reach the \$309 per acre foot estimate, the agency included the cost of keeping the YDP in "ready reserve."

Since 1992, the YDP has been maintained on standby - or ready-reserve - at an annual cost of ~\$5.1 million. This cost includes \$2.4 million of general research concerning desalting plants. Keeping the plant in ready-reserve mode obviously has nothing to do with seeking water leases. Including the cost in alternatives to operating the YDP is a blatant lie.

The report mentions the alternatives of "extraordinary conservation" such as upgraded irrigation systems for farmers in the lower basin. It does not however develop these alternatives nor does it state even an estimated cost for these alternatives.

The draft report explains that the YDP operation would cost \$26-34 million yearly. The other effect the report mentions is that water flowing to the Cienega would be decreased to reject brine. According to report predictions, the flows would be reduced to 30,000 acre feet yearly with an average salinity of ~9000ppm . The annual amount of water the YDP is predicted to process is 60,700 acre-feet to 75,400 acre-feet. Then the BuRec would blend that product water with 10,000 acre-feet per year of untreated agricultural drainage water (p.15) yielding a complete return to the Colorado (when YDP is operating at full capacity) of 70,700 to 85,400 acre-feet.

The BuRec predicts that desalted product water from the YDP at full capacity operation will cost between \$305 and \$480 per acre-foot. The estimates are based on completely unrealistic assumptions including insanely low power costs, and do not take into account that the plant cannot operate at full capacity for at least four years. At one third capacity, even the BuRec's unreasonably optimistic estimates show a cost of \$689 per acre foot of product water.

The report concludes that BuRec intends to follow a two-pronged strategy of pursuing forbearance agreements and readying the YDP for operations.

Living Rivers and a network of other environmental groups in the US and Mexico do not intend to allow a thriving wetland to die. Nor should the phenomenal cost of operating the YDP be imposed upon taxpayers particularly in a time of national economic distress. We will be preparing comments to the BuRec report as well as our own report to Congress about the real economics of operating the YDP versus pursuing lower-cost and environmentally responsible options.

Please send the BuRec a message that their report to Congress is irresponsible and unacceptable in the fallacies it includes as well as in its erroneous conclusion. Send comments by March 31, 2003 to:

Mr. Robert Johnson
Regional Director
Lower Colorado River Region
U.S. Bureau of Reclamation
PO Box 61470
Boulder City, Nevada 89006-1470

By fax: (702) 293-8614

[To access the Bureau's full draft report to Congress, click here](#) [148k PDF File]

LR Event 03/13/03

Full Page Ad for Mill Creek Revival on Day of Action

On March 13, Living Rivers ran this full-page advertisement in the Moab *Times Independent* demanding action by the Grand County Council to aid in restoring flows to Moab's Mill Creek.

Download a copy [here](#) [284k PDF File]

Letter to LR 03/14/03

To Gale Norton Demanding Immediate Action on Colorado River Drought

Honorable Gale Norton
Secretary, United States Department of Interior
1849 C Street, NW
Washington DC, 20240
Dear Secretary Norton,

We are writing to seek your cooperation in averting the emerging social, economic and ecological crises related to Colorado River water availability. Although snow packs in the basin are improving, river flows are again predicted to be below normal for the fifth straight year. According to the National Oceanographic and Atmospheric Administration, the current El Niño event has, "reached its mature stage and is expected to weaken." Basin-wide storage is at an all-time low. With federal water allocations continuing to exceed natural deliveries, the region is quickly nearing the halfway point to catastrophe. It is vital that federal, state, Indian tribes and private groups begin developing a framework for revisiting Colorado River water allocations and the laws which govern them.

We fully appreciate the political, economic and legal complexities associated with re-opening discussions pertaining to the Colorado River Compact and the Law of the River. However, the warning signs of system collapse are apparent. Storage in reservoirs is less than 60 percent of capacity and declining at a rate of more than ten percent per year. The Geological Survey cautioned last year that Western water managers should be prepared for below average precipitation over the next several decades. They caution that "a repeat of the 1942 to 1977 drought could be catastrophic" given the Colorado Basin's increased population growth.

If precautionary mechanisms are not put in place shortly, a crisis of unquantifiable proportions could easily unfold. Ten percent of the nation's population relies on Colorado River water, including the metropolitan areas of Los Angeles, Phoenix, Las Vegas, Salt Lake City, Albuquerque, San Diego and Denver. A \$1.5 billion agricultural industry and 4200 megawatts of the Southwest's energy supply could be severely impacted. Yet, Bureau of Reclamation Commissioner John Keys stated on February 13 that his agency has no plan for how to allocate water once major shortages occur.

Such complacency will not only burden the Southwest's economy, but the federal treasury and judiciary as well. Emergency funds will be sought to compensate irrigators who shift their water to municipal users. Major lawsuits will materialize as Western states and water users battle the federal government over control of water rights. Further compromises regarding in-stream flows will burden federal courts with additional environmental complaints. Unless timely, pro-active measures are taken, an extensive amount of federal, state and local resources will unnecessarily be poured into crisis management.

Such an atmosphere will exacerbate tensions amongst competing interests and further complicate efforts to establish realistic long-term Colorado River management strategies. Given the present allocation system, it is not a matter of if, but rather of when, the Colorado River storage system will be unable to meet demand. Scientists have determined that the actual average flow of the Colorado River at Lee's Ferry is 20 percent below the original Compact allocations. The data also reflects that the Colorado River flow during the current drought cycle has been 15 percent lower than during the first four years of the 1942-1977 drought. Additional reservoirs will not solve the problem; new strategies for water allocation and use must be developed as soon as possible. We seek your commitment toward helping to establish a dialogue amongst the basin states, water users and environmental groups in order to begin tackling this critical problem.

The federal government has primacy over Colorado River management; you are the basin's legally designated Water Master. The Colorado River is held in trust for the benefit of the public, and it has become obvious that its management can no longer be relegated solely to the basin states. Uniform leadership, authority and policy development must come from the Department of the Interior. Your action at the end of last year to limit California and Nevada's deliveries to their prescribed allocations was a positive first step. We now encourage you to begin a thorough overhaul of the Colorado River Compact--one that realistically reflects present use patterns and anticipated river flows. At a minimum, water allocations need to be reduced to reflect actual historical river flows.

Bringing the basin's water use into balance with natural flows will be much easier, far more efficient and certainly less costly than the monumental engineering works of the past have been. In fact, as was calculated by the late Walter B. Langbein, the Colorado River Basin's reservoirs' evaporation and seepage losses far exceed the benefits of the additional water storage they provide.

In order for the Department of the Interior to realize a reduction in water allocation, a top priority should be the establishment of water use efficiency standards for all irrigators under contract with the Bureau of Reclamation. These users consume more than 80 percent of Colorado River water not destined for Mexico; programs should be established to aid irrigators in replacing water-intensive feed crops, such as alfalfa, with produce crops that use significantly less water per acre. Such measures could reduce irrigation consumption in the Colorado River Basin by half, thereby freeing up more

water than is presently being used by all the municipalities currently plumbed into the Colorado River system.

The historical theory underlying Colorado River law and management is that in years of below-average river flow the sixty million acre-feet of storage built into the system will act as an insurance policy against the effects of cyclical drought. But we are becoming increasingly aware that such insurance is not limitless. Increasing water use within the basin and changing climatic conditions are driving the system to the breaking point. This need not occur. A vast amount of additional water management understanding and experience has been accumulated since the Colorado River Compact was first crafted. The Colorado River can accommodate the future needs of the Basin states, Indian tribes and Mexico as well as the natural environment. This important goal will most effectively be accomplished when the Department of the Interior takes the lead in the evolution of management policies which recognize the Colorado River's inevitable constraints.

Thank you for your attention to the matter, and we look forward to your reply (transcribed below).

Sincerely,

Owen T. Lammers
Executive Director

cc: John Keys, Commissioner, Bureau of Reclamation

Commissioner Keys responds to LR letter United States Department of the Interior

Bureau of Reclamation
Washington, D. C. 20240
In Reply Refer To:
W-6333 June 17, 2003
ADM-13.00

Mr. Owen T. Lammers
Executive Director, Living Waters [Rivers]
P.O. Box 466
Moab, Utah 84532

Dear Mr. Lammers:

Thank you for your letter to Secretary of the Interior Gale A. Norton dated March 14, 2003, regarding Colorado River issues. The Secretary has asked that I respond to you on her behalf. Similar to other Western rivers, the Colorado River Basin has experienced four dry years, some of which having been among the driest on record. With such a significant part of the nation dependent on water supplies from the Colorado River, it is truly fortunate that we continue to enjoy the benefits of our existing

water supply facilities that help to mitigate to make up for these tough years of insufficient moisture.

As you point out in your letter, these issues are complex and sometimes contentious, and it gives me a perfect opportunity to mention the Secretary's new initiative, entitled Water 2025: Preventing Crises and Conflict in the West. Water 2025 recognizes the realities we face in dealing with water issues, such as explosive population growth, increasing needs for water for environmental and recreational uses, and the national importance of food and fiber production from Western irrigated agriculture. Water 2025 sets forth a strategic plan to facilitate a vigorous and educated public discussion in key Western communities, including those that rely on the Colorado River, where the likelihood for conflict and crises over water exists or can be predicted to occur by the year 2025. I invite you to attend and participate in any of the eight regional consulting sessions hosted by the Bureau of Reclamation. The information on these sessions is located on our website, www.doi.gov/water2025.

Again, thank you for your comments and concerns about Colorado River issues. The Colorado River has been and will continue to be a top priority for our agency, and I look forward to working with you and your organization in the constructive and positive manner set forth in Water 2025.

Sincerely,

John W. Keys, III
Commissioner

LR Press Release 03/14/03

Drought Watch campaign launched: demands immediate federal action to avoid catastrophe

Contact:

Owen Lammers (435) 259-1063
John Weisheit (435) 259-1063 or (435) 259-8077

El Niño provides no Drought Relief Colorado River Storage at lowest levels in history

"Drought Watch" Campaign demands Federal Action to Avoid Catastrophe

The National Oceanographic and Atmospheric Administration reported on March 3, 2003 that the current El Niño event has, "reached its mature stage and is expected to weaken." What was hoped to provide a break from several years of below average precipitation, has only brought snow packs to 80 percent of normal. The result: water

use in the Colorado watershed will again outpace river deliveries, causing reservoir levels to decline for the fifth year in row.

As of today, levels in the Colorado watershed's primary reservoirs are at an all time low of 59 percent, declining at a rate of ten percent per year. Abundant historical evidence reveals that the present drought is far from unprecedented, and warnings from the United States Geological Survey one year ago urged water managers to be prepared for several decades of below average precipitation. They cautioned that "a repeat of the 1942 to 1977 drought could be catastrophic," given the Colorado Basin's increased population growth and water use. River flow during the current drought cycle has been 15 percent lower than those at the beginning of the 1942-1977 drought.

However, on February 14 Commissioner John Keys of the Bureau of Reclamation stated that his agency had "no plan" for how the federal government would handle water shortage once reservoirs began running dry. The Bureau of Reclamation has merely continuously revised its over-optimistic hydrologic forecasts for river flows. The most recent, on March 3, was a 25 percent downward revision for flows into Lake Powell, the principle figure for determining water availability for California, Arizona and Nevada. In October, 2002 BuRec predicted flows would be 10.14 million acre-feet in the water year of 2003. Now they are predicting only 7.44 million acre-feet, 62 percent of normal.

"This is nothing more than the beginning of an Enron event for the 25 million people reliant on the Colorado River water," said Owen Lammers, executive director of Living Rivers, the Colorado River's principal advocacy organization. "The Bureau of Reclamation puts out inflated projections to give the public a false sense of security, meanwhile the Basin's bank accounts are going down, down, down."

In a letter sent today to Secretary of Interior Gale Norton, on the occasion of the sixth International Day of Action Against Dams, and for Rivers Water and Life, Living Rivers demanded urgent action by the Colorado River's legally designated Water Master. As an initial step, Living Rivers is seeking the Secretary's commitment toward helping to establish a dialogue amongst the basin states, Indian tribes, water users and environmental groups, to begin tackling this critical problem.

The letter outlines two key challenges that need to be addressed.

- Bringing the basin's water use into balance with natural flows by re-negotiating the water allocations established in the Colorado River Compact. These allocations are 20 percent above what the river deliver in years of average flow.
- Establish water use efficiency standards for all irrigators under contract with the Bureau of Reclamation. These users consume more than 80 percent of Colorado River water, much of it for water intensive and low value crops, such as alfalfa and other feed crops for livestock.

"The Colorado River can accommodate the future needs of the Basin states and Mexico as well as the natural environment. This important goal will most effectively be

accomplished when the Department of the Interior takes the lead in the evolution of management policies which recognize the Colorado River's inevitable constraints," the letter from Living Rivers states.

Living Rivers has established "Drought Watch" as an urgent campaign focus to provide the public with accurate information about the decline in water availability in the Colorado River watershed, and opportunities for the region's water users to alter their consumption patterns without jeopardizing the meeting of human needs, the economy or the environment.

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On the Web:

[Living Rivers Drought Watch Campaign](#)

[United States Geological Survey, Precipitation Survey of the Colorado Plateau Region](#)

[National Oceanographic and Atmospheric Administration Forecast](#)

LR in the News 03/16/03

Conservationists Bemoan Diversion of Water From Moab's Mill Creek

SALT LAKE TRIBUNE
BY LISA CHURCH

MOAB -- Grand County's water policies are destroying a sensitive riparian area and threaten to further damage the Colorado River watershed, water conservation activists say.

About 80 rallied Friday in Moab to protest those policies, an event that coincided with the sixth annual International Day of Action Against Dams and for Rivers, Water & Life.



Speakers at the rally, sponsored by Living Rivers, a Moab-based nonprofit group, accused the county of "putting greed before the welfare of the community." The activists

contend the Grand County Water Conservancy District diverts too much water from Mill Creek, a stream that originates with runoff from the La Sal Mountains and flows more than 25 miles through Moab, emptying into the Colorado River. The water winds up in Ken's Lake reservoir, the main source of irrigation water for about 125 farmers and ranchers in the county's southern reaches.

"Water may be pouring off the La Sals, but by the time it makes its way into Moab, every drop has been diverted," said John Weisheit, conservation director for Living Rivers. "Mill Creek's ecology is being destroyed."

Last month, the district petitioned the federal Bureau of Land Management for permission to reduce by half the amount of water it leaves in the stream below Ken's Lake, a move Weisheit said would devastate Mill Creek's native plants and fish. The BLM denied the request. Meantime, the Grand Water and Sewer Service Agency, of which the district is a part, has approved a feasibility study on the cost of diverting Colorado River water to Ken's Lake. The agency owns rights to 10 cubic feet per second of water but has never exercised them because it had no way to get the water to the reservoir.

Increasing Mill Creek's flow is essential to maintaining a healthy riparian area, said Lee Goodman, of Moab.

"Mill Creek is everything people create in their myths as an idyllic place. When you've got something as gorgeous and as important to the human spirit, one shouldn't have to argue over how much water it can have," Goodman said.

Agency manager Dale Pierson said Friday that Grand County water districts encourage conservation. In recent years, he said, district users have reduced water consumption by 25 percent, the state water conservation standard, and last year water use was down by 28 percent from 2001.

"We're doing pretty well, but we can do better," Pierson said. "We want all our customers to be conscious of water use, and to conserve as much as possible."

He said the proposed \$20 million Colorado River plan would add additional water to Ken's Lake that the district would use to establish a separate valley-wide irrigation system. That way, customers who now use water from the culinary system to water lawns and gardens could save money and help the agency cut back on the amount drawn from its aquifer.

However, he said, "We won't build it if it isn't feasible for water customers."

Living Rivers Currents 03/19/03
Volume 3, Number 1, March 2003

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Living Rivers Currents 03/19/03

Troubled Delta: Help Save What's Left

For the past year, Living Rivers has been working to stop the Bureau of Reclamation (BuRec) from destroying the most functional piece of Colorado River delta habitat, the Cienega de Santa Clara. BuRec is preparing to submit a report to Congress that recommends the diversion of Cienega water to BuRec's Yuma Desalting Plant. Public input is needed now to help influence this report before it is finalized, as well as letters to Congress once it is submitted.

This rich 14,000-acre biosphere reserve in Mexico receives the only constant flows in the entire two-million-acre delta region. As such, it provides critical habitat for a number of endangered species, and especially for waterfowl traveling the Pacific Flyway between Alaska and South America. The Cienega and 90 percent of the surrounding delta region was destroyed when water diversions from the Colorado River by the United States and Mexico began taking every drop. The Cienega has been revitalized, however, as a result of irrigation drainage from southwestern Arizona that has been diverted into Mexico. BuRec now wishes to capture all this drainage water, and divert it through its mothballed desalting plant in Yuma, Arizona.

BuRec's motive is to add an additional 108,000 acre-feet of water back into the Colorado River, so that a similar amount could be used by farmers upstream. Finally completed in 1992 at a cost of \$253 million, the Yuma Desalting Plant was slated to treat irrigation drainage water and to ensure that water delivered to Mexico met agreed upon water quality standards. However, given the plant's operation costs of \$36 million annually, it has been more economical to obtain the 108,000 acre-feet of water from California, and allow the drainage water to flow on down to the Cienega. Starting up the plant will have the reverse effect—an ecological disaster for the Cienega, and an unnecessary economic burden for US taxpayers.

On March 7, Living Rivers, Defenders of Wildlife, Pacific Institute, Sierra Club, Environmental Defense and Southwest Rivers jointly submitted a critique of BuRec's most recent draft report to Congress. Among the most blatant omissions were hardly any reference to the Cienega and the ecological impacts associated with the loss of its only water source. There was also no mention of the federally listed endangered

species that would be affected by taking this water, including the Yuma clapper rail, desert pupfish and black rail.

To improve the economic picture, BuRec overestimated the desalting plant's output, causing the average price per acre-foot of water produced to be 33 percent lower than what would actually occur. A similar error was made in calculating the plant's primary operating costs: electricity. BuRec used a price of \$32 per megawatt hour, when the actual price is \$44. BuRec hopes that such faulty analysis will not be questioned by Congress, nor that Congress will ask for alternative methods of achieving the required water quality standards.

In fact, the draft report did not address long-term alternatives at all. Living Rivers' analysis reveals that water rights could be purchased or leased from Arizona irrigators at a cost of 75 to 85 percent less than the cost of desalting the drainage water via the Yuma plant. By not relying on the operation of the plant, it can be permanently decommissioned, saving tax payers an additional \$5.1 million annually.

Please join Living Rivers in demanding that a more thorough economic and alternatives analysis be undertaken by BuRec before they submit their report to Congress. Write to: Robert Johnson, Regional Director; Lower Colorado River Region, U.S. Bureau of Reclamation; PO Box 61470; Boulder City, NV 89006-1470; Fax: (702) 293-8614; Email: BJohnson@lc.usbr.gov.

Living Rivers Currents 03/19/03

Mill Creek: Microcosm of the Colorado River

In conjunction with the sixth International Day of Action Against Dams, and for Rivers, Water and Life, Living Rivers initiated a campaign to help revive a small tributary of the Colorado River running just 300 yards from its Moab offices. About 80 people turned out for the noon time rally on March 14.

Mill Creek drops 7,000 feet from the La Sal mountains to its confluence with the Colorado River, 25 miles away. Just like the Colorado, Mill Creek runs dry before reaching its final destination; can no longer support endangered native fish; sees most of its water diverted for taxpayer-subsidized alfalfa irrigation; and receives limited public involvement in decisions affecting its future.

Living Rivers' objective is the return of year-round stream flow by mobilizing public support to reduce the need for extensive diversions. On any given year, from 15 to 40 percent of the water diverted from Mill Creek is lost to leakage in the system's principal reservoir, Ken's Lake. Additionally, the agency responsible for managing this facility often takes more water from the creek than is allowed by their water right. Merely correcting these problems would go a long way toward reviving Mill Creek.

More important are the implementation of programs to help farmers who are potentially interested in making the transition to more water-efficient, higher-value crops. For example, alfalfa can require four times as much water as grapes, and provides the farmer with a crop that yields only \$100 per acre-foot of water, whereas good quality grapes can yield \$7,500 per acre-foot. Living Rivers is advocating similar alternatives for those who use Mill Creek water for water-intensive ornamental landscaping—promoting a switch to drought-tolerant native plants to keep more water in the creek.

Living Rivers Currents 03/19/03

Lake Powell: Running Out of Reservoir

Lake Powell reservoir is down 91 feet from normal; it is officially half empty. The last time it was at this level was 30 years ago when the reservoir was first filling. According to a report that was published in October 1995 by the American Water Resources Association, should a severe and sustained drought similar to past events occur, Lake Powell reservoir is likely to stay empty for approximately eight years.

The National Park Service, which oversees the marina facilities at Lake Powell, has had to make several adjustments to keep the facilities operational since last summer.

Despite these adjustments, three boat ramps are presently closed and the ferry service between two other marinas is also shut down.

Additionally, the recently approved \$70-million Antelope Point Marina Resort is in jeopardy of being built but never used. To be operational, this facility is totally dependent on having a full reservoir. Right now, at Antelope Point, the reservoir is confined between the sheer vertical cliffs of the original Colorado River canyon and is inaccessible. When considering the demand for water in the lower basin states of California, Arizona and Nevada, compounded by the growing realization that a severe and sustained drought is already upon us, it is possible that the resort may not be useable for decades.

At the top of the reservoir, where the Colorado River enters, major sediment problems are surfacing. The sediment deposits of the last 40 years have built a substantial delta forcing boat ramp and campsite closures, and will eventually engulf the concession facilities and the culinary water intakes.

This situation is also causing extensive complications for white water rafters whose multi-day trips through Canyonlands National Park end at Lake Powell. Their primary facility for getting off the water, Hite Marina, is effectively shut down due to sediment. It's difficult for land vehicles to get close enough to the water without getting stuck. This could be a major problem for the multi-million-dollar commercial rafting industry that relies on this stretch of the Colorado.

It has been anticipated that the upcoming snowmelt, and the consequent reservoir rise, might bring some relief for the facilities. But a current projection supplied by the Bureau

of Reclamation does not support such a hope and indicates lowering will continue through the middle of summer. The snowmelt will actually serve to aggravate the situation because the increased river flows will erode and mobilize the suspended sediments upstream, and then redeposit them at Hite Marina where the Colorado River delta is currently expanding.

Decreased recreation is not the only potential impact of the lowering reservoir. If the present drought does not relent, within three years Lake Powell will eventually drain to the level of the penstock tubes that spin the generators at Glen Canyon Dam.

This problem is not just indicative of Lake Powell. The entire Colorado River storage system has dropped from 92 to 59 percent over the past 40 months. In Arizona, a reservoir on the Verde River is completely empty. A reservoir on the Gila River is four percent full and Lake Roosevelt reservoir on the Salt River is 14 percent full. "Lack of access to flat water recreation is the least of our worries," says Owen Lammers, executive director of Living Rivers. "The Southwest plumbing system is headed for complete catastrophe and the Bureau of Reclamation, together with the seven states that use Colorado River water, have no disaster preparedness plan." For ongoing updates, visit "Drought Watch" at the Living Rivers web page.

Living Rivers Currents 03/19/03

Flaming Gorge: EIS to be Released

After nearly three years, the Bureau of Reclamation (BuRec) will soon be releasing its draft Environmental Impact Statement (EIS) for the reoperations of Flaming Gorge Dam. The purpose of this EIS is to recommend changes in dam operations to improve habitat for endangered fish along the Green River and in Dinosaur National Monument—the humpback chub, razorback sucker, bonytail chub and Colorado pikeminnow.

For a long time the operation of Flaming Gorge Dam has caused harm to native fish. The introduction of a successful fishery for non-native trout in the dam's tailwaters is a testament to the conditions existing downstream of the dam that make the river inhospitable for native species, which require warmer water for successful spawning and survival. The reservoir traps vital sediments behind the dam, thereby inhibiting sandbar- and beach-building habitat necessary for protecting juvenile fish. The dam, which has no fish passage structure, forms a reservoir which is used and managed for a recreational sport fishery for several



non-native species known to prey on endangered native fish. Conditions are marginal at best for endangered fish survival in the reservoir as well as downstream.

In 2000, Living Rivers formed a nationwide coalition to demand that BuRec fully consider the decommissioning of Flaming Gorge Dam as the most viable alternative to ensuring the recovery of native fish habitat in Dinosaur National Monument. Although a rather significant structure, Flaming Gorge Dam stores very little water, and generates an insignificant amount of hydroelectricity. Its decommissioning, along with that of the much smaller Fontenelle Dam upstream, would allow the Green River to again flow wild and free.

[Scoping Comments on EIS for Flaming Gorge Scoping Comments on EIS for Flaming Gorge Scoping Comments on EIS for Flaming Gorge Dam](#)

To obtain a copy of the draft EIS, write to: Beverly Heffernan; BuRec; 302 East 1860 South; Provo, UT 84606-7317; (801) 379-1161; Fax: (801) 379-1159; Email: bheffernan@uc.usbr.gov. Keep an eye on our web site for more detailed information once the draft EIS has been released.

Living Rivers Currents 03/19/03

Drought Watch! Demands Action to Avoid Crisis

Reservoir levels in the Colorado River watershed are at their lowest point in history. Over the past three years, they have been declining at a rate of ten percent per year and are now at 59 percent of capacity—an approximate three-year supply for the basin's 25 million residents and farmers. While historical evidence reveals that the present drought is not unprecedented and is likely to continue, the basin's water managers remain unconcerned.

The most recent sustained drought in the basin took place between 1942 and 1977. The regional climate was marked by less snow and fewer summer rains. No major crisis surfaced because Colorado River consumption was much lower than today. Last year the United States Geological Survey warned that a repeat of this drought could be "catastrophic." It is already shaping up to be much worse than the previous one. River flows during the first several years of the present drought are 15 percent below what they were when the 1942 drought began. Despite hopes that an El Niño event would generate above-average precipitation this year, the most optimistic forecasts now call for snowpacks of 20 percent below normal.

When these issues were raised to Commissioner John Keys of the Bureau of Reclamation (BuRec) last month, he stated that his agency had "no plan" for how the federal government would handle water shortages once reservoirs began running dry. BuRec has merely continuously revised its over-optimistic hydrologic forecasts for river flows. Its most recent, on March 3, was a 25 percent downward revision for flows into Lake Powell. In October 2002, BuRec predicted flows would be 10.14 million acre-feet

in the water year of 2003. Now BuRec is predicting only 7.44 million acre-feet—62 percent of normal.

According to Living Rivers' conservation director John Weisheit, BuRec is also overestimating the amount of available water in its reservoirs. "Their available water figures from Lake Mead and Lake Powell reservoirs do not fully account for the sediment which now occupies storage space. There are another two million acre-feet of storage losses, bringing the overall storage in the basin to 55 percent of capacity."

In a letter sent to Secretary of Interior Gale Norton on March 14, on the occasion of the sixth International Day of Action Against Dams, and for Rivers Water and Life, Living Rivers demanded urgent action by the Colorado River's legally designated Water Master. As an initial step, Living Rivers is seeking the Secretary's commitment toward helping to establish a dialogue amongst the basin states, Indian tribes, water users and environmental groups, to begin tackling this critical problem.

The letter outlines two key challenges that need to be addressed. First, bring the basin's water use into balance with natural flows by re-negotiating the water allocations established in the Colorado River Compact. These allocations are 20 percent above what the river delivers in years of average flow. Second, the federal government should establish water use efficiency standards for all irrigators under contract with the Bureau of Reclamation. These users consume more than 80 percent of Colorado River water, much of it for water-intensive and low-value crops, such as alfalfa and other feed crops for livestock.

LR in the News 03/20/03

Mill Creek Rally organizers say Grand County water agency puts greed before welfare of land

Times-Independent by Lisa Church

Moab, UT - Grand County's water policies are destroying a sensitive riparian area and threaten to further damage the Colorado River watershed, water conservation activists said at a protest rally Friday.

The Moab event coincided with the 5th Annual International Day of Action Against Dams and for Rivers, Water & Life, and also commemorated the founding of Living Rivers, a Moab-based non-profit group that promotes water conservation and restoration of Western rivers, officials said.

Speakers at the rally also accused the water agency of "putting greed before the welfare of the community."

Representatives from Living Rivers and other conservation groups say the Grand County Water Conservancy District annually diverts too much water from Mill Creek into

the Ken's Lake Reservoir. Mill Creek originates with runoff from the La Sal Mountains and flows more than 25 miles through Moab, emptying into the Colorado River. It is the main source of irrigation water for about 125 farmers and ranchers in the county's southernmost reaches.

"Water may be pouring off the La Sals, but by the time it makes its way into Moab, every drop has been diverted," said John Weisheit, conservation director for Living Rivers. "Mill Creek's ecology is being destroyed."

Last month, the district petitioned the U.S. Bureau of Land Management for permission to reduce by half the amount of water it leaves in the stream below Ken's Lake, a move Weisheit said would devastate Mill Creek's native plants and fish. The BLM recently denied the request, but activists point to it as an example of the agency's greed.

About 80 people gathered on the Grand County courthouse lawn to protest that request and a feasibility study approved by the Grand Water and Sewer Service Agency - the district's umbrella agency - to examine the cost of diverting Colorado River water to Ken's Lake. The agency owns rights to 10 cubic feet per second of water but has never exercised the right because it had no way to get the water to its reservoir.

Increasing Mill Creek's flow - the stream drops 8,000 feet through the mountains before reaching the Moab Valley - is essential to maintaining a healthy riparian area that is important to the community, said Moab resident Lee Goodman.

"Mill Creek is everything people create in their myths as an idyllic place. When you've got something as gorgeous and as important to the human spirit, one shouldn't have to argue over how much water it can have," Goodman said. "If you see your child being tortured right in front of you, it's important to stand up, to complain."

Agency manager Dale Pierson said Friday that Grand County water districts encourage conservation, and have been successful in promoting lower water use. In recent years, district users have reduced water consumption by 25 percent - the state water conservation standard - and last year, water use was down by 28 percent from 2001, he said.

"I think we're doing pretty well, but we can do better," Pierson said. "We want all our customers to be conscious of water use, and to conserve as much as possible."

He said diverting water from the Colorado River represents another step in reducing the amount of culinary water used by residents. The \$20 million plus project would add additional water to Ken's Lake that the district would use to establish a separate valley-wide irrigation system.

"If this pipeline were built, customers who currently must use water from the culinary system to water lawns and gardens, could save money and help us cut back on the amount water drawn from our underground aquifer," Pierson said. "We won't build it if it isn't feasible for water customers."

Activists hope the public protest will promote dialogue between Grand County residents and water officials.

"We want to work within the community to create responsible water use and conservation with a goal of maintaining our rivers, streams, and ecosystems. But we must also look regionally to restore the balance because we share this area with Native Americans and their values, which are older than ours and more important actually," Weisheit said. "If we continue this way like other hydro-societies, we will lose it all."

LR Letter 03/20/03

Fossil Creek Restoration Threatened

March 20, 2003
Phil Smithers
Senior Designer
APS / Generation Engineering
P.O. Box 53933, m/s 3190
Phoenix, Arizona 85210

Dear Mr. Smithers:

RE: Concerns regarding the restoration of Fossil Creek as agreed upon in the Childs Irving Hydroelectric Project Settlement Agreement and Removal and Restoration Plan between Arizona Public Service and the Intervenor, dated September 11, 2000.

Thank you for submitting the "Childs-Ingving Hydroelectric Decommissioning Update" dated February 03, 2003. We commend you for your work to support the decommissioning of the plants as agreed upon in the Offer of Settlement, Childs/Ingving Hydroelectric Project, Project No. 2069 between the intervenors and Arizona Public Service, submitted September 15, 2000 and the Settlement Agreement (Agreement), dated September 11, 2000.

Your February 3, 2003 Update includes an item under "Ongoing issues related to decommissioning" which is of concern. It reads "Historical – The R & R plan for this project describes removal of the surge tank at the top of the Childs penstock and the removal of contents from the Childs powerhouse. SHPO has raised issues with both. We support leaving the majority of contents in the Childs powerhouse for historical purposes and never intended to gut the building. These are the only issues SHPO has at this time."

First, this is not an ongoing issue as the Agreement includes a Removal and Restoration Plan (Exhibit M) which was negotiated at length between the intervenors and APS, and for which input was received from the US Forest Service, SHPO and

other agencies with a stake in the Proceedings. The Removal and Restoration Plan clearly states:

"The standpipe (30x30') shall be removed" (page 30); and "The Childs powerhouse shall remain as historical feature. All equipment, electrical, mechanical and maintenance will be removed" (page 31).

We will address the surge tank issue first. Leaving the surge tank in place is unacceptable.

Removal of the tank has already been negotiated and agreed upon as is stated in the Offer of Settlement (Offer) between APS and the Intervenor. SHPO and the USFS were both included in those discussions, as stated in the Offer (page 3), with the conclusion that the participants agreed to the Removal and Restoration Plan:

"These negotiations were designed to address the concerns of all interested parties, whether Intervenor in the relicensing proceeding or not. In fact, the settlement negotiations involved several additional parties that did not intervene in the relicensing proceeding, including ...the USFS,...State Historic Preservation Office...

"As a result of the collaboration discussed above, APS, the Intervenor and the Non-Intervenor have reached agreement for the surrender of the Project license and removal of the Project works, as described in the Childs/Irving Hydroelectric Plants Removal and Restoration Plan..."

The Agreement, Section 1.1 reads "The Participants have entered into this Agreement for the purpose of ...(b) approving the Removal and Restoration Plan..." (section 1.1)

"The Participants agree that Project removal, under the terms and conditions of this Agreement, constitutes a reasonable resolution to the dispute between them..." (section 2.1)

Because the Agreement is in place and has been for more than two years, no further discussion of these items should be necessary. However, we will reiterate briefly, for the record why leaving the surge tank in place is unacceptable

The value of preserving the tank for historical interpretation is questionable. The surge tank is a simple symmetrical 30-foot by 30-foot pipe made of concrete. It includes no innovative design, no natural native materials and is of little visual interest or appeal. While a surge tank was important to the production of hydropower at this facility, the need to preserve the tank itself is highly questionable. The tank is physically located well away from the Childs plant where the bulk of historical information will likely be sought. The tank's design and purpose are easily depicted in photos, drawings or verbiage. Removing the tank will have no impact on historical depictions.

SHPO's record for preserving Native American sites is dismal, and it continues to ignore the requests of Native American stakeholders in this proceeding. The Yavapai-Apache, stewards and residents of Fossil Creek long before the appearance of Euro-American settlers, have asked that the surge tank be removed. Yet SHPO continues to ignore them.

As stated by Vincent Randall, Tribal Chairman for the Yavapai-Apache Nation during the proceedings to FERC, September 21, 1999:

“Five-hundred years of stewardship on the land should serve as good cause for us to be acknowledged as real life stakeholders at the table. We believe the Nations voice should have official status along with the other participants when decisions are being made about such a traditionally significant place.”

In a letter of June 5, 2000, Vincent Randall stated:

“As we stated in the letter Chris presented on our behalf in May the Yavapai-Apache Nation was initially drawn to the process by the concept of full restoration for Fossil Creek....

“We believe the idea of full restoration is a noble one. Is the surge tank really intrinsic to the Euro-American experience in the west? ... The Yavapai-Apache Nation is pro preservation, but we see it as a matter of strict triage. Can the APS story be told without the actual surge tank? Yes, we believe it can. Will the touring public be diminished if the surge tank is removed? No, we believe it will not. Is the concept of returning the landscape to as close to the pre APS condition as possible a noble one? Yes, indeed it is. Is the skylined surge tank part of that condition? No it is not.”

Over and over, in the state of Arizona, ancient Native American sites have been photographed, at best, and then bulldozed with SHPO's blessing in the name of development. Now, the Yavapai-Apache are requesting one small concession from SHPO in this historical opportunity to restore a site that holds cultural and spiritual significance for their Nation.

We find SHPO's insistence on preserving the concrete tank, against the express wishes of the Yavapai-Apache Nation, shameful and appalling. We would hope that no admonition to the USFS concerning respect for the Nation in this matter is necessary.

The goal of the restoration plan is to return the area to its natural state as much as possible. The Introduction of the Removal and Restoration Plan reads, "The following plan is based on limiting damage to the surrounding environment while returning the environment as close as practicable to its native state." The native state did not include a three-story concrete tank. Moreover, the tank is a visual scar on the landscape and interferes with the enjoyment of a "natural" area.

The surge tank will be an obvious target for graffiti and will increase maintenance costs. With restoration, Fossil Creek will become a more desirable recreation destination, drawing larger crowds, and with potential historical signage regarding the surge tank, drawing them specifically to the tank. The USFS and SHPO should consider whether it has the funds to continuously remove graffiti and trash from the tank. Should the tank be left in place, we will seek designation regarding who will patrol the tank area and how often the maintenance work will be performed.

The tank represents a liability. The USFS and SHPO, as well as APS, should consider the safety and legal issues they may encounter given that the tank represents an

"attractive nuisance". Again leaving the tank in place and perhaps including signage drawing people to the tank is irresponsible. Putting a fence around the tank will only add to the nuisance factor and certainly does not constitute "removal and restoration."

The next issue at hand is APS' request to leave the electrical, mechanical and other equipment in place in the Child powerhouse. We recognize that APS has and will continue to incur substantial costs in complying with the terms of the Agreement and with the Federal Energy Regulatory Commission's requests for information to support APS' Surrender application. We also appreciate the contention that the contents of the powerhouse may be helpful as a means of interpreting the historical production of hydroelectric power at the plants. As such, we do not intend at this time to object to leaving the majority of the contents in the Childs powerhouse.

Sincerely,

Lisa Force
Program Director

Cc: Mr. Jim Garrison
Arizona State Historic Preservation Officer
1300 W. Washington
Phoenix, AZ 85007

Ken Anderson
District Ranger
US Forest Service
P.O. Box 300
Sedona, AZ 86339

LR in the News 03/27/03

Water and Sewer Board irked by questions raised in letters and rally

Times-Independent by Lisa Church

Moab, UT - Recent protests and letters to The Times-Independent questioning the business practices and the fairness of the Grand Water and Sewer Service Agency (GWSSA) board structure prompted one board member to ask agency employees to develop charts and literature explaining how the agency is organized and operates.

Rex Tanner, a member of the agency operating committee, took issue with statements and statistics disseminated by Living Rivers - a Moab-based non-profit group that promotes water conservation and restoration of Western rivers - in news releases and at a rally two weeks ago protesting the agency's water management practices. Tanner characterized as "outrageous" statements made by the group, and said a letter to the

editor in the March 20 issue of The Times. The letter writer called the agency to task for holding "secret meetings" in reference to legally-allowed executive session discussions held by the board, clearly show that area residents do not understand the workings of the agency and the laws governing public boards.

"There's just so much misinformation floating around out there. The newspaper should not be telling people in this county what this agency is doing. The agency should be doing that," Tanner said.

But James L. Walker, a member of the Grand County Water Conservancy District Board, disagreed. Walker said groups like Living Rivers, and others in the community will choose to misinterpret the agency's actions in order to push their own agendas.

"Every time you give them more information they still interpret it however they want," Walker said. "All you do by giving them more information is to give them more ammunition to use against us."

Agency board president Gary Wilson questioned whether developing informational literature for the public is the best use of staff time. State and federal law require all public agencies to provide certain documents and information upon request by citizens, and Wilson said the agency always complies even though doing so often constitutes a drain on staff.

"It takes a tremendous amount of the staff's time to provide this information," Wilson said. "But we do it because we have to."

River News 03/27/03

RRFW Riverwire PEARCE FERRY RAPID UPDATE

The normally tranquil waters of the Colorado River are beginning to become turbulent at two points near Pearce Ferry, Arizona just past the western boundary of Grand Canyon National Park. This reach of the Colorado River is controlled by the water level of Lake Mead. When the lake is near full pool, a large lake with no current greets river runners departing the end of Grand Canyon. But with the 4th year of drought continuing, the unusually low level of Lake Mead has caused the Colorado River to entrench into the sediment deposited in the upper reaches of the lake. The river is flowing with strong current at the Ferry. The river no longer follows its historic channel and is now flowing over low gravel hills approximately one mile north of Pearce Ferry. Two new riffles have formed in this area.

The upper riffle, at approximately river mile 280, is a series of small standing waves stretching almost all the way across the river, which is about 150 feet wide at this point.

A fast channel has developed on the river right side of the riffle. The lower riffle is forming where the river is cutting through a saddle between two small hills.

At this time, these riffles pose no difficulty to river travelers, but have the potential to upset articles laid out on watercraft decks. Night floating through this area is not recommended. This area has the potential to form serious rapids as Lake Mead is projected to drop 12 to 15 feet in the next 4 months.

Photographs of these two riffles are at www.vishnutemplepress.com/pearceferry.html

LR in the News 03/30/03

West's water at risk as Utah lake shrinks

By Stuart Leavenworth Sacramento Bee Staff Writer Monday, March 31, 2003
LAKE POWELL, Utah -- When John Wesley Powell embarked on his historic trip down the Colorado River in 1869, he described a raging, foaming torrent of water, rapids "that reel and roll and boil ... making a wild music."

It is doubtful Powell would recognize the Colorado River now. As it enters the lake that bears his name, the river looks more like a creek than a cataclysm. Starved by four years of drought, the nation's second-largest man-made lake has dropped to its lowest point in three decades. It is the Amazing Shrinking Reservoir, and its rapid downsizing is sending ripples across the West, even up to Northern California.

Unsure about supplies from the Colorado, Southern California is buying water from Sacramento Valley rice farmers. Las Vegas also is scrounging for supplies. Environmentalists are saying "we told you so," and Lake Powell's major industry -- houseboating -- isn't floating like it once was.

On a recent weekend, boat owners Rob and Darcy Yates drove to the upper tip of Lake Powell and stood stunned by the miles of sunbaked mud flats before them.

"The environmentalists have wanted to drain Lake Powell for years," said Darcy Yates, a flight attendant from Lehi, Utah. "It looks like they will finally get their wish."

Normally holding 7.8 trillion gallons of water and stretching 180 miles into two states, Lake Powell is dropping a foot a week, slowly exposing the sinuous canyons that federal engineers flooded when they built Glen Canyon Dam in the early 1960s.

If the dry spell continues, officials of the U.S. Bureau of Reclamation will have to prepare for the unthinkable. Eventually, they say, the lake could drop so low it will stop feeding the hydroelectric penstocks that generate \$70 million in power yearly for 1.7 million people throughout the Southwest. At that point, the water supply of 25 million people in California, Nevada and Arizona would also be in jeopardy.

"We could witness the draining of Lake Powell in our generation," said John Weisheit, conservation director of Living Rivers, an environmental group based in Moab, Utah. "When a big drought comes on the Colorado, no amount of reservoirs will help."

Even federal officials, who rarely acknowledge their projects are vulnerable to nature's whims, say the next few years could be crucial.

"It is never too early to start getting a little concerned," said Rusty Gattis, deputy manager of Glen Canyon Dam. "You never know what the next day may bring."

Seen from the air, Lake Powell looks like a giant blue Rorschach blotch splattered across the red-rock moonscape of southeastern Utah. When full, the reservoir holds enough water to cover Pennsylvania a foot deep. Now, it has dropped to half its volume, leaving behind a white ring of calcified rock on its vast, 1,960-mile shoreline.

Scientists disagree on what is happening to Lake Powell and other depleted reservoirs of the Colorado basin.

Some say the watershed is experiencing a normal boom-and-bust cycle -- illustrated by the huge snowstorm that walloped the Rockies two weeks ago. Others say the region is undergoing a climatic shift that could lead to multiyear droughts unseen during this century.

Nowhere are the stakes higher than in Page, Ariz., a town of 9,000 near the Utah border that is entirely dependent on Lake Powell. Some 2.5 million people visit Page and the Glen Canyon National Recreation Area each year, spending an estimated \$400 million on houseboat and Jet Ski rentals, motel rooms, fishing gear, boat tours and countless gallons of sunblock.

Business leaders say despite the low water, Lake Powell is still the floating party it once was.

"The press keeps putting out the message that the lake is gone, or half-empty," said Joan Nevills Stavelly, director of the Page-Lake Powell Chamber of Commerce. "We like to say that the lake is half-full."

Even so, the drought has created some challenges, as Stavelly readily acknowledges. Already, three boat ramps are unusable because of the low water. The National Park Service is spending \$2.5 million to extend the boat ramps before the tourist season starts in May.

The drought also has complicated the task of reaching popular destinations, such as Rainbow Bridge, the world's largest natural rock arch.

Four years ago, tourists could boat within eyesight of Rainbow Bridge. Now, they must dock a half-mile away and walk along a floating gangplank and trail to the sweeping, 290-foot-high arch.

Velma Stoss, an Arizona native who now lives in Seattle, returned to Rainbow Bridge two weeks ago and was taken aback as she hiked up the trail.

"When you think about the amount of water that has been lost, it is staggering," said Stoss, gazing at the dried-up side canyon beneath Rainbow Bridge. "I guess it is going to California."

Stoss is partly right. Although Lake Powell provides recreation and hydropower, its main function is to convey water from the upper Colorado basin to states downstream. Under the 1922 Colorado River Compact, the four states of the upper basin -- Utah, Colorado, Wyoming and New Mexico -- must release 8.2 million acre-feet (or 2.6 trillion gallons) from Powell each year, no matter how much flows into the lake.

About half of that goes to Southern California.

In effect, Lake Powell serves as a massive security blanket for the upper basin states, which might otherwise have to tap their own reservoirs to send water downstream. But it hasn't come without a cost.

As Lake Powell filled Glen Canyon, it drowned miles of fern-lined canyons, Anasazi Indian ruins, petroglyphs and mysterious rock arches and chambers like the Music Temple and Cathedral of the Desert. The casual loss of this natural heritage angered artists and environmentalists, some of whom cling to a hope that Glen Canyon Dam will one day be decommissioned and the canyon eventually restored.

One of these is Rich Ingebretsen, a Salt Lake City emergency room doctor and an unlikely activist. A descendent of Brigham Young, Ingebretsen spent his youth rafting down the upper Colorado River. When Lake Powell started to submerge some of his favorite rapids, Ingebretsen saw his calling in life and founded the Glen Canyon Institute, one of several groups committed to draining the lake.

Wearing a cap that reads "Damn Dam," Ingebretsen recently rented a motorboat and went in search of some of Glen Canyon's lost wonders.

Heading south from Hall's Crossing marina, Ingebretsen rounded one sheer cliff after another, then turned right into the Escalante arm of Lake Powell, then left at a side canyon. Soon the boat was entering an increasingly narrow, curved chamber, wide at the bottom with a slender parabola of sunlight descending from above.

"This is the entrance to one of the most famous places in Glen Canyon," pronounced Ingebretsen as he entered a cavern called the Cathedral in the Desert. "We are going to see something people haven't seen in years."

A favorite haunt of early canyon explorers, the Cathedral has been called a masterwork of natural architecture. During its heyday, a slim waterfall fell from the lower part of the cavern; now the cascade is submerged. The bottom walls are discolored from years of high water, but still the Cathedral is an ethereal place, a water-carved amphitheater of streaked sandstone, shifting light and reverberating echoes.

For seven years, Ingebretsen has been trying to rally people around the idea of bringing back these jewels by draining Lake Powell. Some say his quest is quixotic. Others call him crazy.

Not surprisingly, Ingebretsen isn't a popular figure in Page, a town whose founders helped build Glen Canyon dam. The town stopped welcoming environmentalists in 1981, when a group of Earth First! activists climbed onto the dam and unfurled a banner that depicted a giant crack down the side.

Water managers in California and Arizona also scoff at the idea of draining Powell.

Dennis Underwood, a former Bureau of Reclamation commissioner, says the drought would be far more serious if the reservoir wasn't there. Without Lake Powell, he said, lower basin states would be close to exhausting the Colorado's downstream reservoirs, such as Lake Mead, backed up by Hoover Dam. "You'd have trouble meeting the needs of the lower basin," said Underwood, who now works for the Metropolitan Water District of Southern California.

Even with Lake Powell, the region's water prospects are hardly secure.

According to the U.S. Census Bureau, the combined cities of Phoenix, Las Vegas and Los Angeles are adding about 350,000 people every year. Las Vegas in particular is a major water consumer, using 307 gallons per person daily -- about twice as much as residents in Los Angeles.

In recent months, Las Vegas officials have started restricting the water pumped to golf courses, raising the ire of resort owners. The city is mulling other conservation measures, although critics such as Weisheit, of the environmental group Living Rivers, say the measures are mostly window dressing.

For several years, various California agencies have been haggling over a proposed water sale between the Imperial Valley and San Diego, aimed at securing Southern California's access to surplus water from the Colorado River.

Now, however, federal officials are unsure if there will be much surplus water in coming years. As a result, the Metropolitan Water District has been lining up backup supplies, such as the water it is purchasing from Sacramento Valley rice farmers.

Even the recent storm in the Rocky Mountains -- which dumped several feet of snow -- didn't help prospects much.

As it melts, much of that snow is expected to soak into the parched soil of the region, leaving little for reservoirs, said Barry Wirth, a spokesman for the Bureau of Reclamation. Lake Powell as a whole is expected to drop for a few more weeks, level off with spring runoff, rise a few feet and then starting dropping again this fall.

Ultimately, many water analysts say, the western United States will have to confront some root causes of the water crunch in the Colorado basin. When they divided up water supplies in 1922, the basin states overestimated the average yield of the river and went on to develop cities, farms and reservoirs based on an unrealistic estimate of nature's bounty.

Now, say Reclamation officials, the upper basin is struggling to send water downstream as a historic drought collides with a historic population boom.

"Everything is really tight," said Wirth, who works out of Salt Lake City. "As every year goes by, and another moving van moves into Grand Junction and Salt Lake, it gets a little harder."

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LR in the News 03/31/03

Colorado blizzard not helping drought

Kansas City Star
JUDITH KOHLER
Associated Press

DENVER - Colorado's worst blizzard in nearly a century fell on the wrong side of the Continental Divide for much of the drought-parched West.

The mountain snowpack that feeds river basins serving eastern Colorado rose to more than 100 percent of average levels after the storm. But the snowpack feeding the Colorado River basin, which provides water to seven Western states, rose only slightly.

Most states plan to keep in place voluntary or mandatory water restrictions and conservation measures, saying it is too early to tell what the summer will bring.

"There's not any meaningful change," said Wayne Cook, executive director of the Upper Colorado River Commission, based in Salt Lake City. "Maybe next time you could send (the snow) over in a truck or something, dump it over the top, let it run down this side of the hill."

A 1922 agreement allocates Colorado River water among the states. Colorado, Wyoming, Utah and New Mexico get water from the upper part of the basin and California, Nevada and Arizona get water from the lower basin.

Water agencies from Las Vegas to Santa Fe, N.M, closely track storms in the Colorado mountains, where snowpack is even more critical in drought years.

"What impacts us is snow in the Colorado Rockies," said Vince Alberta, spokesman for the Southern Nevada Water Authority, which serves Las Vegas.

The blizzard dumped up to 8 feet of snow in a 500-mile swath in Colorado and southeastern Wyoming the week of March 17, primarily falling on the east side of the Continental Divide.

In river basins serving eastern Colorado, the storm increased projected snowpack runoff from 61 percent of the historical average to 65 percent this year. That is up from the 14 percent recorded at the end of the spring melt last year.

The blizzard barely registered in the Colorado River's lower basin, where the projected runoff remained at about 62 percent, said Colleen Dwyer, spokeswoman for the U.S. Bureau of Reclamation in Boulder City, Nev.

The snowpack percentage is measured against a 30-year average. Melting snow contributes about 80 percent of the water in rivers, streams, lakes and reservoirs, which comprise much of Colorado's water supply.

The blizzard was encouraging but one good season won't wipe out four years of below-average snowpack, Alberta said. His water authority will maintain limits on outdoor watering and types of lawns and water recycling.

In Wyoming, the snow will help parched grasslands in the southeastern region where ranchers have struggled to keep their cattle fed. The rest of the state will benefit little, state climatologist Jan Curtis said.

"Having been in a drought for three to four years now, we are probably so far behind so far as moisture deficit that it would probably take seven of these types of storms to get back to normal," she said.

In the Denver area, paralyzed for days by hip-deep snow, initial glee about the storm's impact on the drought has turned into measured enthusiasm.

"How wonderful! This is really going to help us out," Peter Binney, utilities chief in the Denver suburb of Aurora, said when heavy snow started March 18. Reservoirs that feed Aurora are so low that there's a ban on new lawns and planting vegetables and new flowers.

A week later, Binney was still optimistic, but cautious. "I'd like to see a couple more of these in the next couple weeks," he said.

More snow and rain were predicted for the mountains and foothills, where spring can be the wettest time of the year. El Nino is credited with breaking the region's dry cycle this year.

Vivienne Fink still plans to tear out her Kentucky bluegrass lawn and replace it with ornamental grasses, boulders and native plants.

"I just really don't want to have to pay for watering a lawn that probably shouldn't be there in the first place," she said.

The moisture will allow farmers to delay irrigating for a couple weeks, but "it certainly doesn't end the drought crisis," said Bob Sakata, one of Colorado's largest vegetable producers.

Colorado's blizzard won't do much to relieve the drought in the West, said John Weisheit of the environmental group Living Rivers in Moab, Utah.

He said he is concerned that a wet spring will lead people to ease up on conservation. The Colorado River can't meet the area's growing demand even in good years because the water is overallocated, he said.

Wetter-than-normal seasons in the 1980s and 1990s helped mask that fact, Weisheit said.

"We've been lucky, is what we've been," he said. "Now our luck's run out."

River News 04/02/03

RRFW Riverwire RIVER PLAN DRAFT NOW SET FOR OCTOBER RELEASE

Grand Canyon National Park planners have pushed back the release of the release of the Draft Management Plan for the Colorado River Management Plan to the fall of this year. RRFW has learned that the NPS is now looking for release of the Draft River Management Plan for no later than October 31, 2003.

RRFW has also learned that the reason for the delay is to allow Grand Canyon National Park planners to include advice from a National Park Advisory Board subcommittee made up of concessioners, nonprofit groups and others. RRFW has not yet discovered how this group will be formed, however we do know that among those pushing for the formation of this Advisory Board subgroup are Grand Canyon River Outfitters Association Executive Director Mark Grisham and GCROA consultant Destry Jarvis.

Besides releasing a Preferred Alternative, Grand Canyon National Park planners expect to have 5 to 6 other alternatives in the draft. One of the alternatives will be a motor-free alternative. Park planners are still looking to have a Final CRMP by December 31, 2004, so that river concessions contracts can be renewed in 2005. All 16 of the river concession contracts will terminate if not renewed on December 31, 2005.

River News 04/07/03

RRFW RIVERWIRE - CONCESSIONAIRES HIRE DC LOBBYIST

T. Destry Jarvis has recently been hired to lobby for the Grand Canyon River Outfitters Association, a trade association established to protect the economic interests of 16 Grand Canyon river concessionaires. Mr. Jarvis will be influencing the CRMP to benefit his employers, especially in Washington D.C., where he lives. Mr. Jarvis recently noted that powerboats on the Colorado River in Grand Canyon are "necessary for the future good condition of the park and the provision of high quality visitor river experience

there.” He also stated in a recent article for the Boatman’s Quarterly Review (Spring, 2003), that “...all concerned should come to realize that the river experience is enhanced, and the park’s resources are better conserved, with motors, while both the experience and the resource are diminished without.”

Jarvis’ position is that the exceptions to the Wilderness Act that have allowed motors shape the real application of it more than the Act’s actual language. This is relevant since his various interpretations of the Wilderness Act appear to hinge on where his paycheck comes from. While employed as Federal Policy Director at National Parks Conservation Association, Jarvis wrote a letter defending the 1980 CRMP’s proposed phase-out of motors in Grand Canyon National Park to NPS Director Russell E. Dickenson.

“...the decisions to ban motors in the Grand Canyon...were not made lightly, but only after years of discussion, study and consideration.” he admonishes the Director. Mr. Jarvis went on to say, “The Service can not afford to allow additional years of contentious debate on these issues, if progress is to be made in any other of the many problem areas deserving your attention. NPCA urges you to stand firm on these important principles.”

“What changed his mind? There have been no amendments to the Wilderness Act, no changes in the underlying spirit, values and principles of Wilderness. The intent of Zahniser and wilderness advocates and contemporaries Olaus Murie, Aldo Leopold, Supreme Court Justice William O. Douglas and Bob Marshall is clear. Time and again they wrote that motorized transportation is antithetical to Wilderness.” notes Jo Johnson, co-director of River Runners for Wilderness.

Johnson went on to observe “If Jarvis is so sure powerboats are fine in Wilderness, why is it necessary for him to lobby legislators for a Grand Canyon Wilderness Bill that leaves its heart--the Colorado River--out? Why not just allow Congress to designate the entire Grand Canyon, with the River, Wilderness? Is it possible he isn’t convinced and therefore must hedge his, or rather, GCROA’s, bets?”

“Now more than ever, we need the peace and solace of motor free Wildernesses in Grand Canyon and elsewhere. The meaning of Wilderness was clear in 1964, it was clear at the time of Mr. Jarvis’ 1980 impassioned plea to get rid of motors, and it remains clear now. If there is any place on Earth that deserves to be free of motors, it has to be Grand Canyon.” Johnson remarked.

Regional News 04/10/03

Trying to make sense of current water controversy (part one)

Times-Independent

Moab, UT

by Lisa Church

contributing writer

Ask a dozen people in Grand County to explain how the Grand Water and Sewer Service Agency works, and you're likely to get a dozen different answers. Factor in the three individual water districts that have pooled their resources under the GWSSA umbrella and the confusion deepens to bewilderment.

In the West, where control of water wields considerable power, it is not surprising, then, that this complex organizational structure devised to manage and distribute culinary and irrigation water in Spanish Valley and throughout Grand County has become a lightning rod for critics who contend that too much water in the valley is now controlled by governing bodies representing the interests of too few county residents. Conversely, staunch defenders of the system maintain that the agency serves the interests of the public by protecting and preserving the valley's valuable water resources.

This great divide in public thinking is deeply rooted in the history of modern water development in Grand County and the chain of events that led to the creation of GWSSA in 1998.

First there was a dam: Creation of the Grand County Water Conservancy District

In the early 1970s, most water rights in Grand County were still privately owned, or were vested in the Moab Irrigation Company, a private corporation made up of individuals who elected to convert their water rights into shares of stock in the larger company. Because growth in any modern community is intrinsically tied to that community's ability to provide its residents with adequate water and sewer services, Grand County officials during this time recognized the need to begin developing a stable water system within the valley.

Their solution: form a water conservancy district that could acquire water rights, build infrastructure including a dam, storage and delivery system, and offer water services to farmers, ranchers and residents in Spanish Valley.

Under state law, water conservancy districts are formed by district courts, and are considered state, not county, agencies. The governor appoints the district's five board members, although the county may recommend names for appointment. However, state law requires a petition, signed by at least 20 percent of landholders within the district, be presented to the court requesting the court to create the conservancy district.

Like all state water conservancy districts, the Grand County Water Conservancy District, created by the 7th District Court in 1971, has the right to hold water rights, and to provide irrigation and culinary water service to customers within the service district. GCWCD's district includes all of Grand County, and 370 adjacent acres in the San Juan County portion of Spanish Valley.

When GCWCD was formed, the district immediately began work to develop the Mill Creek Project – a water storage system that includes constructing a dam to divert water from Mill Creek into a reservoir at Ken's Lake, and the lake's delivery system that now provides irrigation water to shareholders within the district.

To accomplish this massive project, the district needed financing. The State of Utah's Division of Water Resources agreed to provide a low-interest loan to pay for the project, but in order to receive financing, the GCWCD first had to acquire water rights, which they purchased from the Moab Irrigation Company, to be held by the state as partial collateral for the loan.

The district's initial 1979 agreement with the state estimated the cost of the Mill Creek Project at about \$3.7 million, but construction delays, and the county's economic downturn in the early 1980s –largely a result of the demise of the uranium business – forced the district to seek an additional \$900,000 in funding over a period of several years.

To recoup part of the cost, the district elected to sell irrigation shares to valley farmers and ranchers. Today, about 125 individuals and corporations purchase irrigation water shares in Ken's Lake water, and the annual proceeds from the sale of those shares helps cover the annual loan payment to the state.

The district initially believed it could also generated revenue through the sale of industrial water to mining and other business entities. But as the mining industry went bust, those hopes dried up, said James Walker, president of the Moab Irrigation Company, and a current member of the GCWCD board.

Unfortunately, the water shares owned by GCWCD were strictly irrigation water, so in 1979, the district entered into an exchange agreement with local farmer George White that provided the district with a minimum of 625 acre feet of culinary quality water from White's numerous wells, in exchange for an equal amount of irrigation water from Ken's Lake. The district set about constructing a storage system and pipes to transport the water from White's wells to a storage tank that would eventually provide culinary water to Spanish Valley residents.

Delivering Culinary Water and Sewer Services: The creation of Spanish Valley Water and Sewer Improvement District

Because state law prohibits water conservancy districts from operating a sanitary sewer system, the county commission, in 1974, created the Spanish Valley Water and Sewer Improvement District. The district's boundaries were tightly drawn to encompass only Spanish Valley, and then, only that portion of the valley located within Grand County.

SVWSID is charged with the responsibility of building and operating a culinary water distribution system, storm drainage, and a sewer collection system to service Spanish Valley residents.

The district's five-member board, appointed by the Grand County Council, consists of individuals residing within the district's boundaries.

Since its formation, SVWSID has systematically built infrastructure to deliver culinary water, and sanitary sewer services to Spanish Valley, including the recent \$5.4 million

expansion project that extended those services to outlying areas of the valley and created additional culinary water storage tanks that will hold water generated from new wells recently approved for partial development by the state.

Under the original agreement, SVWSID purchased culinary water at wholesale prices from GCWCD, then provided the water at retail cost to customers. Rather than incur the expense of building and maintaining a sewer treatment plant, SVWSID contracts with the city of Moab for sewer treatment, and recoups the cost through user fees.

Currently, SVWSID revenues pay a portion of three separate bonds incurred to cover costs of water delivery systems and development of culinary water and sewer services.

Financing: Creating the Grand County Special Service Water District

Developing water services and storage facilities is an expensive business. In Grand County, financing the host of projects dating to the original Mill Creek Project was a challenge that, like many other Utah counties, commissioners resolved by proposing creation of a special service water district. The Grand County Special Service Water District, approved by Grand County voters in 1977, possesses specific powers to raise funds through taxes and bonds – powers not bestowed upon GCWCD and SVWSID. The GCSSWD may also raise funds through various federal and state granting agencies.

The creation of GCSSWD enabled Grand County to acquire additional funding – through taxes and bonds – needed for the construction of the Mill Creek Project, as well as monies required for building a culinary water and sewer delivery system in Spanish Valley. The agency is an independent district but is governed by Grand County, which appoints the district's five board members.

Primarily a financing agency, GWSSA works in tandem with the Grand County Water Conservancy District, and with Spanish Valley Water and Sewer Improvement District, to secure funding and make payment on outstanding loans and bonds for Grand County water and sewer projects, said Grand County water planning administrator, Lance Christie.

Combining Resources: Creation of the Grand Water and Sewer Service Agency

As all three water-related agencies worked to develop their joint and individual projects, the issue of managing Grand County's water systems surfaced as a significant problem. From the beginning, the boards of GCWCD and GCSSWD met jointly and shared the same chairman and vice-chairman. The two districts were bound by an agreement, signed in 1979, that gave GCSSWD authority to act as the conservancy district's agent for construction of the Mill Creek Project, and making payments on the project loans.

In 1980, SVWSID and GCWCD agreed to share staff and office space. The conservancy district hired staff, and SVWSID paid a percentage of staff salaries and benefits through reimbursements to GCWCD. These districts were also bound through an agreement by which GCWCD leased culinary water and storage to SVWSID, which then distributed the water to Spanish Valley customers.

These confusing arrangements were, perhaps, not ideal, but as Christie points out, they were likely necessary.

"This complicated mess of agencies was required because of the limitations and powers in the Utah State Code which are extended to Water Conservancy Districts, Special Service Districts, and Water and Sewer Improvement Districts," Christie has said. "It may be a mess, but it's the best mess we could come up with."

In an effort to simplify matters, the three districts agreed in 1998 to create one management agency that would oversee the daily operations and ongoing financial management of Grand County's water projects.

The Grand Water and Sewer Service Agency has, perhaps, become the most contentious part of the county water puzzle. Many find the agency's organization difficult to understand, and some question whether it gives each individual district equal representation at the table.

But the agency's structure is fairly simple. The GWSSA board consists of all members of each of the individual district boards, and board members have equal voting power. However, the agency also has a seven-member operating committee, charged with overseeing the agency's day-to-day business. That committee, consisting of three members each from the boards of the GCWCD and SVWSID, and one member from the GCSSWD board, has no power to set budgets, and may not conduct elections, but the committee is empowered to approve agency expenditures up to \$10,000. The operating committee appears to hold no clear power over the agency's full board because any member of the agency's full board may vote on issues brought before the operating committee.

GWSSA manager Dale Pierson is empowered through the interlocal agreement signed by all three districts, to "perform and carry out the functions, activities, and responsibilities of improvement districts," and to act as the financial agent, disbursing debt payments and collecting annual revenues for the individual districts. Under the agreement, the individual districts retain ownership of all property, and resources, and they also remain responsible for any outstanding district debts.

Is GWSSA Here to Stay?

Those who support the GWSSA structure say it saves all the districts money by streamlining staff and operations, and has improved communications between districts that sometimes in the past appeared to be working at cross purposes.

But critics charge that GWSSA staff, originally hired by GCWCD, rarely has the interests of SVWSID users at heart. To illustrate, SVWSID board member Barb Morra points to the fact that the titles to culinary water rights purchased through the agency are always held by the conservancy district. Spanish Valley Improvement District, she said, has never been offered the chance to own water rights even though it has the largest and only culinary water customer base.

Resolving these issues may be the greatest challenge confronting GWSSA staff, and the boards of Grand County's individual water districts. In the next several weeks, the Times-Independent will examine in-depth the inner-workings of GWSSA, and water issues facing Grand County's water districts.

Editor's Note: This is the first detailed installment of a series, a heavily researched series on how things operate in Spanish Valley's complex water and sewer agencies. The situation is critical to the future of Grand County, and needs to be understood. Though controversial, we believe it is essential.

Regional News 04/17/03

Umbrella agency may be causing confusion, conflict (part two)

Times-Independent
Moab, UT
by Lisa Church
contributing writer

When Grand County's three water districts agreed in 1998 to create an umbrella agency to oversee operations and management of culinary and irrigation water systems the plan was touted as a cost-saving measure for all water users in Spanish Valley.

Today, some Spanish Valley water users believe the arrangement has created an unwieldy financial structure that forces culinary water users to unfairly subsidize about 125 irrigation water users.

The plan to combine the districts seemed logical at the time, past board members have said. The three districts – Spanish Valley Water and Sewer Improvement District (SVWSID), Grand County Water Conservancy District (GCWCD), and Grand County Special Service Water District (GCSSWD) – already shared staff and office space, and the culinary and irrigation systems were dependent on one another because the Conservancy District, which built the Mill Creek Project and Ken's Lake Reservoir, owned the culinary water rights, storage tank and tank delivery systems and sold culinary water to the Improvement District, which provided drinking water to Spanish Valley customers but did not own substantial culinary water rights or storage facilities. The Conservancy District paid staff, then billed the Improvement District for the time staff logged working on Improvement District projects.

By creating the agency, many argued, districts had little to lose and everything to gain. Districts would still own all their property and resources, but revenues, except those from property taxes, would be billed by and paid directly to the Grand Water and Sewer Service Agency (GWSSA), and the agency, in turn, would issue payments for outstanding revenue bonds and other ongoing agency expenses. GWSSA staff would continue to oversee the daily operations of the culinary water and sewer system, and

the Ken's Lake irrigation system, but could focus all their attention on work rather than spending valuable time tracking daily hours by project so the Improvement District could be billed separately.

"Some days I felt like I was spending more time writing down what I was doing than I actually spent doing the work," GWSSA manager Dale Pierson said. "Now, we can focus completely on our jobs."

Improvement District board member Barb Morra is not convinced.

"We don't know how their time is spent now. The Improvement District contributes four times the revenue of the Conservancy District, but are we getting four times the work? I don't know. And [agency staff] has no documentation," Morra said.

Pierson said the staff "probably spends that much more time" doing work for the Improvement District because maintaining culinary water and sanitary sewer systems is far more costly, both in time and money, than maintaining the Conservancy's irrigation system. In addition, he said, the Improvement District has grown, and the agency employs a staff member whose time is largely spent handling monthly billing for water and sewer service customers.

"The Improvement District is our primary focus," Pierson said. "There's health and human welfare involved there. If we have two jobs to do, and one is irrigation and the other is drinking water or sewer, the drinking water or sewer job takes top priority. It's that simple."

For critics, on-site staff accountability is but one of several problems with the agency arrangement. Morra says. In 2002, the Improvement District contributed more than \$1 million in revenues to the agency, compared to \$362,000 contributed by the Conservancy District. The agency budget shows that Improvement District Costs totaled \$910,000 – a gross profit of about \$100,000 – while the Conservancy District had \$360,000 in expenses.

"The whole thing about the agency is every time you try to figure out something fiscal, it's like trying to hit a moving target," Morra said. "We're contributing 90 percent to the agency while the other districts are contributing 10 percent. Where is our money going? I'd like to know specifically."

Spanish Valley resident Bill Love believes he knows. The agency, he charges, is using Improvement District revenues to "subsidize" the 125 irrigators who annually purchase Ken's Lake water.

In a detailed written statement to the Times-Independent, Love argues that the agency regularly uses Improvement District revenues to pay for work and maintenance of the irrigation water system and Ken's Lake Reservoir.

Love rightly points out that state-backed loans for the Mill Creek Project which created Ken's Lake are annually paid through property taxes charged to all Grand County taxpayers. That bond was approved by taxpayers in 1980, and will be completely paid in

2018. Love argues that through those property taxes, all Grand County residents are "subsidizing" the irrigation water users of Ken's Lake.

And it is true that the lake would likely not exist without the tax revenues. But Pierson points out that voters approved the bond, in part, because Ken's Lake is also a recreation area that is open to the public.

"A lot of people use Ken's Lake every year. A lot of people here see it as an amenity," Pierson said. "The lake isn't just for irrigators."

Love also believes recent water fees from Spanish Valley customers are being used by the agency to pay Conservancy District expenses.

"The fees from the culinary users and irrigation users are co-mingled to pay expenses of \$490,477 for the operations and maintenance of the irrigation system, the culinary water system, and debts. GWSSA claims that they are unable to identify which fee is used to pay which bill without extensive analysis," Love wrote.

And he charges that the water rate structure of Spanish Valley – a conservation-oriented structure that charges increased fees for higher water consumption – are unfair, compared to the rate structure for irrigation customers whose fees per acre-foot of water decrease with higher consumption. Irrigators pay between \$21 and about \$35 per acre foot, depending on use, Pierson said.

"The culinary water users are now completely unprotected from GWSSA using their fees to subsidize the 125 irrigation Ken Lake and the golf course," Love said.

Pierson said the rate structure for irrigation users is "typical" for Utah.

"There are a very few number of irrigation customers who actually try to make a living from farming," Pierson said. "We don't want the water to be so expensive we put them out of business."

Lance Christie, the water planning administrator for Grand County, said it is not uncommon in the West for drinking water customers to subsidize irrigators. But in many parts of the state, he said, the culinary water users pay much higher fees.

"It's a common practice. But from my research, the people in Spanish Valley are subsidizing at a much lower rate than in most other places," Christie said.

A 2001 report by the state's Division of Drinking Water backs up Christie's claim. According to that report, culinary water agencies in Utah charge, on average, \$1.39 per 1,000 gallons of water. In Spanish Valley, customers pay between \$.50 and \$1.25 per 1,000 gallons depending on how much water they use. The state report shows that the average Utah home customer pays \$33.89 per month for drinking water. Bills in Spanish Valley average about \$24 per month, GWSSA staff said. Sewer charges are billed separately.

For critics of GWSSA, the monthly cost of water is less important than whether the agency is properly managing the financial resources of the Spanish Valley Improvement

District. Agency staff now view revenues from all districts – except tax revenues, which are kept in separate accounts – as agency revenues, not separate revenues from individual districts. And supporters of the agency say the arrangement works to the advantage of all districts because all three are interconnected through the complex network of culinary and irrigation water supply lines and storage facilities.

"It may not be perfect, but things work a lot better now," said Conservancy District board member James L. Walker. "The idea here is for all the districts to work together. We all have the best interests of Grand County at heart."

Pierson puts it another way. "One district wouldn't exist without the other," he said. "It's that simple." Morra believes otherwise.

"I think the Improvement District would be better off as a separate district," Morra said. "The agency isn't doing us any favors."

Next week, this Times-Independent series will examine arguments for and against an agency plan to purchase wells and property that they currently lease, and which district should own the water rights if the purchase is completed.

Regional News 04/27/03

Exposed Upper Colorado River Deltas Rapidly Eroding Into Lake Powell

The investigations of Professor John Dohrenwend

[Click here](#) to read this story by Lori Stiles of *University of Arizona News*

Regional News 04/28/03

How district got culinary water rights (part three)

Moab Times Independent by Lisa Church contributing writer

From their inception in the 1970s, Grand County's two main water districts have struggled with a serious dilemma – both had authority to provide culinary water to Spanish Valley, but neither district owned any culinary water rights.

Because the state had placed a moratorium on further water exploration in the valley more than a decade before, the county could only secure culinary water by purchasing or leasing existing water rights. In 1979, the Grand Water Conservancy District solved this massive problem by striking a deal with local rancher George White. In exchange

for a maximum of 625 acre feet of irrigation water from Ken's Lake, White agreed to provide the district with an equal amount of culinary water from his wells.

That 50-year agreement between White and the Conservancy District enabled the district to provide wholesale culinary water to the Spanish Valley Water and Sewer Improvement District, which delivered the water at retail prices to customers in Spanish Valley. For some, the pact also marks the beginning of a water monopoly in the valley.

In recent years, district and county officials have mulled, with increasing concern, the county's prospects for securing culinary water rights beyond 2029 when the exchange agreement with White is set to expire. So when a pair of those wells came up for sale, board members of the Grand Water and Sewer Service Agency – an umbrella agency created by the districts in 1998 to oversee daily management of Grand County water projects – jumped at the chance to own them outright.

With the board's near unanimous blessing – two members opposed the purchase – GWSSA in February began efforts to secure a purchase agreement with White, and the financing needed to seal the deal. The sales price will remain undisclosed until final negotiations are completed, but Dale Pierson, GWSSA manager, has said the agency hopes to recoup much of the cost by selling land – about 130 acres – that is also included in the deal.

The plan approved by board members gives the agency staff authority to pursue the purchase, and places ownership of the White water rights and land in the hands of the Grand Water Conservancy District. That decision, some charge, gives the Conservancy District a monopoly on valley water, and forces Spanish Valley water users to remain forever dependent on the Conservancy District for its culinary water supply.

"There's no reason the [Spanish Valley Improvement] district should not own that water," said SVWSID board member Barb Morra. "If we purchase the water, we can become independent of the Conservancy District. But they don't want that to happen. Basically, we're allowing the Ken's Lake water users to control the agency, and that means they control where the water is going and how much Spanish Valley users pay."

For Spanish Valley resident Bill Love, the plan represents a "boondoggle" that gives the Conservancy District total control over Spanish Valley water users. Love said the agency should hold a public hearing before making a final decision about the purchase.

"This water is for the use of the culinary rate payers in Spanish Valley. The negotiations are controlled by the irrigators' board members," Love said in a letter to the Times-Independent. "The irrigators, per a June 6, 1979 agreement, can charge the culinary rate payers any fee they 'fixed from time to time' for the culinary water. If the new culinary water is given to the irrigators, they will have the ability to charge the culinary users any fee they decide is sufficient to pay all their expenses."

Morra points to the fact that agency board chairman, Gary Wilson, is "one of the largest users of irrigation water in the district," as evidence that the members of the Conservancy District control the GWSSA board.

Wilson and other board members take issue with Morra's characterization.

"To me, the whole purpose of this agency is for us all to work together," Rex Tanner said at a recent meeting. Tanner, a Grand County Council member and a GCWCD board member, dismissed Morra's allegations as "paranoia."

"It's not us against them here. It's one pool that we're working from," Tanner said. "We started down this road to purchase this water because of the long-term goal to better serve the community. This seems like a good business deal to me, and I hope we go through with it."

During several board meetings, Morra and Love have also repeatedly questioned why the Improvement District has not been given the option to purchase the White wells. Pierson said the decision is purely financial – banks view the Conservancy District as a "better risk" than the Improvement District because GCWCD has fewer outstanding debts.

Currently, SVWSID makes annual payments on eight outstanding revenue bonds totaling almost \$5 million– most associated with a recent system expansion – and one general obligation bond, paid through property taxes collected from Spanish Valley residents, totaling \$126,000 that will be paid off in 2006. The revenue bonds have payoff dates ranging from 2006 to 2040, depending on the specific bond, Pierson said.

The Conservancy District has one outstanding bond, Pierson said. That bond, a \$1.5 million general obligation bond paid through annual property taxes assessed all county property owners, will be paid off in 2018, he said.

"Either district could purchase the White property and wells. But from what our attorneys and the bank tell me, the Conservancy District is in a better position to borrow the funds," Pierson said. "Banks want to be at or near the top as lien holders. In the case of the Improvement District, that just isn't possible because they already have several outstanding revenue bonds."

But Morra said that simply is not true.

"I've had conversations with the bank, and they've said we can buy the property," she said. "I just don't see what the problem is here."

Pierson said bank representatives "prefer" making the loan to the Conservancy District for reasons stated earlier.

"The Improvement District may be able to secure financing, but it would be much more difficult, if it's even possible," Pierson said.

Some agency board members fear that the ongoing debate will derail the White purchase, leaving Grand County vulnerable in future years should the Whites sell the wells to someone else.

"Barb has some good points to make, but I think we need to move on this," said James Walker, Conservancy District board member. "No one has ulterior motives with this

purchase. But proven wells like this don't come along often. We need to buy them while we can."

The agency has yet to finalize a contract for the White well purchase, but Pierson said an agreement is "close." So far, the board has not responded to Love's call for a public hearing on the issue.

Next week, in the final installment of this series, the Times-Independent will explore the effectiveness of the GWSSA agreement, and examine arguments for and against dissolving the agency.

Letter to LR 05/02/03

Response from BuRec: Glen Canyon Dam's Adaptive Management

United States Department of the Interior
Bureau of Reclamation
Washington, D.C. 20240
In Reply Refer To: ADM - 2.00

Ms. Lisa Force
Program Director
Living Rivers
P.O. Box 1589
Scottsdale, AZ 85252

[Letter to Gabaldon \(January, 2002\)](http://www.livingrivers2.org/archives/article.cfm?NewsID=234)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=234>

Dear Ms. Force:

Thank you for your participation as a member of the public in meetings of the Glen Canyon Dam Adaptive Management Work Group (AMWG). The AMWG was formed as a Federal Advisory Committee to make recommendations to the Secretary of the Interior on the operation of Glen Canyon Dam and the use of other management authorities to achieve the resource protection objectives of the Grand Canyon Protection Act and the Glen Canyon Dam Environmental Impact Statement (GCDEIS) Record of Decision (ROD). You have raised concern for many of the important resources downstream of Glen Canyon Dam, and have encouraged the AMWG to take action to protect these resources. We have integrated your specific comments into the areas of endangered species protection, sediment conservation, administrative activities, and public outreach.

Endangered Species

Protection of endangered species is one of the paramount mandates of all Federal agencies, and the AMWG strategic plan is framed from that perspective. Many recent discussions within the Adaptive Management Program (AMP) have addressed the apparent decline in juvenile recruitment and adult population estimates of the humpback chub. The cause of this decline is unknown, but may be related to non-native competition and predation, parasitic infestation, habitat conditions, or adverse effects from handling and sampling. It is the current opinion of the Grand Canyon Monitoring and Research Center (GCMRC) that negative effects from non-native fish predation and competition overshadow other factors.

Collecting and addressing this type of new information and hypotheses is one of the strengths of adaptive management. At its January 2002 meeting, the AMWG passed the following motion calling for the control of non-native fish:

"In support of goal 2 (of the Strategic Plan), the AMWG recommends the following actions subject to environmental compliance to include assessing recreational use, Endangered Species Act (ESA), in consultation with the tribes and other affected state agencies.

1. evaluate methods to remove non-native fish, except rainbow trout, from Bright Angel Creek in 2002,
2. evaluate methods to remove non-native fish from the LCR in 2002,
3. gather public input and conduct public education and environmental compliance on long-term removals in #1 and 2 above,
4. establish a Technical Work Group (TWG) ad hoc committee to develop a 2002 - 2006 research monitoring and management work plan for meeting MO 2.5 and 2.6 of the August 17, 2001, Draft of the AMP Strategic Plan. The TWG will report back to the AMWG at the next meeting,
5. using data from #1 - 4 above to make recommendations on future removal."

Through a combination of National Park Service and Bureau of Reclamation funding, appropriate environmental compliance, and approval by the Secretary of the Interior, these nonnative fish control efforts began this year. The authority and responsibility for these non-native control actions rest with appropriate Federal and State agencies, the National Park Service for the Glen Canyon National Recreation Area and Grand Canyon National Park and the Arizona Game and Fish Department for the State of Arizona. Results from initial evaluations will guide future decisions about management actions and dam operations.

Testing experimental dam releases to benefit the humpback chub is also an important part of the Biological Opinion (BO) on the Operation of the GCDEIS. The BO discusses implementing these test releases in low release years of approximately 8.23 million acre-feet (maf). Reclamation has agreed to implement such experiments through the AMP. Several years ago, GCMRC coordinated the preparation of a program of experimental flows to address this requirement. The resultant work product called for

the establishment of baseline conditions, followed by a steady release with moderately high spring flows and low flows the remainder of the year. In fiscal year 2000, we tested these steady spring and summer flows, even though the annual water year release was greater than 8.23 maf. In water years 2001 and 2002, the dam made releases according to the GCDEIS ROD, and baseline data was collected. This baseline data will be compared with data from future experiments, the nature of which is still evolving among native fish experts through the AMP.

As described in more detail below, GCMRC followed this initial experimental design with a 2003-2004 experiment designed to benefit humpback chub and conserve sediment inputs. In all these adaptive management actions, the U.S. Fish and Wildlife Service (Service) has actively participated, and Reclamation has continually discussed with the Service the resulting effects to ensure that sufficient progress is being made toward removing jeopardy from the humpback chub and achieving the recently published U.S. Fish and Wildlife Service Recovery Goals for the humpback chub.

Sediment Conservation

The 1996 Beach Habitat Building Flow (BHBF) was highly successful in depositing sand above the normal maximum discharge stage. Subsequent wind and water erosion of these deposits was expected, as was the need for periodic redeposition of sediment. Since that time, additional research has indicated that the previous assumption of interannual sediment conservation of tributary sediment inputs is likely incorrect, indicating a relatively short residence time for the finer fractions of tributary inputs. As a result, the AMWG passed the following motion at the January meeting relating to further testing of BHBFs:

"In concert with Reasonable Prudent Alternative flows for native fish, during 2002-2003 request that the GCMRC, in consultation with the TWG, design an experimental flow sequence that tests hypotheses for conservation of sediment. Report to AMWG in April 2002 on the proposed flow sequence."

In response to this motion, GCMRC proposed an integrated experiment in February 2002, addressing specific assumptions and hypotheses for the humpback chub and sediment conservation. To counter the short residence time of fall tributary sediment inputs, this experiment tests two strategies to preserve these inputs until high flow tests can be conducted the following January. The fall flows of these tests are hypothesized to benefit the humpback chub and would complement the results of the 2000 Low Steady Summer Flow experiment. Nonnative fish control efforts during 2003-2004 are also expected to reduce the deaths of humpback chub from predation and competition. This experiment is now underway. In addition, GCMRC and the AMWG are now working to develop an overall program of experimentation that addresses the ecosystem as a whole, including all the resources considered by the AMP.

Administrative Actions

During the past 2 years, the AMP has succeeded in developing a strategic plan, the completion of which has represented a significant increase in the ability of stakeholders

to work together on common goals. We recognize that some reject the concepts of collaboration and consensus, but we believe that these approaches will produce more effective resource protection results than litigation and conflict. In addition to completing the strategic plan, the AMP has sequenced the strategic plan research information needs, which will guide future scientific work.

Reclamation and the GCMRC have restructured their websites to facilitate public access of AMP documents such as the GCMRC State of the Natural and Cultural Resources in the Colorado River Ecosystem report and the annual report to Congress required by the Grand Canyon Protection Act. These reports include results from the monitoring and research activities conducted as part of the AMP. The AMWG meeting minutes also contain scientific presentations at technical and management meetings on the status of resources.

Public Outreach

Public involvement is a key part of the AMP. Stakeholder membership on the AMWG was carefully selected to provide representation of public interests. It is important to note that any AMWG recommendation to the Secretary of the Interior is implemented only after completing appropriate National Environmental Policy Act (NEPA) compliance with applicable federal law (e.g., NEPA), a step that ensures additional public participation. In addition to inviting the public to AMP meetings, we have attempted to keep all information about the program visible and accessible. We recognize that to date, few outside public comments have been given at our meetings, and that the AMWG's response to your comments has been less than you desired. In future meetings, we will encourage AMWG members to continue their discussion after public comments are received to ensure understanding, prior to voting on recommendations. It would also likely be more effective for public comments to be received prior to any meeting to allow AMWG members time to consider comments. Since most of the issues addressed during the AMWG meetings are first discussed by technical and ad hoc groups, we would encourage you to become involved in the technical presentations and discussions which form the basis for AMWG recommendations.

In conclusion, we believe the AMP is a successful example of a collaborative, multi-stakeholder process. Moreover, we believe that this critical program is fulfilling the role envisioned by the Grand Canyon Protection Act, the 1996 Glen Canyon Dam EIS, and the Federal Advisory Committee Act. The Department of the Interior is taking action to address resource concerns revealed by scientific monitoring and have enlisted prominent scientific advisors and other forms of peer review to enhance the quality of analysis in this process. We appreciate your comments and welcome your continued involvement in all our meetings.

Sincerely,

Michael R. Gabaldon
Director, Policy Management
And Technical Services

cc: See attached list

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LR Letter 05/17/03

Lake Powell's 'new marina' another Park Service fumble

May 17, 2003 12:00 AM

Arizona Republic

Letter to the Editor

The May 5 article "New marina at Lake Powell 30 years in making" omitted two significant facts:

- Low reservoir levels make the marina unusable.
- The Diné will receive only low-level jobs, while profits go to non-Diné developers.

The Diné Medicinemens Association, along with Living Rivers and others, asked for a proper environmental impact statement. The concerns were disavowed by the National Park Service, which determined that this \$75 million project on virgin Diné land would have "no significant impact" on the human or natural environment.

The Diné leaders asked the Park Service to consider dedicating this spiritually significant site as a place for their people to be educated in the traditional ways of their cultural heritage. This alternative deserves a respectful response by the National Park Service.

The Park Service wants to provide economic opportunities for the Diné, yet it refused to study Living Rivers' proposal to allow the Diné to become the concessionaire at Wahweap Marina. Living Rivers also stressed that building another marina when visitation has been declining does indeed impact humans and the environment.

Antelope Point is perched on top of a canyon wall. To operate this facility the reservoir must be nearly full. Currently the reservoir is down 95 feet and the public boat ramp ends at the cliff's edge. Current high demands for an already over-allocated Colorado River, compounded by a present and future drought cycles, makes Antelope Point a boondoggle.

How can a facility that must face the hardships of natural topography and drought during a period of decreased visitation be considered without a study? The Park Service should be delighted to provide taxpayers with a thoughtful process, especially if it will demonstrate true benefit to the Diné.

John Weisheit Moab, Utah

The writer is conservation director of Living Rivers, an Arizona-based non-profit environmental organization.

Secretary Gale Norton's 2025 Water Plan--propaganda to mask reality

Colorado River water users should prepare for the worst

Contact:

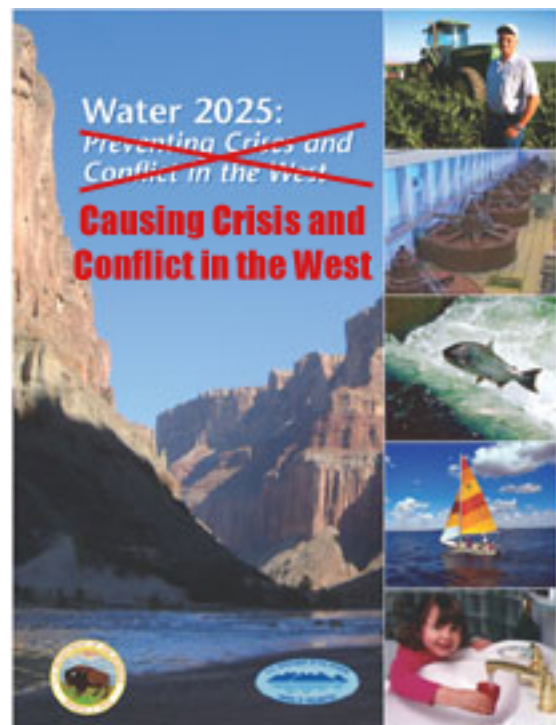
Owen Lammers (435) 259-1063

On Friday, June 6, Denver will play host to Interior Secretary Gale Norton and one of the greatest public relations charades in the history of western river management. At a time when many Western states are experiencing major problems with water allocation, the Department of Interior is selling the public "band-aids for gun-shot wounds," says the Colorado River advocacy group Living Rivers.

Secretary Norton's initiative "Water 2025 Plan: Preventing Crisis and Conflict in the West," is little more than a repackaging of management strategies Interior is already implementing combined with a heightened push for desalinization technology. It contains no proposals for how to substantively address major water shortages, such as those looming in the Colorado River watershed.

"Minor efficiency gains and conservation measures as Secretary Norton prescribes will bring about some savings, but these are merely drops in the bucket given that the Colorado River is providing barely half the water the Department of Interior is contracted to deliver," says Owen Lammers, Executive Director of Living Rivers.

Abundant historical evidence reveals that the present drought in the Colorado watershed is far from unprecedented, and warnings from the United States Geological Survey one year ago urged water managers to be prepared for several decades of below average precipitation. Lammers notes, "Water 2025 demonstrates that the Department of Interior is ignoring this responsibility."



- The Plan emphasizes Interior's long-standing tradition of acquiescing to the states for resolving disputes. However, as eighty years of conflict reveals, cooperation is rare, even in the best of times. Moreover, as California recently demonstrated, reaching agreement amongst Colorado River water users within

states is problematic. This internal dispute forced federal action in January to reduce Colorado River flows into California.

- The Plan's market-driven water banks and transfers from farmers to municipalities during times of shortages are laudable on a small scale, but there is no discussion of what will happen when the real crisis hits. Certainly, the 25 million people reliant on Colorado River water will not be deprived, but what will it cost? Farmers are becoming increasingly reluctant to make water transfers, as San Diego has recently experienced. Without strict federal guidelines and policies, municipalities like Los Angeles, Phoenix, Los Vegas and Salt Lake City will be forced into a cost environment not unlike what California energy utilities faced three years ago.
- Crop substitutions, which represent the greatest opportunities for water savings are completely ignored by the Plan. Nearly half of Colorado River water is used to grow water-intensive alfalfa and other forms of cattle feed. Much of this water could be saved by growing crops for human consumption.
- The Plan relegates environmental stewardship as merely aspects of conflict, not as an integral part of what society now demands of its river managers. Despite the fact that all the water referred to in the Plan comes from rivers integral to this continent's natural heritage, the Plan does not even mention or use the word river, other than when using place names. In describing its "Five Realities" the Plan completely ignores the reality that the riverine ecology throughout the watershed, such as in Grand Canyon National Park, Dinosaur National Monument and the Colorado River delta, has been dramatically altered, while the public is becoming increasingly vocal about reversing the damage.
- The Plan advocates maintaining and enhancing existing infrastructure. However, much of this infrastructure is responsible for the loss of up to 20 percent of the Colorado River's flow due to evaporation and seepage amongst its reservoirs. The draining of Lake Powell reservoir, for example, will eliminate enough water loss to service the municipal water needs of the state of Arizona.
- Not until the 25-page report's last 100 words does the term "drought" receive much attention. This should be Interior's main focus at this time. Questions Interior needs to be asking include: outlining specific federal management tactics it may employ; how farmers will be enticed or forced to release their water to preserve municipal economies, and will Interior enforce strict conservation strategies and efficiency standards?

"This report is all about carrots with no federal stick," adds Lammers. "Interior must begin developing water use standards and practices, as well as allocation strategies to be implemented as this drought situation worsens. Absent this, crisis is inevitable, despite Secretary Norton's report and marketing strategy titled to prevent it."

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For more information:

[Living Rivers](#)

[Water 2025 Plan: Preventing Crisis and Conflict in the West](#)

[United States Geological Survey. Precipitation Survey of the Colorado Plateau Region](#)

LR in the News 06/16/03

A River, Saved: Wild Yampa and Green nearly went the way of Glen Canyon

A River, Saved: Wild Yampa and Green nearly went the way of Glen Canyon

By Judy Fahys The Salt Lake Tribune

THE YAMPA RIVER, Colo. -- This wild place might have been entirely different were it not for a fateful boat trip a half-century ago. Fifty years ago this month, David Brower fell in love with the Yampa, and the Green and the Colorado rivers downstream. In the years that followed, a time before the word "environmentalist" existed, the activist rallied the nation against two dams planned for canyons just below the Yampa, dams that would have forever changed the landscape into vast lakes. This history was unknown to Salt Lake City resident Bob Hausser when he signed up for a white-water rafting adventure this month. In fact, the retired Kennecott engineer wore his "Lake Powell" T-shirt as Brower's one-time aides talked about the significance of Brower's fight for wild rivers and urged listeners to follow the example of his spirit.



Hausser's trip leader was John Weisheit, who sipped all day from a plastic coffee mug that proclaims, "Just Drain It!" referring, of course, to the same Lake Powell beloved by Hausser. Weisheit is director of the Moab-based environmental group Living Rivers, which through its Colorado Riverkeeper project organized the 50-year anniversary raft trip.

"We have things to do," Weisheit said at the outset. "We're going to get going again."

"Going," in this case, means reviving the broad-based conservation ethic that made it possible for activists such as Brower to help shape the modern West.

Brower, who died in 2000, took his trip in the U.S. Bureau of Reclamation's heyday, when it had more than 140 dams on its project list. And, after he drifted through Dinosaur National Monument's scenic redrock canyons, he made a career of harnessing American outrage over the destruction of national treasures for water and electricity intended to profit the bureau alone.

Two of the proposed dams would have braced against canyon walls visited on this month's Riverkeeper trip.

The bureau proposed one for below Echo Park, at the confluence of the Yampa and the Green. The other would have been more than 20 miles below at Split Mountain on the Green. If they had been built, the dams would have inundated 140 miles of canyon, up to Flaming Gorge on the Green and to Deerlodge Park on the Yampa.

"What happened here 50 years ago changed the world," said Rod Nash, the noted wilderness historian who joined the Brower commemorative trip in his dory, Canyon Dancer.

Brower fought dams with statistics that showed they would not conserve as much water, nor provide as much power, as the Bureau of Reclamation projected. When the bureau had finished building its Colorado River Basin dams, the two Dinosaur dams were not among them. "We have a living river here -- the Yampa is undammed," Nash told the 20 commemorative trip clients in one after-dinner talk. "It's a miracle in the American West." The guide: What might have been lost can be seen by anyone floating the rivers with Dee Holiday. He has been guiding for about 42 years, much of it with his wife, Sue, co-owner of their Holiday Expeditions, which hosted the commemorative trip.

Tall and wiry, Holiday probably knows the Yampa as well as a human can after spending roughly 2,000 days of his life on it.

He is the naturalist who can point out a chokecherry forest on the trail and tell about a woman named Josie whose chokecherry wine was the county's best. He is the oarsman who can pull a fast-moving raft away from the dangerous waves and dips of a rapid.

He is the historian who knows the story behind Pat Lynch, the hermit whose initials are chipped into canyon and cave walls. He can point out an unusual wild, desert orchid, rare spawning grounds for endangered fish and secret sea fossils captured in canyon stone.

Holiday is also the hiking guide who asks visitors to be respectful inside a cavern that holds ancient American Indian ruins.

"It's a real special place to me," he says, nearly whispering. "But it's sacred to the Native Americans."

The song and feel of rivers has always gripped Holiday, and its hold has only tightened with time.

"When you are younger, you do rivers for the experience," he said. "The longer you do it -- that's when I started to love the river." Slack water: To the activists, loving Western rivers means, in many cases, trying to undo the damage wrought by mankind. Where dam advocates point to the electricity Colorado Basin dams provide to 9 million people and the water they deliver to 30 million people, the activists see environmental havoc.

Wherever dams have been constructed, the surrounding ecology has fundamentally changed, usually harming the plants and animals around it. A good example is Glen Canyon, which was filled with water behind a dam built just outside the boundaries of Grand Canyon National Park, a dam Brower didn't fight but always wished he had.

Its riverbed spawning grounds for endangered fish species have been ruined by the dam flow's unnatural currents. And the trophy trout planted in the cold water below the dam are blamed for making meals of the federally protected humpback chub, flannelmouth sucker and the bluehead sucker.

More recently, the Bureau of Reclamation's renewed efforts to desalt the lower Colorado River have environmentalists worried about the fate of species-rich wetlands near the river's end, in Mexico and California.

Meanwhile, a near-war continues between the Grand Canyon's commercial rafting outfitters, who insist on using motorized boats to speed clients downriver, and wilderness advocates who say the Colorado, by law, should be motor-free in the park.

Weisheit's group has spearheaded the 4-year-old campaign to remove Glen Canyon Dam, which forms Lake Powell. Living Rivers charges that, besides imperiling or wiping out seven fish species, weak canyon walls and pressure from silt buildup will someday make the dam fail.

While dam supporters have laughed at the idea, Weisheit remains confident the dam will be removed and Lake Powell will be drained. "We can do it, and we can do it soon."

Kim Crumbo, a retired Grand Canyon river ranger and wilderness advocate, takes a starker, more ominous view.

"The victories are ephemeral," he says. "The defeats are forever." To dam or not to dam: Heady as the debates and history lessons might have been for the 20 paying customers on this trip, it was the wild Yampa that swayed their hearts.

Ranging in age from 7 to 70-something, they came from Portland, Ore., and Scottsdale, Ariz., and the nation's capital to run the Yampa and sections of the Green.

They saw how, because there is no dam, the Yampa's water is brown with silt and carries a forest of tree-size snags on its boisterous current. They observed migrating pelicans and browsing deer. They might have seen small rabbits, snakes or the fossil remains of prehistoric life.

Still, they didn't always agree with the activist-leaders.

For instance, Denise Dion, a Maryland-based regulatory consultant and rafting enthusiast, agrees that motors should be restricted in the Grand Canyon, but not banned, because motorized rafts make the place much more accessible to the public.

"I want to go to pristine areas," she said. "But my aunt, she wants to see them, too. She's 70," and cannot get around easily without the help of paved paths and motorized conveyances.

Dion called the push for a motor ban "elitist."

"You have to think about how you can serve many masters," she said.

A retired political science professor on the trip commented: "For most people, wilderness is not having a flush toilet and a motel."

Hausser, meanwhile, has not lost any affection for his Lake Powell houseboat, although he did gain a new appreciation for conserving water and efforts to block future dams. He says activists are "unrealistic" about decommissioning Glen Canyon Dam.

"I love the idealism of the people on the trip," he said, "but they are not going to be able to take back what is done." "Don't give up": Some activists are optimistic that this, the latest effort to engage the public in the debate in the fight for the West's rivers, will succeed. Others have doubts.

Lisa Force, a project director for Living Rivers, predicts that the movement will not gain broad public support until society has a crisis, perhaps a fit of guilt over its wasteful use of the Colorado River and the ecological damage that is being left for future generations.

"The hope is we'll recognize humans are part of the Earth community," said Force, who serves on the Sierra Club's board of national directors.

Jeff Ingram, another speaker on the trip, reminded the group that Americans deeply value the places they have set aside in parks, wilderness and preserves such as the wild Yampa. Ingram is a mathematician and Grand Canyon advocate who has been described by Cadillac Desert author Marc Riesner as Brower's secret weapon in the fight against dams proposed for the Grand Canyon.

Recalling Brower's seemingly futile efforts to protect wild, Western rivers, he pressed listeners to hold fast to their ideals, think independently and pursue those ideals even in the face of what seems like hopeless odds.

Parks, wilderness and wild places are something that all Americans cherish, he said.

"You may get defeated, but don't give up."

fahys@sltrib.com

Water: BuRec to alter flows at Utah's Flaming Gorge Dam to protect endangered fish

April Reese

Land Letter Colorado correspondent

The Bureau of Reclamation is putting the finishing touches on a proposal to change the way it operates Flaming Gorge Dam on the Green River in Utah to help recover endangered fish downstream, agency officials say. While federal biologists say the new flow regime will go a long way to meet recovery goals, some environmentalists contend that decommissioning the dam is the only way to help the fish over the long run.

The forthcoming draft environmental impact statement, over three years in the making, will likely call for releasing more water from the dam in the spring, said Beverly Heffernan, environmental protection specialist in the BuRec's Provo, Utah office. Providing peak spring flows will bring sediment downstream, where it forms sandbars and replenishes beaches -- important nursery habitat for endangered fish.

"The proposed action is to change the way we operate the dam so it more closely resembles a natural river flow," Heffernan said.

The draft EIS, initially scheduled to be released this spring, is now expected to be issued in October. The delay is necessary to give the agency a chance to incorporate new water temperature data into the document, Heffernan said.

The dam, authorized by Congress as part of the Colorado River Storage project in 1956 and completed in 1964, was primarily built to create a 91-mile-long reservoir that would store water promised to users in the Upper Colorado River Basin as part of the Colorado River Compact. The dam -- the largest on the Green River, a major tributary of the Colorado -- also provides hydropower: The Flaming Gorge power plant's net generation in 2002 was about 217 million kilowatt hours (kWh).

But in the 1980s, federal wildlife biologists began to suspect that the dam was harming native fish downstream in Dinosaur National Monument. In 1992, FWS issued a biological opinion that found the dam was contributing to the decline of four species of endangered fish in the Green River: the razorback sucker, Colorado pikeminnow, humpback chub and bonytail.

That prompted BuRec, which operates the dam, to study how changing the operation of the dam might help the fish. The resulting flow recommendations, completed in 2000, provided the basis for the new proposal, Heffernan said.

Under the new plan, BuRec would allow as much as 11,900 cubic feet per second (cfs) of water to flow over the dam in the spring. Currently, flows below the dam fluctuate between 830 cfs and 4,000 cfs, peaking in summer and winter, when electricity demand

is greatest. But operating the dam to simulate natural flows will not have a significant effect on power generation, Heffernan said.

Larry Crist, a fisheries biologist with FWS who helped develop the 2000 flow recommendations in his previous position with BuRec, said that while altering the operation of the dam is "a big step forward," it's only part of the solution. "It's an important element, but it's not the only element in recovering these fish," he said. "You'll have to do that in conjunction with dealing with non-native species and reintroducing native fish in places where they're no longer found."

The Moab, Utah-based environmental group Living Rivers says altering flows is not enough to recover the fish. It has urged BuRec to consider decommissioning the dam, and hoped the agency would include dismantling as an alternative in the draft EIS. But Heffernan said taking out the dam is not an option. "We can protect fish while maintaining other functions of the dam," she said.

John Weisheit, conservation director for the group Living Rivers, is skeptical.

"It's not going to work, in my opinion," he said. "They're applying band-aids to stay out of court, to show they're trying to keep the fish alive. But as long as that dam is there, affecting temperature and sediment, recovery of those fish is not going to happen."

Crist acknowledged that a natural system would be "the most ideal situation," but he said the new flow regime is "a good compromise" considering the realities of demands for power, irrigation and recreation.

"When you deal with the Endangered Species Act and you deal with recovery, it doesn't mean returning all the way to natural conditions," he said. "I think endangered fish can tolerate a certain amount of development."

And with snowmelt still below average in some watersheds, Lake Flaming Gorge provides an important source of water for a growing population, Heffernan said.

"The current drought we're in shows the value of these reservoirs, for both water storage and endangered species. It provides a source of water for everybody in a period where there wouldn't be water otherwise," she said.

"Unless we can get everybody to not move to the state of Utah, (the dam) will continue to figure in our water needs substantially."

Complicating recovery efforts is the presence of an economically important blue-ribbon trout fishery below the dam. While the endangered razorback sucker, Colorado pikeminnow, humpback chub and bonytail require warm water, trout need cool water.

Crist said the new flow regime will create temperatures agreeable to both endangered fish and trout. But Weisheit sees that scenario as overly optimistic. "You can't manage for both endangered native fish and exotic fish in the same system," he said.

Letter to LR 06/17/03

Commissioner Keys responds to LR letter

United States Department of the Interior
Bureau of Reclamation
Washington, D. C. 20240
In Reply Refer To:
W-6333 June 17, 2003
ADM-13.00

Mr. Owen T. Lammers
Executive Director, Living Waters [Rivers]
P.O. Box 466
Moab, Utah 84532

Dear Mr. Lammers:

Thank you for your [letter to Secretary of the Interior Gale A. Norton dated March 14, 2003](#), regarding Colorado River issues. The Secretary has asked that I respond to you on her behalf. Similar to other Western rivers, the Colorado River Basin has experienced four dry years, some of which having been among the driest on record. With such a significant part of the nation dependent on water supplies from the Colorado River, it is truly fortunate that we continue to enjoy the benefits of our existing water supply facilities that help to mitigate to make up for these tough years of insufficient moisture.

As you point out in your letter, these issues are complex and sometimes contentious, and it gives me a perfect opportunity to mention the Secretary's new initiative, entitled Water 2025: Preventing Crises and Conflict in the West. Water 2025 recognizes the realities we face in dealing with water issues, such as explosive population growth, increasing needs for water for environmental and recreational uses, and the national importance of food and fiber production from Western irrigated agriculture. Water 2025 sets forth a strategic plan to facilitate a vigorous and educated public discussion in key Western communities, including those that rely on the Colorado River, where the likelihood for conflict and crises over water exists or can be predicted to occur by the year 2025. I invite you to attend and participate in any of the eight regional consulting sessions hosted by the Bureau of Reclamation. The information on these sessions is located on our website, www.doi.gov/water2025.

Again, thank you for your comments and concerns about Colorado River issues. The Colorado River has been and will continue to be a top priority for our agency, and I look forward to working with you and your organization in the constructive and positive manner set forth in Water 2025.

Sincerely,

John W. Keys, III
Commissioner

LR in the News 06/30/03

Colorado River basin unprepared for shrinking reservoir capacity

April Reese, Land Letter Colorado correspondent

PAONIA, Colo. -- The intricate plumbing system that has turned the arid Colorado River basin into a patchwork of irrigated fields and fast-growing cities is at risk of running dry if water managers do not focus more effort on keeping sediment from building up behind the river's dams, some water experts and river advocates warn.

The Colorado River stretches 1,450 miles from the Rocky Mountains to the Gulf of California and the Sea of Cortez, draining a 244,000-square mile basin. More than 30 million people in seven states depend on water stored in the basin's reservoirs to provide a steady and reliable supply for irrigation, hydropower and municipal water use. But while the dams allow large volumes of water to be stored and distributed, they also intercept sediment that would otherwise be carried downstream in the silt-heavy river. Sediment is slowing accumulating in the system's reservoirs, and eventually will render their usefulness for water storage obsolete, water experts say.

"If we allow those reservoirs to fill up with sediment, we'll have severe water shortages, and we will not be able to meet our water needs," said Ron Christensen, an independent water engineer based in Salt Lake City.

Scientists say siltation is affecting areas downstream as well: Reservoirs are collecting sediment that in a natural river system would flow downstream and replenish sandbars and riverbanks, resulting in erosion and a deepening of the river channel.

Barry Wirth, who handles communications for the Bureau of Reclamation's Upper Colorado River Basin office, said sedimentation "will present some challenges," but not until "many years down the road."

Wirth said it will take centuries for silt to have a major impact on water storage capacity in the basin's reservoirs. As an example, he cited Lake Powell, the reservoir created by Glen Canyon Dam in Arizona and one of the Colorado's largest. It will not silt up for another 500 to 700 years, he said, adding that that estimate is based "somewhat on conjecture."

But some water experts say that is an overly optimistic scenario that fails to take into account the vagaries of weather, climate change, water demand and other variables.

Christensen said capacity can shrink dramatically long before silt reaches the top of a dam.

For instance, "Lake Powell has gone from full to half empty," because of the current drought, he said. "If the reservoir was half full with sediment [when the drought hit], you'd be done today, basically. All the water you'd have is what's coming down the river

- there would be nothing in storage." Glen Canyon Dam and Lake Powell. Photo courtesy of BuRec.

John Weisheit, conservation director for the Moab, Utah-based group Living Rivers, said that BuRec's wait-and-see approach could backfire.

"It puts the entire system in jeopardy, and it's going to be embarrassing for them," he said. "They're in denial. They knew this was going to happen when the dams were built."

All of the dams -- including the massive Hoover Dam, built in the 1930s -- were constructed with extra storage capacity to account for sedimentation buildup, said Bob Walsh, Wirth's counterpart in BuRec's Lower Colorado River Basin office. Dam engineers estimated how much sediment was likely to build up behind the dam and expanded the reservoir's depth accordingly, Walsh said. For example, of Lake Mead's 32 million acre-feet capacity, 2.5 million acre-feet were set aside for sediment. (One acre-foot is the amount of water needed to cover an acre of land in one foot of water.)

"Some of the organizations that would like to see the dams removed would like to tell people the dams are going to silt up and be useless. But we've never seen anything that provides hard evidence of that," Walsh said. "The engineers that planned and built these dams knew the Colorado was a silty river and they took special precautions for that. These dams were built to handle sedimentation."

It's too soon to come up with solutions to a problem that isn't likely to surface for centuries, Walsh said. And when that day comes, "there will be ways to remove the sediment, if that's necessary," he said.

Wirth added that with the water supply for 30 million people -- and counting -- hanging in the balance, BuRec would not hesitate to address the sediment problem if the agency felt it was a pressing concern.

"It's to our advantage to do as thorough a job as we can, because it's in our best interest," he said. "We want to ensure the water is there to be allocated."

In the meantime, BuRec faces more immediate challenges, such as meeting the water needs of the current generation, Wirth said. "I just don't think in the year 2003, we can make an allocation decision for the people who will be here in 500 years. But we can do that for people who will be here in 2030," Wirth said. "Those dams were built according to what society wanted in those years. Now that we have 30 million people in the basin, how do we best utilize those resources?"

But as far back as the early 20th Century, before the dams were built, federal officials were expressing concern about sedimentation. In 1910, F. H. Newell of the Geological Survey, who later became the first Director of the Reclamation Service (now BuRec) wrote: "The upper ends of all reservoirs are rapidly filled with silt and it becomes an important question to the projectors of storage works as to how many years will elapse before the value of the reservoir is practically destroyed and whether its use can be restored in part by subsequent removal of some of this material."

Wirth said that as far as he knows, none of the reservoirs in the basin have plans for handling sediment buildup.

"I think that there are ways to wash the sediment out or stop it before it gets into the reservoirs. But no one's doing anything about it," Christensen said. "I think they ought to do it sooner rather than later because we need the water storage that we're losing to sediment," Christensen said. "We ought to be maintaining our storage capacity rather than letting it fill up."

As Colorado River-dependent cities like Tuscon, Salt Lake City and San Diego continue to grow, and demands on limited water supplies increase, maintaining full storage capacity in the system's reservoirs is becoming more crucial.

"Everybody's worried about how to get more water. Not nearly as many are worried about their reservoirs filling up with sediment," Christensen added. "And they're not going to worry about it until it becomes a problem."

Although BuRec and environmental groups have completed a handful of sedimentation studies of reservoirs in the basin, many are outdated or flawed, and "very little research is being done," Christensen said.

Water experts say the little research that has been done suggests that sediment is expensive to remove or control and difficult to dispose of.

But Weisheit said taking on the problem now, while it's still in the early stages, is preferable to waiting until diversion pipes are clogged with silt.

"A sediment survey for the whole Colorado River basin is an appropriate thing to ask for and accomplish," he said. "The longer they wait, the greater the amount of sediment they will have to deal with and the more it will cost to mitigate."

LR in the News 07/06/03

Water: Growing demand, dwindling supply

Shaun McKinnon The Arizona Republic Jul. 6, 2003

Lesson No. 1 about water in the West: There's never enough to go around, and no one's making any more.

Competition for what there is has intensified as growth and drought tighten the supply. The struggle threatens everything from economic development and tourism to agriculture and municipal water supplies.

Courts are deciding who can use the water and who can't. Cities are preparing to buy or lease from farmers or Indian tribes for 10 times the current cost.

If you go Phoenix will host the first of eight regional meetings to discuss issues raised by "Water 2025," Interior Secretary Gale Norton's blueprint for reventing water crises and conflict.

The half-day conference will be held from 1 to 5 p.m. Tuesday at the downtown Hyatt Regency Hotel.

Two sessions are scheduled, one to talk about specific Arizona issues and the other focusing on resolving conflicts. Participants include Herb Guenther, director of the state Department of Water Resources; Sid Wilson, general manager of the Central Arizona Project; Douglas Nelson of the Arizona Rural Water Association; and representatives from Indian tribes, environmental groups and local governments.

Additional sessions are scheduled throughout the summer in Las Vegas; Sacramento; Salt Lake City; Boise, Idaho; Billings, Mont.; Albuquerque and Austin.

Input from the sessions could help shape Water 2025 as well as other Interior Department water policies.

The Phoenix sessions are open to the public, but advance registration is required. Information is available by logging on to www.doi.gov/water2025/az/main.cfm.

And on the eve of a series of meetings aimed at quelling some of the unrest, the federal government lobbed its own bomb, ruling on Thursday that farmers in California's Imperial Valley are wasting water and will receive less beginning next year. Furious farmers are already preparing a legal challenge that will likely drag on for months and could eventually draw in Arizona and other states.

The escalating battles pushed Interior Secretary Gale Norton to step in and try to negotiate a truce. She introduced "Water 2025" in May as blueprint for preventing crisis and conflict and planned to begin discussing it with regional water leaders beginning Tuesday in Phoenix.

"When water crises and conflict pit neighbor against neighbor, species against species and business against recreation, when they threaten your way of life, we cannot afford to stand on the sideline," Norton said last month from Denver. "The consequences . . . are just too severe."

Critics have already dismissed Norton's plan as, among other things, "Band-Aids for gunshot wounds," as the environmental group Living Rivers called it. State and local water managers bemoan its puny budget, fearing more unfunded federal mandates. But some water experts believe it's a reasonable approach to a nearly unreasonable situation.

"The water supply is finite, and the demands are growing," said University of Arizona law Professor Robert Glennon, an authority on Western water issues. "There will be no new Central Arizona Project, no second era of dam building. That's just not going to happen. What the West is looking at is the fastest-growing section of the country, a population boom that's going on unabated. The question is, What's going to give?"

Among the issues that fuel the fiercest fights:

*Growth. More than 25 million people rely on the Colorado River, which is now controlled by dams and reservoirs for much of its 1,400-mile length. Nevada has exhausted its legal allocation of the river and is now searching for alternatives. Colorado lawmakers recently approved a plan to build a new pipeline that will carry more of that state's share of the river to its most populous cities east of the Rockies.

Related links

- * Saving Southwestern willow flycatcher
- * Special report: A long, dry streak

The story is similar on other rivers, which strain to serve growing populations. "Almost every major river in the West is overappropriated," said John Keyes, commissioner of the Bureau of Reclamation, the agency that operates most of the region's water delivery systems. In Arizona, the groundwater supply is at greater risk of depletion, especially in rural areas.

*Environment. Courts are increasingly siding with environmental groups who want water set aside for wildlife and natural habitat. Salt River Project must spend \$20 million to create and maintain a habitat for the Southwestern willow flycatcher, an endangered bird that moved into the drought-stricken edges of Roosevelt Lake. Another court ordered the Army to reduce its pumping near Sierra Vista, ruling that growth there was endangering the San Pedro River.

Just last month, a New Mexico court ruled that Albuquerque must take less water from the Rio Grande to accommodate the endangered silvery minnow. That decision is "huge," said Lisa Force, Arizona program director for Living Rivers. "It has the potential of impacting Western water law."

* Politics. Few issues have fueled the kind of political battles that water has in the West. And it has rarely been more evident than the past year in California, where the powerful Imperial Irrigation District has dug in to protect its huge water supply from San Diego, Los Angeles and the U.S. government.

Federal officials said Thursday that the district is wasting some of its allocation and will lose up to 9 percent of its water next year. Imperial holds the rights to more water than any single user on the river, more than the entire states of Nevada, Wyoming and New Mexico.

In Arizona, tribal water claims are crawling through Congress, the Legislature and the courts. The Navajo Nation earlier this year filed suit to force action on its claim to the Colorado and Little Colorado rivers, a move that could set off new skirmishes over who must give up water to satisfy any settlement.

If the tribes decide to lease water back to urban providers, they could demand premium costs. Valley cities that now pay roughly \$30 to \$100 per acre-foot could find bills topping \$1,000 per acre-foot, according to water experts. (An acre-foot equals 325,851 gallons.)

* Agriculture. Despite the urban growth explosion, farmers still use more water than anyone else in the West. The Imperial Irrigation District in southern California holds the largest single allocation on the Colorado River, larger even than all of Arizona's. That gives farmers power, but in many cases, it also gives cities a source of water for new growth. The battles will focus on how farmers will reduce their consumption and how much cities will have to pay them to do so.

* Drought and climate. The one pressure point out of anyone's direct control, drought has reshaped many of the arguments in recent years simply by reducing the amount of water available. Both the Colorado River and the Salt and Gila rivers in Arizona produced record-low runoff last year, forcing cities to draw heavily on reservoirs. Lake Powell is now at half-capacity, and Lake Mead dropped low enough to trigger limits on some states.

Drought cycle

University of Arizona hydrologist Julio Betancourt predicts the Southwest is headed into a long-term drought cycle that would choke the water supply for years or even decades. But that may be just the beginning, according to Tim Barnett, a researcher at Scripps Institution of Oceanography who is studying abrupt climate change.

Warming seasonal temperatures will shorten the snow-melting season in the West's high country and will reduce runoff by 17 percent to one-third on the Colorado River and other systems, leaving them unable to meet demands for the foreseeable future, Barnett asserts.

Those pressure points form much of the foundation for Norton's Water 2025 initiative, which begins with what she calls "the five realities:" growth, existing water shortages, conflicts caused by those shortages, aging water delivery and treatment systems, and ineffective crisis management.

From there, she proposes four tools to help stave off future crisis and conflict: improving water management through conservation, efficiency and water markets, such as Arizona's water bank; collaboration among cities, farmers, environmental groups and others who have a stake in the West's water; boosting supplies with technology such as desalinization of water that otherwise would be wasted; and adjusting policy and even law to more efficiently use existing supplies.

The proposal included an \$11 million appropriation for the first year, an amount reclamation chief Keyes acknowledges would barely address issues in Phoenix but still "money to get things started." The Interior Department will encourage state and local leaders to develop ideas and plans suitable for their specific situations.

Water experts say the plan falls short of addressing some of the most critical conflicts still looming. One potentially blockbuster showdown is brewing just over the border in Mexico, where environmental groups in that country and this one are trying to force their governments to restore the Colorado River Delta. That once lush riparian area most years now receives no water from the overtaxed river.

Restoring it would cost tens of millions of dollars and billions of gallons of water, which someone would have to give up at such a significant cost that few U.S. leaders will even consider it. Some delta advocates have tried instead to focus on minor successes that could lead to a long-term approach.

One such example is a tiny edge of the delta just south of Yuma, where runoff from farms has created a new riparian habitat that supports birds and other wildlife.

"The big lesson is that it is possible on very small water budgets to finally incorporate wildlife and the river itself into the way we manage the river," said Charles Bergman, whose book *Red Delta* chronicles the transformation.

The one hitch: The water that runs into the marshes is the same water that some officials want to treat and desalt, making more efficient use of it.

The only way around such conflicts is to settle feuds, set aside differences and cooperate, said Patricia Mulroy, general manager of the Southern Nevada Water Authority.

'This is all political'

"The consequences of not cooperating are very real and very immediate," Mulroy said. "If this drought continues, there is no way, given the current separatist approach of the lower basin states, that we can all make it through. This is all political. The hydrology of the river has made those politics more acute."

She said Arizona's willingness to bank water for Nevada is one sign that politics aren't forever. Norton actually cited the water bank in her initiative as an example of what should happen throughout the West.

"Long-lasting solutions will come from the people who must live with or learn to live without the water they need," Norton said.

"Doing nothing is an option, but only if we are willing to accept the drastic consequences that follow."

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LR in the News 07/12/03

Thirsty Colorado Is Proposing to Stick a 'Big Straw' Into Its Namesake River

July 12, 2003 LA Times Headlines

By Bettina Boxall, Times Staff Writer

GRAND JUNCTION, Colo. - It's an audacious - some say absurd - scheme: Take Colorado River water just before it slips over the Utah border, pump it east more than 200 miles, lift it 5,000 feet over the Rocky Mountains and deliver it to the state's burgeoning Front Range communities.

Nicknamed the "Big Straw," it is a big, old-fashioned kind of idea, reminiscent of the mega-water projects that greened the West in the 20th century. Estimates of its cost start at \$2.5 billion and climb. Opponents call it a giant boondoggle in the making that would suck water from some of Utah's most popular rafting spots and deplete flows needed by endangered fish.

The Big Straw's grand scope underscores Colorado's keen desire to protect its full share of the 1,400-mile-long river that cleaves the Southwest like a rusty saw. Downstream in California, the plan is seen as a harbinger of the future, when the rising demands of other states along the Colorado will inevitably staunch the bounteous surplus on which the Golden State has long depended.

The water hog of the Colorado, California has no choice but to stand by while other states move to tap their full entitlements meted out by Congress and a multi-state compact in the 1920s and '40s. "They have a right to develop their apportionment," said Dennis Underwood, vice president of the giant Metropolitan Water District of Southern California.

California's prodigious thirst looms large in Western water policy and is helping drive the Big Straw proposal. Politicians see it as a way to keep Colorado water in Colorado - and out of the swimming pools and sprinkler systems of Southern California.

"While Coloradans are carefully considering which day they are allowed to turn their home sprinklers on, California lawns are lush and green, thanks to Colorado's water," Gov. Bill Owens lamented during a water policy discussion this spring.

The Big Straw proposal is still in the earliest stages of review. A \$500,000 study, due out in the fall, will determine only if the project is worth pursuing, not whether it will be built.

Nobody can say at this point how much electrical power it would take to transport the water, how much the project would cost, who would pay for it, what the route of the pipeline would be, or how much treatment the water would require. Nor can anyone say precisely who would use the water, which is coveted more for the Front Range's future growth than current consumption.

But Grand Junction water attorney and Big Straw backer Gregory Hoskin believes there is a ready market, even if the water proves expensive.

"This is the desert. People can't stand the desert. They need trees. They need green," insisted Hoskin, a member of the Colorado Water Conservation Board. "I don't know what people will pay for water. But I know people with money will pay anything to water their lawn."

Were it not for a mismatch of geography, Coloradans would probably already be using their full share of the river. But the Colorado, like most of the state's water, is on the western side of the Rockies, while most of its people - and growth - are on the eastern side in a stretch of development that runs from Colorado Springs to Denver and beyond.

Starting in the 1930s, the state and the federal Bureau of Reclamation developed a complex system of reservoirs, aqueducts and mountain tunnels to ship water to the eastern side of the Continental Divide. The Big Straw would reach farther, pulling water through a 10-foot-wide pipe all the way from Colorado's westernmost border. The pipeline would climb 4,000 to 5,600 feet over the Rockies, higher than California's most grandiose projects. Although the State Water Project in California sends water a greater distance - 600 miles south to Los Angeles from the Sacramento-San Joaquin Delta - its rise across the Tehachapi Mountains is no more than 2,000 feet.

By waiting to tap the river after western Colorado has used what it wants, the Big Straw would avoid many messy in-state water brawls. But removing at least several hundred thousand acre-feet of water annually - an acre-foot would supply two Southern California households for a year - could change the nature of the river in the downstream states.

There would be much less flow for the river's four endangered fish species, for the huge reservoirs that store water for the Lower Basin, and for the rafting outfitters who play a significant role in Utah's recreation economy.

"We think it's horrible. It could put the river-running industry at risk," warned John Weisheit, conservation director of Living Rivers in Moab, Utah, and a member of several river outfitter boards. "It is going to be a huge burden to the taxpayer, when the more reasonable alternative is conservation."

The proposal has its critics in Colorado as well. "I don't think average, everyday Coloradans want to pay through the nose for a project like this," said state Sen. Terry Phillips, a Democrat from the Denver suburb of Louisville who scoffed at the Big Straw as an extravagant fantasy when the Legislature appropriated funding for the preliminary study. "It's ridiculous."

At the Colorado Canyons National Conservation Area, manager Greg Gnesios fears the pipeline's massive infrastructure could blight the scenic red rock canyons of the 123,000-acre tract bordering the river at the state's western edge.

"It's almost like putting it through the national park," Gnesios said. "That could create some problems for the Big Straw folks."

Dan Luecke, a hydrologist who works for several Colorado environmental groups, doubts that the scheme will survive close scrutiny.

"I think an evenhanded study will drive a stake in its heart," he said. "It's a bad idea. It will be enormously expensive. It will require an enormous amount of energy to pump that water. It will have incredible water quality problems."

Born amid the 13,000-foot peaks of Rocky Mountain National Park, the Colorado is far from pristine when it hits the Utah border. Often it resembles a giant, murky irrigation ditch.

On its course down the western slope of the Rockies, the river picks up salts and selenium from the riverbed and farm runoff, as well as urban effluent. The river's salinity levels at the Utah border are 10 times greater than they are at its headwaters. Selenium levels at times exceed state standards. If pumped untreated to high-country reservoirs on its way to the Front Range, the border water would be warmer and dirtier than the supplies into which it is piped, lowering overall water quality.

"From our standpoint, that is the biggest concern," David Nickum, executive director of the Colorado Council of Trout Unlimited, said as he stood near a mountain reservoir that flows into a trout-fishing river. "If you envision taking a large amount of water out of the Colorado and bringing it up here, it's hard to imagine the magnitude of the change [in quality] or the magnitude of treatment."

Using more water in the Colorado's Upper Basin also means that less water would reach the Lower Basin, where California has been sucking more than its share from the river for nearly half a century.

It could do so because the other six Western states that draw from the Colorado didn't need their full allocations. But as the West grows, that is changing. Arizona and Nevada have both begun to use their full river entitlements in the last three years.

"Now the reason there are surpluses is because the Upper Basin states have not developed their allocations," observed Jerry Zimmerman, executive director of the Colorado River Board of California. "In the future, there will not be surpluses nearly as frequently."

Nor is there as much water in the Colorado as everybody thought when the river's flow was divvied up between the Upper and Lower basins in a 1922 interstate compact.

Hydrologists had figured that 18 million acre-feet of water a year spilled down the river's rock-walled canyons to the Gulf of Mexico. But that estimate, based on a wet period, turned out to be too high by about 3 million acre-feet a year. The average river flow is in fact less than the total legally allotted to the seven basin states and Mexico.

"If you have a river overcommitted, then the chances of getting shortages are there. That's why you need to look at more effective ways of doing things," said the MWD's Underwood.

Ironically, the Big Straw idea grew out of love of another river. Ralph Clark III, a private environmental planner, first proposed it in the late 1980s as a way of protecting the headwaters of the Gunnison River in western Colorado. Better, he thought, to take water from the Colorado at the state border than divert the upper reaches of his beloved Gunnison to the east side of the Rockies.

But even Clark is not yet prepared to endorse its construction. He thinks of the Big Straw, which he more mundanely calls the Colorado Aqueduct Return Project, as a last resort. * Times staff writer Doug Smith contributed to this report.

LR in the News 07/17/03

Reclamation chief won't drain Powell

Arizona Daily Sun

By PAUL FOY

Associated Press Writer

SALT LAKE CITY -- Advocates of draining Lake Powell and allowing the Colorado River to flow freely through southern Utah again pitched their idea Wednesday to the head of the Bureau of Reclamation, but he dismissed it out of hand, declaring: "That's never going to happen."

Reclamation Commissioner John Keys convened the fourth of eight regional conferences on Western water problems Wednesday in Salt Lake City.

Speaking to about 350 government and water district officials, Keys advocated conservation, collaboration and planning. He told officials they shouldn't look to the federal government for money as a solution.

"I didn't come here with a bag of money to solve everyone's water problems," Keys said.

Advocates of draining Lake Powell argued that four years of drought have left the huge reservoir on the Utah-Arizona border only about half full.

John Weisheit, director of the Moab group Living Rivers, said Lake Powell could be sucked dry in eight years if the drought continues. Keys disputed that, saying Lake Powell never would run dry. And he said it would be irresponsible to drain Lake Powell or Lake Mead, the two largest Colorado River reservoirs.

Weisheit said the reservoirs squander huge quantities of water to evaporation and seepage -- a loss Keys dismissed as the "cost of doing business."

Without Lake Powell or Lake Mead, Keys said, the 23 million people who depend on the lower Colorado River basin would have had only 40 percent of their normal water supplies last year.

"It's something that's never going to happen," he said in an interview of the idea of tearing out Glen Canyon Dam. "I won't spend a dollar studying it."

LR Press Release 07/22/03

House votes to destroy Colorado River Delta wetlands

Taxpayer money to be wasted on mothballed desalting plant; Senate yet to act
Contacts:

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The U.S. House of Representatives voted last Friday to retool a defunct desalting plant near Yuma, Arizona. The Bureau of Reclamation (Bureau) estimates the cost of repairing the now obsolete plant technology at \$26 million. The decision was made despite the reality that operating the plant will destroy the majority of wetland habitat in the Colorado River delta region, and that far less costly measures are available to meet US treaty obligations for water delivery to Mexico.

"At a time when federal deficits are skyrocketing, it's unbelievable that Congress would consider throwing away taxpayers dollars to retool this plant, " says Lisa Force, program director for Living Rivers. "This is pork barrel politics at its worst."

The inclusion of the provision in the House report on the 2004 Energy and Water Appropriations bill allows for re-operating the Yuma Desalting Plant, a measure which the Bureau estimates will cost a minimum of \$36 million annually. Completed in 1992 at a cost of \$256 million to clean up brackish wastewater from farms in southern Arizona, the plant was shut down several months later due to extremely high operating costs. The Bureau of Reclamation has downplayed an alternative solution costing 33% to 85 % less--just \$6 million to \$26 million annually--involving paying willing sellers to lease water they presently do not need.

The agricultural wastewater that the plant would process is now funneled into the Cienega de Santa Clara, a 40,000-acre open water ecosystem in the Colorado River delta region. The desalting plant would remove the entire flow from the cienega and return only highly saline brine to the wetlands.

"This provision would destroy an extremely important wetland in Mexico that contains the largest remaining population of Yuma Clapper Rail in the world," says Bill Snape, Defenders of Wildlife Vice President for Law and Litigation. "It will be impossible to replace the value of the Cienega de Santa Clara to the Colorado River ecosystem."

The cienega is the largest remaining wetland in the southwest Americas and is home to fifty-six threatened, endangered and declining species. Several scientific studies funded by the Department of Interior confirm that the wetland would be completely destroyed by desalter operations.

"This is reminiscent of the days of old, when the Bureau wasted tax payer money left and right, leaving renowned habitat laid to waste," says John Weisheit, conservation director of Living Rivers and the designated Colorado Riverkeeper.

"We are disappointed that some members of Congress wish to move forward with such an expensive and destructive proposal. Congress mandated public involvement in Colorado River management but we fear the public is not being heard," says Steve Glazer, Chair of the Sierra Club Colorado River Task Force.

"We're fighting hard to ensure the Senate does not duplicate the folly of the House," adds Lisa Force. The U.S. Senate is expected to vote on the water and energy appropriations bill as early as this week.

LR Press Release 08/11/03

Sediment forces closure of Hite Marina

For immediate release
August 11, 2003

Contact: John Weisheit (435) 259-1063

Sediment makes access to Hite Marina impossible

Glen Canyon Dam hydropower at risk

As predicted two years ago by the environmental group Living Rivers in Moab, Utah, Colorado River sediment at Hite Marina has necessitated the removal of all reservoir conveniences such as the floating store, fuel docks, water and septic lines, boat rentals, and courtesy docks. With the blessing of the National Park Service the concessions operator, ARAMARK, has literally lifted anchor and towed their floating facilities down-reservoir to keep their investment from becoming engulfed in mud.

A "use at your own risk" boat launch currently remains open for the convenience of river runners and small, hard-hull boaters. Because Lake Powell reservoir is dropping fast, this primitive boat ramp will be completely unusable by the first of September, and will force river runners to go another 45 miles down-reservoir to exit instead at Bullfrog Marina.

The land-based facilities at Hite, which includes a store, gasoline, drinking water and a sewer clean-out, will remain open to service the needs of the residents and the traveling public.

In 1986 the Bureau of Reclamation determined that the delta for the Colorado River arm was located at Dark Canyon, which is 15 miles above Hite. The National Park Service and ARAMARK jointly authorized a sediment survey to be conducted by Mussetter Engineering of Denver in 2000. The engineers had determined that the delta advanced from Dark Canyon to the mouth of the Dirty Devil River at a rate of about one-mile per year. At present the delta is just beyond Hite Marina where the original river channel is 245 feet below the full reservoir elevation of 3700 feet.

According to the 2000 survey, reservoir managers were given another 35 years of service at Hite Marina provided the reservoir could be maintained at full pool. "Such a projection is incredibly optimistic," says John Weisheit, conservation director of Living Rivers. "Considering the downstream demand for water, the present drought situation, and how the river erodes into the exposed sediment and feeds the delta, the facilities at Hite are basically history."

By April of 2004, Lake Powell reservoir is predicted to be 106 feet below normal. At this elevation, Bullfrog and Antelope Point marinas will also feel the effects of sustained drought. The boat ramp at Bullfrog is beginning to flatten out and the lack of incline will make it very difficult to load and unload boats--especially longer craft such as a houseboat and the highway department's ferryboat. Because Antelope Point is located on the rim of the original Colorado River canyon, the lowering reservoir level will perch this boat ramp high and dry. Already boat traffic is creating congestion problems at the narrows before Antelope Point and a no-wake designation is now being enforced to minimize hazards to navigation.

During the spring snowmelt, Lake Powell reservoir levels rose a mere 11 feet. Already the reservoir has returned to the levels of the previous winter. With no drought relief in sight, this continuing trend will eventually place power generation at risk too. The minimum storage level to safely produce electricity is set at 6 million acre-feet. Right now the reservoir is storing 12.7 million acre-feet of water at 50% of capacity. Power generation at Glen Canyon Dam could effectively end in two or three years under present drought conditions.

"This drought emphasizes the dubious nature of Lake Powell reservoir. By decommissioning Glen Canyon Dam we could restore five hundred miles of river to its natural habitat, which includes Grand Canyon National Park, while at the same time saving the water that is otherwise lost to evaporation," concludes Weisheit, who is also the designated Colorado Riverkeeper.

LR Letter 08/11/03

Proposed Modification to Mechanical Removal of Non-native Fish from the Colorado River in Grand Canyon Arizona, dated July 25, 2003

August 11, 2003
Mr. Dennis Kubly
Bureau of Reclamation
125 South State Street
Suite 6107
Salt Lake City, UT 84138-1107

Re: Proposed Modification to Mechanical Removal of Non-native Fish from the Colorado River in Grand Canyon Arizona, dated July 25, 2003

Via Fax and E-mail

Dear Mr. Kubly ,

Thank you for the opportunity to submit comments on Proposed Modification to Mechanical Removal of Non-native Fish from the Colorado River in Grand Canyon Arizona, dated July 25, 2003.

Living Rivers finds this proposed action constitutes improper science, thus an inappropriate deviation from the original objective. Living Rivers is also disappointed that this proposed action represents yet another example of how the Adaptive Management Program (AMP) is failing to address the long-term recovery needs for endangered fish, and merely perpetuating a reactive strategy with no demonstrated results.

1) No justification for altering the experiment

As noted in materials for the 13-14 August AMP meeting, it is clear that in-migration is occurring in the existing mechanical fish removal zone. The supplemental EA stated the contrary. (The EA should be re-written to reflect this new information, and released again for public comment.) Since there is no confirmation that the experiment is indeed permanently reducing non-native population to desired levels, there is no reason to contemplate any change in the experiment.

Second, while the experiment is certainly demonstrating that fish are being killed, there is no data to support the experiment is leading to improved Humpback Chub recruitment. It is improper to change the parameters of the experiment until such time as there is a demonstrated rationale to do so. Such is not the case at present, especially, as noted above, with migration now well underway.

Third, there has been no independent review of this proposal, a consistent recommendation by the National Research Council and the National Academy of Sciences of such GCMRC activities.

2) Demonstrated lack of focus on the long term objectives.

The investment of AMP resources in contemplating and studying the alteration of an incomplete, and so far, inconclusive experiment is yet another unfortunate example of poor leadership within GCMRC and the AMP. There is an extensive amount of work that needs to be undertaken to help recover Grand Canyon's native fish, the principle charge of the AMP. After nearly two decades, seven under the direction the AMP, the results have been abysmal. This is in no small part due to wasted resources, such as plans to alter an experiment with insufficient justification to do so.

A more appropriate investment in resources would be to begin studying and implementing mechanisms to address the need to reduce non-native fish with natural, as opposed to mechanical approaches. An objective of the AMP is to reintroduce presently extirpated species, such as the Colorado Pikeminnow or Otter. Both such species would gladly feed on the non-native fish, likely at a much higher rate than the remaining natives.

With movement now by the AMP to address the need to warm the water, habitat conditions may be sufficient to support Pikeminnows. But the AMP need not wait until the temperature issue has been resolved to implement such a reintroduction, as it may petition to so for experimental purposes, despite the fact that it is unlikely that the Pikeminnow can reproduce in the present system. However, if it appears that they are

helping to significantly reduce the non-native population, with minimal impact to the native fish, and thus aiding in Humpback Chub recruitment, this would be cause to accelerate efforts to realize this species recovery as well.

While the Park Service has so far been resistant to Otter reintroduction due to inconclusive evidence regarding which sub-species dominated Grand Canyon habitat, it is clear that the increased interest and assumed need to increase predation on non-native fish, amplifies the call for implementation of a reintroduction plan.

Such nature-based proposals to mimic and rebuild the natural system should be the focus of the AMP, not short-term efforts to modify inconclusive experiments.

Thank you for your attention to these concerns.

Sincerely,

John Weisheit Conservation Director

LR Letter 08/13/03

Concerns regarding Glen Canyon Dam Adaptive Management Program

August 13, 2003

Mr. Michael Gabaldon Deputy Director of Operations U.S. Bureau of Reclamation
Department of Interior 1849 'C' Street, NW Washington, DC 20240

Re:Concerns regarding Glen Canyon Dam Adaptive Management Program

Dear Mr. Gabaldon,

The consistent message emanating from the Glen Canyon Dam Adaptive Management Program (AMP) is that it is failing in achieve its principal objective, the protection and recovery of endangered Humpback Chub (HBC). While the AMP and independent scientists debate how low HBC numbers are, all agree that they have declined considerably since the process began seven years ago. Living Rivers recognizes that AMP efforts are underway in an attempt to remedy this situation, but is very concerned that such efforts are not sufficiently comprehensive, nor do they justify hasty and inappropriate management practices.

Furthermore, Living Rivers believes that more than sufficient "new information" now exists to warrant the immediate undertaking of an entirely new, or supplemental, Environmental Impact Statement (EIS). Additionally, such new information also warrants an EIS be prepared for the planned Temperature Control Device (TCD) or the potential installation of generators on the dam's bypass tubes.

1. Emphasis on HBC numbers insufficient to address recovery needs

The AMP and Grand Canyon Monitoring and Research Center (GCMRC) focuses undue emphasis on yet conclusive approaches of counting of fish, and little to no

resources on understanding their physical condition, nor the biological parameters necessary for their recovery. After nearly seven years of operation, all GCMRC has learned is that HBC populations are declining, but cannot determine by how much. The present estimate has an one hundred percent level of variability of 2,000 to 4,000 fish. Why has GCMRC yet to develop a mechanism to provided reliable fish counts, nor can the scientists within the AMP agree on whether the present counts constitute a crisis as far as the near extirpation of HBC in Grand Canyon?

The AMP's priority should not just be numbers of fish, but knowing their physical condition and what biological parameters must exist for preservation, and, as necessary, recovery. In 2000, Meretsky, et. al., published findings that indicated a possible decline in HBC condition since 1978. If true, such a trend would indicate that factors other than predation are effecting the HBC, and that undue emphasis on predation, as is presently occurring, won't address this problem. So far all reports and analysis by the AMP have focused on HBC numbers, and not their relative condition or health. While some of this data has been collected, there has not yet been any ongoing analysis of HBC condition factors as was recommended by Meretsky. Why?

Additionally, GCMRC has not developed sufficient information on HBC biological parameters. Such understanding is critical for making effective management decisions for the HBC future in Grand Canyon. At minimum, GCMRC should be investigating feeding habits, water quality, and recruitment and migration patterns for all periods of the HBC's lifespan. As the Little Colorado River presently represents the sole refuge for HBC in Grand Canyon, immediate emphasis should be placed on understanding the biological parameters to be persevered in this tributary to ensure this critical habitat is not disrupted.

Lastly, GCMRC must determine the population level, and changes in biological parameters, that would trigger a cessation of handling HBCs so as to avoid placing undue stress on the remaining population.

2. Inappropriate emphasis and approach to alien fish suppression

Scientist's are in agreement that predation by alien fish on HBC is limiting their recruitment, and thus suppression of these predators is warranted. While Living Rivers concurs, we find GCMRC's management choices are over-emphasizing this aspect of the problem, potentially to the detriment of the HBC recovery effort, and the scientific integrity of the AMP process.

First, the non-native fish suppression flows from Glen Canyon Dam represent a significant departure from the spirit of the EIS and the Record of Decision (ROD). While the flow levels themselves are within the ROD, they are being used in an attempt to affect non-native fish, not to directly affect native fish as was contemplated in the EIS. Any departure from the river's natural hydrograph is bound to have negative effects ecosystem-wide, not just the HBC. However, because the AMP has not sufficiently addressed the biological parameters for the HBC, it is not yet qualified to determine if, and to what extent, these alien fish suppression flows are impacting HBC recovery. It is also unclear if these flows have demonstrated any formidable change in trout

populations. Plans to repeat these flows in 2004 are not prudent. Also, how could these increases in daily flows compliment a Beach/Habitat Building Flow planned for January if triggers are met? They seem at odds with each other.

Living Rivers is also concerned with the lack of independent review, and competitive bidding associated with contracts being let for monitoring the results of these experimental flows. When the AMP began seven years ago, it took pride in the independence afforded in the competitive bidding process for its science programs. Now, the vast majority of this work is being moved in house to GCMRC staff. When consultants are being used, as in the case of monitoring for these experimental flows, they are awarded without any competitive bid. This appears particularly suspicious in this case, since a contract was awarded to ECO PLAN Associates, which has been under contract with the Western Area Power Administration (WAPA). As these experimental flows would benefit WAPA and its customers by affording greater flexibility in power generation ramping, and that a variety of other consultants with greater experience in this area were not considered by GCMRC, AMP's appointment of ECO PLAN Associates has the strong appearance of industry bias.

Problems with the lack of independent oversight also appear to be surfacing with the mechanical fish removal program. The recent proposal to alter this program has been prematurely developed and submitted to the AMP without sound justification. The experiment has yet to demonstrate any impact on HBC recruitment, nor that in-migration is indeed not occurring in the target zone. Independent review of such proposals as recommended by the National Research Council should be standard procedure for such modifications to AMP activities to avoid such potential missteps in future.

A more appropriate and economically sustainable plan for non-native fish removal would be to study the reintroduction of natural predators. The management objectives of the AMP are to reintroduce presently extirpated species, such as the Colorado Pikeminnow or River Otter. Both aquatic predators species would gladly feed on the non-native fish, and likely not harm the native fish population.

The AMP could petition the US Fish Wildlife Service for an experimental release of the endangered Pikeminnow, despite the fact that it is unlikely that the Pikeminnow can reproduce in the present ecosystem. Thermal modification of the river could also provide the needed habitat for recruitment of these native predators. This scenario would provide sustainable control of alien fishes in Grand Canyon while providing for the recovery of two native fish.

There has been resistance to studying River Otter reintroduction due to inconclusive evidence regarding which sub-species dominated Grand Canyon habitat. However, it is clear that the increased interest and assumed need to increase predation of alien fish, particularly trout, amplifies the call for a reintroduction plan. Such nature-based proposals to mimic and rebuild the natural system should be the focus of the AMP, not short-term efforts to modify inconclusive experiments.

3. Need for a Supplemental Environmental Impact Statement

The assumed environmental baseline associated with the Glen Canyon Dam EIS, and the launching of the AMP has little bearing on reality. Options allowed under the ROD have been attempted and have proven to be ineffective, leading to continued impairment to all significant downstream resources since the ROD was implemented. This is now placing the AMP in uncharted territory, as evidenced by the implementation of trout suppression flow not contemplated by the EIS or the ROD. Furthermore, the continued drought conditions are effecting reservoir levels, and soon, water temperature and dam operations in a manner not evaluated in the EIS. The AMP is effectively operating without a net, and must advise the Secretary of the Interior to call for a supplemental EIS to guide and inform its future programs.

The most significant changes are in HBC populations and sediment budgets. While the AMP has yet to agree on how bad the current HBC count is, there is no doubt that the population is in significant decline since the program began. Furthermore, there has been no movement on establishing a second population in the mainstem Colorado. Beach building efforts under the ROD have not worked in a sustained manner. The number and size of beaches in the Grand Canyon have experienced a significant decline since the AMP was put into place. Not only has this negatively effected the Canyons recreational experience, but has also impacted the river corridor's cultural resources which are now prone to erosion.

Anticipated upstream impacts associated with reduced elevations of Glen Canyon Reservoir (i.e. increased temperatures, modified nutrient dynamics, etc.) will have significant effects on the downstream resources in the Grand Canyon. As the drought situation persists, these effects will become most pronounced once reservoir levels fall below the elevation of the penstocks.

The key to reinitiating compliance with the National Environmental Policy Act, through a supplemental EIS, is if new data or impacts are recognized. Clearly in the case of Glen Canyon Dam and Grand Canyon National Park, significant new data (biological and sediment) indicate that the ecosystem needs to be reevaluated and assessed. The fact that new data on the HBC, sediment deposits, cultural resources, water quality, and reservoir levels show that decisions made on the original data from the Glen Canyon Environmental Studies is now in need of reassessment.

Thank you for your attention to these matters, and we look forward to your reply.

Sincerely,

John Weisheit Conservation Director

LR Press Release 08/15/03

Draining Update: 50 percent--forcing marina closures.

Marinas left high and dry, power generation next to go.

Contact:

John Weisheit (435-259-1063 or 435-259-8077)

Lake Powell reservoir is down 90 feet from normal, equating to a reservoir that is half full. The National Park Service, which manages marina facilities at Lake Powell, is at the beginning of shutting down marina's because they can no longer accommodate launch vessels. Meanwhile, Glen Canyon Dam is just two years away from no longer being able to generate hydroelectric power.

Now in the fourth year of an anticipated sustained drought, Lake Powell reservoir will soon be empty. Forecasters have informed the Park Service that the reservoir levels will only be getting lower. The reservoir is dropping faster than it can be replenished.

The United States Geological Survey 2002 report on Southwest climate change predicted that the Colorado Plateau would be heading into a 30-year period of below average river flows. Previous estimates by forecasters, on the impacts of such a sustained drought, calculated that Lake Powell would be drained within eight years. It's right on schedule. In July 1999, Lake Powell was at 90 percent. As of August 1, 2003, it was at 50 percent.

If the present drought does not relent, within two years Lake Powell will drain to the level of the penstock tubes that spin the generators at Glen Canyon Dam. According to a model that was published in October of 1995 in the Water Resources Bulletin, if a severe and sustained drought similar to the drought of the late 16th century appears, Lake Powell could stay drained for eight years.

"We're witnessing the end of Lake Powell right now," says Living Rivers' Conservation Director John Weisheit. "This was predicted, and nothing the National Park Service or the marina operators can do will change this."

- Two of Lake Powell's six boat ramps have been closed, and another will be closed by the end of the season. River sediment has brought an end to the marina at Hite at the top of the reservoir. At the other end of the reservoir, near Glen Canyon Dam, Antelope Point's marina facilities will soon be forced to again close because they will be perched atop a cliff being exposed as the reservoir lowers. This, just four years after construction in 1999.
- A \$3 million emergency appropriation was made in January to extend three other boat ramps at Bullfrog, Hall's Crossing and Wahweap marinas. But as the reservoir continues to lower, Bullfrog marina may also see its facilities shut down. Wahweap and Hall's Crossing will probably be able to stay open until the reservoir completely drains.
- A new \$75 million marina facility is supposed to be under construction at Antelope Point, but with a 500-foot cliff being exposed where the launch ramps are proposed, progress has stalled. Calls to Antelope Point Holdings and their

engineers, revealed no comment to the feasibility of the project..

- The fate of the white-water rafting industry, which concludes trips at the top of Lake Powell, is also a major question. With sediment and mud clogging the marina and boat ramp at Hite, rafters will have a very difficult time getting off the water.

"As the drought persists, it is going to be very difficult, if not impossible, to conduct business as normal with the river and reservoir users. This includes the Grand Canyon river runners who will lose the large Glen Canyon Dam releases they need to run their large motorized boats through the canyon only to arrive at the sediment-choked Lake Mead," adds Weisheit.

Lake Powell is not the only problem. The entire Colorado River storage system has dropped from 92 to 60 percent over the past 44 months. "Lack of access to flat water recreation is the least of our worries," concludes Weisheit. "The Southwest plumbing system is headed for complete catastrophe, and the Bureau of Reclamation and the seven states that use Colorado River water have no disaster preparedness."

###

Web pages on Southwest climate change:

[Severe and Sustained Drought for the Colorado River Watershed](#)

[Precipitation History of the Colorado Plateau](#)

[Latest News on the National Campaign to Drain Lake Powell and Restore Glen and Grand Canyons](#)

LR in the News 08/17/03

Colorado River Battle: 100 Years of Water War

Deal: Thirsty California, desperate for water, is willing to pay reluctant farmers billions to get some of their surplus.

By Alec MacGillis

Baltimore Sun National Staff

EL CENTRO, Calif. - Inch by inch, the life's blood of a large swath of the United States - Colorado River water - seeped across the desert. Or rather, across the desert that is now Mike Cox's cotton field.

For Cox, circling the field in his pickup truck to check on the water's progress, soaking his cotton is a routine procedure. Every 10 days during the summer, he uses 7.8 million gallons of water diverted by canals from the Colorado River to irrigate the 70-acre field, just a fraction of the 1,000 acres he farms in California's Imperial Valley.

But for the rest of the Southwest, Cox's routine watering represents something more significant. In this single irrigation of a tiny corner of a broad farming plain, Cox used about as much water as 50 households use in a year - as much as all their showering, toilet-flushing and dish-washing put together.

This is the explosive equation at the heart of the battle that, after gripping the Southwest for years, is now nearing a climax.

With the cities of the western Sun Belt booming, much of the water from the Colorado River, the main water source in a parched region, continues to be used by only a few hundred farmers in the Imperial Valley along the Mexican border.

The valley won the right to the water more than 100 years ago and has guarded it ever since. But in a historic shift, the Southwest is now on the verge of a landmark transfer of Colorado water from the Imperial Valley to San Diego.

The deal, which negotiators hope to seal by next month but which could still collapse, might help resolve a conflict that has been building for a century.

The war over Colorado water has pitted cities against farmers, fomented tensions among seven states, and dominated the attention of Native American tribes, environmentalists, federal officials and Mexico. The water wars have transformed a whole corner of the country, from the construction of vast cities on arid plains to the accidental creation of a sea in the middle of the desert.

For the 25 million Americans who rely on the river as it flows 1,400 miles from the snowpacks of the Rocky Mountains to its delta across the Mexican border, the outcome of the negotiations is nothing less than a matter of their region's survival.

"The big picture is that there are more rights to water from the Colorado than there is reliable water in the river," said Robert Glennon, a law professor at the University of Arizona. "We have a train wreck ahead of us."

Under the deal, San Diego would pay the Imperial Valley \$2.5 billion over 45 years to receive about 7 percent of the valley's share, water made available by more efficient irrigation. The water would compensate for the cutback California faces because of higher usage in Arizona, which now stores river water underground, leaving less for its western neighbor.

The deal, which also includes several smaller transfers within California, looks like a win-win arrangement. San Diego would get a reliable new source of water, while the Imperial Irrigation District would be able to sell water to San Diego at a rate 16 times what its own farmers pay.

But in the kind of twist so common to the water wars, a possible deal-breaker arose last year. Conserving water on Imperial farms, it turns out, would doom the Salton Sea, the giant lake in the middle of the desert at the valley's edge, imperiling millions of birds for which it is a key stop on the Pacific flyway.

Last week, amid the hoopla of the effort to recall Gov. Gray Davis, negotiators spent long days in Sacramento seeking a way to split the cost of protecting the sea and still salvage the transfer.

It is a surreal situation, with all the water machinations of the classic film Chinatown: Because of water being pumped into the Arizona sand, farmers in the California desert are being urged to sell water to a port city but are being held up by the danger of causing a landlocked sea to vanish from the Earth.

A century of change

It seemed simpler when farmer Cox's predecessors in the valley won rights to the water more than 100 years ago. Phoenix was a desert town of 5,000, San Diego a fledgling port city of 17,000 and the river water was the farmers' for the taking.

One century later, the farmers are not about to give up the water easily, no matter how many Beverly Hills lawns or Las Vegas casino gardens need to be kept a luscious green.

"It does take a lot of water, but I get a lot of production out of it," said Cox, 52, as he looked down his cotton furrows to monitor the water, which is drawn from an irrigation ditch by small siphon hoses and flows by gravity across the slightly slanted field. "Why is it OK for [cities] to use it in their fountains and spray it on their sidewalks? I think I have the right to use it for productive purposes."

But to many in the Southwest, such farmers' claims represent an entitlement the region can no longer afford. Phoenix, which has grown 75 percent in 30 years to 1.4 million people, will soon surpass Philadelphia as the fifth-largest U.S. city; Las Vegas, a railroad town of 5,000 in 1930, now has a metropolitan area population of 1.5 million.

This boom has caused the most problems for California, which uses more Colorado water than any other state. For years, California has taken more than its allocated share of the river because other states haven't used their full amount.

Now, with the Southwest growing fast and suffering a long drought, there's less extra water to go around, and California is under strict orders from the federal government to cut back.

The pressure on California is driven most by Arizona, which profoundly altered the region's water equation with the construction, in the 1980s, of a 336-mile aqueduct to carry Colorado water over the mountains and desert as far as Tucson.

This has allowed Arizona to claim its full share of river water, even though it doesn't actually use the full amount. Instead - in a tactic viewed as being unfair by some, brilliant by others - it pumps surplus water into the ground, reserving it for future use and thereby leaving no surplus for California.

Forcing California to cut back to its allocated share of the river would hit hardest in Southern California's sprawling cities, which have the legal right to far less than the state's farms, and therefore have been relying heavily on the leftover water.

That's where the deal comes in. By transferring Imperial water to San Diego, California can gradually wean itself from excessive use of the river.

Imperial Valley leaders were close to signing on to the transfer late last year when they balked, worried that the valley would be liable for the cost of restoring the Salton Sea, estimated to be as much as \$2 billion. The 15-by-35-mile sea, created when floodwaters on the Colorado broke an early canal to the Imperial Valley in 1905, depends on runoff from valley farms as its main water source.

Reducing runoff would rapidly shrink the sea, threatening the birds that, deprived of other wetlands, now rely on it.

As a penalty for pulling out of the deal, Interior Department Secretary Gale A. Norton cut the valley's river allocation by 10 percent last winter, saying that farmers were wasting water.

It was a major step: The Interior Department, which has the authority to withhold water if it's not put to "reasonable and beneficial use," had rarely invoked the right before. The valley sued in protest.

Unlike the backroom water deals in Chinatown, dealing over the transfer has played out in public view. In a region where residents face rising water bills and threats of rationing, water politics is front-page news.

If a deal is reached, it could be the blueprint for future transfers from farms to ever-thirstier cities, possibly spelling the decline of agriculture in the region.

The transfer is "a model for how historic distrust between urban and agricultural water interests can be overcome," said Dennis Cushman, assistant general manager of the San Diego County Water Authority.

But if the deal falls through and Imperial farmers are forced to give up water anyway, they say they'll defend their century-old rights to the end.

"If we have to fight them in the Supreme Court, that's what we'll do," said John Pierre Menvielle, a third-generation farmer who is running for the Imperial Irrigation District board, a paid, five-member panel elected by the voters of 140,000-resident Imperial County. "We got some hard-headed people down here - maybe because we've been in the heat for too long."

The river's journey

Once a raging river, the Colorado now peters out in marshes well short of its outlet in the Gulf of California.

It barely makes it that far. Massive dams halt its flow for storage and power generation, and wide canals carry off its water like so many needles stuck in a blood donor.

Near Parker Dam, one aqueduct heads west carrying about 1.2 million acre-feet of water a year 242 miles to Southern California, while close by another carries 1.5 million acre-feet a year 336 miles east into Arizona. (An acre-foot is the amount of water needed to cover an acre of land at a depth of 1 foot. It is about 326,000 gallons and is roughly equal to what two households use in a year.)

Farther south, near the Mexican border, 3 million acre-feet of water a year are diverted into the All-American Canal, the 82-mile canal built in 1942 to carry water into the Imperial Valley. From the canal, the water flows into a network of smaller canals connected to irrigation ditches.

The broad reach of Colorado River water is extraordinary because it is not a particularly big current to begin with, with an average depth of only about 20 feet and an annual flow that is only 3 percent of the amount of the Mississippi River's.

Indeed, seen from the riverbank at Blythe, Calif., on the border with Arizona, the Colorado looks like any other medium-size river. A few small trees sprout on its bank. Children in life vests are paddled upstream in a canoe. A man on a jet ski roars up and down.

In effect, many say, the Colorado today is less a river than a glorified water main serving seven states - a main that happens to have carved out the Grand Canyon eons ago.

"The river is extremely generous - as a desert river it produces a lot of water," said Lisa Force, a program director for Living Rivers, a group seeking to reduce Colorado River water use. "But it was seen as inexhaustible, and it's not."

Valley of green

The mining of the river began in earnest more than 100 years ago when enterprising farmers made a discovery that would change the Southwest forever: The California desert near Mexico may look bleak, with less than 3 inches of rainfall a year, but sprinkle water on it, and it turns to gold.

The desert adjacent to the river was made of silt carried from the Grand Canyon and elsewhere upstream, deposited in a broad swath by the river's shifts in direction. When irrigated, this soil was extremely fertile. And with the warm climate, farmers had a far-longer growing season than those in the rest of the country.

Cox, who has farmed for 30 years, marvels at the founders' ingenuity every time he drives out of the valley and reaches the point where green fields stop and the brown desert resumes.

"I'm in awe of this valley," he said. "I'm in awe of the people who had the foresight to divert the water from the river."

Backing up the farmers' discovery was the law. When it comes to allocating natural resources, the East operates on riparian rights: You can use water your property abuts, as long as you're not taking from your neighbor's fair share.

Not so out West. Ever since the gold rushes of the mid-19th century, natural resources on the frontier were awarded on a first-come, first-served basis. By diverting water into the desert, farmers not only won themselves newly fertile land, but they also secured the Imperial Valley's place in a series of compacts and court rulings that make up the "law of the river."

In 1922, an interstate compact divided the river's annual flow in two portions: 7.5 million acre-feet to the upper basin states of Utah, Colorado, Wyoming and New Mexico; and 7.5 million to the lower basin states of California, Arizona and Nevada. In a 1944 treaty, Mexico won rights to 1.5 million acre-feet a year.

Shares among the lower basin states were settled by the Supreme Court in 1963: California got 4.4 million acre-feet, Arizona got 2.8 million, and Nevada got 300,000. Within California, the Imperial Valley and some smaller farming districts eventually were allocated 3.85 million acre-feet, while the Metropolitan Water District, which delivers water to 18 million people in Southern California, gets only 550,000.

After all the divvying up, the Imperial Valley receives about 3.1 million acre-feet a year. That's more than all of Arizona, and nearly one-fourth of the river's flow, which has averaged about 13 million acre-feet a year, far less than the 15 million assumed in the original divisions.

This worked well enough for years; California was able to take as many as 800,000 additional acre-feet a year left over by other states. But in the past decade, the arrangement has been badly strained. Not only have Arizona and Nevada started claiming their shares, but a four-year drought has further reduced river flow.

The crop debate

With supplies running short, scrutiny has fallen on the Imperial Valley's \$1 billion farming industry. Most of the valley's 470,000 acres is in water-guzzling field crops, mostly alfalfa and other grasses that feed the West's dairy and beef industries, as well as cotton, wheat and sugar beets.

Only about 55,000 acres are used for vegetables and melons, which use much less water per acre than field crops. The area's long growing season makes it ideal for winter vegetables, and its lettuce, asparagus, broccoli, cauliflower, onions and carrots are its most lucrative crops on a per-acre basis.

But many farmers prefer field crops: Their prices fluctuate less, due partly to federal price supports; they require less labor; and farmers say there is limited demand for vegetables.

"We have a huge amount of water being used in inefficient ways for crops that one might question why they're being grown in this area," said Joseph L. Sax, a law

professor at the University of California, Berkeley who has consulted for the Interior Department. "It's a good place to grow avocados, but why we're growing cotton and alfalfa here is a question a lot of people have been asking for some time."

Meanwhile, having enjoyed a large share of river water for so long, valley farmers have seen little reason to limit use.

The valley's canals are unlined, allowing water to seep through their borders. Irrigating by gravity means that 15 percent of the water used runs out at the end of the field, runoff that goes into the Salton Sea. Some farmers, like Cox, now use pumps to recycle some of the runoff, but the pumps, and more costly conservation tools like drip irrigation systems, are relatively rare.

"They won't admit they're wasting water," said Adan Ortega Jr., vice president of the Metropolitan Water District. "Because they believe they have this God-given right to the water, they don't have any incentive to preserve it."

This kind of talk infuriates Imperial Valley farmers, who say they would use more efficient irrigation if they could afford it. Already, they say, they've spent thousands on tiles placed beneath their fields to keep salt from sinking too far into the soil.

Moreover, they say, it's their thousands of tons of field crops that fuel California's dairy industry (the largest in the country), feed the Southwest's cattle and help maintain America's cotton industry.

"Where's this agriculture going to go? It has to go someplace," said Steven A. Pastor, director of the Imperial County Farm Bureau. "You need your feed grown, your cotton. Do we want to rely on other countries to supply our food and fiber?"

Heidi Kuhn, an activist whose husband owns and runs one of the valley's largest farms, sums up the argument with a simple refrain for what she calls "the person sitting in Starbucks": "We're the latte in your coffee."

"We're not just doing this for our own health. We're doing it because there's a market need for it," she said. "I don't know if growing food is any less beneficial than having 112 golf courses in Palm Springs."

Hard-won success

On a tour of her family's 14,000-acre, 300-employee operation, Kuhn shows just how productive a single Imperial Valley farm can be. After passing field after field of the Kuhns' hay crops, she stops at the vast lot where the grasses are baled, compressed and stacked by the hundreds under long sheds.

Many of the bales, a grass variety called Sudan grass, will be loaded in containers to be transported to California ports by the train line running adjacent to the lot. There, they will be shipped to Japanese ranchers, who prefer Sudan grass for cattle feed but lack room to grow it.

Other bales will go to California dairies, but many stay with the Kuhns, to serve as feed at their own 4,000-cow dairy. The dairy's milk, in turn, goes across the street to a cheese-making plant that produces Muenster and Swiss cheese.

It's a thriving operation, but Kuhn says it's not hugely profitable, given slumping commodity prices and the cost of state labor and environmental regulations. Her family recently moved into her mother-in-law's old house, a three-bedroom rancher with a cracked tennis court. It's one of the nicer houses in El Centro, a struggling town of small bungalows and shuttered stores, but it's no mansion.

Indeed, many valley landowners resent the widespread notion that their big share of Colorado water has made them wildly wealthy.

"They see us driving nice pickups and cars and having a house in San Diego," said John Grizzle, a valley farmer since 1964, sitting in the office of his 7,000-acre operation. "They don't realize the hard work and the risk involved. The return on our investment is not large."

As they fend off critics, the valley's residents also face internal divisions.

There are disagreements about how to divide the \$2.5 billion San Diego would pay for the 200,000 acre-feet a year it would receive under the transfer. As the deal stands, the Imperial Irrigation District would distribute most of the money among the county's roughly 400 farmers, requiring much of it to be used for more efficient irrigation, while some would go toward the larger community.

A large faction of farmers, though, believes that the money, as well as any revenue from future transfers, should go directly to landowners, who in turn would give part of it to the community. This group has sued the irrigation district.

Others view this effort as a naked grab by farmers for the millions in water revenue.

"We better make sure that if the money comes in, it's applied to increasing efficiency, to insulate us against long-term attacks on our water use," said district board member Andy Horne. "If landowners are allowed to take the money and do whatever they want with it, including sticking it in their pocket and not doing anything toward efficiency, then we haven't accomplished that."

Farmers also disagree over whether to reduce their usage by investing in more efficient irrigation or by leaving fields fallow, which would mean lower crop yields and fewer farm jobs but would require less effort and leave more water for the Salton Sea than conservation would.

To valley outsiders, the ambivalence over the transfer is hard to fathom, given how much money is involved. The valley would get \$258 an acre-foot from San Diego for water that costs farmers \$16 an acre-foot.

"What they're not admitting is that these are the first farmers that will be allowed to sell water at market rates," said Ortega, of the Metropolitan Water District. "They're going to create a precedent that a lot of people in the valley can benefit from."

But this is just what alarms many in the valley - including some of the non-landowning Mexican immigrants who see the farms as the biggest source of employment in the county. Once farmers start selling water, they fear, it may be hard to stop; farmers will walk away rich, but the valley will have sold away its livelihood.

One thing unites the county residents: All see themselves as underdogs trying to keep their rights from being pried away by powerful California cities.

"We can see the handwriting on the wall: We have a very large water right, and there is a seemingly unquenchable thirst for this water around the southwestern United States," said district board member Horne. "We're such a small community facing such a huge population that doesn't care what happens to us in the future."

And all in the valley think the same thing when they hear urban critics question the wisdom of desert farming: Why doesn't the same argument apply to the cities of the arid Southwest?

"San Diego is as much of a desert as we are," Kuhn said. "Why is it any more logical for people to live there?"

Growing demand

It's a question that San Diego officials don't have the luxury of asking. Whatever the wisdom of its growth, the city is now the country's seventh largest, it lacks water of its own, and officials need supplies for 3 million area residents and counting.

The transfer deal with the Imperial Valley is the centerpiece of this effort, but it's not the only element. The San Diego County Water Authority is planning a desalination plant that would process enough ocean water, at great cost, to provide 15 percent of the county's demand.

In addition, the authority is about to finish a massive new dam in a box canyon in Olivenhain, 30 minutes north of the city, that will hold more than two months' supply of emergency water. The aqueducts that bring San Diego's water south from Los Angeles, a mix of Colorado River and northern California water, cross major fault lines, and the city's been at risk of running dry after an earthquake.

The new dam is visible proof of water's primacy in the Southwest. At 318 feet high and 250 feet long, it is designed to withstand an earthquake measuring a magnitude of 7.2. The reservoir, a giant cavity that will be filled over the coming year, is 2,552 feet long; 700,000 cubic yards of fill was blasted out of it.

"With the amount of water we have to deliver to people, we just have to build some amazing structures to do it," said project manager Jerry Reed as he oversaw work on a recent morning.

That is what happened hundreds of miles away in Arizona, where two decades ago engineers designed an aqueduct to carry 1.5 million acre-feet a year of Colorado River water as far as Tucson. The \$3.8 billion Central Arizona Project uses six 60,000-horsepower pumps to lift water 824 feet above the river.

Fourteen pumps along its 336-mile route lift the water high enough so it can run downhill to the next pump. At a control room north of Phoenix, two men sitting before a big screen regulate the flow on the 80-foot-wide, 16-foot-deep canal by raising or lowering gates at checkpoints every seven miles.

Things to come

The Arizona aqueduct represents more than just the driving force behind the pressure on California to reduce its river use. The project also offers hints of what might happen in California if the San Diego water deal sets a precedent for future transfers.

That's because in Arizona, transferring water from agriculture to urban use has been the policy for decades. Unlike their counterparts in the Imperial Valley, the cotton and alfalfa growers on the plains of central Arizona lack enshrined rights to the Colorado River, and have long relied on groundwater.

When the state built the aqueduct, it allocated two-thirds of the water to farmers - but with the understanding that their share of the water would decline as farmland was developed for homes, leaving most of the water for urban users. And indeed, large tracts of former farmland around Phoenix are sprouting dense subdivisions.

This sprawl has met with relatively little official resistance. Subdivisions may cause problems, officials reason, but they have one thing going for them: They require about half as much water as the farms they replace.

"We want to sustain agriculture as long as possible, but while making sure we have a sustainable water source" for residential use, said Dennis G. Kimberlin, a state water manager in Pinal County, an agricultural area south of Phoenix that is rapidly being developed.

Those farms that remain, meanwhile, have already taken many of the steps that California farms may face. Because water is at a greater premium in Arizona, costing farmers \$36 an acre-foot - more than double the Imperial Valley rate - there is incentive to conserve.

Dan Thelander, for instance, added an underground drip irrigation system four years ago at his 500-acre cotton field in Pinal County. It cost \$1,500 per acre, but his cotton now uses one acre-foot less per acre.

His neighbor, C.L. "Bill" Scott, long ago leveled many of his fields so that less tailwater runs out at the end. Instead of irrigating his fields at a steady stream for a full day as Cox does in the Imperial Valley, Scott sends a stronger stream across for only two hours, producing a more even level of saturation while using less water.

Scott happens to know the Cox family and isn't about to second-guess their techniques. He chalks up his conservation to market demands: His water costs more, so he must use less.

"There are a lot of things you can do to make better use of water," he said, driving a visitor across his 6,800-acre farm. "It's a matter of economics. It makes you do things that are cheaper."

Future battles

Even if the transfer from the Imperial Valley to San Diego is approved, few expect the deal to settle the water wars for good.

Other demands for water loom: The state of Colorado is discussing building its own version of the Central Arizona Project to carry its share of the river over the Rockies to Denver and other cities. This may be prohibitively expensive, but if it happened, it would remove 400,000 more acre-feet a year from the river, about 3 percent of its flow.

More immediate is a drive by environmentalists to allow more of the river to make it to Mexico, to start restoring the delta, at a cost of 150,000 acre-feet a year. And in Arizona, Native Americans winning rights to hundreds of thousands of acre-feet, forcing cities to buy water from them.

But the biggest fights ahead, many expect, will be continued clashes between cities that will need ever more water and farms that still use most of it.

Regional water officials admit they may eventually push the limits of their supply, even with the transfer. This, they say, will force higher water prices, constraining further growth, and may even raise the once-unthinkable prospect of "toilet-to-tap," treating wastewater for drinking use.

Aware of the growing needs of the cities, Imperial Valley farmers say they are bracing for the federal government, goaded on by the Metropolitan Water District, to return and pressure them to give up even more water. If the valley refuses to sell, they fear, federal officials will again declare it is wasting water and take the water for free.

"It's a slippery slope," said Pastor, the farm bureau director. "A lot of farmers worry this isn't going to end until all the water is shipped to San Diego or Los Angeles."

Valley landowners say they owe it to their forerunners on the land not to let that happen. Their critics may question the wisdom of having created a farming valley in a desert, they say, but the transformation happened, and it can't just be reversed, 100 years later.

"This place is not unworthy of being here. It's families who are proud to be here, who put roots here, who had kids here," said Kuhn, the activist. "It's not as simple as wiping us off the map to have more water for L.A."

River News 08/19/03

PECOS RIVER MANAGEMENT PLAN UPDATE

An Environmental Assessment containing the Pecos Wild and Scenic River Forest Plan Amendment and Management Plan was sent out for public review on April 23, 2003 thirteen years after its declaration as a Wild and Scenic River. The proposed management plan banned all boating in the Wild and Scenic Corridor as it "can only be done in short sections along the river during periods of high water flow, which commonly does not occur. Prohibiting floating would therefore not be expected to displace many users and it would enhance fishing within the corridor."

The Pecos River was declared a Wild and Scenic River in 1990. Above Cowles (mostly in the Pecos Wilderness) is designated wild. From Cowles to Terrero is designated recreational. The section from Cowles past Terrero to Windy Bridge is runnable by kayak, canoe and inflatable kayaks during spring high water each year. This is a period of heavy boating use of other rivers in New Mexico and the Pecos serves as an alternative run for boaters looking for more solitude. Although there is development along the road to Cowles, the sections of the river away from the road retain much of the wilderness characteristics of the surrounding Pecos Wilderness. The run is unique for New Mexico due to the clear water and forested environs that are reminiscent of rivers further north in Colorado and Idaho. Although the area is very popular for fishermen, they generally prefer lower water levels when the river is unrunnable by boaters.

Tom Robey (River Runners for Wilderness) noticed the public comment period for the management plan and Tim Scofield (Adobe Whitewater Club) discovered the prohibition on boating. Enlisting the help of Jason Robertson (American Whitewater Association) they undertook a campaign during Memorial Day weekend to send in comments. An excerpt from the comments submitted by Tom Robey stated:

"...There is no reasonable basis that eliminating boating would enhance fishing. It is evident that there have not been any recreational surveys of boating use on the Pecos River. Have you done any surveys of fishermen about their encounters with boaters? Have you documented any adverse impacts of boaters upon fishing? My experience is that very few fishermen encounter boaters and that encounters between fishermen dwarf any such impacts. As fast as the Pecos is moving during high water (there are few eddys) it is ludicrous to suggest that boaters have any impacts on the fish or fishing. Therefore I suggest that the management plan allow boating and that the Forest Service gather data before even considering any management action regarding boating between Cowles and Terrero."

The first item of the Decision Notice issued July 31st stated:

"Revised the provision to allow floating use. The Standard now reads, 'The use of non-motorized rafts, boats, or other conveyances to float down the river is permitted. No additional facilities (put-ins, parking areas) will be constructed to facilitate floating' ",

The entire decision and other materials should be available at www.fs.fed.us/r3/sfe or upon request from the Pecos/Las Vegas Ranger District, PO Drawer 429, Pecos, NM 87552 (phone 505-757-6121).

LR in the News 08/20/03

Drought drying up boater fun

by Tom Wharton

The Salt Lake Tribune

Prolonged drought in the western United States, particularly Utah, has left boaters high and dry on launches at many major lakes and reservoirs.

At Lake Powell, water levels have dropped below boat ramp and marina access levels, forcing closures, especially in the upper end of the huge reservoir on the Utah-Arizona border. Visitation is down 13 percent from a year ago. And the lake level is expected to drop even farther, perhaps as far as 112 feet below capacity by April. Still, Barry Wirth of the U.S. Bureau of Reclamation said there are still 12.5 million acre-feet of water in the reservoir.

"That is an awful lot of water," he said. "It is important to note that that is a pretty nice half-full body of water."

Char Obergh, of the Glen Canyon National Recreation Area, said boaters have experienced few delays launching despite the closure of Hite Ramp and "use at your own risk" warnings at Stateline and Antelope Point, a precaution to boaters that they could get stuck in the muck, or worse.

She expects some launching delays to occur during the upcoming Labor Day weekend.

"It has been an interesting year," she said. "But there is a lot of lake to enjoy. It's just a different lake. We are asking people to be aware of that. We have done our best to maintain access. As it goes down this winter, we will be faced with additional challenges."

Because of low water at Lake Powell, Defiance House and Three Roof Ruins are no longer accessible by water. The Castle Rock Cut is closed. And vehicle access is not possible at Dirty Devil, Farley, White Canyon, North and South Bullfrog Primitive Camping Area and Crosby Canyon. Stanton Creek may be the best primitive vehicle camping area still available.

On the upper end of the lake, Hite Marina is out of service. The launch ramp there is closed, though river runners floating down from Cataract Canyon on the Colorado River are using a temporary dirt facility. All water-based marina facilities have been relocated downstream.

These developments have not gone unnoticed by environmentalists who would like to drain Lake Powell and decommission its dam.

"This drought emphasizes the dubious nature of Lake Powell reservoir," said John Weisheit of Moab-based Living Rivers in a news release.

"By decommissioning Glen Canyon Dam, we could restore 500 miles of river to its natural habitat, which includes Grand Canyon National Park, while at the same time saving the water that is otherwise lost to evaporation."

Low water apparently has not affected boating safety, either on Lake Powell or other reservoirs across Utah.

"We have had no safety problems out of the ordinary," said Obergh. "We do caution people if they have not been here for a while that it is a different lake and they need to boat with caution."

Ted Woolley, boating coordinator for the Utah Division of Parks and Recreation, said added congestion among boaters has not contributed to safety problems.

"It seems that when you get more people in there, they pay more attention to what is going on," he said.

Visitation has been down at some water-based state parks because of perceptions -- some real, some not -- that the drought is affecting boating. But Woolley said there are plenty of good boating opportunities if you know where to look.

"We have some areas in good shape and some that are in real poor shape," he said.

He listed eastern Utah reservoirs such as Starvation, Red Fleet, Steinaker and Flaming Gorge as good boating alternatives that, in some cases, have been underused this summer.

Closer to the Wasatch Front, Rockport, Jordanelle, East Canyon and the Great Salt Lake are relatively safe for boating.

Perhaps the biggest problem area is Willard Bay, where the south marina has been closed and the north marina is available for personal watercraft and smaller boats. But, Woolley said, boaters should use Willard Bay at their own risk because rescue boats are not available.

Yuba Reservoir has been drained for dam repairs, and Lost Creek Reservoir's ramp is not available. The main ramp at Deer Creek Reservoir State Park is out of the water, but boaters are still launching on the dirt ramp at the Island area. Trailer parking, however, can be a problem there.

Utah Lake's boat ramp has major problems, though some boaters are launching smaller craft. Bear Lake's marina is still OK for motor boats, but some sailboaters are experiencing problems. Echo Reservoir is about 50 percent of capacity but is still in use. Pine View reservoir is also low, but there is adequate water for launching.

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River News 08/25/03

Sediment Clogs River Runner Access At Former Hite Marina

Submitted by Tom Robey on Mon, 08/25/2003 - 23:00 August 2003.

Sediment at Hite Marina, the most upstream facility at Powell Reservoir, has necessitated the removal of all reservoir conveniences such as the floating store, fuel docks, water and septic lines, boat rentals, and courtesy docks. The concessions operator, ARAMARK, has towed its floating facilities down-reservoir to keep the facilities from becoming trapped in mud. The land-based facilities at Hite, which includes a store, gasoline, drinking water and a sewer clean-out, remain open to service the needs of the residents and the traveling public.

A primitive "use at your own risk" boat takeout area opposite the former Hite boat ramp can still be used by river runners for inflatable and small, hard-hull boats. Since Powell Reservoir continues to drop rapidly, this site could be completely unusable by September, which will force river runners to go another 45 miles down-reservoir to exit at Bullfrog Marina. Glen Canyon National Recreation Area currently has no plans to accommodate river runners by constructing an alternate ramp, despite spending over \$1 million earlier in the year to temporarily extend ramps for houseboats and power boats. A description of the takeout site is posted at Canyonlands National Park's Cataract Canyon website at <http://www.nps.gov/cany/river/lakepowell.htm>.

According to a sediment survey conducted by Mussetter Engineering of Denver in 2000, the Colorado River delta beginning at Dark Canyon and reaching to the mouth of the Dirty Devil River was advancing at a rate of about one mile per year. At present the delta is just beyond Hite Marina where the original river channel is 245 feet below the full reservoir elevation of 3700 feet. The survey predicted another 35 years of power boat access at Hite Marina provided the reservoir could be maintained at full pool. "Such a projection is incredibly optimistic," says John Weisheit, Conservation Director of Living Rivers. "Considering the downstream demand for water, the present drought situation, and how the river erodes into the exposed sediment and feeds the delta, the facilities at Hite may never again be usable."

By April of 2004, Powell Reservoir is predicted to be 106 feet below normal. At this elevation, Bullfrog and Antelope Point marinas will be affected by the sustained drought. The lack of incline and shallow depth at the Bullfrog Marina boat ramp will make it very difficult to load and unload boats--especially longer craft such as houseboats and the Bullfrog-to-Halls crossing ferryboat--the only method of transporting land vehicles across the 186-mile-long reservoir. Because Antelope Point is located on a cliff at the rim of the original Colorado River canyon, the dropping reservoir level will perch this boat ramp high and dry. During the spring snowmelt, Powell Reservoir levels rose a mere 11 feet and the reservoir has now returned to the levels of the previous winter, about 90 feet down from full-pool. With no drought relief in sight, this continuing trend will eventually place power generation at risk. The minimum storage level to safely produce electricity is set at 6 million acre-feet. Currently the reservoir is at 50% of capacity storing 12.7

million acre-feet of water. Power generation at Glen Canyon Dam could effectively end in two or three years under present drought conditions. "This drought emphasizes the dubious nature of Lake Powell reservoir. By decommissioning Glen Canyon Dam we could restore five hundred miles of river to its natural habitat, which includes Grand Canyon National Park, while at the same time saving the water that is otherwise lost to evaporation" observes Weisheit.

LR in the News 08/28/03

Hite Marina closure leaves Cataract Canyon outfitters high and dry

Times Independent

Moab, Utah

by Lisa Taylor, contributing writer

The end of a Cataract Canyon river trip usually involves motoring or rowing for miles from where Lake Powell effectively absorbs the Colorado River's current to the small marina at Hite. This year, with the lake receding to record lows, some commercial trips are having to motor right on to Hall's Crossing or Bullfrog, 45 miles to the south.

Lake Powell is currently about 100 feet below "full", and is expected to drop another 12 feet by next spring. Dropping water levels and rising sediment have acted as pincers, squeezing away the usable access at the marina on Hite's eastern shore. In July, concessionaire ARAMARK got approval from the National Park Service to move its floating facilities down-lake, and in mid-August towed them completely clear of the area. The facilities include a floating store, fuel docks, water and septic lines, boat rentals, and courtesy docks. Hite's land-based store, gas, water and sewer services are still open.

Commercial and private boaters can use an "at your own risk" launch area, but as water levels continue to drop, the primitive ramp is barely usable, and at least one outfitter, Sheri Griffith River Expeditions, has opted to continue to Hall's Crossing, another 11 hours farther if the weather cooperates.

Tag-a-Long Expeditions president Bob Jones is frustrated that the Park Service didn't heed outfitter warnings about the marina going dry. "They should have been ready, because we met with them in March and outlined almost to the day when they'd have to find a solution. I'm discouraged they're not responding to the public."

Until the Park Service officially deals with the problem, Jones is improvising. "We've opened up another road [the NPS] allowed to the old marina site on the east side, where the water is pretty close. We've simply taken down our Snow-cat, to take people and boats across that dry mud." The dry mud he's referring to is a 150-yard-wide band of compacted silt, webbed with cracks up to two inches across and two feet deep. Vehicles and pedestrians would have trouble with it on a dry day – if it rains, forget it.

Jones says the access he's using won't work for everyone, but argues that it wouldn't cost much to upgrade it, and with the Colorado River's original channel closest to the west side, "we're where the water will always be." Tag-a-Long has about 12 more trips

this season, and Jones isn't interested in bypassing Hite. "The alternative – to go to Bullfrog – is 12 to 14 hours of motoring on a calm day, but if you get into wind and waves, rafts don't go like hard-hull boats, they go all over the place."

As to the environmental impact of restoring river access on the western shore, Jones points out, "We're talking about moving silt that's not supposed to be there anyway. Any environmental assessment will tell you to get rid of it."

An ARAMARK/Park Service sediment survey done in 2000 showed that the Colorado River delta, effectively the "top" of the lake, had crept four miles downstream in four years, and was about 11 miles north of Hite.

The survey allowed the marina 35 years of use provided the reservoir held steady at 3,700 feet, an "incredibly optimistic" projection according to John Weisheit, conservation director of environmental group Living Rivers. "Considering the downstream demand for water, the present drought situation, and how the river erodes into the exposed sediment and feeds the delta, the facilities at Hite are basically history."

Even Jones, with a vested interest in Hite's recovery, guesses it will take at least five years to restore the facilities, provided there's a break in the drought and the reservoir can recharge. In the meantime, a 2003 NPS/ARAMARK survey showed the delta had already crept past Hite, and new dock and pumping-station closures pop up on the official Glen Canyon National Recreation Area website every week. Lake Powell businesses are insistent that there are still unlimited activities on the water – the trouble for the foreseeable future is how to get out there.

LR Press Release 08/28/03

Drought could cause Lake Powell Reservoir to drop as low as 39% next year

For immediate release
August 27, 2003

Contact: John Weisheit (435) 259-1063

Drought could cause Lake Powell Reservoir to drop as low as 39% next year.

Recreation access to be cut substantially.

Federal forecasts for the operation of major dams in the Colorado River system indicate that if drought conditions continue as anticipated, Lake Powell could see another significant drop to as low as 39 percent over the next 12 months. System-wide storage could drop from 57 to 48 percent as water users in the basin continue to use water at pre-drought rates.

Using data from the past 30 years, the Bureau of Reclamation's (BuRec) "2004 Draft Annual Operating Plan" forecasts a range of inflow scenarios for Lake Powell reservoir

from 3.8 to 15.6 million acre feet. This would equate to a range of reservoir levels from 39 to 83 percent.

The lower level would represent a near repeat of 2002, when flows into Lake Powell reservoir were 75 percent below normal. Normal flows as estimated by BuRec are approximately 12 million acre-feet. The upper level would represent flows not seen since 1997.

"As federal scientists continue to forecast that drought conditions will last several decades, water managers and the public should not count on any high flows," says John Weishiet, Conservation Director for Living Rivers. "During the drought of 1942 to 1977, flows were off by 19% percent. Taking into account increased diversions above Lake Powell reservoir since that time, which now are approximately 4.7 million acre-feet per year, it's easy to see why Lake Powell continues to drop."

Over the past four years, inflows into Lake Powell have averaged just 50 percent of normal: 62, 59, 25 and 54 percent respectively from 2000 to 2003. Even last year's forecasted El Niño conditions, which generally result in well above average precipitation, yielded a snowpack of just 84 percent of normal. Due to the significantly dry soil conditions from three straight years of well below average precipitation, Lake Powell received just 54 percent of its average inflow of 12 million acre-feet.

Simulating a significant drought event, as the region is now experiencing, the American Water Resources Association estimated that it could take just eight years of drought for Lake Powell reservoir to be emptied of its store of water. "They're right. It's been four years, and we're half way there," adds Weisheit.

Presently, Lake Powell reservoir is reported to be at 51 percent capacity, down from 59 percent last year and 95 percent at the beginning of 2000. The actual amount of available water is 50 percent, as BuRec is not compensating for 500,000 acre-feet of storage lost to sediment since its last sediment inventory was conducted in 1986.

When full, Lake Powell reservoir can store 24.3 million acre-feet. An acre-foot of water represents 326,000 gallons, or enough for two urban families per year.

If inflows into Lake Powell reservoir continue to average 50 percent of normal, or about six million acre-feet per year, this would result in the reservoir level dropping an additional eight percent next year, to 10.7 million acre-feet, or 44 percent of capacity.

This would bring the reservoir elevation down 140 feet from full. Only two of the reservoirs six marinas would be operational. Commercial and private Colorado River rafting trips, which normally end at Lake Powell reservoir, would have no way to get off the reservoir, short of rowing or motoring their rafts more than fifty miles to the nearest functioning marina.

"This is a multi-million dollar industry that we are about to lose," adds Weisheit. "First they killed the rafting industry through Glen Canyon when they built Glen Canyon Dam, and now they're stopping us from running the rivers upstream too."

In addition to Lake Powell dropping eight percent, the systems other major reservoir, Lake Mead, will also drop. In water year 2003 (October 2002-September 2003) Lake Mead will have dropped from 66 to 60 percent. 2004 will see a repeat of this six percent reduction. Lake Mead's primary input comes from releases from Glen Canyon Dam which are only 8.2 million acre-feet per year. Hoover Dam is scheduled to discharge 9.4 million acre-feet for its users downstream, which combined with evaporation and reservoir withdrawals will draw the reservoir down to 54 percent of capacity next year.

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Additional information

[Draft Annual Operating Plan](#)

[Severe and Sustained Drought for the Colorado River Watershed](#)

[Drought Conditions in Utah During 1999-2002](#)

[Precipitation History of the Colorado Plateau](#)

[Living Rivers's Drought Watch Campaign](#)

River News 08/29/03

GLEN CANYON DAM UPDATE

Operations

Releases from Glen Canyon Dam will be lower in September than August. Releases in August averaged about 14,600 cubic feet per second (cfs) with a total of 900,000 acre-feet released. In September, releases will average 8,000 cfs with a total of 476,000 acre-feet scheduled to be released. On Mondays through Saturdays (except for Labor Day) in September, daily fluctuations due to load following will likely vary between a low of 5,000 cfs (during late evening and early morning off-peak hours) to a high of 10,000 cfs (during late afternoon and early evening on-peak hours). On Sundays (and on Labor Day), releases will be 5,000 cfs from 7 pm until 7 am, and 8,000 cfs from 7 am until 7 pm.

Releases from Glen Canyon Dam in October and November of 2003 are currently scheduled be 492,000 acre-feet and 476,000 acre-feet respectively, with the same load following pattern as September.

Because of the draw down condition of Lake Powell, releases from Lake Powell in water year 2003 are being scheduled to meet the minimum objective release of 8.23 million acre-feet. This is consistent with the requirements of the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs.

Basin Hydrology

Drought in the Colorado River basin continues. Inflow volumes have been substantially below average this year with water year 2003 being the 4th consecutive year with below average inflow to Lake Powell. April through July unregulated inflow to Lake Powell in 2003 was 3.91 million acre-feet, only 49 percent of the 30 year average. Total unregulated inflow for water year 2003 will likely be about 51 percent of average.

Snow accumulations in water year 2003 were again well below average levels. Additionally, what snowpack there was in the Upper Colorado River basin this year melted earlier than normal, with the runoff for the most part, being completed by late June. This has resulted in very low summer flows. Inflow to Lake Powell in July tallied up to only 350,000 acre-feet or 22 percent of average. Summer thunderstorms can help augment river flows in the summer, but thus far there has been only limited monsoonal precipitation in the Upper Colorado River basin. Unregulated inflow to Lake Powell in August will likely be only 24 percent of average. Inflow to Lake Powell on August 28, 2003 was 4,800 cfs, 50 percent of what is usually seen in late August.

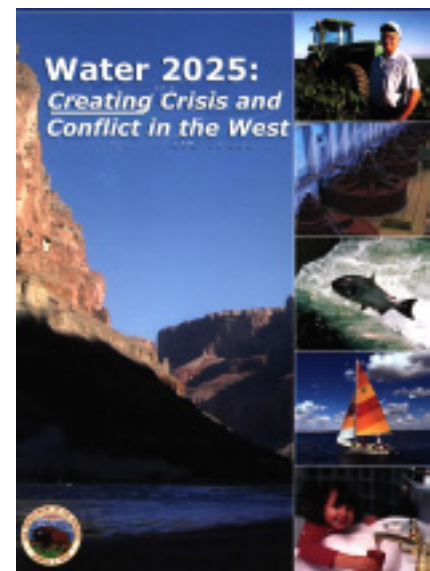
Total unregulated inflow into Lake Powell in water years 2000 and 2001 was 62 and 59 percent of average, respectively, and only 25 percent of average in 2002. Inflow in 2002 was the lowest ever observed since the completion of Glen Canyon Dam in 1963. These low inflows have reduced water storage in Lake Powell. Lake Powell reached a low water surface elevation this spring at 3605 feet (95 feet from full pool) on May 1, 2003. The lake then rose in response to snowmelt-runoff, reaching a peak on June 23, 2003 at 3616.6 feet. The current elevation of Lake Powell is 3,604.8 feet (95.2 feet from full pool). Current storage is approximately 12.2 million acre-feet (50 percent of capacity). The water surface elevation at Lake Powell will likely continue to decrease for the remainder of the year. Under expected inflows, Lake Powell will likely be near elevation 3600 feet on January 1, 2004.

This release courtesy Tom Ryan.

Living Rivers Currents 09/01/03

Water 2025: A Crisis in the Making

Throughout the summer the Department of Interior, through the Bureau of Reclamation (BuRec), has been orchestrating another of its legendary public relations charades. At a time when most Western states are experiencing major problems with water allocation, BuRec is responding with a long-term management plan which completely ignores the problem. It is dubbed "Water 2025: Preventing Crises and Conflict in the West," and is little more than a repackaging of existing management strategies combined with a heightened push for desalinization technology. It contains no proposals for how to substantively address major water



shortages, such as those already manifesting in the Colorado River watershed. "Minor efficiency gains and conservation measures as Secretary Norton prescribes will bring about some savings, but these are merely drops in the bucket given that the Colorado River is providing barely half the water the Department of Interior is contracted to deliver," says Owen Lammers, executive director of Living Rivers.

Abundant historical evidence reveals that the present drought in the Colorado watershed is far from unprecedented, and warnings from the United States Geological Survey one year ago urged water managers to be prepared for several decades of below average precipitation. Lammers notes, "Water 2025 demonstrates that the Department of Interior is ignoring this responsibility."

- * The Plan emphasizes Interior's long-standing tradition of acquiescing to the states for resolving disputes. However, as 80 years of conflict reveals, cooperation is rare, even in the best of times.

- * The Plan's market-driven water banks and transfers from farmers to municipalities during times of shortages are laudable on a small scale, but there is no discussion of what will happen when the real shortages occur. Certainly, the 25 million people reliant on Colorado River water will not be deprived, but what will it cost? Farmers are becoming increasingly reluctant to make water transfers. Without strict federal guidelines and policies, municipalities like Los Angeles, Phoenix, Las Vegas and Salt Lake City will be forced into a cost environment not unlike what California energy utilities faced three years ago.

- * Crop substitutions, which represent the greatest opportunities for water savings, are completely ignored by the Plan. Nearly half of Colorado River water is used to grow water-intensive alfalfa and other forms of cattle feed. Much of this water could be saved by growing crops for human consumption.

- * The Plan advocates maintaining and enhancing existing infrastructure. However, much of this infrastructure is responsible for the loss of up to 20 percent of the Colorado River's flow due to evaporation and seepage amongst its reservoirs, but there are no capital improvements planned to reduce these losses.

Not until the 25-page report's last 100 words does the term "drought" receive much attention. This should be Interior's main focus at this time. Areas that Interior should be addressing include: outlining specific solutions for federal management to employ; how farmers will be enticed or forced to release their water to preserve municipal economies; and how Interior will enforce necessary conservation strategies and efficiency standards.

"This report is all about carrots with no federal stick," adds Lammers. "Interior must begin developing water use standards and practices, as well as allocation strategies to be implemented as this drought situation worsens. Absent this, crises is inevitable, despite Secretary Norton's report and marketing strategy titled to prevent it."

The Articles

- [Delta Deficit: Wasting Money and Habitat](#)
- [Water 2025: A Crisis in the Making](#)
- [Riverkeeper: On the Yampa, Green and Grand Canyon](#)
- [Glen Canyon Dam: LR Demands Supplemental EIS](#)
- [Powell Reservoir: Draining Recreation](#)
- [LR Drought Watch: No Relief In Sight](#)



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[LRC V3, N2, September 2003](#)

Living Rivers Currents 09/01/03

Riverkeeper: On the Yampa, Green and Grand Canyon

From June 2-6, Living Rivers' Colorado Riverkeeper program, in conjunction with Holiday River Expeditions, honored the 50th Anniversary of the first Yampa/Green river trip organized to stop the inundation of Dinosaur National Monument from Echo Park Dam. It's purpose included drawing attention to the slow death of Dinosaur National Monument's river corridor due to the operations of Flaming Gorge Dam upstream. This month the Riverkeeper program will return to the Green River. It will spend nine days in Desolation Canyon, the most remote wilderness- quality river corridor in the continental United States. Like those in Dinosaur National Monument, native fish in this stretch suffer from the impacts of Flaming Gorge Dam. This critical habitat is being ignored by federal researchers developing re-operation plans for the dam.

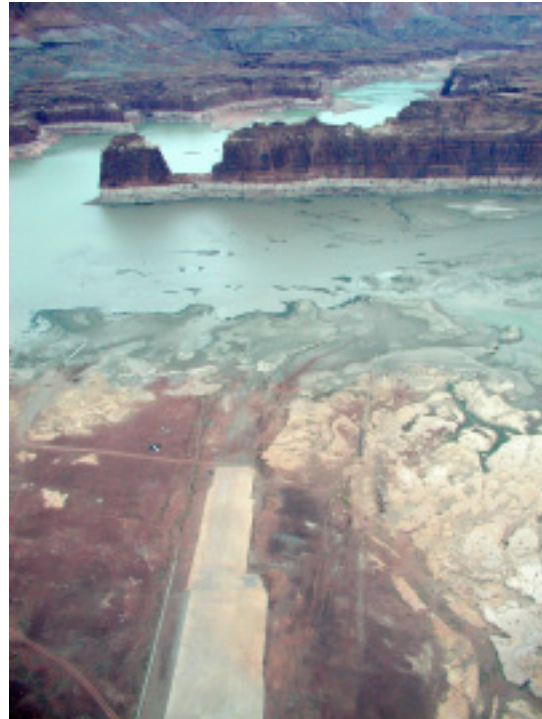
In October the program will undertake a 12-day science trip down the Colorado River through Grand Canyon National Park. Participants will assist researchers from Northern Arizona University in collecting data to evaluate how the food base of Grand Canyon's river ecosystem has changed due to the operation of Glen Canyon Dam. Federal scientists are considering ceasing financial support for such research, despite its vital role in understanding the steps needed to recover endangered fish species in the Grand Canyon National Park.

Living Rivers Currents 09/01/03

Powell Reservoir: Draining Recreation

The reservoir-draining drought is again revealing canyon walls not seen in 30 years. For example, the National Parks Service's marina facilities at Antelope Point near Glen Canyon Dam will be perched on a cliff's edge this Autumn.

The situation at Hite Marina at the top of Lake Powell reservoir is already disastrous, where a vanishing reservoir has exposed a sediment plug that backs up the Colorado River Arm for 30 miles. Because of the thick, gooey mud, the Hite concessions operator, ARAMARK, has literally pulled anchor and moved their floating docks 50 miles downstream to the marina at Hall's Crossing. Hite Marina is looking like a ghost town of thick mats of non-native weeds and obnoxious tamarisk trees.



Colorado River runners who previously finished their trips at Hite, now have no place to exit. Thoughts of pushing rafts through a choppy reservoir 50 miles further to Bullfrog or Hall's Crossing marinas are not welcomed. Bullfrog's boat ramp is about to become unusable itself, and Hall's Crossing is too small to accommodate all of the visitors now that these other facilities are closing. In desperation, river outfitting companies are attempting to forge a road across the sediment themselves at a location across the reservoir from Hite.

In a letter to the superintendent at Glen Canyon National Recreational Area, Living Rivers has reminded the National Park Service that the money targeted for capital improvements at Hite Marina must immediately be shifted toward mitigating the impacts from sediment on the river running public, who typically have to endure the National Recreation Area's bias to the powerboat industry. In 2003, power boaters have received \$3 million dollars in boat ramp improvements, and river runners have received none.

Living Rivers Currents 09/01/03

LR Drought Watch: No Relief In Sight

Federal forecasts for the operation of major dams on the Colorado River indicate that if drought conditions continue, Lake Powell could see another significant drop to 39 percent in one year. Basin-wide storage could drop from 57 to 48 percent as water users continue to use water at pre-drought rates.

BuRec's "2004 Draft Annual Operating Plan" forecasts a range of inflow scenarios for Lake Powell reservoir from 3.8 to 15.6 million acre-feet. This would equate to a range of reservoir levels from 39 to 83 percent. The lower level would represent a near repeat of

2002, when flows into Powell reservoir were 75 percent below normal. Normal flows estimated by BuRec are approximately 12 million acre-feet, flows not seen since 1997.

"During the drought of 1942 to 1977, flows were off by 19 percent. Taking increased diversions above Lake Powell reservoir since that time, which are now approximately 4.7 million acre-feet per year, it's easy to see why Lake Powell continues to drop, " says John Weishiet, conservation director for Living Rivers.

Since year 2000, inflows into Lake Powell have averaged just 50 percent of normal: 62, 59, 25 and 54 percent respectively. Presently, Lake Powell reservoir is reported to be at 51 percent capacity, down last year from 59 percent. The actual amount of available water is 50 percent, as BuRec is not compensating for .5 million acre-feet of storage lost to sediment since its last inventory was conducted in 1986.

If inflows into Lake Powell reservoir continue to average 50 percent of normal, or about six million acre-feet per year, this would result in the reservoir level dropping an additional eight percent to 10.7 million acre-feet, or 44 percent of capacity. This would bring the reservoir elevation down 140 feet from full. Only two of the reservoirs six marinas would be operational. Commercial and private Colorado River rafting trips, which normally end at Lake Powell reservoir, would have no way to get off the reservoir, short of rowing or motoring their rafts to the nearest functioning marina.

"This is a multi-million dollar industry that we are about to lose," adds Weisheit. "First the Bureau of Reclamation killed the rafting industry through Glen Canyon when they built Glen Canyon Dam, and now they're stopping us from running the rivers upstream too."

Living Rivers Currents 09/01/03

Glen Canyon Dam: LR Demands Supplemental EIS

In a letter submitted this month to Michael Gabaldon, chair of the Adaptive Management Program (AMP) for Glen Canyon Dam, Living Rivers outlined the justification for the Department of Interior initiating a new Environmental Impact Statement (EIS) for Glen Canyon Dam. This would would compel the federal government to examine decommissioning Glen Canyon Dam as a means of recovering endangered species habitat lost in Grand Canyon National Park as a result of the dam's operations. Completed in 1996, the existing EIS for Glen Canyon Dam prescribed a set of operational criteria for the dam in an effort to halt the Bureau of Reclamation's violation of the Endangered Species Act in Grand Canyon. So far, all these efforts have failed.

* The decline of the Humpback Chub population from 8,000 to 2,000 fish, and the inability to establish a second location in the river corridor for Humpback Chub to live.

* The inability to provide enough sediment for the preservation of beach habitat. The number and size of beaches in the Grand Canyon have experienced a significant decline since the AMP began. This negatively effected the Canyon's recreational

experience, but has also impacted the river corridor's cultural resources, which are now prone to erosion.

* Unanticipated impacts resulting from reduced elevations of Glen Canyon Reservoir, such as increased temperatures and modified nutrient dynamics, could have significant effects on the downstream resources in the Grand Canyon. As the drought situation persists, these effects will become more pronounced.

The key to reinstating National Environmental Policy Act compliance, through a supplemental EIS, is if new data or impacts are recognized. Clearly in the case of Glen Canyon Dam, significant new data (biological and sediment) indicate that the system needs re-evaluation.

More Information:

[Letter demanding Supplemental EIS](#)

Living Rivers Currents 09/01/03

Delta Deficit: Wasting Money and Habitat

Congress is about to fund the start-up of a defunct desalting plant on the Colorado River near Yuma, Arizona, dooming critical habitat in the delta region. The Bureau of Reclamation (BuRec), which has recommended that Congress authorize the desalter's repair, is downplaying the results of its own analysis, which reveals far less costly and less environmentally damaging measures to meet US treaty obligations for water delivery to Mexico.

"This is reminiscent of BuRec of the past," says Lisa Force, Living Rivers program director. "At a time when federal deficits are the largest in U.S. history, it's unbelievable that Congress would consider throwing away taxpayers' dollars to prop up this boondoggle." "There are cheaper and less destructive ways to save Colorado River water than running the Yuma Desalting Plant," added Myra Wilensky, regional organizer at the National Wildlife Federation.

BuRec's objective is to produce about 108,000 acre-feet of water from the plant of sufficient quality to help meet its 1.5 million acre-feet annual obligation to Mexico. Taxpayers will be required to pay \$26 million to replace obsolete technology-plus a minimum of \$36 million in annual operating costs for the plant.

Completed in 1992 at a cost of \$256 million (a five-fold increase in projected construction costs) to clean up brackish wastewater from farms in southern Arizona, the plant was shut down several months later due to extremely high operating costs.

Another option ignored by BuRec for the 108,000 acre-feet involves paying willing sellers to lease water they presently do not need, at just 15 percent the cost of starting

the Yuma plant. "The Department of the Interior has already proposed an alternative that could save \$30 million every year. Not only does Interior's alternative have great economic advantages, it will also save enough electricity to supply 25,000 people," says Jennifer Pitt of Environmental Defense.

International water expert and director of the Pacific Institute in Oakland, Dr. Peter Gleick, said "Despite the Department of Interior's much ballyhooed 'Water 2025 Plan' claiming a new era in western water management, the decision to reopen the expensive and environmentally damaging Yuma desalter shows that federal water policy is really business as usual - spending taxpayer money for unsustainable water projects."

The agricultural wastewater that the plant would process now flows into the Cienega de Santa Clara, a 40,000-acre open water ecosystem in the Colorado River delta region. The desalting plant would remove this flow from the Cienega and return only highly saline brine to the wetlands.

"This provision would destroy an extremely important wetland in Mexico that contains the largest remaining breeding population of Yuma Clapper Rail in the world," says Bill Snape, Chief Counsel for Defenders of Wildlife.

"It will be impossible to replace the value of the Cienega de Santa Clara to the Colorado River ecosystem."

The Cienega is the largest remaining wetland in the Southwest and is home to 56 threatened, endangered and declining species. Several scientific studies funded by the Department of Interior confirm that the wetland would be completely destroyed by desalter operations.

River News 09/12/03

MOTOR RIG STRANDED IN UNKAR RAPID

Grand Canyon National Park

A Wilderness River Expeditions 36 foot motorized tour boat ran aground in Unkar Rapid on the Colorado River in Grand Canyon Thursday afternoon. The boat was part of a two-boat trip of 41 people. National Park Service technical rescue personnel used a helicopter to short-haul 6 people off the stranded raft late yesterday afternoon. This type of rescue involves lifting two people at a time off the boat by a 100-foot line from the helicopter. Rescue personnel acknowledge this is the most dangerous type of rescue the park performs. Darkness halted the rescue operation of the remaining boat occupants around 7:00PM. The remaining passengers spent last night on the boat. The short-haul operation resumed this morning.

The river trip was scheduled to exchange passengers at Phantom Ranch before noon today. Concessions passengers hiking into the canyon to join the river trip are being told they can expect the arrival of the boats late this afternoon.

Flows from Glen Canyon Dam have been between 5,000 and 8,000 cubic feet per second. This flow is considered very low for motorized tour boat travel through the park.

During low water flows in 2000, the NPS conducted 3 short-haul operations for motorized tour boats stranded in the rivers rapids. Drought conditions in the Colorado River Basin continue, with Powell Reservoir above Glen Canyon Dam at 50% capacity.

It's been a busy period over the last 30 days for National Park Rescue teams responding to commercial river tip calls for evacuations. There have been two rescues of passengers with broken arms, a number of rescues of passengers with Norwalk Virus-like gastrointestinal distress, and one passenger sustained a de-gloving injury to his hand when he caught his wedding ring on boat rigging as he jumped off the boat into the river.

River News 09/17/03

RRFW Riverwire - USFS TO TRASH WILDERNESS ON MIDDLE FORK

The Salmon Challis National Forest has released a Finalized Environmental Impact Statement (FEIS) which proposes to reduce the number of days that parties can remain on the Middle Fork of the Salmon river. The idea is to reduce the impacts of boaters on the river corridor, while at the same time the analysis would allow for an increase in jetboat numbers on the wilderness mainstem Salmon River.

The boiled down synthesis goes something like this: Public parties of 21-24 members, and commercial parties of 21-30 customers, would be limited to a maximum of 6 days on the river. Parties (both commercial and public) of 11 -20 members would be limited to 7 days on the river. Only those groups of 10 or less would be allowed to remain on the river for the current use limit of 8 days.

Lloyd Knapp, with North West Rafters Association, notes that most commercial trips don't stay on the river for 8 days due to quick turnaround times. This new ruling will not affect commercial outfitters, but it will fall onto the backs of self-outfitted recreational boaters, who typically take longer trips through the area. While the intent of the plan is to reduce the wear and tear on the Frank Church River of No Return Wilderness, Lloyd notes that in doing quick-turnarounds, the commercial outfitters are pouring more people down the river than trips that moving at a slower pace. Knapp notes "I would say that the river is not over-used. It does get a lot of use, but the Summer float season is relatively short. It's not at all like the Gauley in West Virginia, or other rivers that are loved to death."

Knapp also points out that the river also raises a substantial fortune in the contested Recreation Fee Demonstration program. "There is no evidence that the Forest Service has spent a dime of this money on the river. If there is over use in certain areas, then the Fee Demo money should be used for repairs and maintenance."

Jo Johnson, co-director of River Runners For Wilderness, notes there are clear flaws in this management plan. "Increasing motorized use and speeding up river travel through the wilderness do nothing to promote wilderness character. This plan continues the now outdated concept of allocating river use between the public and a small oligopoly of middlemen. This model has outlived its usefulness, especially in light of a continued

growth in public rafting and ongoing declines in demand for guided river running services."

The FEIS has been issued, and the deadline for comments is October 27, 2003. A summary version of the FEIS is available at the website below. This is a Forest Service publication known as Frankly Speaking (a reference to Frank Church).

www.fs.fed.us/r4/sc/recreation/fcronr.htm

Your comments strongly opposing this plan are needed. Quite simply, there is very little justification for this type of wilderness river use. It's discriminatory against public river users, and doesn't do anything about the commercial interests, who carry very large groups of people quickly through while putting most of the use on the wilderness.

Comments can be submitted to:

Ken Wotring Supervisor's Office Salmon Challis National Forest 50 Highway 93 South Salmon, Idaho 83467

Comments can also be e-mailed to:

comments-intermtn-salmon-challis@fs.fed

RRFW encourages you to mail a hardcopy. It's a lot harder to lose a hardcopy than it is to press a delete button.

RRFW thanks Lloyd Knapp for information supplied in this Riverwire

River News 09/18/03

PARK AIRLIFTS 17 PEOPLE OFF STUCK RAFT

By Brad Fuqua Editor, Grand Canyon News

A 37-foot motorized raft, operated by Wilderness River Adventures, became pinned on a rock at Unkar Rapid September 11, 2003. Unkar Rapid is at river mile 72.5. "At approximately 2 p.m., the motorized raft experienced engine failure upon entering the rapid," incident commander K.J. Glover said in a report. "It traveled to the left side and got lodged on rocks towards the base of the rapid." For the next three hours, the boatman and crews from two other Wilderness River Adventures' boats attempted to free the raft. The NPS received a satellite call for assistance at 5 p.m., after the self-rescue attempts failed. But SAR [search and rescue] personnel had less than two hours of daylight left for the operation.

Two rangers were inserted onto the boat via short-haul, a technique of moving rescuers utilizing a 100-foot rope attached to the helicopter. Six passengers were evacuated before nightfall, but air operations had to be suspended at dusk due to safety protocols. "Rangers stayed on the boat with the remaining passengers throughout the night," Glover reported. "In the morning the passengers were short-hauled to safety." There

were no reports of injuries. Some of the 17 were able to get onto other river trips and hike out from Phantom Ranch.

Following the helicopter operation, rescuers and boatmen remained on the raft to assist with efforts to free it from the rock. Attempts to free the boat Friday proved unsuccessful. However, the boat was moved with a "Z rig" from the initial point of entrapment to a location 10 feet downstream. The boat also rotated 180 degrees. On Saturday morning, park rangers returned to Unkar Rapid to assist with freeing the boat. The raft finally broke free utilizing engine power. The boat then continued down river without further incident.

A photo of the stranded boat is at <http://www.grandcanyontourguide.com/> click on "Grand Canyon Newspaper".

River News 09/29/03

GRAND CANYON SLIDESHOW TOUR

Tom Martin, Co-Director of River Runners for Wilderness, will be presenting a slideshow on the Colorado River Management Plan and on his book Day Hikes from the River: A Guide to 100 Hikes from Camps on the Colorado River in Grand Canyon National Park. The CRMP-Hikes slideshow will be shown in Grand Junction, Boulder, Denver, Fort Collins and Colorado Springs, Colorado. See beautiful vistas illustrating Grand Canyon hikes you can do from the river and exciting river running shots. Tom will cover the latest news on the controversial Colorado River Management Plan now in progress for Grand Canyon National Park, and how this plan will affect your boating access. Tom will be signing books, the sale of which will benefit River Runners for Wilderness.

Round up your boating buddies, and catch one of these free shows:

Grand Junction Wednesday, October 8th, 7PM - 9PM White Water West 418 South 7th St Hosted by W.A.T.E.R.

Boulder Thursday, October 9th, 7PM - 9PM The Dairy Center 2590 Walnut St. Plenty of free parking in Dairy Center's Walnut St lot

Ft. Collins Tuesday, October 14th, 7PM - 9PM REI 4025 S. College Ave. Hosted by REI

Denver Downtown Wednesday, October 15th, 7PM - 9PM AAA Inflatables 3264 Larimer St. Hosted by High Country River Rafters

Colorado Springs Thursday, October 16th, 7PM - 9PM Sports Page 965 Summer Games Dr. Hosted by Pikes Peak River Rafters

All shows are free and open to the public. For more information or for scheduling a show in your area, contact Jo Johnson at jojohnson@rrfw.org or 303-443-1806.

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River News 10/01/03

GLEN CANYON DAM UPDATE

Operations

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Basin Hydrology

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Inflow into Lake Powell picked up somewhat in September, 2003. Significant amounts of precipitation fell in the Colorado River Basin, particularly in the Four Corners region, in the first two weeks of September. Unfortunately, a drying trend followed. There has been almost no precipitation in the Colorado River Basin in the latter part of September. Total unregulated inflow in September will end up at about 453,000 acre-feet, or 95 percent of average. Inflow on September 29, 2003 was 5,600 cfs, about 60 percent of what is usually seen in late September.

Total unregulated inflow into Lake Powell in water years 2000 and 2001 was 62 and 59 percent of average, respectively, and only 25 percent of average in 2002. Inflow in 2002 was the lowest ever observed since the completion of Glen Canyon Dam in 1963. These low inflows have reduced water storage in Lake Powell. Lake Powell reached a peak elevation in 2003 on June 23 at 3616.6 feet. The current elevation of Lake Powell is 3,603.8 feet (96.2 feet from full pool). Current storage is approximately 12.1 million acre-feet (50 percent of capacity). The water surface elevation at Lake Powell will likely continue to decrease for the remainder of the year. Under expected inflows, Lake Powell will likely be near elevation 3600 feet on January 1, 2004.

Experimental Flows

Daily high fluctuating releases from Glen Canyon Dam, as part of the Glen Canyon Dam experimental flows, were completed on March 31, 2003. From January through March 2003 releases ranged between a high of 20,000 cfs to a low of 5,000 cfs each day. These same high fluctuating releases are scheduled to be repeated in January through March of 2004.

The January through March high fluctuating releases were intended to benefit the endangered humpback chub. Scientists have recognized that the humpback chub population has been in general decline since highly fluctuating flows were curtailed in November of 1991. Those flows helped keep the non-native fish, especially the rainbow and brown trout, in check. The trout are thought to prey upon and compete with native fish such as the endangered humpback chub.

The experimental flows from Glen Canyon Dam received environmental clearances in December 2002. The flows were analyzed in an environmental assessment in accordance with the National Environmental Policy Act. The experimental flows are the result of ongoing studies by scientists from the United States Geological Survey and were recommended by the Glen Canyon Dam Adaptive Management Work Group, a Federal advisory committee. The experimental flows address the decline of two key resources in the Grand Canyon: sediment and population viability of endangered humpback chub. The Finding of No Significant Impact on the experimental flows can be found at http://www.uc.usbr.gov/amp/flow_fonsi.pdf.

This release courtesy Tom Ryan.

River News 10/06/03

COLORADO RIVER ECOSYSTEM SYMPOSIUM

The Glen Canyon Dam Adaptive Management Program and the Grand Canyon Monitoring and Research Center will be hosting a symposium on the Colorado River in Grand Canyon. The symposium will be held in Tucson Arizona, October 28-30, 2003, and is open to all interested persons (public and students welcome!). The symposium will address questions such as:

Was the Low Steady Summer Flow in 2000 good for the river? How can conditions for the endangered humpback chub be improved? Are the new flows and experimental removal of non-native fish working? What is the role of experimentation under the Record of Decision?

Registration is free, but please register your attendance online using the website link below so organizers have enough meeting materials and light refreshments available. The program will run from approximately 8:30 a.m. to 5 p.m. each day, with a special poster session the evening of October 28th.

The program and flyer are available at <http://www.gcmrc.gov/symposium/2003/symposium.html> The Symposium will be held at the Sheraton Tucson Hotel and Suites, 5151 E. Grant Road, Tucson, AZ 85712. For further information, contact Serena Mankiller, USGS/BRD, Southwest Biological Science Center, Grand Canyon Monitoring and Research Center, 2255 N. Gemini Dr., Flagstaff, AZ 86001, Ph: 928/556-7094, E-mail: smankiller@usgs.gov

River News 10/06/03

BOULDER, GRAND JUNCTION SLIDESHOW REMINDER

Grand Canyon enthusiasts in Boulder and Grand Junction, Colorado: Don't forget the free upcoming Day Hikes from the River slideshow and CRMP update this week at the following locations.

Grand Junction Wednesday, October 8th, 7PM - 9PM White Water West 418 South 7th St Hosted by W.A.T.E.R.

Boulder Thursday, October 9th, 7PM - 9PM The Dairy Center for the Arts 2590 Walnut St.

If you can't make it to one of those, you have more opportunities in Fort Collins, Denver and Colorado Springs.

Fort Collins Tuesday, October 14th, 7PM - 9PM REI 4025 S. College Ave. Hosted by REI

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Colorado Springs Thursday, October 16th, 7PM - 9PM Sports Page 965 Summer Games Dr. Hosted by Pikes Peak River Rafters

Additional shows are tentatively scheduled in Colorado for Salida, December 2nd and Durango, December 4th, and in Salt Lake City. For more information on any of the shows, contact jojohnson@rrfw.org or at 303-443-1806.

River News 10/09/03

RIVER RUNNERS WANT LARGER SHARE OF CANYON

By Chris Barge, Boulder Daily Camera Staff Writer

So let's say you're a hard-core paddler who wants to lead your own trip down the Colorado River through the Grand Canyon. Now, pretend you want to do that some time in the next decade. Good luck. Under the current wait-list system, you'd have to buy a Day Planner for the year 2023 before finding a page to pencil in a trip. The wait list for recreational paddlers is about 20 years long. If you want to go this year, cash in those stocks: A spot is waiting for you on a commercial trip with one of the many outfitters that

share 68 percent of the trip allocations. A woman from Boulder and a man who spends most of his time near the Grand Canyon are trying to rally the public behind a movement to change the status quo.

Jo Johnson of Boulder and guide book author Tom Martin co-founded River Runners for Wilderness one year ago. Martin will present a slide show tonight to promote their organization and his updated guidebook, "Day Hikes from the River: 100 Hikes from Camps on the Colorado River in Grand Canyon National Park." The book, an expanded version of his first guide, points out fun side hikes from the river for the 32 percent of river runners who are going it on their own. He says he hopes the book warms people to the idea of joining his and Johnson's cause.

Together, Johnson and Martin are trying to get the public engaged as the National Park Service develops a new Colorado River Management Plan. "There has been 30 years of stagnation down there to the benefit of an oligopoly of concessionaires," Martin said. "Fixed allocations don't work." The Park Service is scheduled to publish a draft environmental impact statement for the plan this fall. It will address the allocation system, as well as whether to continue allowing motorized boats on the river.

Commercial outfits in the canyon like using motor boats because they allow them to offer customers longer river trips over fewer days. Johnson says, in addition to being expensive, fast trips rob visitors of the true immersive psychological experience that the Grand Canyon can provide.

Hooey, says Mark Grisham, executive director of the Grand Canyon River Outfitters Association, which represents the concessionaires. Go to Minneapolis or Dallas and fill an auditorium with people who would seriously consider taking a river trip through the Grand Canyon, he said. Then, ask for a show of hands to these questions: Who wants to book an outfitter for a one- to two-week trip? Now, who wants to round up their own gear, own group and all the time off necessary to do the trip on their own? "We don't think that show of hands would be 50-50," Grisham said. "We think it would be more like 95-five."

Grisham said he and Martin disagree on how many commercial boats should run the river. It's the right mix, Grisham said. It's the antiquated wait-list system that needs to change. He suggests introducing a lottery. Both sides agree that the current method for private boaters to get on the water needs improvement. "That's why people are so pissed off," Grisham said. "They feel like the Park Service has let them down, so we become the for-profit bad guys."

The Grand Canyon River slide show and park plan update will be from 7 to 9 p.m. today at the Dairy Center, 2590 Walnut St., Boulder. For more information, call Johnson at (303) 443-1806. Martin's book is available at www.vishnutemplepress.com. For more information on the Colorado River Management Plan, visit www.nps.gov/grca/crmpl/. Contact Chris Barge at (303) 473-1389 or bargec@dailycamera.com. Copyright 2003, The Daily Camera. All Rights Reserved.

River News 10/13/03

RRFW Riverwire – RIVER OF NO RETURN MANAGEMENT PLAN UPDATE

The final environmental impact statement (FEIS) has been released for the Frank Church River of No Return Wilderness Management Plan by the Salmon Challis National Forest. This plan will guide management of the Main and Middle Fork of the Salmon River for years to come. The wild character of this area has degraded significantly in the past 20 years and that trend will actually increase under the new plan. Please take a few minutes to write a letter to the Forest Service asking them to protect the wilderness character of the Frank Church - River of No Return Wilderness. Comments must be submitted by October 27, 2003.

The final plan allows unlimited expansion of aircraft and motorboat use, continued degradation around campsites, lakes, streams and trails, serious impairment of the opportunity for a wilderness experience on the Middle Fork Salmon and Main Salmon rivers, and an unfair quota system that has commercialized much of the access to these rivers. While the draft EIS included 11 alternatives for consideration, the final EIS has been reduced to a final five (A to E). Though none of these alternatives are optimal to preserve Wilderness character and values, Alternative B comes closest. We endorse Alternative B, but only with the following changes:

(1) Managing use on the Middle Fork and Main Salmon rivers: Alternative B is the only alternative that caps use at a level that protects Wilderness character and opportunities for a wilderness experience. However, because this alternative continues an outdated and unfair allocation system (60 percent of use is for commercial trips), and allows for overly large party sizes (19 per group) it unnecessarily limits the number of public boaters who can float these rivers. The Forest Service should cap river use at the level set in Alternative B, but increase the number of trips available to the public by reducing group size limits to 12 per trip, and by allocating a much larger percentage of the launches to the public, rather than commercial users. The opportunity to experience Wilderness should not be based on one's willingness to pay a commercial outfitter.

(a) Jetboats: The plan allows virtually unlimited motorboat use on the Mail Salmon. Jetboat use has grown dramatically since 1978, much of it for "jetback" shuttles, which bring rafters upriver to their cars. Urge the Forest Service to prohibit jetbacks, and to cap motorboat use at 1978 levels.

(b) Painter Bar Road: The Painter Bar road is a primitive route that was used to access a private inholding within the Wilderness and Wild Salmon River corridor. The Forest Service has acquired the inholding. The FEIS proposes to leave this road open to ATVs and 4-wheel drive traffic. The Wilderness Act prohibits permanent roads and the Wild Scenic Rivers Act prohibits roads along Wild Rivers. Urge the FS to close the Painter Road in the final plan.

(2) Aircraft Use: The Forest Service estimates that 5,500 aircraft land on airstrips in the Wilderness each year. Most of the use is not for wilderness dependent activities but part of a new fad where pilots "bag" airstrips to prove their competence, or engage in an airplane version of car camping. All of the alternatives the Forest Service developed

allow aircraft use to increase without restriction. Urge the Forest Service to limit the number of aircraft landings to pre-Wilderness designation levels, and to implement a permit system that allows access for legitimate Wilderness dependent activities only.

In addition, and without agency approval, pilots have converted four Wilderness meadows into landing strips, referred to as the Dewey Moore, Mile-Hi, Simonds, and Vines "landing strips". The Forest Service preferred alternative proposes to maintain these strips for "emergency use," though landing at other times would not be prohibited. Urge the Forest Service to permanently close the Dewey Moore, Mile-Hi, Simonds, and Vines landing strips.

(3) Backcountry: Urge the Forest Service to implement specific management strategies to reduce crowding and on-site physical impacts by reducing group size limits from the current 20 people/20 head of stock, to 10 people/10 head of stock.

(4) Outfitter Camps: The plan would continue the practice of reserving over 80 camps for commercial land-based outfitters. The camps include permanent structures such as corrals, tent logs and fences. All Wilderness users should be required to meet the same rigorous leave-no-trace standards. Urge the Forest Service to require that outfitter camps be temporary and removed at the end of each season.

(5) Livestock grazing, fire control, fish stocking: These three important ecological issues are not addressed in the plan despite the fact that each has a significant effect on natural conditions in the Wilderness. Urge the Forest Service to adopt standards that promote naturally functioning ecosystems. Natural fires should be allowed to burn, stocking non-native species should cease, and strict controls should be incorporated into livestock allotment plans.

Send your comments to: Ken Wotring, FC-RONR Wilderness Coordinator, Forest Supervisor's Office, Salmon-Challis National Forest, 50 Highway 93 South, Salmon, ID 83467. Phone: (208) 756-5131, Fax: (208) 756 - 5151, email: comments-intermtn-salmon-challis@fs.fed.us

River Runners for Wilderness thanks Wilderness Watch www.wilderness.org for gathering the information contained in this release.

River News 10/21/03

RRFW Riverwire - Update on the CRMP Planning Process

To: All Interested Persons From: Planning Team Leader, Colorado River Management Plan

Subject: Update on the CRMP Planning Process Grand Canyon National Park is making considerable progress in developing a Draft Environmental Impact Statement for revising the park's Colorado River Management Plan (CRMP). We have developed a full range of reasonable draft alternatives (including the current situation which is the No

Action alternative), which is now undergoing preliminary impacts analysis. The planning team has carefully considered and addressed input including the following:

- * Extensive comments the park received during the public scoping period in 2002,
- * Input from the stakeholder workshops and expert panels,
- * Consultation with Native American Tribes,
- * Interagency consultation,
- * Provisions of the 2002 lawsuit settlement agreement,
- * Extensive data and other information gathered by the planning team, and
- * Laws, policies, and principles guiding plan development (on the CRMP website at www.nps.gov/grca/crmp).

The next steps in the CRMP planning process will include:

- * Add mitigation measures to the alternatives, as necessary, to address any major impacts identified in the preliminary impacts analysis. The mitigated alternatives will then undergo additional impacts analysis. All of this is scheduled for completion in early November.
- * Review the draft alternatives and draft impacts analysis, make any necessary changes, and select a preferred alternative. The preferred alternative will be the agency's proposal for a revised CRMP; it may be one of the draft alternatives, the No Action alternative, or a new alternative developed during the preferred alternative selection process.
- * Publish a Draft CRMP/EIS for public review and comment (after any additional revisions and analysis).

We will not know the exact timing for publishing and public review of the Draft CRMP/EIS until the preferred alternative selection process has been completed. Once that process is completed, we will announce the schedule in a note to the CRMP email list, and on the CRMP website.

When the Draft CRMP/EIS is published, the park will issue a Notice of Availability in the Federal Register, a press release, and a note to everyone on the CRMP mailing list. We have begun planning for extensive public review opportunities, including public meetings, and we will keep you informed as we develop the details.

Please send any comments or questions concerning this note or the process to grca_crmp@nps.gov (please be sure to use an underscore to make grca_crmp). Thank you for your interest in Grand Canyon National Park and the Colorado River Management Plan. Rick Ernenwein CRMP Planning Team Leader.

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River News 10/21/03
NOROVIRUS UPDATE

River trip illnesses down from last year By Brad Fuqua, September 24, 2003 Grand Canyon News Editor

One year after a series of norovirus outbreaks on the Colorado River, things appeared to be pretty much back to normal this summer as river runners made their way through Grand Canyon. Last year, dozens of river trip passengers fell sick to the gastrointestinal illness, the same strain that ran rampant on cruise ships. This summer at Grand Canyon, only one trip reported three or more sick passengers. The infected trip launched from Lee's Ferry on Sept. 1 and a passenger became sick the following day. As a result, there is a theory that the person may have arrived for the trip already carrying the virus.

"The first person got sick on the 2nd, so our wildest guess is that it was brought in," said Michael McGinnis, Grand Canyon National Park river sub-district ranger. "The Coconino County Health Department actually has the toilets ... they took samples and are testing for norovirus. That's what they think it is, they don't know for sure." McGinnis said it appears 13 people got sick from the incident. Two people were flown out and taken to the hospital in an evacuation done above Crystal Rapid. Last year's problems with the illness were traced to discharges from Glen Canyon Dam's water-treatment plant. This year, McGinnis said "they did testing and did not find it," so that problem has seemingly been solved.

In addition, the National Park Service, commercial river runners and public boating groups met in a series of meetings to go over sanitation practices. Out of those meetings came a policy that private or commercial boating groups must report three or more illnesses immediately via satellite phone. That happened just the one time this year.

If fewer than three people become sick with contagious gastrointestinal illness on a river trip, the boaters are not required to report it until the end of the trip. That happened 12 times this summer, including one person who had to be flown out.

According to the Centers for Disease Control, symptoms of norovirus usually include nausea, vomiting, diarrhea and some stomach cramping. Sometimes people additionally have a low-grade fever, chills, headache, muscle aches and a general sense of tiredness. The illness begins suddenly is usually brief, with symptoms lasting only about one or two days, the CDC reports.

River News 10/23/03

UPDATE ON CRMP PLANNING

Released October 21, 2003 To: All Interested Persons From: Planning Team Leader, Colorado River Management Plan Subject: Update on the CRMP Planning Process
Grand Canyon National Park is making considerable progress in developing a Draft Environmental Impact Statement for revising the park's Colorado River Management Plan (CRMP). We have developed a full range of reasonable draft alternatives (including the current situation which is the No Action alternative), which is now undergoing preliminary impacts analysis. The planning team has carefully considered and addressed input including the following:

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River News 10/25/03

RIVER CONCESSION SALE POSSIBLE

Grand Canyon, AZ

A Grand Canyon river concessionaire has initiated the process of being purchased by another rafting concession, according to park officials. The river concession contract, owned by High Desert Adventures, has two years left on its present contract extension. The purchaser, if approved by the park, will be Arizona Raft Adventures. High Desert Adventures has 3,323 user days, while Arizona Raft Adventures has 10,368. There are currently 16 river concessions contracts today, with one company holding two contracts. If the sale is approved, there will be 16 contracts held by 14 companies. The contract period is now up to 10 years, with three-year extensions allowed beyond the 10-year period. All river concessions are presently operating under an extension that will expire December 31, 2005.

Grand Canyon National Park will be renewing the river concession contracts based on the Colorado River Management Plan (CRMP), now in the midst of an Environmental Impact Statement review. The final management plan will set the stage for river use for another 10 years.

Jo Johnson, River Runners For Wilderness Co-Director, is hoping for a change in the way the park distributes these permits. Johnson notes that 21 businesses become river concessionaires in the fall of 1971, with the initiation of 5-year contracts. At that time, all government agencies were to be following the National Environmental Policy Act, known as NEPA. Though federal law requires public review and scoping of such activities, these have never been conducted, and river concessions contracts have since been awarded based on requirements found in the CRMP. "Today, the split-allocation system has resulted in the do-it-yourself river running public waiting in a projected 20 year backlog of permits for river access while river concessionaires are slashing prices on river trips to assure their river trips fill." Johnson adds "We question the continued usefulness of a split allocation system."

According to Johnson, there are only two ways to shift user-days from the river concessions back to the public. The first is if the CRMP identifies a decreased need for commercial concessionaire services as they are presently offered. "The other way would be for the CRMP to adopt an allocation-free access system like the one at Boundary Waters or at Grand Canyon for backpackers. This completely eliminates the need for concessions to have a fixed allocation base." Johnson points out that de-regulating the concessions would move them from an oligopoly with fixed subsidies to an oligopoly "that could compete for market share. The park could terminate the concessionaire contracts and award any number of qualified Incidental Business Permits for guided river services."

"A number of businesses have been thriving for over a decade servicing the non-commercial river running public without any allocations whatsoever" Johnson noted. "These businesses provide a wide array of great services at low cost to the public. Allocation-free access plans hold the only hope for a contention free future for the river."

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LR in the News 10/29/03

Interior Dept. favors more Canyon flooding

By Mitch Tobin ARIZONA DAILY STAR

Tucson, Arizona - Despite initial resistance, the Bush administration favors continued experimental floods meant to restore the Grand Canyon's ecology, a senior official said in Tucson on Tuesday.

Assistant Secretary of the Interior Bennett Raley, the administration's point man on water issues, spoke to 60 scientists at the start of a three-day meeting on how Glen Canyon Dam affects the Colorado River.

Researchers explained how they're using lasers, underwater cameras, century-old photos and experimental flumes in Minneapolis to learn how sand grains and Volkswagen-sized boulders move through the Canyon's rapids and eddies.

Raley urged the scientists not to politicize their work and to remember that "science is not the only input factor for management of the Colorado River."

"If scientists are sloppy and mix advocacy with science, you will end up with the same public perception of integrity that lawyers have," said Raley, a lawyer by training.

Glen Canyon Dam, completed in 1963, dramatically altered the Colorado's flow. Before the dam, the warm, muddy river roared with spring snowmelt. Sediment was lifted onto beaches and sand bars, creating wildlife habitat and backwaters vital to native fish, such as the endangered humpback chub. The beaches are still important campsites for boaters.

After the river was plugged to stabilize the Southwest's water supply, it ran colder and clearer below the dam, which trapped 90 percent of the silt. But dam releases--which often fluctuate with the Sunbelt's electricity demands--have also caused the Colorado's baseline flow to double downstream. As a result, much of the silt and gravel deposited by the Grand Canyon's 740 tributaries gets whisked into Lake Mead downstream.

"It wasn't that we just lost the spring floods, which redeposited sand," U.S. Geological Survey researcher Ted Melis said, "we lost the low-flows the rest of the time, which were low enough to retain those inputs for use during the high-flows. We're getting hit on both ends."

The result is an ecosystem transformed by a dam that helps supply water and power to 25 million people.

Tucson is becoming increasingly dependent on the Colorado, whose water comes here via the Central Arizona Project's 336-mile canal.

After passage of the 1992 Grand Canyon Protection Act, the Clinton administration tried to replicate the river's natural flows. With much fanfare, Interior Secretary Bruce Babbitt opened the dam's floodgates in 1996; another flooding experiment was tried in 2000.

Despite initial claims of success, scientists now say the results were minimal. A lack of sediment in the river made it tough for sandy areas to expand, and many gains were quickly washed away.

Scientists want to create more floods and time them when the Paria River is dumping sediment into the Colorado.

But the drought has caused that tributary, 15 miles below the dam, to deposit less silt in the past three years than any time in recorded history.

Raley said at first he was "deeply, deeply skeptical about the experimental flow program." But, after talks with scientists on a river trip, Raley accepted it was "good science and it was worth taking the political risks to move forward."

"We know when we're being gamed. Had we sensed that, we probably would have slow-walked, ducked, evaded and done everything not to move forward," he said.

John Weisheit, an environmentalist with the group Living Rivers who would like to see Glen Canyon Dam removed, was encouraged by Raley's words. But he said the Interior Department still isn't spending enough money to restore the Grand Canyon.

In the past 30 years, researchers have flip-flopped on whether the Canyon was losing or gaining sediment, said Jack Schmidt of Utah State University. Some thought the lack of

floods created a surplus of silt and there was enough sand in the river to form new beaches.

"What we've learned in the Grand Canyon is, the system may be in sediment deficit all the way to Lake Mead," he said.

* Contact Mitch Tobin at 573-4185 or mtobin@azstarnet.com.

River News 10/31/03

RRFW Riverwire - PUBLIC TO BE BYPASSED AGAIN

Grand Canyon National Park October 31, 2003

River Runners for Wilderness has learned that a Recommendation for Wilderness Proposal has been submitted to the park by Representative George Radanovich (R-CA, Chairman, Subcommittee on National Parks, Recreation and Public Lands).

Chairman Radanovich is proposing a wilderness recommendation which excludes the Colorado River. Grand Canyon National Park staff are responding to a request from the NPS Directorate to prepare the necessary documentation. Representative Radanovich and committee staff members intend to introduce this alternative through the congressional process as a wilderness bill.

"Here we go again." commented Tom Martin, Co-Director of River Runners for Wilderness "We are in the middle of a public process dealing with the river-wild, where the public, as it has for over 30 years, is clamoring for preservation of the wilderness character of the river, and in steps Congress to bypass the public. In fact," Martin notes, " we are possibly only two months away from seeing the release of the long awaited preferred alternative for the Colorado River Management Plan Environmental Impact Statement. Just like this spring, the summer of 2001, and in 1980, we're seeing an attempt to muzzle the public process. This recommendation not only shuts down the public process," he continues, " but it flies in the face of a court ordered settlement from two years ago to include a wilderness alternative."

Grand Canyon Superintendent Joe Alston and staff are in the process of producing a map that reflects the Chairman's intent, which excludes the river from Wilderness designation. The park is providing narrative explanation that delineates further exclusions besides the river, as defined in the 1993 Final Wilderness Recommendation. RRFW has also learned that the 1993 recommendation will also be included for reference purposes. These documents will be submitted to the NPS Office of Congressional Affairs for final drafting services. The information is being provided as a service to the Chairman and Subcommittee staff, who will then handle all further liaison activities with the Congressman's office relating to the proposed recommendation.

"The river rafting public has discovered that wilderness rivers are an incredibly unique and scarce resource. This recommendation eliminates 240 miles of the best wilderness river running in the world. There are no motorized boats on the river for three months of

the year, and no jet-boats at all. The loss of wilderness protections will change all that." remarks Jo Johnson, also of River Runners for Wilderness. "Most importantly, allowing 80% of the public river access to be given to park rafting concessionaires, 75% of which use motorized tour boats to run through the canyon, while the do-it-yourself paddler waits in a 20 year backlog for access, is inconsistent with wilderness management. Thirty years of access wars over the character of the river have taught us that outdated fixed allocations are not what wilderness river running is supposed to be all about."

This recommendation will result in a reduction in wilderness acreage at Grand Canyon National Park. The 1993 Final Wilderness Recommendation proposes 1,139,077 acres. By excluding the river, the amount is reduced by 12,190 acres to 1,126,887 acres of wilderness. RRFW has learned that Grand Canyon National Park has taken no position on this recommendation at this time.

All river runners are encouraged to contact the following congressmen and ask to speak with the environmental staffer. Politely request that the Radanovich Grand Canyon Wilderness recommendation not be introduced while a public process to sort these issues out is ongoing. Even if the listed congressmen below are not in your district, you are all encouraged to contact them as this is a National Park, and therefore a national issue.

Rick Renzi 202-225-2315 Mark Udall 202-225-2161 Tom Udall 202-225-6190 Raul Grijalva 202-225-2435 George Radanovich 202-225-4540 John McCain 202-224-2235

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River News 11/02/03

RRFW Riverwire - GLEN CANYON DAM UPDATE

Updated October 31, 2003
Operations

Releases from Glen Canyon Dam in November will be nearly identical to what they were in October. In November, releases will average 8,000 cfs with a total of 476,000 acre-feet scheduled to be released. On Mondays through Saturdays in November, daily fluctuations due to load following will likely vary between a low of 5,000 cfs (during late evening and early morning off-peak hours) to a high of 10,000 cfs (during late afternoon and early evening on-peak hours). On Sundays, releases will be 5,000 cfs from 7 pm until 7 am, and 8,000 cfs from 7 am until 7 pm.

Releases from Glen Canyon Dam in December of 2003 will likely be higher than November. The volume releases in December is likely to be 600,000 acre-feet (an average release of about 10,000 cfs).

Because of the draw down condition of Lake Powell, releases from Lake Powell in water year 2004 are being scheduled to meet the minimum objective release of 8.23 million acre-feet. This is consistent with the requirements of the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs.

Basin Hydrology

Severe drought conditions in the Colorado River Basin continue. As we move into a new water year there are no signals of the drought easing. Water year 2004 began on October 1, 2003 and the first month of our new water year was much warmer and drier than average. Basinwide precipitation in October was only about 30 percent of average. Soil moisture levels throughout the basin are very low, and as we move into winter it appears likely that the snowpack will be building upon these very dry soils. The scenario is not favorable for next spring's runoff, as much of the melting snow will be absorbed by the dry soil. Reclamation is estimating that with average snowpack conditions this winter, runoff next spring would be about 75 percent of average.

The Colorado River Basin is now in its 5th year of drought. Inflow volumes have been below average for 4 consecutive years. Unregulated inflow in water year 2003 was only 53 percent of average. Unregulated inflow in 2000, 2001 and 2002 was 62, 59, and 25 percent of average, respectively. Inflow in 2002 was the lowest ever observed since the completion of Glen Canyon Dam in 1963.

The trend of low inflow continues. Unregulated inflow in October, 2003 will end up being only 55 percent of average. As of October 31, 2003 observed inflow to Lake Powell is about 6,000 cfs, about 58 percent of what is usually seen in late October.

Low inflows have reduced water storage in Lake Powell. The current elevation of Lake Powell is 3,602.0 feet (98.0 feet from full pool). Current storage is approximately 11.9 million acre-feet (49 percent of capacity). The good news is that even after 4 years of severe drought, Lake Powell is still storing a large volume of water (nearly 12 million acre-feet).

Experimental Flows

Daily high fluctuating releases from Glen Canyon Dam, as part of the Glen Canyon Dam experimental flows, were completed on March 31, 2003. From January through March 2003 releases ranged between a high of 20,000 cfs to a low of 5,000 cfs each day. These same high fluctuating releases are scheduled to be repeated in January through March of 2004.

The January through March high fluctuating releases were intended to benefit the endangered humpback chub. Scientists have recognized that the humpback chub population has been in general decline since highly fluctuating flows were curtailed in November of 1991. Those flows helped keep the non-native fish, especially the rainbow

and brown trout, in check. The trout are thought to prey upon and compete with native fish such as the endangered humpback chub.

The experimental flows from Glen Canyon Dam received environmental clearances in December 2002. The flows were analyzed in an environmental assessment in accordance with the National Environmental Policy Act. The experimental flows are the result of ongoing studies by scientists from the United States Geological Survey and were recommended by the Glen Canyon Dam Adaptive Management Work Group, a Federal advisory committee. The experimental flows address the decline of two key resources in the Grand Canyon: sediment and population viability of endangered humpback chub. The Finding of No Significant Impact on the experimental flows can be found at http://www.uc.usbr.gov/amp/flow_fonsi.pdf.

This release courtesy Tom Ryan.

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River News 11/03/03

Endangered Species: Interior mulls warming Colorado River to help humpback chub

April Reese, Land Letter Southwest correspondent

This story is the first of a series on management of natural resources in the Grand Canyon.

GRAND CANYON NATIONAL PARK, Ariz. -- Almost 40 years after Glen Canyon Dam plugged the Colorado River, one of the river's oldest inhabitants is struggling for survival. But as the debate swirls over recovering the endangered humpback chub while meeting human water demands, the river's federal caretakers have devised a new solution: warm up the river.

The chub, which ranges in size from 5 to 20 inches and can live up to 30 years, evolved in the Colorado River basin 3 million to 5 million years ago. Once numbering in the millions throughout the watershed, the fish has been reduced to a couple thousand, although scientists disagree over just how many remain. While small groups of the fish persist in the upper Colorado River basin, the only surviving lower basin population is in the Little Colorado River, near its confluence with the mainstem in Grand Canyon National Park.

[The largest known population of humpback chub is in the Little Colorado River in the Grand Canyon, where there may be up to 10,000 fish. Photo courtesy of the Fish and Wildlife Service/John Rinne.]

Scientists attribute the species' decline primarily to Glen Canyon Dam, built in 1963 to provide water and power to the interior West. While many credit the dam and its reservoir, Lake Powell, with turning the arid region into a land of verdant farms and booming cities, the project also has drastically changed the ecosystem downstream. The Colorado River, which historically ran muddy and warm, turned clear and cool with the closing of the floodgates.

As incoming water pools behind the dam, its sediment load settles, and the water released through the dam's penstocks is drawn from the cool depths of the reservoir. Water temperatures that once fluctuated seasonally from about 80 degrees in summer to almost freezing in winter now average 46 degrees year-round, according to the Bureau of Reclamation. Biologists suspect the chub and other native fish that have disappeared from the river altogether have difficulty tolerating the cool, clear waters that now flow through the Grand Canyon.

[The picture on the left shows the clear-running Colorado River in the Grand Canyon above the confluence with the Little Colorado River; the other picture shows the murky Little Colorado. Photos by April Reese.]

On a recent data-gathering trip funded by the U.S. Geological Survey, Joe Shannon, a Northern Arizona University-based aquatic ecologist who has been monitoring the Grand Canyon ecosystem for 15 years, pointed out the contrast between the murky Little Colorado and the mainstem river. A recent storm had loaded the Little Colorado with sediment, and its milk-chocolate flow muddied the crystalline main stem where the two rivers meet in Grand Canyon National Park, about 75 miles downstream from the dam.

"That's how the Colorado should look," he said, pointing to the river, which has grown murky under the influence of its temporarily muddy tributary. "It's not supposed to be clear."

It was a rare glimpse of the river as the humpback chub saw it for millions of years, before the construction of the dam 40 years ago. But a quick splash of the hand in the cloudy waters is a reminder that this is still a "designer ecosystem," as Shannon calls it. The water is cool -- too cool for humpback chub to reproduce.

Warming the river

The Bureau of Reclamation, which owns and operates the dam, hopes to improve those conditions by using a "temperature control device" (TCD) to release warmer water into the river. Dennis Kubly of BuRec's Environmental Resources Division said the agency wants to send water from the reservoir's warm surface layer downstream instead of drawing from the deep, cold waters of the lake.

The impetus for the project was a biological opinion issued by the Fish and Wildlife Service in 1994. The agency recommended that BuRec investigate using temperature control technology, which up to that point had only been used to enhance conditions for game fish, to help recover the humpback chub.

In August, the proposal received an endorsement from the Glen Canyon Dam Adaptive Management Work Group, comprised of 25 stakeholders representing the park service, BuRec, FWS, power interests, environmental groups and others. This week, the group formally asked Interior Secretary Gale Norton to give BuRec the green light to go forward with the project. Norton is expected to make a decision on the proposal within the next few weeks.

But several biologists question whether the water drawn from the top of the reservoir will be warm enough to significantly benefit the chub. While BuRec's proposal to increase water temperatures in the river is partly in response to FWS' recommendations, some biologists are concerned that warming the river could benefit non-native fish that prey on the chub as well. For instance, channel catfish -- one of several species, including striped bass and carp, introduced to the Colorado River by fishery managers -- respond to increases in water temperature by speeding up their metabolism, which causes them to eat more food, including chub, Shannon said.

"Right now, those fish may be suppressed by cold water temperatures," said Sam Spiller, Lower Colorado River coordinator for the Fish and Wildlife Service. "There might be more damage if we warm the water." Even so, the increase in temperature could help control cold water species like trout, he added.

Even if the TCD succeeds in boosting chub numbers, it's likely to fall short of federal recovery goals for the species, said David Haskell, a former director of Grand Canyon National Park's Science Center. "The recovery plan calls for [establishing] another major, viable population," he said. "The TCD would not do that."

Shannon was more optimistic. "I think the TCD can work, but only if there's a total reworking of dam operations," so that water releases would more closely mimic historic fluctuations in flows, Shannon said. "Recovery efforts have to be on a big scale, because the dam and its impacts are so big."

If the project goes forward, Kubly said it will probably be implemented in small steps so federal managers can monitor the effects on both native and non-native fish and adjust the plan accordingly.

"In a sense, it's a one-arm-behind-your-back approach," he said. "Not everyone trusts one another, so this makes sure we don't move too far too fast."

It also costs less to go slow, Kubly noted. The initial two-penstock plan will cost about \$25 million; to alter all eight, the cost would be about \$100 million, he said.

The agency has used temperature control devices with some success on other dams, including Shasta on California's Sacramento River, Hungry Horse on Montana's Flathead River and Flaming Gorge on Utah's Green River, Kubly added.

"There aren't any known disasters out there," he said. "By and large, the system responses have either been positive or neutral."

Recovering the chub

But Haskell, who was also a ranger at Glen Canyon National Recreation Area in the 1970s, said the only way to restore native fish -- and the rest of the ecosystem -- is to decommission the dam. He compared the TCD project to "tinkering while Rome is burning."

"If there wasn't a dam, the trout would be dead real quick, because they can't take a lot of this," said Haskell, gesturing toward the murky water.

According to the Fish and Wildlife Service, the chub will be considered for removal from the endangered species list "when five viable, self-sustaining populations have been restored ... and when the fish's habitat has been protected."

With one of the river system's biggest dams just upstream from the largest population of the chub, that's a tall order, say Haskell and other decommissioning advocates.

In addition to the TCD proposal, federal managers have launched a program aimed at killing non-native fish. But that effort, too, is fraught with uncertainty. Some biologists are worried that reducing the numbers will only give the remaining non-native fish more room -- and more resources -- to thrive. The question, Shannon said, is, "How do you kill all the bad fish and grow the good fish?"

Complicating recovery efforts are conflicting management objectives in the same ecosystem, Shannon added. "The park is killing non-native fish, but [state managers] are still stocking them upstream," he said.

Debbie Felker, a spokeswoman for FWS' Upper Colorado River endangered fish recovery program, said the agency is working with state game and fish officials to scale back stocking programs that conflict with endangered species recovery.

The challenge of recovering the humpback chub is part of a larger debate over how to protect the park's resources while meeting water delivery mandates.

Lake Powell is one of several reservoirs that are part of the Colorado River Storage Project, which provides water for seven states: Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming. About 85 percent of the water is used for irrigation; the rest is allocated for residential, commercial and industrial use. Balancing those demands with the protection of an extensively altered river ecosystem is a daunting task, observers say.

Meanwhile, the stakes are becoming increasingly higher for the chub in the Grand Canyon, Shannon said. "If we lose the base flow of the Little Colorado River because of drought, it's all over," he said. "We're talking at most another 20 years."

River News 11/06/03

RRFW Riverwire CONDOR CHICK FLIES!

Grand Canyon National Park

Biologists from Grand Canyon National Park and The Peregrine Fund have confirmed the fledging of the first California Condor nestling in Arizona in perhaps over a century. The flight was observed at 1:30 p.m. on Wednesday, November 5. The chick jumped out looking like it wanted to land but there was nothing there. It ungracefully circled and landed 500 - 600 feet below its cave in a remote canyon. The California Condor was included on the first Federal Endangered Species List in 1967.

"It was spectacular!" announced an excited Sophie Osborn, Field Manager of The Peregrine Fund. "It was not the graceful flight we had envisioned, more like a controlled fall and our hearts were in our throats as it dropped 500 to 600 feet below the nest cave. Minutes after the chick landed it started to explore its environment, tugging on a yucca plant and hopping from boulder to boulder. We waited and hoped so long for this to happen that being part of it was indescribable!" she added.

"Our biggest worry after the chick left the cave was how long it would take for the parents to find it," remarked Chad Olson, Raptor Technician for the National Park Service. "Both parents were away from the area when the chick fledged. To our great relief, female 127 flew to the nest about two hours after the chick fledged, realized the chick was not in the nest cave, immediately found it, and dropped down to feed it. Since fledging is such a dangerous time for the chick it is tremendous to be past this and on to another exciting phase." Olson said.

The chick is healthy and alert to its surroundings. Biologists are planning to attach telemetry equipment and assess overall health issues. The bird will be closely monitored.

"A fledgling condor chick spreads its wings and flies into the wild, and not just the parents share in the pride. The partners who have worked for decades to rescue this species from the brink of extinction see it as a great cause for hope," observed Interior Secretary Gale Norton.

"I have watched adult condors soaring above the spectacular beauty of the Grand Canyon. The birth and flight of this young condor creates optimism that condors will flourish in the Canyon for many generations to come," Norton added.

Biologists first suspected that Condors 123 and 127 were incubating an egg in March 2003. Daily observations were made, with assistance from a group of "Nestwatch" volunteers. The parents became very attentive to the nest in early May. The existence of the chick was confirmed on August 18 after biologists made an arduous 24-mile hike in 100 degree heat down to below the nesting cave. Daily monitoring continued.

"We are very pleased about this new step in the recovery of the California Condor species," stated Joseph Alston, Superintendent of Grand Canyon National Park. "We are proud to be a part of this highly anticipated and monumental event for both the park and the Colorado Plateau. We look forward to working with our partners in order to ensure the well-being of this new arrival to the condor population and to ensure continued success in the program."

Three pairs of California Condors produced eggs in Arizona in 2003 (one in BLM's Vermilion Cliffs National Monument and two in Grand Canyon National Park). Two of the eggs did not hatch, which is not uncommon for California Condors during their early breeding years. In fact, this was the second egg laid by Condor 127 and the third laid by Condor 119. In California this year, one egg was laid and hatched in early May, but, unfortunately, the chick did not survive.

As Roger Taylor, Arizona Strip Field Manager for the Bureau of Land Management (BLM) states, "We have been anxiously awaiting this bird's first flight. With the good condor viewing opportunities that are typically available along the Vermilion Cliffs, perhaps the public will have an opportunity to view the young condor this winter."

"The significance of the first wild-hatched condor in Arizona is tremendous. While captive-bred condors have exceeded our expectations, it is this chick and others like it in the future that ensure condor recovery in Arizona," says Arizona Game and Fish Director Duane Shroufe.

"The partners have watched this chick prepare to fledge with as much anticipation as any natural parent might," said H. Dale Hall, Southwest Regional Director of the U.S. Fish and Wildlife Service. "We all wish the best for this fledgling and look forward to further successes."

The historic Arizona reintroduction is a joint project among the U.S. Fish and Wildlife Service, the National Park Service, The Peregrine Fund, the Arizona Game and Fish Department, the Bureau of Land Management, Southern Utah's Coalition of Resources and Economics, and others. Funding for the project is being provided by The Peregrine Fund, U.S. Fish and Wildlife Service, Arizona Game and Fish Department, Peter Pfendler, National Fish and Wildlife Foundation, Nina Mason Pulliam Charitable Trust, Disney Wildlife Conservation Fund Awards, Steve Martin/Natural Encounters, Grand Canyon National Park Foundation, Bureau of Land Management, Grand Canyon National Park, Kearney Alliance, Grand Canyon Trust, Patagonia, Turner Foundation, Globe Foundation, Earth Friends, Arizona Public Service, Wallace Research Foundation, Mattie Wattis Harris Foundation, Arizona Community Foundation, and Oracle Corporation Grand Canyon Conservation Fund, and others.

Images and other information may be obtained from the following websites:

The Peregrine Fund: www.peregrinefund.org/press/condor_chick_fledges_2003.html

The Grand Canyon National Park Foundation: www.gcnpf.org, Grand Canyon National Park: www.nps.gov/grca

The California Condors are being released as a "non-essential/experimental population" under section 10(j) of the Endangered Species Act. Section 10(j) provides that the species can be released in an area without impacting current or future land use planning. However, in Grand Canyon National Park condors are provided full protection as federally protected threatened species. This authority has been spelled out further in an innovative agreement between the U.S. Fish and Wildlife Service and local

governments. This "Implementation Agreement" spells out a positive working relationship between the Federal government and the various local governments.

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River News 11/07/03

Study: Global warming to 'substantially affect' California in 20 years

Associated Press

Sacramento, Calif.

Global warming will substantially affect California in about 20 years, experts say, warning that the state is more vulnerable because of its coastline, its climate and its dependence on Sierra Nevada snowpack for water and hydroelectricity.

"It's going to affect all of us," said Robert Wilkinson of the University of California, Santa Barbara, School of Environmental Science and Management, who wrote a 432-page treatise on the impact on California.

It means a shorter ski season in the Sierra, and poorer habitat for endangered salmon in lower streams. It may mean more wildfires and more floods. Extreme heat waves, easier spread of diseases and increased air pollution all could imperil health.

Oceans that rose 4 inches to 8 inches over the last century could rise up to 3 feet this century, swamping San Francisco Bay estuaries and endangering pumps sending freshwater from the Sacramento-San Joaquin River Delta to the Bay Area, San Joaquin Valley and Southern California.

It will mean more fights over water throughout the West.

"Climate change is upon us. In 20 to 25 years, we really will be working with a different climate," said Michael Dettinger, a U.S. Geological Survey research biologist and researcher with the Climate Research Division at Scripps Institution of Oceanography.

Every scientific model predicts warmer temperatures, with the bulk projecting an increase in the range of 3 degrees to 6 degrees by 2100. But the computer models split on whether California will become wetter or drier.

Either way, warmer temperatures mean a shift in California's water cycle.

The Sierra snowpack that functions as the state's largest reservoir could shrink by a third by 2060 and to half its historic size by 2090. Runoff that fills reservoirs will start in midwinter, not spring. And rain falling on snow will trigger more flooding, scientists said Thursday at a seminar hosted by the Water Education Foundation.

Models projecting a drier California predict a sharp increase in critically dry periods, said Alan Hamlet, a water resources engineer with the University of Washington.

"We're going to have exacerbated conflicts over water, both in California and the Colorado Basin" that also supplies six upstream states, he said. Fortunately for California, it is rare -- but not unheard of -- for the Sierra and the Rockies to have a simultaneous drought, so usually there is substantial water for Southern California from one or the other.

The trends are already in play.

Spring temperatures have increased 2 degrees to 3 degrees since 1950, peak spring snowmelt comes two to three weeks sooner, and vegetation blooms one to three weeks earlier and stays green longer, scientists earlier told a state Assembly committee on water and climate change.

While more dams and reservoirs could capture vital runoff and control flooding, there are substantial questions where or if to build them given the uncertain long-range weather pattern forecasts. Experts predicted the state will have to rely more on conserving and reusing water, desalinization, groundwater storage, and water trades and transfers between regions.

As with the ebb and flow of the Ice Age, warmer temperatures mean grass and oak woodlands and chaparral will grow higher into the mountains over the next 100 years, while conifer forests can grow above the current tree line, said Susan Ustin, an environmental and resource science professor at the University of California, Davis.

But 100 years is a blink in geologic time, and the relatively quick change will disrupt ecosystems that need millennia to adapt, she said. Invasive species that already threaten native plants and animals may be quick to fill that void.

Earlier snowmelt means less spring runoff for salmon, and water could get too warm for them to spawn. Already, runoff into the Sacramento River has dropped 11 percent over the last century.

But warmer weather means longer growing seasons, which could help agriculture -- as long as there's enough water for irrigation, said Rick Snyder, a biometeorologist at UC Davis. While many of California's crops could benefit, its famed wine grapes need a precise combination of temperatures and could suffer, said Snyder and Wilkinson.

The effect could come down to "if you're talking white wine or red wine," said Wilkinson. "Is that a great research project, or what?"

LR in the News 11/07/03

Dry state will fight to restart desalter

Shaun McKinnon

The Arizona Republic
Nov. 7, 2003 12:01 AM

YUMA - Down along the final, gasping miles of the Colorado River, on the edge of a desert too dry to notice the drought, an unusual skirmish has erupted over a plan to squeeze more water from the West's already over-tapped supply.

The battleground is a water desalination plant on this city's west side, a \$280 million white elephant that operated for all of nine months a decade ago, before floods and design flaws forced it into hibernation. The plant was designed to recycle agricultural runoff water that was otherwise too polluted and salty.

Now Arizona wants to restart the desalination plant as a hedge against the drought and has asked the federal government to spend \$30 million to bring it back on line and an additional \$24 million to \$30 million a year to keep it running. Without the plant, Arizona officials say, Phoenix and Tucson could someday face crippling water shortages.

Critics question that claim and say the desalter is a failure best left idle. Even other Colorado River states, sympathetic to Arizona's effort to reclaim the lost water, shy away from the plant's enormous cost and the relatively meager return, about 25 billion gallons of desalted water a year, or roughly 0.6 percent of the Colorado River's total flow. But the fiercest opposition comes from environmentalists, who say that operating the desalter would destroy a thriving Mexican wetland and spoil the first real success story in the struggle to restore the Colorado River Delta. That argument frames a larger one, not about who should use the water or how, but whether it should be used at all.

'Very perplexing'

"There are tough issues," admits Herb Guenther, director of the Arizona Department of Water Resources. "It could be quite a tug of war down there. But if we don't operate the plant, there is a potential for water shortages and Arizona is the one to feel the impact. . . . This is a very perplexing problem."

Perplexing barely begins to describe what's happening here. This is, after all, a story about a desalination plant in the middle of the desert. And it asks a sort of chicken-and-egg question of whether the government should take water from a wetland that was the unintentional creation of that plant in the first place. Racing through it all is a gnarly tangle of issues: the environment, border politics, public money and, gnarliest of all in the West, water and how it should be managed.

"There is a taxpayer issue and an environmental-impact issue," said Lisa Force, Arizona program director for the advocacy group Living Rivers. "But the bigger issue is about the Bureau of Reclamation continuing to operate in an old-fashioned way. Re-operating the desalination plant is more of the same old pork-barrel politics, continuing to throw away taxpayer dollars on unsustainable water projects. "There are so many other options to create new water."

30 years of history

As odd as it sounds here at the end of the mighty Colorado, creating new water - or at least wringing every last drop from the water that already exists - is where this story started three decades ago when Mexico complained that the water flowing out of Arizona was too salty.

Mexico is entitled to 1.5 million acre-feet per year from the Colorado, about 489 billion gallons. Because Mexico is last on the river, it sometimes has had to settle for the dregs, often irrigation runoff from farms around Yuma and across the border in California.

Mexico finally complained that the water it was receiving was too salty, unfit to irrigate crops. Although the Colorado River originates half a continent from an ocean, it's one of the saltiest freshwater rivers in the country. It picks up minerals along its rugged 1,400-mile route, along with runoff from thousands of acres of irrigated farmland. In all, the river carries 9 million tons of salt a year, the equivalent of nearly 250 full railroad cars a day. To reduce the salinity of the river as it crossed the border, the United States decided to build a desalination plant at Yuma. The plant would take heavily polluted water from farms in the Wellton and Mohawk valleys to the northeast - water that had been running back into the Colorado and down to Mexico - treat it and return it to the river, in effect using it twice by recycling it.

"The plant is just a tool for salinity on the Colorado river," said Jim Cherry, who oversees the desalination plant as Yuma-area director for the Bureau of Reclamation. "It's just one of the tools. It won't change the salinity of the river significantly - it's almost like running a hose into the swimming pool - but it's a good amount of water we save (by recycling)."

The bureau fired up the plant in late 1992 at one-third capacity. It operated for about nine months, then shut down after a flood on the Gila River washed out one of the delivery canals. A chain of frustrating design flaws kept the plant inactive and a series of wet years in effect rendered the plant unnecessary. Enough water was flowing down the Colorado to fill Mexico's orders.

That changed this year. The drought sucked up all the surplus water and forced the Bureau of Reclamation to draw about 35 billion gallons of water from Lake Mead.

Although the reservoirs are nowhere near running out of water, many scientists predict that drought conditions will persist for years. Both Utah and Colorado are considering plans to use more of their river allocations. If the river can't deliver enough water, Arizona - specifically the Central Arizona Project, which supplies Phoenix and Tucson - is the first to have its flow halted.

Water shortage risks

"The desalter is important to Arizona because it reduces our long-term risk for shortages," said Tom Carr, who oversees Colorado River issues for the state Water Resources Department. "Reducing the water in storage on the river is a significant

issue." So is time, Carr said. Fixing the remaining design flaws and preparing the desalination plant for full-scale operation would take four to five years. An environmental-impact study could stretch that timetable. Congress will have to appropriate up to \$30 million just to fix the design flaws and prepare the plant to operate.

State officials worry that the price tag could hold up their request. The annual operating budget would likely top \$29 million, about \$311 per acre-foot delivered to Mexico, or about 30 times what Yuma farmers pay. But they say a long-term water shortage in Arizona could run up damages of more than \$300 million in lost crops and money spent to find alternate sources.

Shifting money to the desalter would probably mean taking it from other uses, said Bob Johnson, regional director for the Bureau of Reclamation in Boulder City, Nev. Although the agency is moving ahead with an environmental-impact study and repairs to the desalination plant, officials also are exploring other ideas.

Most often mentioned is leasing water from farmers along the river or paying them to leave croplands unplanted. "My guess is if you packed something correctly, you could probably get some water out of there at a lesser cost and with less of an environmental impact than operating the plant," Johnson said. Other states along the Colorado have expressed limited support for Arizona, but they also suggest there may be better alternatives.

"It's been in storage a long time and the technology has changed tremendously. We need to know if it is cost-effective to upgrade it," said Kay Brothers, deputy general manager of the Southern Nevada Water Authority in Las Vegas.

Arizona officials say the other options are even more expensive. Leasing water or paying farmers to fallow land could cost nearly \$54 million a year, the state estimates. A plan to bank surplus water underground to allow more water to flow down the river could cost nearly \$40 million.

Water leases or purchases are equally troublesome, said Carr of the Water Resources Department. If an irrigation district, for example, agrees to give up some of its water, other users on the river, such as California or the CAP, could claim the water first, leaving the state and the bureau no better off than before.

"Arizona pays the price no matter what," said Larry Dozier, deputy general manager of the Central Arizona Project. "It's pretty apparent if there is land fallowed, it would be in Arizona. And if they use system water, well, we're on the short end of the stick, so if you give up system water, you give up CAP water."

Dozier said if the bureau would upgrade the desalter's technology, it could increase output and feed more water into the system.

Far more troublesome for Arizona and the bureau are the claims raised by environmental groups that the desalter would destroy the Cienaga de Santa Clara, a

wetland about 50 miles south of Yuma in Mexico that supports hundreds of species of birds, fish and other wildlife.

The wetland is, in a way, a byproduct of the desalter. While the plant was under construction, the agricultural runoff it would someday treat was diverted south toward what was then a mostly dry corner of the Colorado River Delta.

Because the plant only operated for nine months, the water continued to flow into Mexico. Over the years, it formed the wetland, in effect restoring a sliver of the delta. It is home to dozens of endangered species.

"The delta is coming back by itself," said Michael Cohen, a senior associate for the Pacific Institute, a water research and advocacy group. "They added water and it came back. Vegetation springs up in response to water. It's pretty clear-cut. There are studies that show when they took the water out in the '90s, it dried up. Here's a benefit that has occurred just because people added water."

Three strikes?

If the government restarts the desalting plant, that water will be taken away again. Using existing technology, the desalter can recover as much as 75 percent of what it treats. The remaining 25 percent would be returned to the diversion canal and sent south to the wetland, but it would be up to six times saltier than before.

"They reduce the amount of water, that's strike one," said Steve Cornelius, a Colorado delta specialist for the Tucson-based Sonoran Institute. "The water that does get there will be higher in salinity. That's strike two. The cattails there are pretty resilient, but they're not going to be able to survive that change."

Arizona officials concede that the wetland could suffer some damage if the desalination plant is restarted and the flow of runoff water is altered. But they say the plant's construction was responsible for the wetland's almost accidental creation, an accident that was never meant to happen.

"The original environmental study acknowledged there would be a temporary wetland down there," said the CAP's Dozier. "It would evolve into something different once the plant was started." The fact that the marsh grew over the years is unfortunate, Dozier said, but doesn't alter the original assessment.

Contentious times

That argument peeves conservation advocates: "They did create the wetland area by mistake, but in order to do that they had to destroy it first," said Force, with Living Rivers. "That was a much more biodiverse area before. It did have wetlands, and it also had riparian corridors, estuaries and much more complex ecosystem that died when they filled the reservoirs."

Instead of trying to drain the river dry with a recycling plant, water managers should confront the issue of whether cities and farms should claim every drop of water in the

river, Cornelius said. "The river itself needs water," he said, enough to restore flow all the way to the Gulf of California. Returning the freshwater mix to the gulf would not only benefit wildlife habitat, but fisheries along the coast that have been devastated by the loss of the delta.

"It was fortuitous that the cienaga became what it was today," he said. "We ought to be looking at this as a positive thing instead of a mistake."

Both the state and the environmental groups are preparing for a contentious study period. Carr plans to meet with a conservation advocates in the coming weeks and pledged to listen to their concerns and their ideas. He'll get an earfu

"When you take on anybody on water in the West, it's tough," Force said. "Everybody's very protective of the old way of doing things. But we have a diverse group this time, taxpayer groups, environmental groups, even farmers who want to lease water. It's going to be a tough battle, but it's going to be worth it."

River News 11/09/03

RRFW Riverwire - WILDERNESS UPDATE AND THANK YOU!

Thanks to all the folks who called into your elected officials about Representative Radanovich's (R-CA) river-less "wilderness" proposal. The wilderness documents, with the Colorado River omitted, were requested from Grand Canyon National Park by the representative's office. RRFW has learned that these documents are being forwarded to his staff, but the representative has not yet submitted a bill based on this material. Your congressional leaders heard you loud and clear, and it helped! It turns out many congressional members do not take kindly to this sort of back door approach to wilderness management, especially at a place like Grand Canyon National Park. Indications are that a member of congress will submit a counter bill with the river included. This will be done in the event a bad river-less wilderness bill is introduced, to stop the bad bill so that the public process is allowed to continue.

The Radanovich spurn-the-river proposal would circumvent the public management plan that has already generated over 50,000 comments. The clear signal from congress is that the on-going Colorado River Management Plan should be allowed to run its course without pressure from the park's own river concessionaires to bypass the public process. "There is no doubt we will need to keep up the pressure with more phone calls in the future" notes Jo Johnson, River Runners for Wilderness co-director. "We are grateful to Grand Canyon lovers who have been responsive to this issue. Circumventing the process allows the nightmare of fixed allocations to continue while trashing park wilderness values."

RRFW will continue to keep you informed of developments as they happen.

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LR in the News 11/09/03

Eco Fighting for Rivers: Living Rivers keeps David Brower's legend alive

Paddler Magazine

By Matt Hansen

November/December 2003

It's a warm June morning on the Yampa River and 66-year-old river guide Dee Holladay stands in the shade of Mantle Cove, a magnificent alcove of sandstone in Dinosaur National Monument that harbors ruins from the ancient Fremont civilization. While his guests quietly peruse the alcove, Holladay watches swifts dart back and forth among the high cliffs. The birds are making a ruckus but only a few others notice them. "Look," he says, using his stained coffee mug as a pointer, "they're fighting."

The same could be said about many of Holladay's floatmates this week--although they're not fighting each other, they're fighting for rivers. The nonprofit Living Rivers--an environmental group primarily focused on draining Lake Powell--has gathered river and wilderness advocates to float the canyons of the Yampa and Green with Holladay's Holiday River Expeditions. The trip's purpose is to celebrate the life of David Brower, who first floated through Dinosaur in 1953 as the head of the Sierra Club. Afterward he singlehandedly defeated two dams that had been proposed for the monument. In doing so, he launched the modern conservation era but forsook Glen Canyon, which now sits below the motor-heavy waters of Lake Powell. It was a decision that haunted Brower the rest of his life. A cunning fighter for wilderness, he died in 2000 at the age of 88, but his fight presses on through Living Rivers, which he helped found just before his death.

Those floating with Holladay in June included Roderick Nash, whose 1967 book *Wilderness and the American Mind* has been noted as one of the most definitive pieces ever written on wilderness; Jeffrey Ingram, an activist characterized in Marc Reisner's book *Cadillac Desert* as Brower's "most valuable" asset in successfully fighting off dams proposed for the Grand Canyon in the 1960s; Kim Crumbo, former Grand Canyon river guide and activist with the Arizona Wilderness Coalition; and former river guide John Weisheit, who serves as Living Rivers' conservation director. They're all fighting for more responsible water usage, specifically fewer dams and eliminating motorized vessels on the Colorado in the Grand Canyon. "This is not a happy river," says Ingram of the Colorado. "Outfitters spend hundreds of thousands of dollars to defend themselves against outside interests. Private floaters are angry because of the grievances they go through to get on the river and because they're discriminated against. And people like me have been angry for 30 years because we think it should be wilderness."

Among those present, the 49-year-old Weisheit is these days the one most often tangling with the Bureau of Reclamation and Western politicians. The Los Angeles native first met Brower in the early 1990s, when he told Brower that he hated him for not fighting Glen Canyon Dam. Brower responded by asking for forgiveness, and for help. So that's what Weisheit did. And it's Glen Canyon Dam that he has in the crosshairs, although there are others on his agenda (see sidebar). "We can't manage our rivers this way," he says. "We have sacrificed our natural heritage for short-term gain."

But for these activists, going after Glen Canyon Dam is akin to a mosquito trying to suck a bison dry. The Glen Canyon National Recreation Area and Lake Powell are visited by more than 2 million people annually--making it one of the National Park Service's most popular sites. The Bureau of Reclamation says the reservoir ensures water for millions of Southwest residents. Perhaps more important, however, the Bureau sees Glen Canyon Dam as a symbol of its ability to fundamentally change the desert landscape. Giving up Lake Powell would require the Bureau to turn its back on nearly a century of dogmatic belief that the Colorado River must be harnessed in order to make it valuable. Indeed, this summer Bureau Commissioner John Keys was quoted by The Associated Press as saying the decommissioning of Glen Canyon Dam "is something that's never going to happen. I won't spend a dollar studying it."

Barry Wirth, public affairs officer for the Bureau's Upper Colorado Office in Salt Lake City, says furthermore that if Glen Canyon were drained, there would have to be someplace else for that water to be stored. That reservoir, he says, is simply too important to the well-being of the seven states that depend on the Colorado River. "The current drought has clearly driven home the importance of Glen Canyon Dam," he says, adding that the Bureau's focus is how to balance the needs of agricultural and industrial interests, the public and conservation groups.

Given such statements, Ingram, 66, says being an activist is like "banging your head against a 710-foot concrete wall," which, incidentally, is the height of Glen Canyon Dam. But Weisheit, like Brower before him, doesn't belch anger despite his fanatical belief that Glen Canyon Dam wastes water and is killing the Grand Canyon. He speaks softly and fluidly, smiling often. He sees children as his inspiration, hoping to give them the chance to visit the former Glen Canyon with their own children.

Despite the enormous task, Weisheit believes he will see Glen Canyon drained. "Congress built these dams and said we'd worry about the problems later" he says. "Well, later is now, and the public needs to know there are alternatives." One of Lake Powell's primary problems is the loss of water due to sediment buildup, seepage and evaporation. According to Scott Miller's 2000 report titled "Undamming Glen Canyon," published in the Stanford Environmental Law Journal, some 65 million tons of sediment fills Lake Powell each year, reducing storage capacity. Evaporation accounts for the second highest consumptive use of Lake Powell's waters, behind only irrigation. Bank seepage accounts for 350,000 acre-feet of water being lost each year. The hydropower produced by the dam provides electricity for only 3 percent of the region, according to Miller. And the cold, clear water being sent through the Grand Canyon harms endemic fish that have evolved over millennia in warm, silty water. "These systems are going to

fail before our mortgages are paid," says Weisheit. "And I don't want to pass our poor planning on to future generations. It's unacceptable and it's embarrassing."

Weisheit also points out that this year Lake Powell was only half full due to the drought. He says if the current drought persists, the reservoir will be empty in two years, rendering the dam useless for water storage and power generation. Of removing the dam, he says, "people are beginning to believe that it's not impossible."

On the day that Holladay and his group float into Echo Park, the confluence of the Yampa and Green and approximate site of one of the two proposed dams Brower defeated, he asks everyone to stay silent, allowing their senses to take in the canyon's immensity and the power of two rivers becoming one. Overhead a turkey vulture rides a thermal, floating gently among the 500 foot high canyon walls. Cliff swallows dart back and forth looking for insects. On the bank a lone deer grazes quietly. The sun is warm and the Yampa's muddy waters sparkle beneath an unspeakably blue sky. Other than the sound of the oars plying the river, it is silent. As Roderick Nash floats his dory through these spared canyon walls, he reflects on the significance of Brower's fight. "The only reason why we're not on a lakeshore right now," he says, "is because somebody cared."

Sidebar

Glen Canyon Dam isn't the only bull's-eye being targeted by Living Rivers. The several-hundred-member-strong group promotes large-scale river restoration, habitat preservation and responsible water use. Among the many issues on its agenda, the group has asked the Bureau of Reclamation to decommission Flaming Gorge Dam in northeast Utah. Flowing cold and gin clear from the dam, the Green River here is the best tailwater trout fishery in the country, but Living Rivers contends that the cold water coming from the reservoir is killing the warm-water-loving and endangered humpback chubs as well as the riparian habitat downriver in Dinosaur National Monument. Living Rivers is also trying to preserve a permanent water flow into the Colorado River Delta in Mexico's Gulf of California. In addition, the group opposes the Big Straw, a proposal to siphon water from the Colorado River near the Utah-Colorado border and pump it back to the Front Range of the Rockies to fuel urban growth. "As these depletions continue, we'll find fewer rivers to run because we can't seem to lose our addiction for irresponsible water use," says Living Rivers' John Weisheit.

River News 11/14/03

RRFW Riverwire - Interior Dept. Favors More Canyon Flooding

By Mitch Tobin, ARIZONA DAILY STAR

Despite initial resistance, the Bush administration favors continued experimental floods meant to restore the Grand Canyon's ecology, a senior official said in Tucson on Tuesday.

Assistant secretary of the Interior Bennett Raley, the administration's point man on water issues, spoke to 60 scientists at the start of a three-day meeting on how Glen Canyon Dam affects the Colorado River.

Researchers explained how they're using lasers, underwater cameras, century-old photos and experimental flumes in Minneapolis to learn how sand grains and Volkswagen-sized boulders move through the Canyon's rapids and eddies.

Raley urged the scientists not to politicize their work and to remember that "science is not the only input factor for management of the Colorado River."

"If scientists are sloppy and mix advocacy with science, you will end up with the same public perception of integrity that lawyers have," said Raley, a lawyer by training.

Glen Canyon Dam, completed in 1963, dramatically altered the Colorado's flow. Before the dam, the warm, muddy river roared with spring snowmelt. Sediment was lifted onto beaches and sand bars, creating wildlife habitat and backwaters vital to native fish, such as the endangered humpback chub. The beaches are still important campsites for boaters.

After the river was plugged to stabilize the Southwest's water supply, it ran colder and clearer below the dam, which trapped 90 percent of the silt. But dam releases - which often fluctuate with the Sunbelt's electricity demands - have also caused the Colorado's baseline flow to double downstream. As a result, much of the silt and gravel deposited by the Grand Canyon's 740 tributaries gets whisked into Lake Mead downstream.

"It wasn't that we just lost the spring floods, which redeposited sand," U.S. Geological Survey researcher Ted Melis said, "we lost the low-flows the rest of the time, which were low enough to retain those inputs for use during the high-flows. We're getting hit on both ends."

The result is an ecosystem transformed by a dam that helps supply water and power to 25 million people. Tucson is becoming increasingly dependent on the Colorado, whose water comes here via the Central Arizona Project's 336-mile canal.

After passage of the 1992 Grand Canyon Protection Act, the Clinton administration tried to replicate the river's natural flows. With much fanfare, Interior Secretary Bruce Babbitt opened the dam's floodgates in 1996; another flooding experiment was tried in 2000. Despite initial claims of success, scientists now say the results were minimal. A lack of sediment in the river made it tough for sandy areas to expand, and many gains were quickly washed away.

Scientists want to create more floods and time them when the Paria River is dumping sediment into the Colorado. But the drought has caused that tributary, 15 miles below the dam, to deposit less silt in the past three years than any time in recorded history.

Raley said at first he was "deeply, deeply skeptical about the experimental flow program." But, after talks with scientists on a river trip, Raley accepted it was "good science and it was worth taking the political risks to move forward."

"We know when we're being gamed. Had we sensed that, we probably would have slow-walked, ducked, evaded and done everything not to move forward," he said.

John Weisheit, an environmentalist with the group Living Rivers who would like to see Glen Canyon Dam removed, was encouraged by Raley's words. But he said the Interior Department still isn't spending enough money to restore the Grand Canyon.

In the past 30 years, researchers have flip-flopped on whether the Canyon was losing or gaining sediment, said Jack Schmidt of Utah State University. Some thought the lack of floods created a surplus of silt and there was enough sand in the river to form new beaches.

"What we've learned in the Grand Canyon is, the system may be in sediment deficit all the way to Lake Mead," he said.

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River News 11/15/03

RRFW Riverwire - Free Grand Canyon Slideshow Comes To Durango

Author Tom Martin will be in Durango at the Abbey Theater at 6:30 p.m., Nov. 30, to update local boaters on the controversial Colorado River Management Plan (CRMP) now in progress for Grand Canyon National Park, and how this plan will affect the boating public. Tom will illustrate his talk with a slide show on the Grand Canyon based on his book, *Day Hikes From The River: A Guide to 100 Hikes from Camps on the Colorado River in Grand Canyon National Park*.

The highly controversial CRMP, which was stopped by the Park in 2000, was restarted as part of a settlement agreement in a lawsuit filed by river running groups and individuals. The public comment period during the past summer gathered over 50,000 comments. "The wait for do-it-yourself river runners is so long, those at the bottom of the list will wait an incredible 20 years to get permission to run the river" said Martin, who notes that "you can book a commercial trip tomorrow for next summer, if you can afford it. This process is of vital interest to all Colorado boaters, as more Coloradoans are waiting for a permit to boat the Colorado River in Grand Canyon than river runners from any other state."

The free slide show will be open to the public and features beautiful vistas illustrating Grand Canyon hikes you can do from the river and exciting river running shots. Tom will

be signing books, the sale of which will benefit River Runners for Wilderness, a non-profit group which is sponsoring the event. RRFW represents the interests of the boating public. Taxpayers for the Animas River and the Weminuche Group of the Sierra Club are co-sponsoring the event locally.

Following the slide show, there will be an 8:30 p.m. screening of the movie, "The Same River Twice." This award winning independent film is about a group of friends who re-ran Grand Canyon 25 years after their first trip. There will be an admission charge for the movie.

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LR in the News 11/20/03

Feds gear up for new round of test flows to aid Grand Canyon

April Reese, Land Letter Southwest correspondent

GRAND CANYON NATIONAL PARK, Ariz. -- Seven years after releasing a torrent of water from behind Glen Canyon Dam to provide a much-needed ecological boost to the Grand Canyon, federal water managers are preparing to try it again. But while the dam's gatekeepers hope this experimental flood will bring back some of the river's wild characteristics, some scientists and river advocates say those good intentions may not be enough.

The Colorado River once raged and whimpered through the Grand Canyon in accordance with the seasons, swelling during the monsoons and laying low during dry periods. Those changeable flows alternately carried huge amounts of sediment into the canyon and deposited it in the river channel and on the banks, creating sandbars and beaches. The muddy river also provided prime habitat for several species of native fish (Land Letter, Oct. 30).

Glen Canyon Dam, completed in 1963, drastically altered the historic flow regime and reduced the amount of water -- and sediment -- transported downstream. According to federal estimates, about 90 percent of the sand and silt carried by the upper Colorado River now settles in Lake Powell, the reservoir created by the dam.

The result has been a sediment-starved canyon with fewer and smaller sandbars and beaches, less backwater habitat for native fish and a clearer river that is alien to native fish accustomed to murky water.

Now, the Bureau of Reclamation is poised to open the floodgates in an attempt to deliver some of the sediment that is so crucial to the ecosystem -- and to boaters who camp on the canyon's beaches.

BuRec spokesman Barry Wirth said the agency, which operates the dam, plans to release water from the dam at a rate of about 45,000 cubic feet per second for two days. The volume of water will be about the same as it was in the 1996 flood, but the tap will be shut off six days earlier this time. Scientists and managers monitoring the earlier flood found that continuing the high flows after two days brought no additional benefit, said Bob Hart, a hydrologist with the U.S. Geological Survey in Flagstaff, Ariz.

"Within the first couple of days, the goal was reached," Hart said.

Building the beaches

But the biggest change this time around will be in the timing, Wirth said. The surge of water will be released after the Paria River, a tributary of the Colorado just downstream of the dam and above the park, is running high and thick with sediment. The hope is that timing the rush of water from the dam to coincide with high sediment loads in the Paria will bring more sand and silt into the canyon, where it will build sandbars and beaches and muddy up the river for the endangered humpback chub.

With the dam trapping most of the Colorado's sediment, the Paria River is crucial for delivering what little sediment the canyon receives, said Utah State University professor Jack Schmidt. "The Paria River is the only major source of sediment for the first 60 miles of the Grand Canyon," Schmidt said. "So it's the only significant natural source that the canyon has. It's everything."

A USGS study found that an August 1992 flood of the Paria River delivered 544,000 tons of sediment -- primarily sand -- into the Colorado in less than 24 hours. Typically, flows of that size occur on the Paria about every two years, according to USGS. In all, the Paria dumps about 1 million tons of sediment downstream during the monsoon season in late summer and early fall.

But this year is not a typical precipitation year. BuRec, the National Park Service and USGS have signed off on the necessary environmental studies for the project, and it has the blessing of the Bush administration. The only thing missing is rain.

"We're just not getting the floods during the monsoon season that we need," Wirth said. "The big key is having enough sediment flowing out of the Paria River to justify having the experiment." Without a roiling Paria, there cannot be experimental flows, he said.

A sense of urgency

Nikolai Ramsey of the Grand Canyon Trust said he is supportive of the test flows, but cautioned the canyon may not be able to wait for the drought to recede. "If the weather helps us, we're in good shape for an experiment. If it doesn't, we're still stuck with a sediment-starved system," Ramsey said.

A more timely idea, Ramsey said, is to move the sediment that is building up behind the dam -- at a rate of 6 centimeters annually, by some estimates -- downstream. While that solution may come with its own set of issues--including the potential for carrying heavy metals into the canyon and a price tag of up to \$500 million--it would guarantee a

dependable supply of sediment to the canyon, he said. That, in turn, would head off difficult questions about whether to decommission the dam, Ramsey added.

"The ecosystem in the Grand Canyon would recover, and power and water supplies would be secure," Ramsey said.

Wirth said that option is not on the table. "It's never been studied from a scientific viewpoint," he said. "Maybe some day. Right now we're focused on that which is probably more realistic."

The experimental flows come at a crucial time because there simply is not much sediment left to manipulate, Schmidt said. "We're losing the beaches in the Grand Canyon and continue to do so. Either this will work, or we'll know it's impossible."

If it does not work, federal managers could be left with some tough choices, he added. "Basically, we'll either have to come up with a radical new solution, or announce to the public that we've raised the bar too high--that the price paid for the construction and operation of Glen Canyon Dam is the progressive deterioration of the ecosystem of Grand Canyon National Park," Schmidt said.

John Weisheit, conservation director for the advocacy group Living Rivers, supports decommissioning the dam as the only long-term solution. "These experiments are going to show that the dam does need to come down because the sediment the canyon needs is above Glen Canyon Dam," Weisheit said.

"They're going to have a sediment deficit as long as the dam is there."

But decommissioning is highly controversial and would involve major changes in how water tagged for downstream states is stored and distributed. Lake Powell is one of several reservoirs in the Colorado River Storage Project, which provides water for Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming. About 85 percent of the water is used for irrigation; the rest is allocated for residential, commercial and industrial use. Removing the dam would also eliminate a power source for Southwest cities, critics add.

For now, federal water managers are waiting to open the floodgates and see what happens when the sediment-rich water pulses through the Grand Canyon.

"We're ready to do it," Wirth said. "I think we're going to show, over time, some positive results."

River News 11/26/03

RRFW Riverwire - THE NEXT GENERATION GRAND CANYON RIVER GUIDEBOOK

River Runners For Wilderness is pleased to announce the imminent release of a "next generation" Grand Canyon guidebook written by boaters for boaters! Preview copies

have gotten rave reviews for the wealth of information presented in a easy-to-use format. It's been called the definitive Grand Canyon river guide.

Tom Martin, author of Day Hikes from the River, & Duwain Whitis, publisher of RiverMaps map books, have teamed up to write a new guidebook titled Guide To The Colorado River In The Grand Canyon - Lees Ferry to South Cove. This is the only guidebook to the canyon with USGS topographic map backgrounds, printed at their original scale, with additional map detail added in an easy-to-read format. In addition, it is the only guide with maps extending to South Cove in Lake Mead. Each map shows campsite locations, rapids, scout points, river miles and other points of interest. The accompanying mile-by-mile text describes all campsites on the park inventory (and some not on the inventory), with campsite pull-in information, geological, botanical and historical points of interest. All of the significant hikes, rapids and scouting points are also described, with color photographs on almost every text page. The Guide is 8.5" X 14" spiral-bound to lay flat. The 108 pages are printed on tough water proof and tear resistant synthetic paper. Published by Vishnu Temple Press.

RRFW is pleased to be able to take advance orders for titled Guide To The Colorado River In The Grand Canyon - Lees Ferry to South Cove. The cost of this river guide is \$29.00 (\$25.00 each, plus \$4.00 shipping and handling per Guide), with a tentative shipping date of February 27, 2003. Checks or money orders only please. Advance guidebook sales will benefit River Runners For Wilderness, a not-for-profit organization seeking equitable access to a wilderness river running experience in Grand Canyon. Please send your order to:

River Runners For Wilderness PO Box 17301 Boulder, CO, 80308-0301

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Living Rivers Currents 12/01/03

WAPA Blues: Hydro Not Missed

The ongoing drought is seriously effecting hydroelectric power production on the Colorado River. Colorado River Storage Project (CRSP) dams are experiencing an overall reduction of 25% from normal. The Western Area Power Administration (WAPA),

the agency which distributes federal hydropower, must now purchase electricity from private sources to meet their long-term obligations to their customers.

The Bureau of Reclamation has emphatically stated that the region could not survive without power from Glen Canyon Dam. The drought has demonstrated this to be untrue, with surplus power from non-federal projects easily making up the shortfall. Should the pattern of drought continue for another two years, Lake Powell reservoir will lower to the point where Glen Canyon Dam's powerplant will become inoperational.

This situation will effect US taxpayers. Congress mandated that hydropower revenues must repay the loans used to build CRSP projects. Lower reservoir levels mean less power and less revenue to meet these loan obligations. Additionally, power purchased by WAPA to replace the difference comes at premium price, further effecting loan payments which are scheduled for full payment in about fifty years.

According to WAPA spokesperson LaVerne Kriss, this is not yet a problem. "When we have cash flow problems, we use a pool called the Colorado River Basin Fund to float us through times of shortage, and we make up the difference when the reservoirs recharge and surplus water becomes available again."

"Not true," says Living Rivers' conservation director John Weisheit. "That fund has been near zero for some time, and with persistent drought it's not going to be replenished anytime soon."

This will also cause further strains for WAPA-supported recovery programs, which are designed to mitigate the negative impacts from CRSP operations on the critical habitat of endangered species. The failure of these recovery programs will only drive the budget up further and will undermine WAPA's payback schedule over time. "WAPA will never break even. In fifty more years they will be forced to mitigate other impacts such as sediment removal from the reservoirs. When this occurs the taxpayers will have to contribute to unprecedented subsidies to keep these projects operational," concludes Weisheit.

Living Rivers Currents 12/01/03

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Living Rivers Currents 12/01/03

Science Performs: Management Ignores

Scientists meeting in Tucson this past October were criticized by the Department of the Interior for expressing little confidence in federal efforts to mitigate the downstream impacts of Glen Canyon Dam operations on the Colorado River ecosystem in Grand Canyon National Park.



“Advocacy positions belong to lawyers,” said assistant Secretary of the Interior, Bennett Raley, to the assembled scientists, many who have expressed frustration that their research is being ignored.

Dr. Jack Schmidt, a geologist who’s worked in Grand Canyon for 15 years, stressed that scientists have done their jobs well in reporting accurately to Interior’s Adaptive Management Working Group (AMWG) and then asked, “When is AMWG going to act upon this knowledge?”

Raley stated that Interior could “drag it’s feet” if it did not like what was being recommended. Raley, a water attorney by profession, who has asked Congress to repeal the Endangered Species Act, openly advocated to the scientists the concerns of water and power suppliers, and that these interests maintain superior political and legal positions as compared to environmental interests. He argued that the Grand Canyon Protection Act should be subservient to prior Colorado River laws, and river management policy should therefore follow such a doctrine. Nonetheless, scientists should “continue to support” the adaptive management process.

Dr. Richard Valdez, a senior researcher of endangered fish, gave strong recommendations to AMWG concerning the endangered Humpback Chub by saying, “If you are not going to address the threats to their critical habitat, then you will continue to have endangered species in Grand Canyon.” Humpback Chub populations have declined 75% to just 2,000 adult fish over the past eight years.

Although this gathering was organized specifically for AMWG, very few of its members actually attended. The program is presently facing increased criticism as it was established to recover endangered species in Grand Canyon, but native species diversity has actually declined under their management.

Hydrologist William Vernieu reported on the impacts of drought on Lake Powell reservoir and the downstream implications for Grand Canyon’s water chemistry, which has so far been ignored by AMWG. The reservoir is currently experiencing a decrease in available oxygen along with increases in phosphorus, nitrates and salt. Such changes in water quality will exacerbate the decline in the river’s native food base for endangered fish.

The meeting illustrated that the political situation regarding Grand Canyon's management is deteriorating as rapidly as its ecology. Several scientists admitted privately that absent some form of litigation, there will be little chance of recovering the natural and cultural heritage of Grand Canyon before these resources are lost forever as a result of operations at Glen Canyon Dam.

Living Rivers Currents 12/01/03

Grand Canyon Management: Stepping Backwards

In 1986 the Department of the Interior requested that the National Academy of Sciences review their science program for the Glen Canyon [Dam] Environmental Studies (GCES). While many of the Academy's recommendations were applied by science managers in the Grand Canyon, and continued by subsequent program managers, politics and budget considerations are once again compromising the integrity of science. The National Research Council of the Academy encouraged the GCES to "solicit scientific talent for the work based on a research plan [through a peer-reviewed request for proposals]," and to "use merit competition to select researchers, including a peer-review system outside the agency or agencies conducting the study."

David Wegner, former director of science for the Bureau of Reclamation, informed Living Rivers that, "The advice the Academy gave GCES was very helpful to the science community. We are very proud of the programs that later developed, which continued on through the EIS process of the early 1990s." Even after the Environmental Impact Statement this attitude prevailed during the research and monitoring phase under the auspices of the Grand Canyon Research and Monitoring Center (GCMRC), which is administered by the US Geological Survey in Flagstaff, Arizona.

Living Rivers has recently cautioned members of the Adaptive Management Program (AMP) that research programs are reverting back to old ways. This turn of events is gaining the attention of scientists who are fearful that heavy administrative costs will hinder their results. Additionally, a lack of competitive bidding and sufficient peer review will also detract from the quality and quantity of the monitoring undertaken.

For example, GCMRC recently decided to use in-house staff to undertake mechanical removal of trout in Grand Canyon. Bruce Taubert of Arizona Game and Fish Department (AGFD) pointed out to AMP members that "GCMRC may do this at a cost of \$500,000, while AGFD could hire a consultant to do the same work for \$365,000. There would be a savings of \$135,000 that would return money back to the science programs in Grand Canyon."

Living Rivers Currents 12/01/03

Drought Forecast: Situation Unchanged

A barrage of reports and media advisories continue to come forth from scientists about the persistent drought in the Colorado River basin. The public has been reminded that the region experienced droughts of similar intensity before, notably 1901-1904 and 1953-1956. However, the year of 2002 was singled out as the driest year ever in recent history.

While common forecasting techniques allow for predictions of 3 to 6 months, scientists are beginning to observe two patterns of sea surface temperatures that provide a degree of confidence in predicting long-term droughts, notably the warming of the North Atlantic ocean with the cooling of the tropical Pacific ocean.



By obtaining tree ring data, scientists have reconstructed the climate of past centuries with tested credibility. The analyses of both instrumental and tree ring precipitation records should allow scientists to project drought conditions beyond a mere seasonal forecast. By comparing the data sets, the analyses demonstrate that a drought can persist for one or two decades and, in a few cases, even longer. Additionally, the data can be linked with the aforementioned ocean temperatures and thus provide the indicators necessary to forecast a persistent drought.

In 1998 observers were prompted to anticipate the current drought situation and the conditions remain unchanged and will likely persist into the coming decade. "In the context of shifting ocean climate, the current drought should give water and other resource managers in the Rockies and Southwest little cause for optimism about the drought ending any time soon," said Julio Betancourt of the US Geological Survey.

In a recent report Betancourt and others stated the implications, "It is always prudent to be conservative about water and other resources vulnerable to drought; it is particularly prudent now. ...Societal demands on surface water are on the increase. ...Clearly, the context for long-term drought is different now than it has been in the past."

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[Patterns and sources of multidecadal oscillations in drought-sensitive tree-ring records from the central and southern Rocky Mountains](#)

Living Rivers Currents 12/01/03

Colorado Riverkeeper: All Hands on Grand Canyon

In October, Living Rivers' Colorado Riverkeeper undertook a 12-day science trip through Grand Canyon National Park. Our assignment was to aid in documenting the status of the river's food supply for endangered native fish. Ten volunteers witnessed first hand how the river ecosystem is affected due to climate change.

"Because Lake Powell's reservoir capacity has been reduced by 52%, the chemical and temperature output from the dam is further altering the food web in ways that we have never observed before," said the Colorado Riverkeeper, John Weisheit. Given this recent turn of events in Grand Canyon, Living Rivers and the Colorado Riverkeeper are now devoting the majority of their resources toward mobilizing national support to save what's left of the canyon's native ecosystem. "If the public can't support protection of this world heritage site, there's probably little hope for the rest of the river," concludes Weisheit.

The first obvious observation was a warmer than usual Colorado River. The volunteers knew from experience that the discharge from Glen Canyon Dam normally originates from the chilly depths of the reservoir. While sampling, the volunteers were amazed with the abundant zooplankton found. This indicates that the water used to generate power is coming from the warmer water zone near the reservoir surface, an area containing many exotic life forms, including pathogens and parasites. "It's only a matter of time before these exotic species from Lake Powell become competitors for the available food that endangered native fish must have to survive. This new condition will become a serious issue for the stakeholders of Grand Canyon," said volunteer David Haskell, retired science director of Grand Canyon National Park.



Tatiana Lawson, a river guide from Moab, was intrigued with the organisms now existing in the river. "A flatworm is something I expect to see in my biology class at school," said Lawson, "not in the Colorado River system. But these newly introduced New Zealand Mud Snails are especially worrisome for me. Tiny as they are, by the millions they are effectively over-grazing the river bottom and depleting the food supply."

Joe Shannon, a Northern Arizona University aquatic ecologist who has studied the river's food base for 14 years, supervised the volunteers and staff. "The ecosystem here has changed since I first arrived," remarked Shannon. "This river was loaded with algae called Cladophora and an invertebrate called Gammarus. Now there is another suite of algal types and Gammarus numbers have declined. The flows from Glen Canyon Dam are not managed consistently and consequently the food web is in constant flux." Shannon laments how managers continue to be unresponsive to the sound

recommendations of his fellow scientists who support flows that mimic the natural flows of the Colorado River. "They continue to manage the dam for hydropower revenues first, with the management mandates of our National Park coming last," adds Shannon.

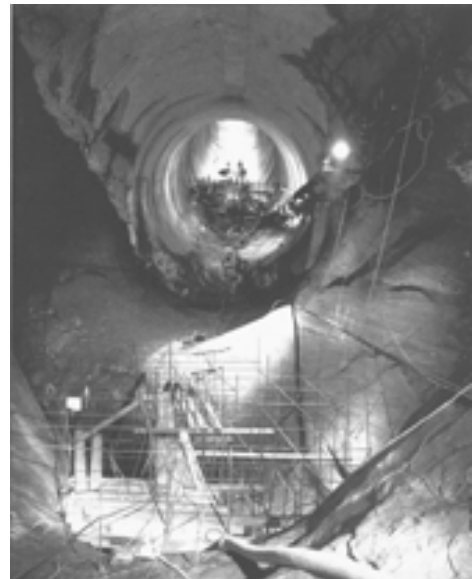
"It's unbelievable how bad things are down here in the Grand Canyon," remarked Michelle Harrington, coordinator for the Center for Biological Diversity. "The river ecosystem here has completely changed from its unique and natural condition because of Glen Canyon Dam. If the public was fully aware of this condition, I think they would respond in the same way as they have for protecting the Arctic National Wildlife Refuge, and would demand river management alternatives that include the decommissioning of Glen Canyon Dam."

Living Rivers Currents 12/01/03

Access Denied: No Release of Inundation Maps

The public has no right to know who might be in the flood path should Glen Canyon or Hoover Dam fail. Using national security risks as their trump card, the Bureau of Reclamation was able to convince Judge Tena Campbell to deny Living Rivers' appeal for their inundation maps, effectively ending the 18 month effort to obtain this information.

If Glen Canyon Dam fails an estimated 500-foot wall of water would race through the narrow parts of the Grand Canyon toward Hoover Dam. Even if Hoover Dam withstood the initial impact of the flood, a waterfall over the top would last 11 days and would destroy the water delivery infrastructure and communities downstream.



"The funny thing about all this, is that some of this information is already in circulation, we had just hoped to obtain it through official channels," says Living Rivers' executive director, Owen Lammers.

Until the trial the Bureau's arguments for withholding the information had nothing to do with national security. They now claim this information is exempt from disclosure based on things like arrest procedures, or the design of the President's limousine; something that aids criminals in completing a crime. This is certainly not the case with inundation maps.

Since the 9/11 political scene, the government is using national security as a means to keep information from environmental groups. Living Rivers has been told that this case is being used to equip federal attorneys in fighting Freedom of Information requests. In

this political climate Living Rivers does not feel it likely that an appeal would overturn the verdict and is not pursuing the matter further.

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LR in the News 12/01/03

'Securing' the Public With Secrets

The News Media and the Law

Published by the Reporters Committee for Freedom of the Press

By Rebecca Daugherty

Judicial deference to the government's widespread claims of national security is keeping unclassified records from public view

Wanting to know what would happen if the Glen Canyon Dam in Arizona burst, a small environmental group filed a freedom of Information Act request in September 2001 for the federal government's projections as to where the renegade waters would go. If the dam should falter, its downstream flow would not only jeopardize the nearby Hoover Dam but waterworks beyond, flooding or destroying communities along the way.

But the Bureau of Reclamation, which creates the "inundation maps" projecting what might happen, denied the request. And in March, the federal district court in Salt Lake City upheld the denial.

Judge Tena Campbell ruled that the government could withhold the unclassified maps under an exemption to the FOI Act for "law enforcement" records because terrorists might make use of the information. One arm of the law enforcement exemption protects against release of information that might help anyone circumvent the law, which Campbell said applied here.

That decision is one of three since the events of Sept. 11, 2001, that defer to the government's pleadings that "national security" interests excuse agencies from giving out records--even when they cannot use the exemption to the FOI Act that is specifically designed to protect national security, or the other far-reaching protection for national security information, a law that protects intelligence sources and methods.

The first FOI Act exemption only covers records that are properly classified in the interest of national security or foreign policy. To classify records, the exemption requires agencies to follow a set of formal procedures laid out in an executive order.

Yet in these three cases the government has used a "national security" excuse to invoke the law enforcement exemption to the FOI Act, denying information that would have likely been released if the government had not played the "terrorist" card to justify use of the exemptions.

Together they demonstrate the breadth of denials in which national security trumps government transparency due to the tenor of the times. With no end in sight to the war on terrorism, the judiciary's deference to administrative secrecy could conceivably trouble FOI requesters for some time to come.

Photo caption: Unclassified information about what would happen if the Glen Canyon Dam in Arizona burst can be withheld from the public based on the government's claims of national security interests, a federal court in Salt Lake City ruled in March.

Examining the U.S. Customs Service

In 1998, Coastal Delivery Corp. successfully sued a warehouse for breaking a contract that made the trucking company the exclusive carrier of its cargo which had to be delivered to a U.S. Customs Service examination station at the Los Angeles/Long Beach port. But in order to recover damages, Coastal Delivery needed to know how often the agency's contraband enforcement team examined containers.

The company asked for the records in October 2001 for use in its complaint, but never got them. Coastal Delivery brought suit against the Customs Service, and again walked away empty-handed.

Coastal Delivery could not have the information, U.S. District Court Judge Matthew Byrne in Los Angeles wrote in March, because "terrorists and others could use the information to discover the rate of inspection and then direct their containers to vulnerable ports." Knowing where the government is lax in its examinations, Byrne reasoned, might tell terrorists how vulnerable some seaports are.

The parties in Coastal Delivery Corp. v. U.S. Customs Service agreed that the purpose of the request made no difference in determining whether information would be available. A reporter hoping to evaluate how thoroughly the Customs Service checked containers would also not be able to see the records under this decision, which was not appealed.

Secretly Detained

Twenty-one public interest and human rights groups have petitioned the U.S. Supreme Court to hear arguments that the government should be required to release the names of hundreds of detainees jailed after Sept. 11, 2001.

The Center for National Security Studies, an advocacy and research group in Washington, D.C., has taken the legal lead on behalf of the organizations, including The Reporters Committee for Freedom of the Press, that are suing the government for the records.

In its request for review, the groups wrote the purpose was "to make clear that a national security crisis is no justification for courts allowing the Government to evade so easily its responsibilities under FOIA--and that courts cannot ignore the vital countervailing interests at stake such as the individual rights petitioners here seek to enforce."

For the divided appeals panel in *Center for National Security Studies v. Department of Justice*, decided in June 2003, Judge David Sentelle wrote that the judiciary would defer to the government's expertise in a "national security" probe. The Justice Department is in a better position than the court to know what should be withheld in a terrorism investigation, the judge wrote, in reversing a lower court. His opinion triggered a lengthy and pointed dissent by judge David Tatel.

The majority's approach "drastically diminishes, if not eliminates" the judiciary's role in FOI cases involving national security, Tatel said.

Fighting an Upstream Battle

"If we had gone forward on this prior to 9/11 it would have been a slam dunk," said Owen Lammers, executive director of the environmental group Living Rivers in Utah and Arizona.

What public interest groups throughout the nation are quickly learning, however, is that policies resulting from the never-ending war on terrorism have done significant damage to the idea of public accountability.

Lammers says his organization wanted copies of the Bureau of Reclamation's inundation maps because it hoped to show the value of decommissioning certain dams in Arizona. The structures are inherently unsafe, he said, and they are far more expensive to maintain than to decommission.

To highlight his point, Lammers says the Glen Canyon dam nearly failed in 1983, as rainfall almost caused the reservoirs to top off and spillways were damaged. Because there are a number of dams along the Colorado River, catastrophic failure of one can affect others. Water from a breached Glen Canyon Dam could flow downstream, flood Lake Mead and possibly breach the Hoover Dam, which holds back the lake.

"It would be quite a scene," Lammers said.

But the government had little interest in allowing Living Rivers to make the projections public. In *Living Rivers v. the Bureau of Reclamation*, the court deferred to the government's claim of national security interests in not releasing the unclassified material. Living Rivers did not appeal, but that does not mean the organization agreed with the rationale.

Photo caption: Environmental groups say the Glen Canyon Dam should be decommissioned, but it's difficult to make a compelling case when public records about the dam are withheld.

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"We are trying to point out that a couple of these facilities could fail on their own," he said. "Most states require that inundation maps be public. But the federal government says that it doesn't have to give these out."

Furthermore, says Living Rivers attorney Joro Walker, if people knew the risks, they could better equip themselves against future danger. Instead, notes Walker, the government is saying, "You don't have to worry about it, we have a plan."

Sidebar: Petitioning for Supreme Court Review

The petition to the U.S. Supreme Court by the Center for National Security Studies and others asks the high court not only to find that the government has misused the exemptions to the FOI Act to deny information about the hundreds of people detained since Sept. 11, 2001, but that the First Amendment requires the government to make the information available.

The First Amendment prohibits secret arrests and detentions except in the most compelling circumstances, the groups wrote. In *Richmond Newspapers, Inc. v. Virginia*, the high court first examined what was to become a test for a First Amendment right of access: If the information was traditionally open, and openness served a purpose in democracy, then the First Amendment requires public access to the information.

That test should apply here, the petition says. Public scrutiny is vital, as it is the public's only restraint on the government's awesome power to arrest and detain people in these situations.

Sidebar photo caption: Kate Martin, director of the Center for National Security Studies, argued the FOI Act case before the appeals panel.

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River News 12/02/03

RRFW Riverwire - HOW DID WE GET IN THIS MESS?

River Runners For Wilderness is pleased to announce the imminent release of *Hijacking A River, The Political History of the Colorado River in the Grand Canyon*, by Jeff Ingram. *Hijacking A River* tells the whole story of "How did we get in this mess?": A pummeled government agency, intransigent businessmen and their political allies, apathetic environmentalists, and disorganized river runners; these are the characters who have made a mess of Colorado River management in Grand Canyon National Park. From the first steps to usher in a wilderness river to the Goldwater-Garn-Hatch Rider of 1980, Ingram unfolds the activities of such players as Fred Burke, Steve Carothers, Kim Crumbo, Fred Eiseman, Marvin Jensen, John McComb, Joe Munroe, Bo Shelby, Gaylord Staveley, Sam Steiger, Merle Stitt, Morris Udall, and many others. Surprisingly, a number of the players in the 1970s are still active in today's Colorado River Management Plan revision.

The book follows the changes in Grand Canyon river running from the 1960s onward, while answering all those persistent questions river runners have been asking for over a decade. With humor and wit, Jeff Ingram answers questions like "Why is it the public now waits 13 years for a self-guided permit to raft the Colorado River in Grand Canyon?" The book also clearly spells out why there is no congressional Wilderness designation for Grand Canyon National Park to this day. Step by step, year by year,

Ingram tells the "how and why" behind Grand Canyon river concessionaire's seeming lock on river travel in the Canyon.

Colorado River crusader and historian Jeff Ingram has, since 1964, been fighting for the Canyon and the public. David Brower hired Ingram as the first Southwest Representative for the Sierra Club, and together they successfully fought the proposed dams in Grand Canyon in the 1960s. Ingram worked with then-writer/environmentalist Martin Litton for a Grand Canyon National Park Wilderness bill, until Litton turned...but you'll have to read about it in the book! Ingram documented events, meetings, legislative and legal moves and tells us about the on-going battle of protecting the Grand Canyon for the people of the world, with personal interviews and painstaking research from a number of archives.

If you want to truly understand the supercharged issue of Grand Canyon's wilderness designation (the lack thereof), the denial of public boaters access rights to the river in the park, and the politics behind Grand Canyon National Park management, *Hijacking a River* is a must-read.

RRFW is pleased to be able to take advance orders for *Hijacking A River*, 496 pages, including maps, readers guide, and index. The cost of this book is \$20 (\$17.95 each, plus \$2.05 shipping and handling per book), with a tentative shipping date of January 15, 2003. Checks or money orders only please. Advance book sales will benefit River Runners For Wilderness, a not-for-profit organization seeking equitable access to a wilderness river running experience in Grand Canyon. Please send your order to

River Runners For Wilderness PO Box 17301 Boulder, CO, 80308-0301

If you'd like to place an order for that special Christmas someone, just let us know with your order and we'll send an announcement card before Christmas, letting them know they will be receiving a gift from you soon.

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River News 12/05/03

RRFW Riverwire - CRMP STAKEHOLDER WORKSHOP VIDEOS AVAILABLE

Grand Canyon National Park is making available to the public the audiotapes from the general session of the stakeholder workshop in June 2003, and the videotapes from the stakeholder workshop in January 2003. The costs for these products covers the duplicating and shipping cost. It will be \$28 for the videotapes. Audiotape prices are not

yet available. The order form for the videotapes is below. If you are interested, contact Julie Graham at BJ Communications, (602) 277-9530, ext 229, or julie@bjc.com. If you would like to purchase a copy of the expert panel series and/or the stakeholder workshop for the Colorado River Management Plan revision, please fill-out the form below and send it along with a check or money order for the appropriate amount to:

BJ Communications Attention: Julie Graham 340 East Palm Lane, Suite 280 Phoenix, AZ 85004. If you have any questions, don't hesitate to contact Julie at 602-277-9530 ext. 229 or julie@bjc.com.

Name: Organization: Address (where tapes should be mailed): City, State, Zip: Phone: Email: Please check the box to indicate the event/s you would like to purchase.

*****Expert Panel: Carrying Capacity, Group Size and Seasonality Wednesday, January 29, 2003 [] VHS Cost: \$28.00 includes tax and shipping

*****Expert Panel: Allocation of Recreational Use Among User Groups Friday, January 31, 2003 [] VHS Cost: \$28.00 includes tax and shipping

*****Stakeholder Workshop Thursday, January 30, 2003 [] VHS Cost: \$28.00 includes tax and shipping TOTAL COST: \$_____

Thank you for your interest in the Colorado River Management Plan revision process. RRFW thanks Mary Orton, mary@maryorton.com for the above information. ### RIVERWIRE is a free service to the boating community from River Runners for Wilderness. Membership is FREE! Send your e-mail address to riverwire@rrfw.org and we'll add you to the RRFW RIVERWIRE e-mail list. To join, visit our website at www.rrfw.org and click on the "membership" link. RRFW is a project of Living Rivers

River News 12/09/03

RRFW Riverwire - PARK FREEZES ADDITIONS TO WAITING LIST!

Grand Canyon National Park News Release
For Immediate Release December 9, 2003 Dawn O'Sickey

Hold Placed on Adding Names to Noncommercial River Permit Waitlist

Grand Canyon, AZ - Grand Canyon National Park is placing a hold on adding new members to the noncommercial river permit waitlist. As part of the current Colorado River Management Plan (CRMP) planning effort, park staff and planners are carefully examining and considering alternatives to the current waitlist permit system. An overwhelming majority of public comments stated the opinion that the permit system should be overhauled. With this in mind, park management does not want to perpetuate the current system while other alternatives are being considered. There are now over 8,000 people on the waitlist, and more than 1,000 are typically added each year. In the event that the current system is selected as part of the final CRMP decision, to be

completed by December 31, 2004, the system for allowing additions to the waitlist would simply be reinstated.

Until a record of decision is made for the CRMP, current waitlist members will be served in the same manner as they have been in the past. They will soon receive the familiar annual letter regarding waitlist procedures, the schedule of release dates, and other topics. The River Permits Office may be contacted at 1-800-959-9164 or 928-638-7843.

Please go to www.nps.gov/grca for more information regarding Grand Canyon National Park. Information about the Colorado River Management Plan may be found at www.nps.gov/grca/crmp.

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River News 12/14/03

RRFW Riverwire - LAKE MEAD UPDATE

Lake Mead elevation is currently at 1140 feet, having dropped 14 feet since March, 2003. The lake is forecast to drop to 1129 feet by June, 2004, subject to the winters snowfall and outflow requirements to California, Arizona and Nevada. Lake Mead full pool elevation is 1220 feet.

Colorado River current continues to flow past Boundary Point, as the sediment cone and river channel pushes out into Iceberg Canyon. End of current is now at North Howland Cove, roughly half way through Iceberg Canyon. The channel runs down the west side of Iceberg Canyons western cliffs. The Lake is still 90 feet deep at Devils Cove, just above Sandy Point. The river may be fairly clear at Separation Canyon (River Mile 240), but becomes more turbid by Burnt Spring, so much so that by Columbine Falls the river is brown with moving silt. There are lots of beach areas to camp on below South American Point, downstream of Pearce Ferry. Hydraulics at Lava Point continue but no rapid has formed there yet.

The upper rapid by Pearce Ferry has cut into the right river bank sediments. The run here is to the right, with exposed rock on the left. The lower riffle still has a strong eddy on the right and a strong wave train. A new sandbar has formed on river left below the lower riffle, and river runners will need to go to the right of this sandbar. Pearce Ferry will remain closed to all boating into the foreseeable future due to low reservoir levels.

Sandbar Alley, an area of shallow water with many sandbars, is now extending from just below the Bat Caves upriver to Mile 253, but there are several sandbars above that up to Surprise Canyon. Dry Canyon corner has a large bar on river right that extends all the way down to the Bat Caves. The current is on the left. There are lots of sandbars in the channel near the Oriental Tours boat landing. Just upstream of there, at Burnt Canyon, there is a big bar on the left, and just above that there is a large bar on the right. There

is good access to the Burnt Canyon campsite, with a big sandbar ½ mile above that on the right.

South Cove is not going to be impacted by the draw down this year and remains open. All river runners taking out at South Cove are supposed to use the gravel area on the south side of the concrete ramp. River runners are asked to be patient in the de-rig area as Hualapai, concessions and public rafters are all taking out in the same area. River runners are encouraged to maintain as small a take-out footprint as possible, and try to de-rig as quickly as possible. Early take-outs are recommended in the high use seasons of late spring, summer and early fall, to avoid late afternoon river traffic. Maintenance work on the South Cove asphalt ramp has been completed. Dumpsters at South Cove are not for downriver use at this time per trip permit regulations.

National Park Service Rangers note that no camping is allowed on the South Cove ramp and take-out area, or the public swimming area just north of the concrete ramp. Camping is allowed outside the harbor area, and is available one-quarter mile downstream (south) of the concrete ramp below the rock jetty just downstream of the take out. The Mead View Scat machine is closed for the winter, and will tentatively re-open in March.

###

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River News 12/15/03

RRFW Riverwire - Commercial Bookings Continue as NPS Freezes Public Access

On December 9, 2003, Grand Canyon National Park announced it will no longer allow the public to seek boating permits for the Colorado River. River Runners For Wilderness Co-Director Jo Johnson called the move "shocking and premature. Now people wishing to reserve a future trip are forced to use expensive commercial services as they can no longer add their names to the permit list. The Park Service cites the failure of the current system without offering any remedies for public relief except the option of purchasing access from a park river concessionaire."

Grand Canyon officials noted that an overwhelming majority of public comments requested an overhaul of the present permitting system, and offered this as their reasoning for disallowing new applicants to the non-commercial permit system to float the canyon. "Granted, Grand Canyon National Park has a serious problem with the non-commercial permit system," says Johnson. "Our own review of the public comments has shown that an overwhelming majority of the public would like to see the access methods and allocation between the public and the river concessions changed. There is a backlog of 130,000 people already waiting years to raft the canyon without paying the high concessions fees. So why add fuel to that fire?" says Johnson, who is quick to

point out that "We want the Park to be thinking about changing the access and allocation method to one that reflects real public demand and shows no favoritism."

Johnson brings up another point: "Freezing the waiting list removes an indicator of public demand for river trips, the only indicator NPS has. Now the park has no way of measuring demand at all. Vigorous advertising by commercial operators to fill trips and lack of demand for those same trips-many of which have gone unfilled the last few years-indicates an oversupply in their allocation. This is in stark contrast to the multi-year wait those 130,000 paddlers face.

One solution for the park that would be responsive to public demand is to introduce a Universal Permitting system. The trip leader gets a permit, then uses whatever commercial services they desire once they have a permit. "We look forward to the park's soon-to-be released draft alternatives for the Colorado River Management Plan" says Johnson, who points out that "If the park does not put forward the idea of an allocation free concept along with other possibilities, then this freeze is a signal that the future of access to our National Parks is in serious jeopardy."

"The Park has given no indication of what will replace the waiting list for public access" notes Jeff Ingram. Ingram's new book on the politics of access to the Colorado River in Grand Canyon, titled Hijacking A River, details how the current problem developed. "The Park started with a First-Come, First-Served system after 92% of the river access was assigned to the commercial operators. The public didn't like that, so the Park used a lottery from 1976 to 1980. This also failed. The Park then started the waiting list. It doesn't work, either, but the 20-year stagnated "status quo" of river management has not changed. Given the Park's attempts at various access systems, we are hoping the park releases a robust spectrum of alternatives, including a Universal Permit system, to get a serious public discussion as a basis for a sound access method."

"Trip opportunities are only open to anyone with the thousands of dollars needed to buy seats on commercial trips, but forbidden to anyone wishing to do it on their own." said Tom Martin, also with River Runners for Wilderness. "This commercialization of our parks is a chilling trend we have seen in this administration, with similar moves at Yellowstone National Park toward privatization of access."

Martin notes that allocations, if they exist at all, need valid indicators of demand so that allocations can shift yearly as needed. "We have heard that the river concessions had 18 trips worth of unused allocation this season. While we are glad to hear that the park will be transferring these unused commercial trips to public boaters for use this winter and next spring, we are amazed that the park does not immediately shift some allocation from the 14 river concessions back to the public. Given the public's huge backlog, if this isn't a clear indicator that the current management system is a failure, and not reflecting real demand, I don't know what is."

###

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River News 12/17/03

RRFW Riverwire - Park Turns 18 Unused Concessions Launches Over To The Public

Officials at Grand Canyon National Park confirmed today the release of 18 additional launches to perspective permittees on the Park's non-commercial waiting list. These permits have been made available as a result of the 2002 lawsuit agreement between Grand Canyon Private Boaters Association with others, and Grand Canyon National Park. The settlement stipulates that unused summer commercial allocation will be turned over to non-commercial launches for the following off-peak season. The dates are limited to the spring of 2004 season: March 1, 3, 4, 7, 10, 11, 13, 15, 18, 20, 23, 26, 29, 31 and April 3, 6, 7, 8.

According to the Continuing Interest Newsletter mailed December 16, 2003 to those on the non-commercial waiting list, during the week of January 5, 2004 to January 9, 2004, the River Permits Office will be releasing 18 launch dates through the cancellation line. Those with a waiting list number assignment of 03#00001 to 03#01499 may call in on Monday, January 5, those with numbers from 03#00001 to 03#02999 may call in on Tuesday, January 6, those from 03#00001 to 03#04499 can call on Wednesday, January 7, those with a number of 03#00001 to 03#05999 on Thursday, January 8, and those holding any number may call on Friday, January 9. Call the River Office cancellation line between 8:00 a.m. to 12 noon and 1 p.m. to 5:00 p.m. at (928) 638-7883. Launch dates will be given out on a first call, first served basis to eligible callers.

The letter goes on to note that many winter launch dates released in past years were not claimed until the very last call-in day. Provided this trend continues, callers who are eligible to call in the first few days should have a good choice of available dates.

The newsletter assures current waiters on the list that their position on the list is not affected by the recently announced hold on new additions to the non-commercial permit waiting list.

Park officials also noted that self guided trip scheduling during the normal year has included a 12% overbooking of non-commercial river trips. This overbooking has all but eliminated the need to release additional launches to the cancellation line, while assuring self guided river trips used all the available user days each season.

Our thanks to Steve Sullivan, Grand Canyon National Park, for this information.

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RRFW Riverwire - GLEN CANYON DAM UPDATE

Basin Hydrology

Severe drought conditions in the Colorado River Basin continue. As we move into mid-winter, there are no clear signals that the drought is easing. While much of Utah was slammed with a major winter storm the last week of December, snowpack in the Colorado River Basin remains near average. The bulk of the moisture from the Utah storm was in the Wasatch Mountains, west of the Colorado River Basin. As of December 30, 2003, snowpack in the Colorado River Basin is 101 percent of average. Because of the extended drought, the snowpack lies atop a mantle of very dry soil. This scenario is not favorable for next springs runoff, as much of the melting snow will be absorbed by the soil. Reclamation is estimating that with average snowpack conditions this winter, runoff next spring would be about 75 percent of average. The National Weather Service will issue an April through July inflow forecast for Lake Powell on January 5, 2004.

The Colorado River Basin is now in its 5th year of drought. Inflow volumes have been below average for 4 consecutive years. Unregulated inflow in water year 2003 was only 53 percent of average. Unregulated inflow in 2000, 2001 and 2002 was 62, 59, and 25 percent of average, respectively. Inflow in 2002 was the lowest ever observed since the completion of Glen Canyon Dam in 1963.

The trend of low inflow continues. Unregulated inflow in November, 2003 was 64 percent of average and Decembers will likely end up at about 65 percent of average. On December 29, 2003 observed inflow to Lake Powell was 5,000 cfs, about 60 percent of what is usually seen in late December.

Low inflows have reduced water storage in Lake Powell. On December 5, 2003, the elevation of Lake Powell dropped below 3600 feet. The last time the water surface elevation was this low was in 1973. The current elevation (as of December 30, 2003) of Lake Powell is 3,597 feet (103 feet from full pool). Current storage is 11.5 million acre-feet (47 percent of capacity). The good news is that even after 4 years of severe drought Lake Powell is still storing a large volume of water.

Operations Experimental Flows

Daily high fluctuating releases from Glen Canyon Dam, as part of the Glen Canyon Dam experimental flows, will be implemented from January through March 2003. Releases will range between a high of 20,000 cubic feet per second (cfs) to a low of 5,000 cfs each day. The 20,000 cfs releases will be maintained for about 9 hours each day (from about 11:00 am until about 8:00 pm), while the 5,000 cfs releases will be maintained for about 8 hours (from about 1:00 am until about 9:00 am). The remainder of the hours will be transition releases where releases will be between the daily high and the daily low. This pattern will be maintained for 7 days a week during the January through March

time period. It should be noted that due to real-time power considerations and regulation to stabilize the power system, actual releases may deviate somewhat from this pattern

The January through March high fluctuating releases are intended to benefit the endangered humpback chub. Scientists have recognized that the humpback chub population has been in general decline since highly fluctuating flows were curtailed in November of 1991. Those flows helped keep the non-native fish, especially the rainbow and brown trout, in check. The trout are thought to prey upon and compete with native fish such as the endangered humpback chub. This is the second year of high fluctuating releases as part of the experimental flows. High fluctuating releases were first implemented in January through March of 2003.

Monthly release volumes in January, February, and March 2003 are scheduled to be 788, 737, and 788 thousand acre-feet, respectively, which averages out to 12,800 cfs per day. Because of the draw down condition of Lake Powell, releases from Lake Powell in water year 2004 are being scheduled to meet the minimum release objective of 8.23 million acre-feet. This is consistent with the requirements of the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs. The experimental flows will not change the total volume of water to be released from Lake Powell in water year 2004.

The experimental flows from Glen Canyon Dam received environmental clearances in December 2002. The flows were analyzed in an environmental assessment in accordance with the National Environmental Policy Act. The experimental flows are the result of ongoing studies by scientists from the United States Geological Survey and were recommended by the Glen Canyon Dam Adaptive Management Work Group, a Federal advisory committee. The experimental flows address the decline of two key resources in the Grand Canyon: sediment and population viability of endangered humpback chub. The Finding of No Significant Impact on the experimental flows can be found at http://www.uc.usbr.gov/amp/flow_fonsi.pdf

This release courtesy Tom Ryan.

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Persistent Drought in the Colorado River Basin

THE CONFLUENCE: Journal of Colorado Plateau River Guides
Issue #27, December 2003

Part One: Introduction

Scientists have studied tree-ring records that span the last seven centuries for five regions of the United States, including the Colorado River basin. These records have been used to examine both wet and dry cycles of climate that can sometimes last for many decades, or multidecadal. For example, droughts of 30-70 years persisted from the late 1500s until the mid-1800s in two of the five regions, and wet/dry cycles were synchronous at some sites until the drought of the 1950s. The pattern of severe drought in the late 1500s, followed by unusually wet conditions of the early 1600s, resembled the drought of 1942-1977 and the subsequent wet period from 1978-1998.

The megadrought of the late 1500s may have resulted from a cooling phase in the tropical Pacific Ocean with a warming phase in the subtropical North Atlantic Ocean, and marked a substantial shift for the climate of the Rocky Mountain region. In 1998, scientists recognized similar sea surface temperatures and forecasted the present drought situation we now find ourselves in, and the present indicators offer little hope for improvement in the next few years. It is unknown if the current drought will become multidecadal, but such a situation seems likely at some point in time, as do other extremes that include massive flooding, and higher sediment transport regimes.

Tree-Ring Chronologies

The identification of ocean oscillations from past centuries has been accomplished by scientists who have sampled tree-rings from, for example, logs from archeology sites (dwellings), and then comparing them with modern-day precipitation records. By modeling the climate records of the past by this method, there is a high degree of confidence within the science community that significant ocean oscillations in the future can be identified in order for communities to better prepare and manage the impacts of drought and floods.

Scientists have also refined the data for greater accuracy by examining more closely the chronologies from different tree species and geographic areas back to 1400 A.D. such as the central and southern Rocky Mountains. Although these two regions have different precipitation variables, historically they have suffered prolonged catastrophic droughts at similar times, such as the drought of the 1950s.

The results of refining the measurements from other tree-ring chronologies and from different regional areas mark both dry and wet periods that alternate for many

successive decades, sometimes even four decades and more. However, the frequency and strength of these periods do vary in time spans and among the various regions. In other words, climate cycles do not necessarily impact all regions at the same time. For example, chronologies from Yellowstone and the southwest Rocky Mountains have a strong moisture signal in a band from 30-70 years around 1250-1400 A.D., but these signals are absent from other regions. Additionally, the Bighorn Basin (northern Wyoming) chronology shows significant energy for an even longer wet period that lasted 128 years around 1300-1400 AD.

A significant oscillation was observed during a severe and prolonged drought throughout much of North America from roughly 1575-1595 AD, which was followed by an unusually wet period in the central and southern Rockies from 1600-1625 AD.

Multidecadal precipitation modes at 30-60 years do not persist after 1650 AD in either Yellowstone or the Colorado Plateau and remains so until the drought of the 1950s. However, the drought of the 1950s, though significant, did not resemble the severity of the drought that occurred in the late 1500s.

Discussion of Sea Surface Temperatures

In the North Pacific, much of the sea surface temperature variance occurs within a time scale of 15-25 years, and is accompanied by the strength and position of the Aleutian Low in winter. These variations have been defined as the North Pacific Oscillation (NPO) when referring to anomalies of the North Pacific, or Pacific Decadal Oscillation (PDO) if they extend into the tropics. The positive, warm phase of the PDO is associated with greater precipitation in all seasons throughout the central and southern Rockies (El Niño or wet). The 1900s were marked by two full +PDO cycles. The warm or positive +PDO regime prevailed from 1925-1946 and from 1977-1998. The cool or negative -PDO (La Niña or dry) regime prevailed from 1890-1924 and 1947-1976. In 1998, scientists noted the tropical Pacific Ocean was cooling (-PDO).

Warmer sea temperatures in the North Atlantic exhibit a 65-80 year cycle termed the Atlantic Multidecadal Oscillation (+AMO). Warm phases occurred during 1860-1880 and 1930-1960 and cold phases during 1905-1925 and 1970-1990. The AMO shifted to its warm phase around 1995, coincident with the apparent recent shift to the negative, cool phase of the PDO. During the warm phase of the AMO, the central U.S., including the central and southern Rockies, receives less than normal rainfall, particularly in summer.

By 1998 scientists were confident that having a warm North Atlantic and a cool tropical Pacific would spell out a persistent drought for the United States. They were right, for the last five years have substantiated the prediction with water year 2002 being the driest ever in the history of documentation by modern instruments.

This phenomenon is also identified by dry springs (February-April) over most of the western states and were succeeded in the central and southern Rockies by failures in both the early summer (May-June) and late summer (July-August) monsoon moisture that originates in the Gulf of Mexico.

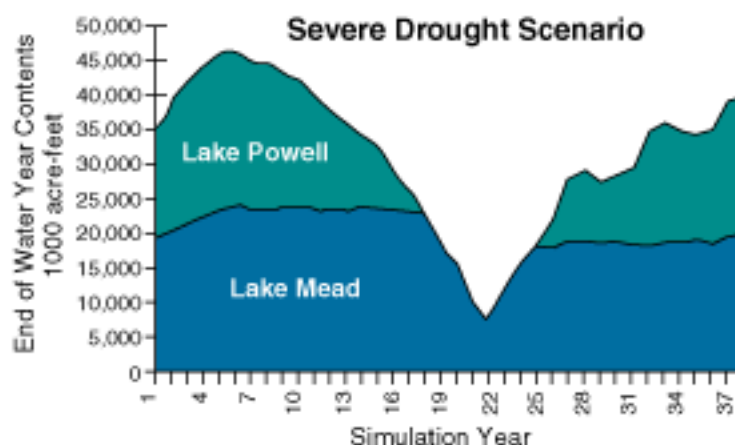
What the scientists envision is a similar pattern of intraseasonal drought for the megadrought of the late 1500s, which affected most of North America from northwestern Canada to the Valley of Mexico and the Atlantic Coast. Like the 1950s drought, the megadrought of the late 1500s was followed by an unusual wet period in the early 1600s, and both events were associated with intense and prolonged La Niña episodes typical of southwestern U.S. and Great Plains droughts. Such continental-scale droughts may be symptomatic of major reorganizations in both Pacific and Atlantic climate.

Long-term forecasting remains limited

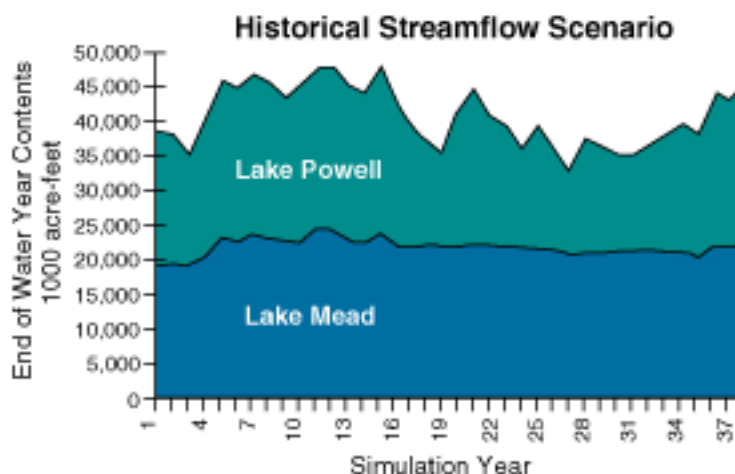
There is considerable discussion about the steady state vs. chaotic behavior of multidecadal variables in climate, and thus about its predictability. An optimistic view is that knowledge about the present phase of the long-term -PDO or +AMO modes can be used to forecast climate more than a year in advance. Some recent forecasts are already taking into account the possible regime shift in both the Pacific and Atlantic sea surface temperatures during 1995-1998, which could signal prolonged drought in the central and southern Rockies.

Although there is plenty of multidecadal persistence in western North America climate, the instabilities argue against extending the forecasting window much beyond 2-3 years. At the very least, however, recent shifts to the cool phase of the -PDO and the warm

phase of the +AMO provide little reason for optimism about ongoing drought in the Rockies.



It is probable that multidecadal variations in North American climate, specifically the occurrence of prolonged, continental-scale drought, involve complex interactions between the Atlantic and Pacific Oceans. Unraveling these relationships will require further development of multi-century, annually-resolved sea surface temperature analyses from the Atlantic and Pacific basins.



Part Two

The Future Hydrology of the Colorado River

The purpose of this next article is to demonstrate that the Colorado River can supply the water

required by humans and the environment, and is available right now and at little cost. This can be achieved by reducing consumption through management policies to increase efficiency. Otherwise the eventuality for all residents in these arid lands, as dictated by its present course in history, is to become another failed hydrosociety. If we simply reduced our water consumption to the national average, Lake Powell would not be needed and the ecosystems of the Grand Canyon and the Colorado River delta in Mexico can be restored.

The other alternative is invasive and economically burdensome, which includes financing and constructing: 1) massive power plants to provide energy; 2) large-scale wastewater and desalinization plants; 3) pipelines to deliver water to the users. These alternatives will increase our dependence on finite natural resources, such as petroleum and nuclear fuels. These fuels are very inappropriate considering: 1) our degraded atmosphere; 2) the expense and dangers associated with nuclear technology and waste; 3) our penchant as a country to generate unproductive relationships with other countries to support our rampant consumptive life style.

Another consideration includes the potential for water to become a commodity controlled by corporations, rather than managed as a public trust.

According to law, the water allocations of the seven states and Mexico is 16.5 million acre-feet. The real time average supply of the Colorado River is, at best, 14 million acre-feet. The total loss due to evaporation and leakage throughout the whole system is currently 3 million acre-feet, which is nearly the complete allocation for the state of Arizona (2.8 million acre-feet). Any objective financial analyst would be shocked at the poor performance of this business venture. Congress is fully aware of this poor performance because they continue to approve Band-Aid fixes and subsidies every year to maintain it.

When the persistent drought appeared in the middle 1900s, nobody really noticed the shortfall because the supply still exceeded the demand-leaks, evaporation and all. Afterwards, when the metropolitan building booms began, nobody noticed either, because the Colorado River over-produced and filled the reservoirs despite the development. Building so-called metropolitan dreams on luck is called greed, not business.

Things are different now that the swimming pools are dug and the golf courses seeded. The demand has almost peaked and the supply continues to wax and wane at the whim of climate. The drought situation at present is very similar to the 35 years of reduced supply that occurred between 1942 and 1977 when El Niños took a long nap and a negative Pacific Decadal Oscillation locked in for an extended stay (see previous article).

The total storage of the Colorado River system right now is below 50%. It took four years to get there. If the drought persists for another four more years, the trend will instead become a long reality and will completely drain Lake Powell reservoir. Obviously the drought will break-they always do. But what is the next climate regime going to bring our way? Will extreme flooding occur and bring the associated shuddering at Glen

Canyon Dam-as occurred in 1983 when the spillways choked at only 20% of capacity? Will the four-hundred fold sediment loads of the early 20th century return? The answer to these questions are-yes.

Models have been generated by hydrologists and resource economists with results posted on the web. Visit: . The diagram presented in this article is based on 400 years of tree-ring data and simulates a drought of the late 16th century (1570-1598). That severe and sustained drought had a 30 percent reduction in stream flow on average in a 19 year period.

How will a drained reservoir effect our river running? Our Colorado River trips will have to take out at the old ferry roads at Hall's Crossing.

Clay Hills Crossing on the San Juan River will continue to be impacted by sediment. The river incising into the sediment may leave the boat ramp perched above a down cutting river. Channel meandering may place the river on the opposite shore. Trips on the San Juan River may have to locate alternate sites to exit the river as well.

River News 01/04/04

RRFW Riverwire - 'Hijacking' A World's Wonder

A New Book From A Flagstaff Publisher Tackles The Commercialization Of The Colorado River In The Grand Canyon

By SETH MULLER Arizona Daily Sun Staff Reporter January 4, 2004
www.azdailysun.com

Advocates for noncommercial boat trips in the Grand Canyon are approaching this year with the same trepidation as a series of class VI, boulder-strewn rapids. By Dec. 31, 2004, the National Park Service must complete a Colorado River management plan for the waterway's Grand Canyon stretch before renewing or augmenting the concessionaire contracts for the 14 commercial raft companies.

The Park Service also will have to figure out how to deal with the growing demand for private permits to run the river-- the waiting list is more than 8,000 permits long and up to 20 years. Some private boaters have organized as River Runners for Wilderness, they will start the year by adding a significant tome to their argument that the river has become too commercialized. This week, the organization will release "Hijacking a River: A Political History of the Colorado River in the Grand Canyon" through the Flagstaff-based Vishnu Temple Press.

The 500-page book by Jeff Ingram of Tucson is a detailed, multi-sourced account of how river running, the idea of wilderness and federal management have had impacts on the Colorado in the Grand Canyon through the late 1960s, 1970s and early 1980s. Tom Martin of River Runners hopes "Hijacking" will give people an opportunity to learn about

how the river came to be managed like it is, with long waiting lists, continued motorized watercraft and bureaucratic resistance to wilderness designation. "When it comes to all the stuff we're dealing with today, Ingram has already been there," Martin said. "He knows the history, and this thing has been going on a long time."

Ingram became the first Southwest representative of the Sierra Club, a position given to him by then-president David Brower. In his work with the Sierra Club, Ingram found himself gaining intimate knowledge of the political landscape and how its changes affect management of the actual landscape. "Back in the 1970s, there was a number of things going on, with the proposed expansion of the park and river as wilderness," Ingram said. "I started collecting materials and saving files with the thought that I would write a history of Grand Canyon National Park and all of the things that have happened to it. Then, life got in the way, but modern history happened when the whole business of planning for the river started in late '90s."

Ingram met with Martin, and Martin asked him to write the book as a way to make more information public on how the past determined the present. "Today, the river runners haven't had a clue as to why we have to pack our solid wastes. They don't know how the commercial river companies become concessionaires," Martin said. "There's nothing else out there like ('Hijacking'). It's opening up a whole new realm of literature."

Martin and members of the River Runners contend that those who want to run private trips down the river are not getting much consideration. In December, park management decided to stop taking names for the private permit waiting list, noting that the list had grown too long. Reports from the Park Service show that they want to reduce the list's numbers as they are unsure of how the management plan will work. "I am just astonished," said Jo Johnson of River Runners, in an earlier interview. "I'm surprised they would do this, and it's not a nice surprise. There is already such a disenfranchisement of private boaters."

Martin said that, meanwhile, the Park Service has not put any restrictions on the commercial outfitters, which could conceivably book trips into 2005 and beyond. Martin is concerned that the park might be leaning toward a plan that penalizes private boaters, but he is optimistic that the Park Service has fully involved the public in the process. For river runners or environmentalists, Ingram has some advice based on his experiences with the Grand Canyon and the politics that affect it. "After 40 years in environmental matters, it's clear to me the most important thing is stamina," Ingram said. "It's possible that we could get a Democratic president and a Democratic Congress, and all of the sudden the political landscape changes."

Reporter Seth Muller can be reached at 928-913-8607 or smuller@azdailysun.com

The book is in! Advance orders are already in the mail (thank you!). RRFW is pleased to be able to take orders for *Hijacking A River*, 496 pages, including maps, readers guide, and index. The cost of this book is \$20 (\$17.95 each, plus \$2.05 shipping and handling per book). Checks or money orders only please. Book sales will benefit River Runners For Wilderness, a not-for-profit organization seeking equitable access to a wilderness river running experience in Grand Canyon. Please send your order to

River Runners For Wilderness PO Box 17301 Boulder, CO, 80308-0301

For additional book information and dealer inquiries, contact: Vishnu Temple Press, PO Box 30821, Flagstaff, AZ 86003-0821 www.vishnutemplepress.com

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River News 01/05/04

RRFW Riverwire - Economic Study of Canyon River Runners Gets Low Marks

A recent masters thesis titled "Regional Economic Impacts of Grand Canyon River Runners", by Northern Arizona School of Forestry Masters student Evan Hjerpe, has received low marks. This according to Stephen Fullam, who runs a consulting firm for environmental groups and is a recipient of the prestigious Public Service Fellowship while at the Kennedy School of Government, Harvard University. Mr. Fullam notes "the study examines an issue that compares Macintosh apples (non-commercial river trips) with Granny Smiths (concessions river trips), but the data is so corrupt he's managed to compare apples and oranges." Hjerpe's analysis examines a very contentious, political issue - commercial vs. non-commercial use of a public wilderness area, in this case the Colorado River in Grand Canyon National Park, and the regional economic benefit river runners have on the local economy.

Fullam expressed concern in how data for the study was gathered. A survey was mailed to a large spectrum of non-commercial river runners, while in contrast, all economic data about commercial river running was provided by one source, the commercial river running trade association. "The analysis allows an industry trade group to report economic expenditures for their customers. Given the potential for upward bias, this data collection technique is flawed and should be questioned. Commercial river trip participants surely could have filled out a similar survey as non-commercial boaters. Furthermore, the study does not provide an example of the survey instrument used by commercial firms. These flaws bias any comparison and raise serious questions about the validity of results for the commercial sector" noted Fullam.

Tom Martin, co-director of River Runners for Wilderness, was also not impressed with the study. "We suspected the same thing" said Martin. "Highly detailed economic data from a large number of non-commercial river runners is compared to a lump sum figure reported by an industry trade group whose political motivations are crystal clear. Warning bells and whistles should be going off, but it doesn't even appear to raise the eyebrows of the study's author. I hope the Park Service distances itself from the results of this study."

The analysis not only allows this bias, but makes no effort to alleviate it in reporting from the commercial sector. In fact, Martin argues, commercial interests are more likely to report economic results with an upward bias since they are already organized as a political and economic entity on Grand Canyon wilderness and access issues. "The Grand Canyon River Outfitters Trade Association (GCROA) provided all the commercial data, and I'm sure they understand the political value of such a study" notes Martin. "The other group in this study, the general public who floats the river without using concessions services, are a scattered group of individual households with varying degrees of understanding of the issues. There is little or no expectation that do-it-yourself boaters in a single permit year would organize to over-report expenditures and potentially introduce upward bias."

Mr. Fullam points out other discrepancies with the study, such as the lack of appropriate distinctions between non-commercial user-days and commercial concessions user-days. "It is not clear whether commercial guide user-days are being counted. The omission of these days would inflate economic results since the total number of user-days would be under-reported for commercial firms. It is hard to believe that Hjerpe found that commercial boaters spend \$161 per day on regional expenditures and non-commercials only \$45. These figures should be less divergent and their divergence should have raised alarms for the author, especially about upward bias from commercial reports and possible downward bias from non-commercial reports" says Fullam.

Yet another flaw in the study, according to Fullam, is the lack of differentiation between commercial firms that run motorized trips verses those that run non-motorized trips. According to Fullam, "The majority of motorized trips make use of the Whitmore helipad and fly clients to Las Vegas. Clients flown to Las Vegas have left the regional economic zone defined by Hjerpe, which does not include Las Vegas. The lack of analysis of this negative economic impact raises more questions about the validity of commercial results. If a commercial customer starts and ends their trip in Las Vegas, then a substantial portion of their trip expenditures was never made in the regional economic zone of northern Arizona. It reflects the potential for additional upward bias or omission bias in reporting by commercial firms, especially motorized concessionaires."

The potential for capital flight by owners of river running concessions is also ignored in the study, according to Fullam. "Although warehouses may be located in the regional economic zone, it is not established to what degree the commercial firms leave revenues in the area."

Other deficiencies in the study have Fullam concerned. There is no consideration in the study of wholesale concessions orders of food, gear, and other services coming from outside the economic zone, which could greatly reduce the multiplier effects of the study. In contrast, non-commercial river runners reported on a case-by-case basis whether they purchased food, gear and other supplies within the economic area or not. Non-commercial trips are more likely to purchase all or most of their groceries, ice, and drinks at retail prices in the regional economic zone, while commercial outfitters can buy wholesale goods and have them transported from outside the economic zone. Fullam also points out that non-commercial trips are 2 to 3 times longer than commercial trips,

hence overall food expenditures can be expected to be 2 to 3 times higher on a per trip basis for non-commercial trips, especially factoring in the difference between retail and wholesale prices.

Fullam points out one last discrepancy. Despite the reporting on an aggregate basis and acknowledgment by Hjerpe that only 8 of the 16 firms even have bases within the economic zone, the analysis still states overly confident findings about economic impacts of commercial firms. Fullam says "confidence should be low given these conditions." Combine this with a lack of solid positive information, and Fullam rejects the study as a useful tool for Park Service decision-making. "Open-door methodology simply allows too many opportunities for bias in the economics of the commercial boaters. An economic comparison of the regional impacts from non-commercial and commercial boating would be a useful study, but it needs a more academically strict methodology and independent data collection applied coherently and equally to both groups," Fullam concludes.

The study can be read in its entirety at <https://www.rrfw.org/programs/rrfw/pdfs/RiverRunnerImpacts.pdf>

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River News 01/12/04

RRFW Riverwire - ARKANSAS RIVER MEETINGS SCHEDULED

By Colorado State Parks

Arkansas Headwaters Recreation Area Integrated Concept Plan Meetings Scheduled

SALIDA--The Arkansas Headwaters Recreation Area (AHRA) will hold four public meetings to discuss the proposals of the Integrated Concept Plan (ICP).

CONTACT: Gary Thorson 1313 Sherman St Room 618, Denver, CO, 80203 . Office: (303) 866-3203 ext. 337

For immediate release January 12, 2004

Arkansas Headwaters Recreation Area Integrated Concept Plan Meetings Scheduled

SALIDA--The Arkansas Headwaters Recreation Area (AHRA) will hold four public meetings to discuss the proposals of the Integrated Concept Plan (ICP). This plan was developed to provide assistance in resolving a number of Private Boat and Commercial Special Use Agreement issues that have been brought to the attention of Colorado

State Parks and the Bureau of Land Management (BLM). Adoption of the ICP could lead to modifications of the 2001 Arkansas River Recreation Management Plan.

All meetings will be held from 6 pm until 8 pm on the following dates and locations:

Tuesday, Jan. 20, Annex Meeting Room, Lake County Public Library, 1115 Harrison Avenue, Leadville;

Thursday, Jan. 22, Public Room, Community First Bank, 146 G Street, Salida;

Friday, Jan. 27, BLM Field Office Conference Room, 3170 East Main Street (Hwy 50), Canon City;

Monday, Feb. 9, REI Flagship Store, 1416 Platte Street, Denver.

All interested parties are encouraged to attend. For more information, please contact the AHRA office at (719) 539-7289.

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River News 01/18/04

RRFW Riverwire - Free Grand Canyon Slideshows In Salida and Portland

Author Tom Martin will update local boaters on the controversial Colorado River Management Plan (CRMP) now in progress for Grand Canyon National Park, and how this plan will affect the boating public. Tom will illustrate his talk with a slide show on the Grand Canyon based on his book, *Day Hikes From The River: A Guide to 100 Hikes from Camps on the Colorado River in Grand Canyon National Park*. The show will be in Salida, Colorado, at Bongo Billy's Coffee House, 300 W. 2nd St., at 8:00 p.m., Sunday, Feb. 8, and at Lewis and Clark College in Portland, Oregon on Tuesday, February 17, in the Templeton Student Center (Council Chambers) at 7:00 p.m.

The highly controversial CRMP, which was stopped by the Park in 2000, was restarted as part of a settlement agreement in a lawsuit filed by river running groups and individuals. The public comment period during the past summer gathered over 50,000 comments. "The wait for do-it-yourself river runners is so long, those at the bottom of the list will wait an incredible 20 years to get permission to run the river" said Martin, who notes that "you can book a commercial trip tomorrow for next summer, if you can afford it. This process is of vital interest to any canyon lover hoping to visit the Colorado River in Grand Canyon."

The free slide shows will be open to the public and feature beautiful vistas illustrating Grand Canyon hikes you can do from the river and exciting river running shots. Tom will

be signing his book, and copies of the new Grand Canyon book "Hijacking A River, A Political History of the Colorado River in the Grand Canyon", by Jeff Ingram, will also be available. Book sales will benefit River Runners for Wilderness, a non-profit group which is sponsoring the events. RRFW represents the interests of the boating public.

Look for upcoming shows in California and Washington in mid-February, times and locations to be announced.

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River News 01/19/04

RRFW Riverwire - Annual Outfitters Meeting Held With Park

On November 4, 2003, river concessions owners, their spouses, warehouse personnel, river guides, Hualapai Tribal members, representatives from the river outfitters trade association and National Park Service employees met at Albright Training Academy for the annual NPS-river concessions meeting. Nick Hardigg, Chief of Concessions Management, Grand Canyon National Park, advised the group of 54 that the park had received two requests from non-concessioner representatives to observe the meeting. RRFW was formally denied attendance at the November, 2002 and was turned away from the November 2003 meeting.

According to Grand Canyon historian and author Jeff Ingram, non-participatory public observers were once allowed to attend these meetings. That they are now excluded bothers public advocacy group River Runners for Wilderness. "We have asked to observe for the past two years, and have been denied." said Tom Martin, River Runners Co-Director. "We are amazed that the park would exclude the interested public, as the issues discussed directly affect all river runners. Excluding the public is a disservice to all river runners. Spouses, trade association representatives, river guides, warehouse managers and Native American tribal representatives are all allowed to participate, but the public is turned away."

RRFW has learned that the November topics discussed included a review of river accidents, including Norovirus illnesses, increases in river concessions rates, patrol trip contacts and frequency, availability of rescue helicopters, along with appropriate ways to contact the NPS during river incidents. Other topics included a Phantom Ranch Update on duffel service for river passengers and other Ranch improvements, cultural resource issues presentation, Colorado River Fund project review, and a review of the Cooperative Resource Conservation Program. This program uses river concessions to provide access to the canyon for scientists via chartered commercial river trips.

The group was informed the NPS would not discuss the Colorado River Management Plan, and one attendee was noted to say "We're not going to ask questions, since they cannot be answered." Park Service staff did read material aloud that is posted on the Park web site.

Representatives of the Hualapai Nation reviewed an incident between a concessions guide and non-concessions Hualapai guides at Diamond Creek. This incident resulted in the closure of the Diamond Creek take-out to all non-Hualapai activities between the hours of 7:00 am and 10:00 am daily. When asked by a concessioner whether there was the potential to coordinate use rather than have such a large daily prohibition of use, Hualapai representatives were optimistic that some sort of agreement could be scheduled between the concessionaires and the tribe. "It would be great if the non-commercial river runners could schedule with the Hualapai as well" noted Martin. "We will continue to seek cooperative ways to work with Grand Canyon National Park so that in the future the interested public will be able to attend these important meetings.

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River News 02/01/04

A Colorado River Sediment Inventory

THE CONFLUENCE
Journal of Colorado Plateau River Guides
Issue #27, December 2003

Updated Report



The presentation cited below is a compilation of scientific data from reports written by government scientists.

Included in this presentation are reports to Congress by Authur Powell Davis and Frank Weymouth from the Bureau of Reclamation.

A very comprehensive study on sediment in Lake Mead reservoir was conducted by the USGS in 1948-49 and published in 1960 as Professional Paper #295. This paper set the standard for the study of sedimentation in large reservoirs that has yet to be repeated.

Subsequent studies, but limited in scope, have been accomplished such as the 1986 Lake Powell Survey by the Bureau of Reclamation, and an excellent report was written by Edmund D. Andrews of the USGS, Sediment Transport in the Colorado River Basin,

which was published in 1991 by the National Academy of Sciences. Unfortunately, the collection of data for sediment was discontinued by the USGS in 1989.

Two points of climate history must be considered when reviewing this data: 1) sediment loads vary considerably due to changes in climate regimes; 2) since the construction of Hoover Dam, additional reservoirs have been added to the plumbing system, which are collecting sediment independently throughout the entire basin. Incidentally, all river sections between dams have had their sediment loads reduced.

The government scientists who studied the sedimentation of Lake Mead in 1948 were actually alarmed at the rapid accumulation of sediment in that reservoir. To mitigate the problem, and to their chagrin, they recommended the building of upper basin dams. Though this provided more longevity for Lake Mead, it essentially spread the sediment problem to more than one place and effectively increased future mitigation costs substantially. This demonstrates the mismanagement of water resources in the Colorado River basin, which can be summarized best as stealing the future to gain the present.

What the studies indicate is that sediment transport in the main stem of the Colorado River has been significantly reduced since 1942 because of a noticeable change in climate that demonstrates a waning of flash flood activity in the basin.

This does not necessarily mean that natural erosion on the Colorado Plateau is at rest. More likely, sediment is being stored in the arroyos of the basin and waiting for threshold events to transport their loads into the Colorado River, and subsequently into mainstem reservoirs such as Mead and Powell.

For example, a flood with a peak discharge of 140,000 cfs roared through San Juan Canyon below Mexican Hat, Utah in October 1911. It is just a matter of time before similar flood events mobilize many decades worth of sediment from arroyos and send huge plugs of sediment into Lake Powell.

A sediment management plan must be conducted in the very near future by the Bureau of Reclamation. This study must not only evaluate the sediment of all the mainstem reservoirs of the Colorado River and its tributaries, but it must also evaluate the storage of sediment in all the ephemeral arroyos, especially where soft Mesozoic rocks dominate the landscape such as the basins of the San Juan and Little Colorado rivers.

It must also determine the effects that sediment will have on dam safety, power generation, water storage, recreation, and the management of endangered species.

How Much Sediment Are We Talking About?

According to E. D. Andrews' very reasonable estimate, which was published in 1990, there are 44,400,000 tons of sediment arriving into Lake Powell reservoir on a yearly basis under the current climate regime. A truck pulling a street legal load has a carrying capacity of 22 tons. In one year, it would require 2.018 million truck loads to remove the annual sediment load of Lake Powell. That is 5,529 truck loads per day; 230 loads per hour; 4 loads per minute.

This scenario demonstrates very well the costs and impacts involved in solving the sediment problem of reservoirs. It also destroys the myth that federal dams are cost-effective and that hydropower is a renewable resource.

[Sediment Presentation](#) [15mb PDF File]

Regional News 02/20/04

Water Resources: As the West Goes Dry

By Robert F. Service

In a region already prone to water shortages, researchers now forecast that rising temperatures threaten the American West's hidden reservoir: mountain snow

MOUNT BACHELOR, OREGON-- Under the dome of a concrete-gray sky, Stan Fox assembles four pieces of aluminum tubing into a 3-meter-long hollow pipe. After standing it on end, he plunges it through more than 2 meters of snow at Dutchman Flat, an alpine meadow perched on the shoulder of this 3000-meter mountain. Fox, who heads the Oregon snow-survey program for the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), removes the tube and reads the snowpack depth, a measurement that has been tracked at nearby sites monthly since the 1930s. Today the snow is 250 centimeters deep, and by comparing the weights of the tube both filled and empty, Fox and a colleague determine that the snow contains about 30% liquid water. If all the snow were instantly liquefied, the water would be nearly 1 meter deep. Not too bad. In a region prone to spikes in precipitation, Dutchman Flat is more than 15% above its 30-year average. "The snow in these mountains is a virtual reservoir," Fox says. As the snow melts in the spring and summer, it will slowly release that water, filling streams and reservoirs, which provide lifeblood to the region during the normally bone-dry summer months.

But indications are that this age-old cycle is beginning to change. New assessments of decades' worth of snowpack measurements show that snowpack levels have dropped considerably throughout the American West in response to a 0.8°C warming since the 1950s. Even more sobering, new studies reveal that if even the most moderate regional warming predictions over the next 50 years come true, this will reduce western snowpacks by up to 60% in some regions, such as the Cascade Mountains of Oregon and Washington. That in turn is expected to reduce summertime stream flows by 20% to 50%. "Snow is our water storage in the West," says Philip Mote, a climatologist at the University of Washington (UW), Seattle, who leads a team that has produced much of the new work. "When you remove that much storage, there is simply no way to make up for it."

The impacts could be profound. In the parched summer months, less water will likely be available for everything from agriculture and hydropower production to sustaining fish habitats. Combined with rising temperatures, the dwindling summertime water could also spell a sharp increase in catastrophic fires in forests throughout the West. With much of the current precipitation headed downstream earlier in the winter and spring, the change is also likely to exacerbate the risk of floods.

For resource managers already struggling to apportion limited water supplies throughout the West, the predictions are grave. "If that's true, it would have a huge impact," says Christopher Furey, a policy analyst with the Bonneville Power Administration in Portland, Oregon, which markets electricity from over a dozen power-generating dams in the Columbia River Basin that provide power to millions of people. In a region where farmers, fishers, recreationalists, and municipalities already compete for water, climate change may be setting the stage for an entirely new round of conflicts. "We think of the water wars in the past," says Fox, referring to the epic battles over rerouting western waters in the early 20th century. "In the future they will probably be more peaceful but much more prevalent."

Too Wet, Too Soon

The root of the problem is easy to state: The semiarid West has too little water, spread too unevenly throughout the year. Most of Montana sees less than 46 centimeters of precipitation a year. Even rainy Portland receives only about one-tenth of its annual 91 centimeters of precipitation during the summer. For most of California the fraction is even smaller. Philadelphia, by contrast, typically receives 102 centimeters of annual precipitation, 30% of which comes in the summer.

Thanks to massive dam-building in the first half of the 20th century, more than 60 million people--roughly one-fifth of the U.S. population--now live in the Pacific and Intermountain West. Those tens of millions of people are dependent not just on water, but on snow. Snowmelt makes up 75% of all water in streams throughout the West. If that snow falls as rain or melts too early, there will be little water left in the virtual reservoir come late summer and fall. Unfortunately, that is just what appears to be happening.

Back down the mountain in a conference room at a small ski resort outside Bend, Fox and a collection of about 50 water experts from the Northwest settle in to listen to Mote describe some of his group's latest data on western snowpacks. Perhaps fittingly, outside the temperature has warmed up on this mid-January day to about 5°C. Icicles encircling the roof drip steadily.

Mote describes work published last year in *Geophysical Research Letters*, in which he took a detailed look at the trend in snowpack accumulations throughout the Pacific Northwest over the last half of the 20th century. Mote reviewed federal records of snow water equivalents (SWE)--the amount of water in a given depth of snow--on 1 April, typically the peak of the season's snowpack. Of the 230 sites where SWEs were measured back to the 1950s, Mote found that nearly all showed negative trends, even as precipitation increased in most places. The hardest hit: areas in the Cascade

Mountains in Oregon and Washington, which saw as much as 60% declines in total snow accumulation. The most likely explanation, Mote says, was the region's temperature rise. When he plotted the snowpack declines against the elevation of the snow-tracking sites, he found that the biggest decreases occurred at the lowest elevations, suggesting that the moderate warming throughout the region was raising the freezing level.

That's just the beginning. In work presented last month at the American Meteorological Society meeting in Seattle, Washington, Mote teamed up with UW Seattle colleague Alan Hamlet and University of Colorado, Boulder, hydroclimatologist Martyn Clark to expand his initial analysis to look at historical snowpack levels throughout the West (see righthand figure). The news was better, but not much. Snowpacks decreased at 85% of the nearly 600 snow-measurement sites throughout the West. The biggest decreases hit the Northwest, where the mountains are smaller and the temperatures warmer, thanks to their proximity to the Pacific Ocean. Declines in the northern Rockies were mostly in the range of 15% to 30%. In these inland areas, Clark points out, winter temperatures are typically far lower than in the Pacific Northwest, so a rise of a few degrees still does not push the mercury above freezing. "In the interior regions all the winter precipitation falls as snow," Clark says. And some regions in the Southwest even witnessed large SWE increases, thanks primarily to a rise in precipitation.

Other clues also suggest that the West's snowpack is changing. The biggest: Snow is melting earlier in the spring. "There has been a fairly broad tendency in snowmelt basins to exhibit advances in runoff timing," says Daniel Cayan, a climate researcher at the Scripps Institution of Oceanography in La Jolla, California. Last month, Cayan, postdoctoral assistant Iris Stewart, and Michael Dettinger, a hydroclimatologist with the U.S. Geological Survey (USGS) in San Diego, reported in *Climatic Change* that the peak of the annual spring runoff in streams throughout California's Sierra Nevada now comes as much as 3 weeks earlier than it did in 1948 (see lower figure). Again, the effect was most pronounced in streams adjacent to lower elevation snow that is more sensitive to temperature increases. "This is very consistent with the evidence Phil [Mote] and company have seen with the snowpack," Cayan says. In a paper now under review at the *Journal of Climate*, Clark and colleagues at the University of Colorado recently found much the same shift for streams in the Northwest. "There is definitely something happening," Clark says.

That evidence is further bolstered, Cayan points out, by records that track the first springtime blooms of flowers such as honeysuckle and lilac, which show a similar 1- to 2-week advance. "This is a totally independent measure and one that is quite strongly related to temperatures in the springtime," Cayan says.

Not everyone is yet ready to believe that these trends will continue. George Taylor, the state of Oregon climatologist and a climate researcher at Oregon State University in Corvallis, for example, argues that broad trends in temperature and snow accumulation over the past century are most likely due to natural multi-decade swings as the climate oscillates between periods of relative warm and cold temperatures. "There was significant warming in the 1920s, '30s, and '40s, cooling in the '50s and '60s, and

warming again from the 1970s through '90s," Taylor says. "In my opinion, the effects of human-induced global warming are small compared to the multi-decadal cycles."

Greg Johnson, a climatologist with NRCS in Portland, also points out that Mote typically starts his analysis of snowpack trends at the beginning of the 1950s, which saw some of the largest snow accumulations over the past century. "If you use those numbers, you will show large decreases," he says. Decadal swings in climate caused by El Niño and the Pacific Decadal Oscillation, he adds, further muddy the numbers.

"I'm not saying it's a nonissue, just that we need to keep watching it closely," Johnson says. "The point is, if you look at the historical record, we've seen some warming and drops in low-elevation snowpack. The question is what can we tie it to. But from a planning standpoint, I think people have to be concerned about this."

Mote agrees that the trend data may be skewed to some degree by the high-snow years of the early 1950s. However, he says, before the 1950s there were so few snow measurement sites that earlier data are suspect. Furthermore, he says, the snow loss is still best explained by the region's modest warming. "The thing that really stands out is that the largest losses are at the lowest elevations, which can only be explained by warming," Mote says. As for whether this warming is best explained by the decade-long climate swings, Mote defers to the latest work by the Intergovernmental Panel on Climate Change (IPCC), the global body of hundreds of scientists that has assembled the "standard model" of climate change. Although IPCC's latest report does show that both natural and human-induced factors explain portions of the last century's global temperature record, climate models that take both into account do the best job at reproducing the complete temperature record.

Dry Times Ahead?

No matter what the historical picture, Mote, Cayan, and others argue that the picture for western snowpacks looks far more bleak when the anticipated future warming is taken into account. Here, too, several teams have been working to understand how events are likely to unfold. All agree there is considerable uncertainty. Precipitation trends, for example, "are all over the map" in different climate models, because precipitation can vary drastically over a short distance, Mote says. However, Mote, Cayan, and others agree that climate models generally do a far better job of estimating temperature, because temperature differences drive winds that tend to reduce those differences. Regional climate models suggest that over the next 100 years, western temperatures are likely to rise between 2° and 7°C, depending on—among other factors—the rate of increase of greenhouse gases in the atmosphere. And unlike the precipitation forecasts, the models all show an increase in temperature.

Modelers then feed these temperature data and other variables into another set of computer programs called hydrology models that compute the effects of changing climate on snowpack and stream runoff. And these hydrology models consistently show that even low-end temperature changes produce big effects. As part of a study described in last month's issue of *Climatic Change*, for example, UW Seattle hydrologist Dennis Lettenmaier and colleagues used a global climate model to compute

how the western snowpack would respond to modest temperature increases. They found that a temperature rise of 1.5°C by 2050 resulted in a loss of nearly 60% of the 1 April snowpack in the Oregon and Washington Cascades, and a 3°C rise by 2090 reduced those snowpacks by 72% (see figure). "That's the best-case scenario," Mote says. "By the 2090s with a warm scenario, you would have essentially no snow left in Oregon by April 1st." When the Pacific Northwest is taken as a whole, the picture is only a bit better, showing a 35% loss in 1 April snowpack by the 2050s and 47% loss by the 2090s.

In a *Geophysical Research Letters* paper last year, Cayan and former postdoc Noah Knowles--now with USGS in Menlo Park, California--computed a similar analysis for the watersheds that make up the western drainage of California's Sierra Nevada Mountains. They found that a predicted temperature rise of about 2.1°C over the next century would reduce the Sierra snowpack by one-third by 2060, primarily at mid to low elevations, and would halve it by 2090. A separate analysis by L. Ruby Leung and colleagues at the Pacific Northwest National Laboratory in Richland, Washington, together with researchers from the National Center for Atmospheric Research in Boulder, Colorado, and Scripps reached similar conclusions when they looked at the effect of climate throughout the West. The one notable difference: In the Rockies, the colder wintertime temperatures are expected to limit the losses to 30%. Without putting too much faith in the exact amount of losses, Mote says, "it's nearly inescapable that we're going to continue losing snowpack."

"Enormous Impacts"

"It doesn't mean we've lost water," Cayan hastens to point out. "It means the water is coming off earlier." Rather than sticking around as snow into the late spring and summer, western snowpacks will wash down mountainsides in the winter and spring. Simply stated, the upshot is wetter winters and drier summers.

In the Sierras, for example, Knowles and Cayan's models predict that the portion of water that flows through the watershed's rivers from April through July each year will decline from 36% today to 26% by 2030. "This represents over 3 km [3 billion cubic meters] of runoff shifting from post-April 1 to pre-April 1 flows," the authors write. That figure nearly doubles by 2090. Other studies show that parts of the Columbia River Basin are likely to fare worse, whereas the Colorado River watershed, with smaller anticipated declines in snowpack and generally colder temperatures, is likely to emerge comparatively unscathed. Overall, however, a steady temperature climb will likely affect tens of millions of people. "There are enormous impacts from this potential change," Cayan says. "Water management in the West has been to use the snowpack as a natural reservoir. This reservoir is really important. It's water that will come later when a lot of the water demand is heaviest." Without that water "people will need to make some difficult choices," adds Todd Reeve, who directs watershed restoration programs for the Bonneville Environmental Foundation in Portland.

That's particularly true in the Pacific Northwest and California. Reservoirs in the Columbia River Basin capture only about 30% of the region's annual runoff, whereas

California's reservoirs hold slightly more. The typical pattern is to fill these reservoirs with late spring runoff and use that water throughout the summer and fall for irrigation and then in the early winter for power generation. An earlier snowmelt means that the water must be spread over a longer dry season when irrigation, recreation, and municipal demand peaks. "You're losing natural storage and taxing built storage. Something has to give," Lettenmaier says. (Here too, Lettenmaier says, the Colorado River Basin is unique, because reservoirs there can store four times the region's annual precipitation.)

With less summertime water, one of the hardest hit areas is likely to be agriculture. Today, farmers in California use about 75% of the state's water. Earlier this month, agricultural economists Wolfram Schlenker of the University of California, San Diego, and W. Michael Hanemann and Anthony Fisher of UC Berkeley presented a preliminary study at the American Economic Association meeting in San Diego of the likely impacts of climate change on California agriculture. Using a range of hypothetical climate and stream-flow scenarios in line with published modeling results, the researchers forecast that snowpack losses could lower farmland values by more than 15%. If that pattern holds for the state's 3.84 million hectares of irrigated farmland, the loss to the state's agriculture economy would be measured in the billions of dollars.

What is more, Fisher says, because access to irrigation water in California depends on the historical system of first-come, first-served water rights, those losses will likely be absorbed primarily by the farmers lowest on the water-rights totem pole, driving many out of business. That same pattern is likely to hold true in the Northwest, particularly in the dry lands east of the Cascades. "It's not going to be feasible to have the irrigated acreage we have now," Mote says--fighting words in a region long wedded to an agricultural way of life.

Forests are also likely to suffer, according to Anthony Westerling, a climate researcher at Scripps. Westerling recently fed data from Cayan and Knowles's climate and hydrology models of the Sierras into a model of his own that attempts to forecast changes in wildfires. Westerling says his preliminary results show that fire danger will soar. "The mean area burned more than doubled by 2090" relative to the present, Westerling says.

Although less easily quantified, low summertime stream flows are also expected to exacerbate problems with declining fish runs, crimp water supplies for recreation and cities, and increase the likelihood of winter and springtime flooding throughout the Northwest and California. But not all the impacts are sure to be bad. Last year, John Fazio, a river flow analyst with the Northwest Power and Conservation Council in Portland, plugged some of the UW group's hydrology forecasts into his Columbia River flow models and found that a warmer Northwest may actually benefit Northwest electricity consumers. Warmer winters, Fazio says, will likely lower the need for electricity during the region's peak demand period, and an expected small increase in wintertime precipitation could churn generators to the tune of an extra 1900 megawatts of power--nearly enough to power two cities the size of Seattle. Of course, if

precipitation swings toward the dry side, it could wind up costing rate payers hundreds of millions of dollars, he says.

No matter how the climate evolves, water managers will face uncomfortable tradeoffs between providing water for agriculture, hydropower, and recreation, and keeping it in streams to support fish runs. In their current Climatic Change paper, for example, Lettenmaier and colleagues show that to keep summertime flow levels in the Columbia River high enough to support endangered-fish recovery plans, water managers will likely have to sacrifice 10% to 20% of the river's wintertime hydropower generating capacity, because it will force water managers to draw down their reservoirs in the summer. "Even with these reductions in power, late-summer minimum flows would still be lower than at present," the authors write.

More Big Dams?

In a region prone to water shortages, talk of such tradeoffs doesn't go down easy. "We already have a problem with shortages," says Maury Roos, chief hydrologist for the state of California. And coming up with the water to deal with population growth throughout the region is already an acute problem, he adds. "This will certainly make the problem worse."

In hopes of heading off some of those problems, Roos and other water officials are beginning to incorporate climate change into their regional water plans. California's latest draft water plan, for example, discusses climate change, although it doesn't yet recommend changing California's infrastructure. Portland, Seattle, and other cities have begun studying the issue in detail to see whether they need to change their water-management plans.

Initial rumblings are also being heard among advocates for building new dams throughout the West. That comes as something of a surprise to many, because during the Clinton Administration, then-Secretary of the Interior Bruce Babbitt claimed that the era of big dam building was over, due to their adverse impacts on fish and wildlife. Already, for example, California is considering building several new dams as part of a joint state and federal effort to provide water for threatened ecosystems while keeping water available for farmers. Washington too is flirting with building a dam at a cost of more than \$1 billion in the eastern part of the state to provide irrigation water for farmers near Yakima. And Idaho water managers say that climate change may force them to build new reservoirs to prevent winter floods along the Boise River, where one-third of the state's inhabitants currently live.

But due to their high dollar and environmental costs, many water experts doubt whether such projects will go forward. "Dams are tough fights and so expensive," says Hal Anderson, planning chief for the Idaho Department of Water Resources. And even if built, they will only soften the blow. With the amount of spring snow expected to be lost due to climate change, "there is no way we're going to build that many dams to capture it all," Mote says.

Other strategies may help. Most water officials agree that there is much that can be done to conserve water, particularly by lining irrigation canals and making other improvements to irrigation. As well, a handful of new programs have sprung up recently to buy or lease water rights from farmers and then keep the water in stream during the low-flow months to improve habitat for fish. Last year, for example, one umbrella effort called the Columbia Basin Water Transactions Program sponsored 32 such deals to keep 28.4 million cubic meters of water in tributaries where it's needed most. That amount of water pales in comparison to what stands to be lost. But for now, water planners still have some time to act before climate change alters the American West in a way humans have never witnessed.

Take Action 02/20/04

Demand New Study on Glen Canyon Dam Operations To Save Grand Canyon, Again!

On March 3-4, the Department of Interior will convene a meeting in Phoenix of the Glen Canyon Dam Adaptive Management Working Group. Open to the public, the agenda will be to discuss the future operating plans for Glen Canyon Dam so as to mitigate the dam's impacts on the Colorado River in Grand Canyon National Park.

Unfortunately, like its 15 previous gatherings over the past eight years, this meeting may accomplish little more than pandering to hydropower interests, while endangered fish in Grand Canyon's famed river ecosystem continue to go extinct. Please join Living Rivers in attending and helping to reverse this.

Top on their agenda is a plan to launch an Environmental Assessment for the installation of proposed temperature control devices on Glen Canyon Dam's water intake structure. Since completion, Glen Canyon Dam has been releasing water into Grand Canyon that is consistently about 48 degrees. Grand Canyon's native fish, however, are used to varying water temperatures that often approached 80 degrees. While a mechanism to warm the water is critical to recovering Grand Canyon's native fish, this device may not be the best choice, and its operation could actually bring remaining native fish species closer to extinction by promoting the proliferation of alien fish that feed on young native fish.

Living Rivers and others will be arguing that a full Environmental Impact Statement (EIS), as opposed to the much narrower and fast-tracked Environmental Assessment must be prepared. This EIS should investigate all potential alternatives to warming the water, including decommissioning the dam. Living Rivers will also argue that this EIS must address a range of "new" information not known when Glen Canyon dam's first EIS was completed in 1996, as is called for by the National Environmental Policy Act when programs such as the AMP demonstrate failure.

Glen Canyon Dam has ravaged Grand Canyon's river corridor, rendering it devoid of much of the life that frequented it when the Park was established. No longer can otters

or muskrats be found. Four of eight native fish are gone, as are all native insects. The dam's cold water releases, trapping of 95 percent of the sediment and nutrients that fed the ecosystem, and unnatural flow regime have made it increasingly difficult for the Canyon's native species to survive.

The AMP was charged with reversing this, but during its tenure the Razorback Sucker has become the fourth endangered fish species to disappear from the Canyon and another, the Humpback Chub, is now headed to be the fifth.

Forty years ago the public rose up and stopped the construction of two proposed dams in Grand Canyon to help preserve this natural wonder. It's now time to save this famed river ecosystem again.

Join us: Wednesday, March 3, 9:30 am – 5:00 pm Thursday, March 4, 8:00 am - noon
Arizona Dept. of Water Resources 500 North 3rd Street 3rd Floor, Conference Room A & B Phoenix, Arizona

[Bureau of Reclamation meeting information](#)

Regional News 03/01/04

Moab Groundwater Report

On March 8, 2004, 7 p.m., Kip Solomon and Phil Gardner of the University of Utah presented their findings on the hydrology of the Matheson Preserve shallow and deep aquifers, the underlying strata revealed by cores from wells drilled 150 feet deep, and water consumption. These findings, detailed below, oblige us to call into question two geohydrological models upon which governmental decision-making is being based:

1. The geohydrological model used by the Department of Energy in evaluating the environmental impacts of the Atlas uranium tailings pile reclamation options. In summary, Solomon and Gardner's data indicate that (A) a highly saline head of water is coming under the Atlas tailings, crossing under the river, and moving well under the Matheson in a deep aquifer flowing through alluvial gravel which is still present at the maximum depth of 150 feet cores were taken; (B) in these gravels next to the portal, at a depth of 24 feet carbon materials test as less than 100 years old and at 35' as 900 years old; (C) below the top 15-18 feet of silty river alluvial deposits, indicating slow water movement, the next 135' of gravels are all flood-scoured with no silty lenses, indicating recurring flood velocities capable of carrying rocks up to fifteen inches in diameter. It is physically impossible to have a bedrock "choke" at the portal and also have these flood velocities immediately upstream of it where current DOE models predict a stillwater lake forming during flood events.

2. The Downs & Kovacs water budget model for the Glen Canyon Group pristine groundwater aquifer: the assumption in that model that the production of the Glen Canyon Group aquifer is 13,300 acre-feet per annum and 9,530 acre-feet of that production is flowing underground down Spanish Valley and discharging into either the

Matheson Wetlands or the Colorado River. In summary, Solomon and Gardner's data indicate that (A) they can account for only about 3,204 acre-feet of groundwater consumed in the Matheson by vegetation and evaporation; (B) they cannot find any outflow into the Colorado River through the Matheson from Spanish Valley in the shallow aquifer; (C) the chemical signature on the water in the Matheson does not match that of the Glen Canyon sandstone aquifer discharge, but instead appears to be "young" water from surface precipitation, irrigation outflow, and shallow flow from Mill and Pack Creeks. At most, 1,000 acre-feet of the Matheson water budget seems to come from the Glen Canyon aquifer, and its location indicates it is from Watercress and Skakel Springs behind the Grand Old Ranch House. (D) the flow in the deep aquifer under the Matheson preserve south of the Colorado River is highly saline water flowing under the river from the north; the center of the plume of saline water corresponds to the Moab Wash and Moab Fault orientation north of the river. In short, of the 9,530 acre feet of Glen Canyon aquifer outflow which is supposed to be flowing into or under the Matheson Preserve from the Spanish Valley valley fill aquifer, 8,530 acre-feet of it cannot be found. There are only two possible explanations for this:

Hypothesis 1: There is a deep gravel "drain" below 150 feet depth which is carrying water out of the Spanish Valley valley-fill aquifer under the Matheson and then beneath the surface water of the Colorado through the portal. There are currently no monitoring wells of sufficient depth to detect this "drain" if it exists.

Hypothesis 2: The water budget for the Glen Canyon sandstone aquifer is around 4770 acre-feet per annum, not 13,300 acre-feet per annum. If this is true, we are close to diverting the entire available output of this aquifer with the existing permitted water rights for the City of Moab and Grand Water Conservancy District culinary wells, and cannot develop more production from this aquifer to support future development.

I will discuss more detail of Solomon and Gardner's findings, and what we need to do in light of them, below.

In addition to Solomon and Gardner, attending the meeting were Sue Bellagamba of the Nature Conservancy; Jeff Freethey and Pat Lambert of the USGS; Laura Kamala of the Grand Canyon Trust; Barbara Morra of the Spanish Valley Water and Sewer Improvement District Board; Richard Lance Christie, Grand County Water Planning Administrator; and Dr. LaRue Christie.

In the Downs and Kovacs water budget (2000), sources of water into the Spanish Valley aquifer system were 13,300 acre-feet outflow from the Glen Canyon sandstone aquifer, 730 acre-feet from precipitation in Spanish Valley, and 3,300 acre-feet leakage from Ken's Lake (this figure includes aquifer recharge from Pack Creek flow). This inflow was accounted for by 6,400 acre-feet diverted and consumed by culinary and irrigation uses; 1,400 acre-feet surface stream flow and vegetative evapotranspiration in Mill and Pack Creeks; and 9,530 acre-feet discharge into the Matheson/Colorado River at the foot of the valley. The 13,300 and 9,530 acre-feet numbers were estimates of low reliability; the other numbers are relatively certain.

In other regional water studies, reliable water budgets have only been established through accurate measurement of discharge from an aquifer system. For a variety of technical reasons, it is very difficult and expensive to accurately measure inputs into aquifers.

The Glen Canyon Group sandstone aquifer water has a geochemical "fingerprint" - low in tritium (<1), R/Ra helium isotope ratio <1 , and stable isotope content indicating the water went into the aquifer at high elevations under cold conditions. The water in the Matheson wetlands in the shallow aquifer is high in tritium (3.1, 2.6, 15, 5.9, 4.7 were typical values in various test wells), has a high R/RA ratio, and does not contain the stable isotopes indicating high elevation, cold conditions at entry into the ground. There is a "plume" of water more like the Glen Canyon water on the NE side of the Matheson which I observe corresponds to the outflow of the Watercress and Skakel spring discharge.

Diane Pataki studied sap flow in cottonwoods in the Matheson under various salinity conditions. They ended up mapping five salinity zones in the Matheson: unhealthy Tamarisk (extremely saline), healthy Tamarisk, unhealthy native, healthy native vegetation, and open water/water vegetation. Evapotranspiration rates were calculated for each zone based on the vegetation there and the sap flow data. Saline conditions across the zones ranged from <1000 microSeimens/cm to over 3,000 average. Evapotranspiration is half that in 3,000 than in 1,000 saline. Total evapotranspiration/evaporation calculated was 3,204 acre-feet per annum.

The wells drilled to 150 feet depth encountered 15-18 feet of silty alluvium (indicating deposition by slow water) followed by cobbles and boulders to the 150 foot depth. There is a sharp transition between the top silty alluvium layer and the cobbles and boulders layer. There are no silty lenses in the cobbles and boulders, which can only have been deposited by swift-flowing current capable of carrying boulders to 15" size routinely. Wood was recovered from cores at 24 feet and 30 feet depth in the BL14 well just upstream of the portal and well back from the current edge of the river. The 24' sample was less than 100 years old and the 30' sample was 900 years old. This tells us that the river has repeatedly flooded at high velocity through an area 1.5 kilometers wide above the portal, and that the current has been swift enough to move 15"+ boulders as well as smaller cobbles, while carrying away anything smaller than about one inch in diameter. This flood cobble zone extends under the Atlas tailings and most of the Matheson. These floods have repeatedly occurred within the last thousand years - in other words, within historic times, and during them the river was scouring to at least 30 feet below today's surface. Since the same flood cobble and boulder formation extends to at least 150 feet depth, this means that the river was scouring at least 150 feet below its current bottom THROUGH THE PORTAL. If the portal had a bedrock sill, as the DOE hydrological models maintain, then the river could not scour below the top of this sill because the sill would slow down the flow of floodwater below the plane of the sill.

Re capping the Atlas tailings in place, with rip-rap armor to protect the cap against erosion from river flood, this kind of water velocity and scouring would make such armoring useless. Why? Because the river cuts down during flood events, and would

undermine the armor and the tailings themselves, causing them to slough into the spate. It would make no difference if the rip-rap was composed of cement-filled greyhound buses; they would still roll off into the flood undercut. Kip Solomon said in light of these findings, leaving the tailings in place "should not even be on the table." As Moab mining engineer Mel Swanson said in 1989, the decision to cap the tailings in place is a decision to put the tailings into the Colorado River; Swanson said it would be cheaper and more honest to shove the tailings into the Colorado with bulldozers for eight years during high water. The environmental effect would be the same as capping in the long run. Solomon's findings confirm Swanson's observation.

The flow of water towards the Colorado is shallow. In the deeper hydraulic system in these cobbles, the water is highly saline, and the head is coming from the north (Moab Wash and Fault align with the center of the saline plume) under the river. As it comes under the Atlas tailings, the uranium concentration rises in a tongue which extends across the river in this saline water. The saline plume is fairly stagnant, so the uranium picked up from Atlas leachate is limited in its extent south of the river so far. Oxygen isotope "fingerprinting" of this water indicates it is not originally derived from either Mill Creek surface or Glen Canyon aquifer waters.

These findings underscore (1) the unfeasibility of a capping-in-place alternative for the Atlas tailings remediation. I've been dealing with this issue since 1989, and every bit of the geohydrology used by Atlas, the NRC, and now the DOE has turned out to be dead wrong. This appears to be yet another chapter in this sorry history. (2) the need to get a good study of the water budget of the Glen Canyon sandstone aquifer done so we know how much water can be supplied to culinary use by it.

[Report by Phillip Gardner and Kip Soloman \(with Addendum\), University of Utah](#)[8.3m PDF File]

LR Letter 03/01/04

Aspinall Unit/Gunnison River EIS Scoping Comments

March 12, 2004
Mr. Ed Warner
Bureau of Reclamation
Western Colorado Area Office
2764 Compass Drive, Suite 106
Grand Junction, CO 81506

RE: Scoping Comments for Environmental Impact Statement for the Aspinall Unit of the Gunnison River

Dear Mr. Warner:

Living Rivers and the Colorado Riverkeeper appreciate this opportunity to submit the following scoping comments on the proposed Environmental Impact Statement (EIS) for

the Aspinall Unit. Our organization collectively represents thousands of individuals from across the United States with an interest in the future of the endangered native fish species and ecological communities of the Colorado River basin, which includes the Gunnison River.

We wish to thank the Bureau of Reclamation (Bureau) for recognizing the seriousness of the plight of the four endangered native fish of the Colorado River basin: the Colorado pikeminnow (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), bonytail chub (*Gila elegans*), and humpback chub (*Gila cypha*).

There is wide agreement within the scientific community that dams in the Colorado River basin, including the Aspinall Unit on the Gunnison River, contribute significantly to the degradation of riverine habitat necessary for the survival and flourishing of these species. As builder and operator of many of these structures, the Bureau has a special responsibility to address issues related to the decline and potential extinction of these four federally listed species.

We understand that the Bureau is undertaking this EIS in response to proposed flow criteria established by the Upper Colorado River Endangered Fish Recovery Program (UCREFRP) pursuant to consultation with the US Fish & Wildlife Service under Section 7 of the Endangered Species Act (ESA). The Bureau is required to consider in an EIS, under the National Environmental Policy Act (NEPA), a range of alternatives that reasonably and practically fulfill the purpose and need of the proposed government action.

In our comments below we address some of the considerations necessary for a comprehensive EIS, including:

- o Issues pertaining to the current operation of Aspinall Unit and reservoirs;
- o Critical areas of analysis, including the need to incorporate decommissioning as a potential alternative; and
- o Issues demonstrating the need for the Bureau to undertake a programmatic EIS for endangered species recovery for its activities throughout the Colorado River watershed.

I. ASPINALL UNIT OPERATIONAL ISSUES

A. Endangered Fish

The operation of Aspinall Unit has been known for many years to cause harm to native fish. The introduction of a successful fishery for non-native trout in the tail waters of the Aspinall Unit is testament to the conditions existing downstream that make the river inhospitable for native species which require warmer water for successful spawning and survival. The reservoirs trap vital sediments and woody material (carbon for the food web) behind the dams, thereby preventing replenishment of the silt, sand and nutrients. The dams form reservoirs, which have no fish passage structures and are also managed as a recreational sport fishery for several non-native species known to prey

on endangered natives. Conditions are marginal at best for endangered fish survival in the reservoirs and downstream environments created by the Aspinall Unit.

B. Water Supply

Aspinall Unit is operated as a water storage facility, part of the Colorado River Storage Project which includes Glen Canyon Dam on the Colorado River in Arizona, Navajo Dam on the San Juan River in New Mexico, the Flaming Gorge Dam on the Green River, and others. The Upper Colorado River Endangered Fish Recovery Program goals, as stated, include providing for "future water development." Reservoir evaporation can be significant, especially in warmer months, resulting in less water available for downstream uses, including instream flows for endangered fish. Furthermore, water conservation, not development, must become the Bureau's strategy for meeting future supply needs. Also, agriculture must begin to use their water more efficiently and, at the same time, become more productive by growing crops that are less water-intensive, such as alfalfa. These two factors require leadership from the Department of the Interior (DOI), which is presently lacking. Overall, we find Aspinall Unit's role for water supply purposes not sufficiently significant enough relative to the facility's impacts on endangered species and the alternatives available to fulfill water supply for human uses.

C. Hydroelectric Power Generation

Aspinall Unit was designed to produce hydroelectricity incidental to the primary function of water storage and flow regulation. The average output of the Aspinall Unit at 819 GigaWatt hours is but a small portion of the region's overall generating capacity. Any loss of hydropower from the Aspinall Unit would be relatively insignificant and could be made up through implementation of energy conservation policies and developing new technologies that are truly sustainable. In other words, hydropower loss is not as important an issue as is our consumption in lieu of conservation of natural resources, which includes native fish, and our lack of leadership as a nation to find power sources that are truly renewable and environmentally responsible.

It appears unlikely that the Basin Fund will ever fully repay the US Treasury for the loans provided to build the water projects of the Colorado River basin, because costs and losses associated with sediment mitigation alone will eventually exceed the Fund's capacity for repayment. It makes more sense for the Bureau to provide a complete long-term cost analysis of its hydropower production, as it compares to the mitigation costs of the future. We are confident that the cycle of public-supported subsidies related to Colorado River development will never be broken otherwise.

D. Recreation

The dams provide a local recreation industry centered primarily on sportfishing and motorboating. As noted in I.A. above and II.B. below, the introduction of non-native species to support sportfishing has impacted native endangered species. Motorized watercraft can contribute to water quality problems that also need to be taken into account.

E. Aspinall Unit and the Colorado River Basin

As noted in I.B. above, Aspinall Unit is a unit of the Colorado River Storage Project. In addition to the CRSP dams in the upper basin, an extensive system of dams exists in the lower basin, including Hoover Dam on the Nevada-Arizona border, and several smaller yet important water supply dams on the river between California and Arizona. The river exits the United States south of Yuma, Arizona, where the once-vibrant Colorado River delta ecosystem has been decimated, converted into an alkali flat polluted by agricultural pesticide and fertilizer runoff.

Water delivery contracts for the Upper Basin are structured pursuant to the Upper Colorado River Basin Compact. The compact has never been subjected to NEPA analysis.

Contracts for the lower basin are subject to allocation by the Secretary of the Interior, pursuant to the terms of the Colorado River Compact (passed into law as the Boulder Canyon Project Act in 1928), which led to implementation of basin wide water planning and allocation ever since. Thus the operations of Aspinall Unit are integrally connected to the operations of the CRSP, the Upper Basin Compact, and the Colorado River Compact/Boulder Canyon Project Act. Therefore its impacts are also tied to this larger system, and as described in item III. below, must be appropriately addressed.

II. CRITICAL AREAS OF ANALYSIS TO BE ADDRESSED IN THE EIS

A. Effects of Dam Operation on Black Canyon of the Gunnison National Park

The Bureau must consider the effects of Aspinall Unit operations on Black Canyon of the Gunnison National Park. The National Park Service is required by the National Park Service Organic Act to protect the Park's natural features, ecological communities, streams, and native species, and to leave them unimpaired for future generations.

Aspinall Unit has caused many documented negative effects on the Gunnison River ecosystem downstream of the dam and in the Park. For example, the dam's cold water releases have for years impaired the native fish stocks. In addition, the absence of floods and sediment has negatively affected stream morphology characteristics important for native fishes.

Alternatives presented in the EIS must ensure compliance with National Park Service laws and regulations that provide for protecting the Gunnison River ecosystem and its native fish. The Bureau should analyze each alternative in light of expected effects on Black Canyon's natural features and aquatic communities, especially on listed endangered species, sensitive species, and species of special concern. The EIS should explain in detail the impacts of the dam's past and present operations on Black Canyon. It should also show how future operations will impact park resources and natural regimes of sediment transport and distribution, depositional patterns, streamflow, temperature, riparian ecosystems, native plant communities, and native fish populations within the park. Finally, the EIS should explain in detail how operations at the Aspinall

Unit should be managed so as to ensure compliance with the non-impairment provision of the Organic Act.

B. Removal of Non-Native Fish Which Prey on Endangered Fish

For years the state and federal governments have operated Aspinall Unit and other dams in the Colorado River basin to promote and enhance sportfisheries and related recreation activities. In the reservoirs and downstream in the tailwaters, government policies have increased the numbers and habitat conditions suitable for non-native species such as trout which are known to prey in significant numbers on endangered native species. The Bureau must address the detrimental effects on endangered fish species, sensitive species, and species of special concern, caused by non-native species, and provide alternatives in the EIS that eliminates such predation, both in the reservoirs and in the tailwaters.

C. Endangered Species Recovery Goals at the Critical Habitat Level

The extensive system of dams and diversions throughout the Colorado River basin fragments and artificially isolates endangered fish populations. Historically, regulators have responded to declining populations of these species by attempting to formulate management criteria that fail to question the fundamental circumstances contributing to the endangerment in the first place. The US Fish and Wildlife Service and the Bureau have chosen to address endangered fish recovery by first declaring isolated populations to be distinct, then proposing recovery plans which fail to address the factors causing the isolation in the first place.

Some or all of the endangered Colorado River fish species are known to be migratory. In addition, evidence exists that the interruption of fish migration by construction of dams in the basin has had a detrimental effect on fish recovery. Within the EIS, the Bureau must evaluate the potential effects, including genetic health and reproductive success, on recovery of fish, including listed endangered species, sensitive species, and species of special concern, that are no longer isolated between dams.

For example, the single greatest threat to the critical habitat of endangered fish is Glen Canyon Dam because the Colorado, Green and San Juan rivers all terminate into Lake Powell reservoir. The genetic connectivity of the three basins has been effectively eliminated and has also isolated the native fish from their historic diversity of habitat; habitat that native fish require for both spawning and the rearing of their young according to their natural heritage. This includes reaches of river habitat that provide floodplains, gravel bars, sandbars, deep pools, massive eddies, and etc. These types of diverse habitats have been largely removed from the basin's ecosystem. Glen Canyon Dam has negatively impacted over 500 miles of diverse habitat, including Cataract Canyon, Narrow Canyon, San Juan Canyon, Glen Canyon, Marble Canyon and Grand Canyon. Glen Canyon Dam also diminishes the ability to have a productive food web in these river reaches because nutrients and woody material is now stored uselessly in the sediment deposits of Lake Powell reservoir.

Therefore, a programmatic EIS that analyzes the dysfunction of the critical habitat in the entire basin is a more productive means to recover critical habitat than a piece-meal approach to reaches immediately downstream of the Aspinall Unit, Navajo Dam, Flaming Gorge Dam and Glen Canyon Dam.

D. Water Quality and Recreational Impacts

In recent years, a rapid rise in recreational use of motorized has resulted in increases of petroleum effluent in reservoirs and streams, such as Curecanti National Recreation Area. The EIS must quantify current and future trends in petroleum discharges from recreational watercraft, and address the potential impacts of these compounds on native endangered fish species. The EIS should analyze one or more alternatives that consider the effects of declining water quality on listed endangered species, sensitive species, and species of special concern. Finally, the EIS should consider alternatives, which implement greater restrictions or outright prohibitions on motorized watercraft, and other polluting machinery.

E. Dam Decommissioning Alternative

The Bureau must incorporate into its EIS alternatives which evaluate the potential for decommissioning (e.g., breaching, removing, or disabling) Aspinall Unit and allowing the Gunnison River to flow freely once again. Decommissioning is the most ecologically effective and economically efficient alternative for addressing the purpose and need of the EIS, namely recovering endangered native fish species. Most environmental impacts of dams cannot be adequately mitigated, e.g. loss of sediment deposition and nutrient composition downstream of the dam, and reduction of frequency and intensity of flood events. And as attempts to do so become more costly, complicated and ineffective, agencies such as the Federal Energy Regulatory Commission and the Army Corps of Engineers are now turning to decommissioning as a preferred alternative for habitat restoration and species recovery. The Bureau should also consider decommissioning alternatives amongst its recovery options.

The Bureau is obliged to consider a decommissioning alternative even if the implementation of such an alternative would be beyond the scope of the agency's discretion, so long as it is reasonable and practical.

36 CFR 219.12(f)(5). Reasonable alternatives which may require a change in existing law or policy to implement shall be formulated if necessary to address a major public issue, management concern, or resource opportunity identified during the planning process.

40 CFR 1502.14(a-c). Alternatives including the proposed action. This section is the heart of the environmental impact statement. ... In this section agencies shall:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency. ...

The Council on Environmental Quality (CEQ) addresses this question in the following excerpt from its "Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 23 March 1981":

Question 2a. Alternatives Outside the Capability of Applicant or Jurisdiction of Agency. If an EIS is prepared in connection with an application for a permit or other federal approval, must the EIS rigorously analyze and discuss alternatives that are outside the capability of the applicant or can it be limited to reasonable alternatives that can be carried out by the applicant?

Answer. Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.

Question 2b. Must the EIS analyze alternatives outside the jurisdiction or capability of the agency or beyond what Congress has authorized?

Answer. An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered. Section 1506.2(d). Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies. Section 1500.1(a).

Given the increasing attention other federal and state agencies are not only paying to the examination of decommissioning alternatives, but selecting them as the preferred alternative, such an alternative in the case of Aspinnall Unit does meet the definition of "reasonable" and "practical" under NEPA.

III. PERFORM A PROGRAMMATIC EIS ON COLORADO RIVER BASIN DAM OPERATIONS AND WATER MANAGEMENT

Problems facing endangered fish on the Gunnison River and elsewhere in the basin are not likely to be solved solely by addressing impacts associated with Aspinnall Unit. Federal policy has too often chosen to view isolated, remnant populations of endangered fish as if they were and always will be isolated, ignoring the purpose and goals of the ESA—to restore viable, healthy populations throughout the species' range. The problems that lead to fish endangerment are not easily resolved at the micro level and must also be addressed from a watershed perspective.

The Bureau is currently engaged in a number of projects, studies, and current and potential litigation that collectively have and will continue to have a significant cumulative impact on these endangered species, including the following examples but not limited to:

1. Lower Colorado River Multiple Species Conservation Plan (LCRMSCP) for endangered fish and wildlife;
2. Adaptive Management Program for Glen Canyon Dam operations pursuant to the Grand Canyon Protection Act;
3. Upper Colorado River Endangered Fish Recovery Program for endangered fish;
4. San Juan River Basin Recovery Implementation Program
4. EIS for Navajo Dam (San Juan River) operations;
5. EIS for Central Arizona Project water allocations;
7. San Juan-Chama Diversion Project (recovery of the silvery minnow);
8. EIS for Flaming Gorge Dam (Green River) operations;
9. Proposals for new pipelines which would withdraw water from Navajo Reservoir and Lake Powell Reservoir;
10. Litigation by Indian tribes, seeking additional water rights or quantification of existing rights.
11. State of Colorado proposed water projects: AB Lateral, Dominguez Dam, and the Colorado Return Aqueduct Project ("Big Straw")

Council on Environmental Quality regulations require the Bureau to address those ongoing agency actions that relate to the proposed action. Since there are numerous NEPA actions underway within the Colorado River watershed which affect water use and allocation and endangered species management, the Bureau must therefore discuss and consider in the context of the Aspinall Unit EIS these other actions. 40 CFR 1501.7(a)(5). Furthermore, even if the impacts of each of these actions are to be analyzed separately, they still must be tiered to a larger programmatic EIS. 40 CFR 1508.28, 1502.20.

It is unclear whether the Bureau can adequately address long-term needs of the fish throughout the basin in the context of these individual projects. It is also unclear how the Bureau will ensure that the cumulative impacts of all these efforts will work together to guarantee, and not impede, recovery.

The Upper Colorado River Basin Compact has had a profound effect on the management, use, and allocation of water in the upper basin, including the Gunnison River. The compact controls all river operations, facility operations, and contracts. In the context of this EIS, the Bureau must look at alternative ways to implement the compact

in order to minimize effects on aquatic ecosystems, including endangered native fish species, sensitive species, and species of special concern, and to ensure compliance with water quality regulations under the Clean Water Act. Given the constraints of the compact, the Bureau must also consider modifications or changes to the compact that would contribute to the recovery of the affected endangered species, other sensitive species and species of concern, and achieve the purpose and need of the proposed action. As discussed in II.E. above, the Bureau is not constrained by existing laws or contracts in formulating and evaluating alternatives.

Given the extensive amount of federal activity within the Colorado River watershed, much of which directly addresses and/or affects endangered species, a comprehensive programmatic EIS covering the entire basin is not only warranted but also sorely needed. Historically, such an approach is not unprecedented for the Bureau to consider. A programmatic EIS for the Colorado River basin would provide for the multitude of issues affecting endangered species to be addressed in a comprehensive fashion. And as outlined in II.E above, such an EIS must evaluate dam decommissioning as an alternative.

The Bureau's operations of its dam and water diversion systems on the Colorado River have had massive and far-reaching environmental impacts, yet have never been the subject of an EIS. Were such an EIS to exist, it would inform the Bureau, other federal agencies, states, tribes, and the public on all aspects of the Bureau's operations and its "off-river" impacts from the continuing urbanization in the basin states that is able to occur only because of the continued supply of water, or at least the expectation of a continued supply of water, from the Colorado River.

While the construction of the dam system predated the passage of NEPA, the operations and management of the river have changed dramatically since Aspinall Unit and other dams were built—substantial activity, which can no longer be considered "grandfathered in" under NEPA. Such actions include the transfer of water from Imperial Irrigation District (IID) to San Diego, the development of off-stream banking, major increases in water consumption, additional water diversions, and the uses of the water diversions and supplies. These changes have altered the character and impact of river management to the extent that now any Bureau activities must trigger a NEPA process. "[When] an ongoing project undergoes changes which themselves amount to "major federal actions, the operating agency must prepare an EIS." *Upper Snake River v. Hodel*, 921 F.2d 232, 235 (9th Cir. 1990); see *Andrus v. Sierra Club*, 442 US 347, 363 n.21 (1979).

As a result, the present NEPA analysis will need to be much more comprehensive in order to compensate for the lack of pre-existing NEPA analysis and baseline information. Note here that the environmental baseline of NEPA encompasses impacts to additional aspects of the human environment—socioeconomic, environmental justice, recreation, cultural resources, wildlife and its habitat for non-sensitive species, air and water pollution—not included in the ESA environmental baseline of impacts to endangered species and critical habitat. The action to be analyzed in the scoping

notice, as well as the new actions mentioned above, would require changes in operations, which have never been analyzed in the first place.

In conclusion, we find the Bureau's initiative to address endangered fish below Aspinall Unit is an important exercise. However, we fear that unless the Bureau approaches this undertaking in the full spirit contained within the ESA and NEPA, that such an effort will be unable to guarantee species recovery. We have outlined assessment methodologies above that we believe will avoid such an eventuality, and look forward to working with the Bureau and other relevant agencies to ensure their appropriate incorporation into the current EIS process for Aspinall Unit.

Thank you for the opportunity to submit these comments and recommendations, and we look forward to your reply.

Sincerely,

John S. Weisheit
Living Rivers Conservation Director
The Colorado Riverkeeper

LR Press Release 03/03/04

Groups Demand Action to Halt the Extermination of Endangered Species in Grand Canyon

For immediate release

Contact: John Weisheit (435) 259-1063

Cell: (435) 260-2590

Environmentalists Demand Urgent Action to Halt the Extermination of Endangered Species in Grand Canyon National Park.

A coalition of national and international environmental groups blasted the Department of Interior today for ignoring mounting scientific and public policy evidence that a once highly touted federal river management program is failing to halt the continued loss of endangered species in Grand Canyon National Park.

In a [ten page letter](#) presented at the semi-annual meeting of the Glen Canyon Dam Adaptive Management Program (AMP) in Phoenix, Arizona, the groups charge that despite eight years and \$80 million dollars, one more of Grand Canyon's endangered fish species, the razorback sucker, has joined the growing list to become extinct in the Grand Canyon. Another endangered fish species, the humpback chub, has declined to only 1,100 fish from 8,000 in 1993.

"Their job is to comply with the law and to bring these fish back. Instead, they are merely engaged in pseudo-science in an effort to mask the gravity of the situation," says John Weisheit, director of Living Rivers' Colorado Riverkeeper program, which is

leading the coalition. "Touting new, unverified fish counts, while ignoring the evidence that regardless of the new numbers, the decline is headed toward zero. This is a huge injustice to our national park system, not to mention the endangered fish."

The Glen Canyon Dam Adaptive Management Program was established in 1995 following the completion of an Environmental Impact Statement which recommends strategies to mitigate the tremendous impacts of Glen Canyon Dam's operations on the river ecosystem in Grand Canyon National Park.

The letter reveals that these recommendations are often being ignored, and even when adhered to, they are not achieving the intended results.

In the event that endangered fish populations did not increase by 1998, water released from Glen Canyon Dam was supposed to shift toward a regime of at least partially mimicking the river's natural flow. This has not occurred.

- * A special set of flow recommendations for low water years was prescribed, but despite five years of drought, these recommendations have been ignored.

- * The program has spent much of its resources attempting to conserve Grand Canyon's remaining sediment, as 95 percent of the Canyon's sediment and nutrients have been trapped behind the dam. These efforts have all failed to bring any lasting benefit to fish habitat or stabilization of cultural sites as called for by the EIS.

- * Recent attempts to use dam operations to control alien fish predation on endangered native fish have been haphazard and have yet to demonstrate any meaningful results.

"As originally designed, the Adaptive Management Program was an excellent approach to addressing the serious impacts on Grand Canyon from this dam," adds David Haskell, retired Science Center Director for Grand Canyon National Park, who participated in the AMP program since its inception in 1995 and has monitored its progress since his retirement. "However, the 2002 AMP Report to Congress clearly indicated that six years of effort had not produced any beneficial results. Since then, the failure of the AMP to seek more effective methods to meet the goals of the Grand Canyon Protection Act has turned this once successful program into a dismal failure. The science done by this program in the past has been very good, but unless the decision makers involved in the AMP immediately seek to make the needed program adaptations, the serious decline of the river ecosystem in the Grand Canyon will continue."

The groups are calling for immediate changes to the program, beginning with and a new federal Environmental Impact Statement. The National Environmental Protection Act allows for such a study when new information and results reveal that the recommendations from a previous EIS to be inadequate.

"It's critical that a new EIS be completed before the AMP launches into its new scheme for installing a temperature control device on Glen Canyon Dam," says Michelle Harrington with the Center for Biological Diversity. "It was once thought that attempts to bring the Colorado River's water temperature to a level more consistent with native

conditions would be a simple proposition. The drought has taught us that disruptions to the food supply for the remaining endangered fish could be further disrupted, besides the fact that much of that food supply is being consumed by the growing number of alien fish. Temperature controls as well as the added impact of drought on management plans must be studied in a comprehensive manner before any such action is taken."

Previously, the AMP program has resisted efforts to undertake a new EIS, in part because Glen Canyon Dam proponents understand that such an EIS will have to explore the possibility of decommissioning Glen Canyon Dam as the best way to comply with the laws protecting the ecosystem in Grand Canyon's river corridor.

"Interior's actions paint a clear picture of disregard for the Grand Canyon Protection Act, Endangered Species Act, and National Park Service Organic Act," adds the Executive Director of the Waterkeeper Alliance, Steve Fleischli. "Why must the public always be forced into the courtroom in order to protect a piece of our famed natural heritage from government malfeasance? That needs to change."

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LR letter to the Adaptive Management Program: www.livingrivers2.org/archives/article.cfm?NewsID=567

Link to the AMP agenda and meeting info: <http://www.usbr.gov/uc/enwvprog/amp/>

LR Letter 03/03/04

Letter to AMP calling for SEIS on Glen Canyon Dam

March 3, 2004
Michael Gabaldon
Deputy Director of Operations
Bureau of Reclamation, Building 67
6th and Kipling
Denver, CO 80225-0007



RE: Supplemental Environmental Impact Statement for the Operations of Glen Canyon

Dear Mr. Gabaldon,

Living Rivers, Colorado Riverkeeper, American Whitewater, Arizona Wilderness Coalition, Bluewater Network, Californians for Western Wilderness, Center for Biological Diversity, Colorado Plateau River Guides, Escalante Wilderness Project, Friends of the Animas River, Friends of Arizona Rivers, Friends of the Earth, Friends of the River, International Rivers Network, Outdoor Adventure River Specialists, Inc., Tag-A-Long Expeditions, Inc., River Runners for Wilderness, Southern Utah Wilderness Alliance,

Waterkeeper Alliance and Wilderness Watch are extremely concerned about the failure of the Glen Canyon Dam Adaptive Management Program (AMP) to mitigate sufficiently the adverse impacts of the operations of Glen Canyon Dam on the Colorado River ecosystem in Grand Canyon National Park.

The most recent AMP report, submitted to Congress in 2002, and subsequent scientific conclusions clearly indicate that the AMP has made little progress in meeting the mandate of the Grand Canyon Protection Act (GCPA). Nor has the AMP met the goals established in the 1995 Environmental Impact Statement (EIS) for Glen Canyon Dam, the Record of Decision (ROD), the Biological Opinion that analyzed the environmental impacts of Glen Canyon Dam, nor subsequent objectives set by the AMP itself.

The AMP has failed because the original EIS has inappropriate limitations, the AMP administrative process is ineffective, and the AMP lacks responsible leadership from the agencies of the Department of Interior (DOI): Bureau of Reclamation (BOR), National Park Service (NPS), US Geological Survey (USGS) and US Fish and Wildlife Service (USFWS). Unless these fundamental deficiencies are corrected, the dedicated efforts of all involved will continue to fail to restore the ecosystem in Grand Canyon National Park.

At the same time, scientific evidence shows that the AMP can not succeed in meeting program goals while constrained by the limitations set by the current EIS. It is evident that unless additional, more effective management options are implemented, the AMP serves only the purpose of documenting the decline of the Grand Canyon river ecosystem. Thus, more than enough evidence exists to require the immediate preparation of a supplemental environmental impact statement (SEIS), to examine in detail and anew the impacts of Glen Canyon Dam based on the significant failures of the present efforts and the myriad of changed circumstances that affect the Colorado River system.

Since the release of the ROD in 1996, it is almost certain that the razorback sucker has joined the growing list of endangered species that have become extirpated in the Grand Canyon ecosystem. Grand Canyon National Park now faces the extirpation of yet another endangered species, the humpback chub. The ROD specifically foresaw the need for the recovery of this native fish, as well to establish a second population of humpback chub and to reestablish a population of the razorback sucker. Yet, scientific evidence indicates that neither objective will occur. The humpback chub's alarming decline and the failure to reinstate the razorback sucker tops a growing list of new scientific information that was not available or known when the 1995 EIS was completed.

Based on past failures, new information and new realities, which we detail below, the Bureau of Reclamation, together with her sister DOI agencies, is obligated to undertake the process dictated by the National Environmental Policy Act [NEPA] in relationship to the operation of the Glen Canyon Dam. According to the regulations implementing NEPA: "agencies **shall** prepare supplements to either draft or final environmental impact statements if: (i) the agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) there are significant new

circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R § 1502.9(c) (emphasis added).

Here, the dramatic decline of the humpback chub, the extirpation of the razorback, the failure of the BOR and the AMP to abide by the terms of the Biological Opinion and to meet the goals of the Grand Canyon Protection Act, and the wealth of new information relevant to the recovery of these species and their habitat combine to require such a supplement.

Listed below are the primary areas of concern:

1. The AMP has failed to improve sediment balance that drives the physical ecological component of the ecosystem

New data collected since the EIS was completed confirms that the EIS needs to be modified to address sediment below Glen Canyon Dam. This is because the scientific community studying the native fish and involved in the recovery of these species, know far more about sediment dynamics than in 1992 when the EIS was developed. A core element of the ROD and the relevant Reasonable and Prudent Alternative (RPA) requires that BOR mitigate the impacts caused by the fact that sediment no longer enters Grand Canyon's river ecosystem. The plan required that experiments be conducted to conserve sediment in the ecosystem of the Colorado River. The first experiment took place in 1996 with subsequent attempts in the year 2000. In each case, efforts failed to produce permanent benefits of preserving beaches, stabilizing cultural sites, and enhance critical habitat conditions as intended. The report to Congress and all supporting sediment research since concludes that net sediment loss from the ecosystem will continue to occur. Natural sediment inputs, combined with organic nutrients, is a fundamental pre-dam ecosystem components necessary to sustain native fish species. Returning to peak-power flows, in a weak attempt to reduce rainbow trout spawning success, will likely accelerate further the rate of sediment loss.

There are other adverse environmental impacts of sediment loss below Glen Canyon Dam not previously anticipated. The continued loss of sediment and inability to regularly enhance beaches has brought about a change in NPS management strategies concerning cultural resource protection in the river corridor. While NPS policies favor the preservation of archeological sites *in situ*, the BOR now finds it necessary to consider immediate salvage operations to save what remains of sites threatened by further beach erosion. This will add federal costs to the program and increase tribal concern for these remnants of ancestral origin. These immediate and vital remedies were not considered in the original EIS.

The sobering conclusions regarding the inability to improve sediment resources have brought about discussions on how to augment sediment inputs in addition to reducing outputs. Any attempt to import sediment into the ecosystem below Glen Canyon Dam will be very costly and is not evaluated in the current EIS. In light of the inability to conserve sediment and meet Lower Basin water allotments as planned, options for improving the sediment and nutrient budget to benefit native fish and cultural sites must be explored in a SEIS.

2. The AMP is non-compliant with the Endangered Species Act and USFWS program recommendations

A. Razorback Sucker

The Biological Opinion uses urgent language to call for specific improvements of critical habitat for the humpback chub and the razorback sucker by 1998. The document states, "If the [Fish and Wildlife] Service determines a study design can not be developed that is expected to provide information to support removal of jeopardy to the razorback sucker and humpback chub populations in the Grand Canyon and associated tributaries, **such will be considered new information and may be grounds for reinitiating formal consultation.**" (p. 35) (emphasis added)

Considering that a live, adult razorback sucker has not been observed in Grand Canyon for the last few years, many senior scientists believe that the razorback sucker has been extirpated from the Colorado River in Grand Canyon National Park. The lack of response to respect performance criteria gives ample evidence that jeopardy has not been removed, and is sufficient ground for reinitiating formal consultation and the NEPA process immediately.

B. Humpback Chub

Monitoring by the USGS through the Glen Canyon Monitoring and Research Center (GCMRC), has documented a major and alarming decline in humpback chub population. Since 1995, when the EIS was completed, the adult humpback chub population in the Little Colorado River has declined by 50 percent. Two years ago the GCMRC scientists estimated that the population could be as low as 1,100 fish. In April of 2003, the USFWS reported, "Results of this ongoing study indicate that despite low catch rates of nonnative fishes in the Little Colorado River, humpback chub continue to decline and that aging adults are not being replaced in the spawning population." (Sponholtz, Pam and Randy Van Haverbeke)

It is undisputed that there has been a major decline in the population of adult humpback chub. Some federal scientists have recently argued that while humpback chub numbers have indeed declined, the present population is stabilizing. Yet, these scientists present no evidence to support this assertion. Privately, some of the same scientists are also saying that extirpation for humpback chub is quite likely. In any case, both this rate of decline and the low absolute number of fish, constitute a vastly different humpback chub assessment than was assumed in developing the original EIS, and the steps necessary for humpback chub recovery.

Furthermore, there has been no progress made in establishing a second viable population of humpback chub in Grand Canyon as mandated by the ROD. Nor has a Management Plan for the Little Colorado River been implemented to protect the critical habitat of the humpback chub from pollution, reduction of instream flows, or truncation of their habitat due to unforeseen geologic events such as debris flows or landslides.

The RPA states that if sufficient progress is not made to remove humpback chub and razorback sucker jeopardy by 1998, then Seasonally, Adjusted Steady Flows (SASF) must begin at Glen Canyon Dam. This has not occurred. Additionally, the RPA also stated that in low water (drought) years, dam releases should be regulated using the SASF alternative. This, too, is not occurring.

As razorback sucker and humpback chub recovery efforts represented one of the cornerstones of the original EIS process, this new information, combined with the information we are presenting, constitutes ground to start a SEIS process.

3. Persistent drought conditions are likely to further complicate achieving program goals and are not being adequately considered or addressed

The Colorado River watershed is experiencing a fifth year of significant drought. Many climatologists are forecasting multidecadal drought conditions for the basin due to the occurrence of oscillating sea surface temperatures. This has already dropped the water level in Lake Powell reservoir by 113 feet to 44 percent of storage capacity. While specific flow recommendations were prescribed in the RPA for low water years, no assessment of management options has been conducted to address the impacts of sustained drought on achieving GCPA goals.

The reduced elevation of Lake Powell reservoir has already stimulated changes in water quality and the aquatic environment below the dam. The river's temperature has increased about 2° C, which is changing the dynamics of the food web and increasing the rates of colonization by exotic species such as the New Zealand mud snail. This particular alien species was discovered in the ecosystem after the ROD was signed. As the surface of Lake Powell reservoir continues to drop nearer to the penstocks, new pathogens, parasites and other exotic species are likely to invade the ecosystem in Grand Canyon and complicate the conservation of endangered native fish. Elevated temperatures raise questions about how this may affect alien fish populations and this predation threat to endangered humpback chub.

Furthermore, more water development projects for the Upper Basin are now being considered to fully deplete the already over-allocated waters of the Colorado River. Drought, consumptive loss, and synergistic effects of these two elements were not considered in the EIS. Predictions confirm that due to factors such as drought and over-appropriation, low levels will become the norm, rather than the exception, for Lake Powell reservoir. As a result, the BOR and her sister agencies must revisit its review the environmental impacts of Glen Canyon Dam and update the analysis to account for this new development.

4. New information relating to implementation of a temperature control device has not been addressed

The drought situation has led to an increased concern over the unforeseen impacts associated with increased water temperature flowing into Grand Canyon from Glen Canyon Dam. While the original ROD encouraged managers to direct efforts to achieve warmer water temperatures to improve native fish recruitment, the EIS did not address

in any detail the full range of impacts associated with such experiments. In 1999 uncertainty surrounding these impacts caused the BOR to shelve its plans to install a temperature control device (TCD) for Glen Canyon Dam's penstocks. Only the threat of legal action associated with the declining humpback chub population has resurrected the proposal. Although in 2003 the AMP Science Advisory Panel recommended full TCD testing and possible construction, along with flow modification and extensive research/monitoring, DOI has taken no action until just recently and even then, the agency suggested a program that is much downscaled. The Environmental Assessment for the proposed TCD is not adequate because of incidental take and other critical habitat factors for humpback chub that has changed since the implementation of the ROD.

Another concern surrounding the TCD involves the impact of the parasitic Asian tapeworm, which could proliferate and heighten the potential of disease for the humpback chub. Since the Asian tapeworm was not discovered in the ecosystem until after the ROD, it too constitutes new information to be addressed in the SEIS.

Certainly, some of the risks associated with the TCD could be overcome by incorporating other operational strategies, such as importing sediment into the system to disadvantage hunt-by-sight predators, and by initiating a periodic spike flow. These were not addressed in the original EIS, and therefore will also need to be incorporated into the SEIS process.

5. Credibility of the AMP science program is in question

A central component of the original AMP design was the development and administration of an independent, peer-reviewed science program. This program would carry out unbiased scientifically credible studies to inform the AMP's decision-making process. A small science staff (less than 12) was to administer the program through the competitive bidding process and to award research contracts to the most competent bidder. Both the bidding process and final reports were to be peer-reviewed to assure quality and non-biased reporting. The GCMRC, the science management component of the AMP, is now operating much differently than established in the original guidelines set for this administrative component of the USGS. The science staff is very large and most programs are being done in-house with no independent peer-review.

Prior to the EIS the Glen Canyon Dam Environmental Studies program was seriously criticized by the National Research Council for this same failure to meet accepted methods to assure scientific credibility. An independent review of the current AMP science program would reveal a loss of integrity and standing when the GCMRC model was abandoned in favor of what currently exists today in the GCMRC.

At a time when the Grand Canyon is about to lose another native fish species, the AMP is cutting back on scientific work, seemingly at the request of the Western Area Power Administration, whose hydropower revenues are used to fund the science. The research for the 2000 Low, Summer Steady Flow (LSSF) represents one example of how the AMP science program has been affected. First, the experiment was fast tracked, with limited opportunity for outside input or competitive bidding for the monitoring. Pre-experiment flow data was not compiled and therefore the design of the experiment may

not have been properly formulated. Scientists did not start collecting data on the river until after the first spike flow occurred. Although the design of the experiment was released for the competition, the one proposed by the contractor was not accepted. Also, this experimental flow was originally proposed to benefit native fish with relatively low, steady flows in accordance with the Biological Opinion, but the final experiment allowed for less than the recommended time.

The original EIS assumed that experimentation and recovery efforts would be achieved with firm attention paid to proper scientific protocol and management of public funds toward endangered species recovery in Grand Canyon National Park. This is not occurring. In fact the opposite is occurring. The AMP has enacted budget reductions and caps without supplemental funds to adequately maintain and preferably improve monitoring and research in Grand Canyon National Park. Finally, AMP is not providing adequate management leadership while the USGS/GCMRC is not contributing credible independent data required by the mandates prescribed by the ROD, RPA and subsequent charters and guidelines. Together, these factors warrant immediate preparation of an SEIS.

6. Inability of the AMP decision-making process to address fundamental resource recovery requirements is limiting progress

The ROD called for the establishment of the AMP as a stakeholder group to advise the Secretary of the Interior on implementation of Grand Canyon programs. The application of the ROD is the sole responsibility of the AMP. The AMP has been, and continues to be, controlled by the water and energy groups, groups whose self-interest is to avoid long-term change from the status quo. These groups necessarily are not ultimately dedicated to the protection and recovery of the Colorado River and the native fish it should support.

While the make-up of the group has provided for a bias toward representing water and energy interests, it was anticipated that the program's mandate to mitigate downstream impacts of dam operations would ensure that sufficient attention would be given to the needs of the resource. This has not occurred, as exemplified by the failure to undertake RPA programs, the decline in humpback chub, the extirpation of the razorback sucker, continued loss of essential sediment, and accelerated degradation of archeological sites. A key reason for this continued program failure is that the AMP decision-making process continues to demonstrate a clear bias toward minimizing loss of hydropower. Also, the AMP evades recommendations that would create legal conflicts between the Organic Act, Endangered Species Act, NEPA and even GCPA. The workings, the make-up and the ineffectiveness of the AMP must be reevaluated in the SEIS.

Evidence to support prejudice for one resource over another recently occurred when the trout population suppression flows were modified in a fast-track manner without proper consultation or due process within the AMP. Moreover, the current Sunday flow regime has proved to be inadequate for true trout suppression and demonstrates the concerns over hydropower prejudice for efforts to conserve endangered species. There has also been a recent suggestion for a flow regime of 5,000 to 25,000 cfs for year 2005. These

proposed flows, the environmental impacts of which have never been addressed, are outside the range prescribed for the conservation of natural and cultural resources by the ROD and the Biological Opinion.

Flow experiments, especially those designed to benefit humpback chub recruitment have been of limited duration, and as such generated inconclusive results. Results of the LSSF were inconclusive because data was neither collected prior to initiating the flows nor afterwards. In this particular experiment the flow was not timely, or sufficient enough for the food web to adjust and respond. The RPA recommended, "experimental flows will be conducted for a sufficient period of time to allow for experimental design, biological processes to function, and for variability inherent in riverine ecosystems to be expressed" (p. 36).

Overall, the AMP is failing to achieve GCPA goals because the ROD and subsequent program design do not allow for meaningful adjustments in key, aquatic ecosystem elements. The program continues to focus on treating the symptoms of ecosystem decline rather than what is actually causing the decline. In other words, the habitat is in dramatic decline and the AMP is doing nothing meaningful—is failing to make any hard choices—to bring the habitat closer to pre-dam conditions. These critical ecosystem elements are well documented and include:

- A. Natural hydrograph that would redistribute sediment during the spring run-off and stimulate native fish spawning.
- B. Natural thermograph with warmer summer water temperatures and colder winter temperatures.
- C. Annual inputs of sediment, nutrients and woody debris to create generally turbid water conditions.

Again, these failures underscore the need to take a renewed look at a process that has not served the Colorado's native fish and has not followed the guidelines, recommendations and requirements set forth to achieve recovery of these species.

7. Our concerns for the First Nations

The AMP has not fully engaged the process that threatens their cultural and natural heritage in Grand Canyon. They have also been given a minimal amount of resources to monitor their cultural properties in Grand Canyon. This is a violation of the trust that was developed with the tribes during Glen Canyon Environmental Studies and is allowing the government to continue to minimize the value of these tribal resources.

8. Recommendations

Based on the above, the following steps are legally required as part of the effort to protect and restore native fish and their critical habitat to the Colorado River below Glen Canyon Dam.

A. The AMP must immediately recommend to the Secretary of Interior that preparation of a SEIS to assess the environmental impacts of the operation of Glen Canyon Dam begin within six months.

B. A SEIS could take several years and there are a number of interim actions the AMP must take, both in terms of science and in the operations, to help impede the further decline of natural and cultural resources in the Grand Canyon while we await a new ROD.

C. Because the SEIS could take several years the AMP must undertake interim actions within six months to help forestall the further decline of natural and cultural resources in the Grand Canyon until a new ROD is issued.

1. Reorganize the AMP to be proactive so that it is comprised of only the responsible agencies and sovereigns: BOR, NPS, USFWS, and the Tribes. (Participation by other stakeholders would be available through public process as explained below in #2.)

2. Require the AMP meet twice a year with a 30-day comment period prior to each meeting. This program would use interactive communication and video technology that was not available during the 1996 EIS process and would provide for more stakeholders to be heard.

3. Reorganize GCMRC to be an administrative organization outside of the DOI. This would remove or militate against agency bias and shortcomings, and be a positive step toward a truly independent science organization. Competition and protocol development should follow NPS guidelines for science activities within national parks.

D. Humpback Chub population and habitat monitoring

All reports and analyses by the AMP have focused on humpback chub numbers, and not the relative condition of the fish or health of the critical habitat. This must change. While some of this data has been collected, there has not yet been any ongoing analysis on the condition factors of the humpback as recommended by the USFWS. Additionally, factors relevant to habitat such as feeding habits, water quality, age class, genetics, and recruitment and migration patterns for all periods of the humpback chub's life span need to be documented. The new AMP must also determine the population level and changes in biological parameters that would trigger a cessation of handling humpback chub so as to avoid incidental take on the remaining population.

E. Follow the Biological Opinion for the Humpback Chub and the natural river hydrograph

As a baseline, all flow decisions should be evaluated by how well they mimic the natural hydrograph. So far, the AMP has ignored this fundamental principle of river ecology. Without it there will likely be no hope of establishing a second population for the humpback chub, or of restoring its critical habitat as called for in the RPA and required by law. AMP should continue intensive alien fish suppression at the Little Colorado River reach.

F. Expand the critical habitat throughout the Grand Canyon, including the tributary streams and the Glen Canyon reach.

G. Develop a scientifically sound monitoring program that extends current non-GCMRC programs through the SEIS process so continuity of ecosystem data sets is achieved. These data sets should be linked with water quality, lower and higher trophic levels, riparian vegetation and beach sand monitoring. GCMRC monitoring programs should be delegated to past or present contractors for one year and then all contracts should be opened for competitive bidding under the new AMP and the SEIS. If these contractors do not want the work then the Grand Canyon Science Center will conduct the monitoring as protocols dictate.

H. Initiate a comprehensive, cultural site degradation abatement program throughout the entire river corridor in accordance with NPS standards.

G. Initiate development of a River Management Plan for the Little Colorado River as called for in the RPA.

In conclusion, the Grand Canyon is treasured by the citizens of the world and the natural values that make up this spectacular place must not be compromised any further. We urgently request serious and immediate action to address these matters. We look forward to receiving a detailed response to this letter explaining the steps you will take to further the goals of the Grand Canyon Protection Act, the Biological Opinion and RPA, NEPA, and the protection and recovery of the Colorado's endangered native fish and their critical habitat, as is required by law. Thank you in advance for your efforts to meet your statutory obligations.

Sincerely,

John Weisheit
Living Rivers Conservation Director
The Colorado Riverkeeper

American Whitewater
Arizona Wilderness Coalition
Bluewater Network
Californians for Western Wilderness
Center for Biological Diversity
Colorado Plateau River Guides
Escalante Wilderness Project
Friends of the Animas River
Friends of Arizona Rivers
Friends of the Earth
Friends of the River
International Rivers Network
Outdoor Adventure River Specialists
Tag-A-Long Expeditions
River Runners for Wilderness

Southern Utah Wilderness Alliance
Waterkeeper Alliance
Wilderness Watch

[200 groups now support the SEIS](#)

Take Action 03/07/04

Save Grand Canyon Native Fish: Demand EIS on the proposed temperature control device at Glen Canyon Dam

The last of Grand Canyon's native humpback chub are headed toward extinction, and the department of Interior is attempting to fast-track a controversial experiment that could kill what's left. Letters are urgently needed to ensure that a full environmental impact statement is prepared, and a sound recovery plan is developed for Grand Canyon's deteriorated river habitat.

On March 3 the Department of Interior began a 30-day scoping period for an Environmental Assessment (EA) to consider the feasibility of installing a temperature control device (TCD) at Glen Canyon Dam, Arizona to study the potential benefits of warming the temperature of water released from the dam to the downstream Colorado River through Glen and Grand Canyons.



First proposed in 1998 and scrapped in 1999, the temperature control device will take water from the warmer (upper) level of Lake Powell reservoir, as opposed to the reservoir's cooler (lower) elevations for turning the turbines that generate electricity.

Since completion in 1963, Glen Canyon Dam has been releasing water into Grand Canyon that is consistently about 47 degrees F, which are too low for native fish to spawn or mature. Before Glen Canyon Dam the river temperatures approached 80 degrees in the summer and near freezing in the winter.

While strategies to warm the water are critical to recovering Grand Canyon's native fish this device, especially on its own, may not be the best choice and its operation could actually bring the remaining native fish species closer to extinction by promoting the proliferation of alien fish that feed on the young native fish.

Living Rivers, Colorado Riverkeeper program and others are calling for:

- A full Environmental Impact Statement (EIS), as opposed to the much narrower and fast-tracked Environmental Assessment, as the magnitude of this federal action requires is too extensive for such limited environmental review.
- The potential for increases in the population of non-native fish species must be fully understood and addressed, including catfish, carp and Brown trout, which are known to prey on the young of endangered fish species.
- A full analysis of water quality concerns, including how they may contribute to new and increased levels of exotic animals and parasites, such as the New Zealand mud snail and the Asian tapeworm which are not native to Grand Canyon.
- The potential impacts on Grand Canyon's aquatic food web, and food security for Grand Canyon's native fish.
- The corresponding dam releases and flow regimes that must be undertaken in consort with temperature modification to mimic the historic flow pattern.
- The corresponding sediment augmentation that must also be undertaken in consort with temperature modifications to mitigate the loss of 95 percent of Grand Canyon's sediment and nutrients trapped behind the dam and to disadvantage hunt-by-sight alien fish predators.
- The impacts of sustained drought on the need for, and operations of, a temperature modification.
- The safety risks associated with operating temperature control device poses a risk to the safety of the dam.
- All potential alternatives to warming the water, including permanently lowering the reservoir levels, and decommissioning the dam.
- The range of new information not known when Glen Canyon Dam's first EIS was completed in 1996, including the continued decline of endangered native fish populations, the ineffectiveness of sediment conservation measures, the likelihood of long-term drought, and the deteriorating credibility of the science program advising dam managers.

Please write to:

Ms. Nancy Coulam
Bureau of Reclamation
125 South State Street, Room 6103
Salt Lake City, UT 84138-1102

Phone: 801-524-3684

Fax: 801-524-5499

Email: ea_comments@uc.usbr.gov

Letters must be received by April 2, 2004.

You can [automatically submit](#) a letter by clicking "ACT NOW" at our affiliate's, Waterkeeper Alliance, web site:

For More Information:

[Sample Letter](#)

[Grand Canyon/Glen Canyon Dam--The Facts](#)

[Letter to BOR requesting extension of public scoping period](#)

[Save Grand Canyon from Glen Canyon Dam](#)

[Living Rivers Colorado Riverkeeper letter demanding new EIS for Glen Canyon Dam](#)

[Department of Interior Glen Canyon Dam Adaptive Management Program](#)

[Draft Science Plan for TCD](#)

[Federal Register Notice for TCD](#)

[Letter from BOR announcing scoping for Temperature Control Device](#)

NOTE: The Bureau of Reclamation's web site and email is down due to a court order concerning the Department of Interior's mismanagement of the Trust Funds for the First Nations.

Regional News 03/09/04

Many farms may not recover from this drought

By Gary Nabhan, director Center for Sustainable Environments Northern Arizona University

Whenever it has rained or snowed in the West this winter, ranchers and farmers have wondered whether the new moisture has been significant enough to break the drought and get their operations back to a normal business routine.

But the sad truth is that there is no "normal" condition in much of the arid West; we spend most of our time either in drought or recovering from it. And regardless of when the meteorological drought is finally broken, it will be many more years, if ever, that farms and ranches will be able to recover from what we might call hydrological and economic droughts. Reservoirs will take years to refill, and the food economy is fraught with instability.

Although this view may sound rather gloomy or cynical, a review of the consequences of the droughts in the 1930s and '50s bears me out. Range-fed sheep and cattle stocking rates never returned to what they were prior to those droughts. Because there were crop failures of dry-farmed grains and beans, many farms went belly-up in the Dust Bowl and never relied on rain alone again.

Still, two factors make this drought different than those in the '30s and '50s. First, today's farmers are not suffering crop failures as much as they are suffering from higher production costs that now keep them in debt. Rather than seeing their crops dry up because rains are sparse and reservoir levels are down, they are investing more in buying and transporting water, controlling pests and maintaining costly irrigation systems.

Since the drought began in 1997, Arizona farmers and ranchers have shouldered 22 percent more debt than they did before. Such debt has forced many out of business, so that we've been losing an average of 100 farms and ranches in Arizona since the drought began, opposed to the long-term average of 82 lost per year.

But the second, unparalleled factor at work today is much more insidious. Government policies on water allocation during drought have put farmers, ranchers and the food security they offer us at a selective disadvantage, whereas water-consumptive urban growth has continued unchecked.

During the past two years, when farmers in the Metro Phoenix area have been forced to cut back their irrigation by 30 percent, urban users have barely diminished their water use by 5 percent, and most of that savings has been due to the valiant efforts of city park managers to use less water.

Regardless of how much central Arizona farmers cut back on their irrigation needs, no more water is truly being conserved for wildlife habitats and future needs because 25,000 more users take up residence in Metro Phoenix every year. In general, residents of Southwestern cities have increased their per capita use by one-fourth over the past quarter century, while farmers have reduced per acre use by one-fifth. Is this fair?

The net effect is that during this drought, more food-producing land has been sold to shopping mall and subdivision developers than ever before. This is because there are few policies that assist farmers and ranchers in resisting urban sprawl. The long-term consequences of such gaps in land and water policy is that more and more of America's food is coming from off-shore sources. We have sacrificed some of the most fertile lands in the world to asphalt and concrete. In doing so, we have compromised our own food security and safety – few countries regulate pesticides and other contaminants to the extent that the U.S. does.

As an attempt to counter such devastating trends in the Southwestern states, the Center for Sustainable Environments is launching a branding campaign to help farmers and ranchers survive this drought. Their direct-marketed products can be labeled with tags and stickers urging consumers to "Get Yours Fresh from Canyon Country."

Nearly half of Arizona's consumers, when surveyed, say that they would be willing to pay more for such locally produced foods; they are particularly interested in fresh, good-quality produce and meats grown with water-conserving, environmentally friendly practices.

If households, restaurants and cafeterias choose to purchase more "Canyon Country Fresh" products, farmers and ranchers will gain more of each consumer food dollar, and will perhaps have the means to reduce their debts and recover from the economic drought.

It is time for Westerners to rally together to ensure that our region's farmers and ranchers are guaranteed enough water to provide our communities with secure food supplies. If we don't, we will be increasing our vulnerability to contaminated vegetables from Mexico and downer cattle from Canada.

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Dr. Gary Nabhan, Director of NAU's Center for Sustainable Environments, is co-author of a new study on drought and food security, available online at www.environment.nau.edu. He will speak on this topic at the Southwest Direct Marketing Network Conference in Flagstaff, Monday, March 16 at 9 am at the Radisson Hotel

Take Action 03/12/04

SAMPLE LETTER: Temperature Control Device/Environmental Assessment

Ms. Nancy Coulam
Bureau of Reclamation
125 South State Street, Room 6103
Salt Lake City, UT 84138-1102
Phone: 801-524-3684
Fax: 801-524-5499
Email: ea_comments@uc.usbr.gov

Dear Ms. Coulam,

I submit the following scoping comments for the draft Environmental Assessment (EA) that the Bureau of Reclamation (BOR) is presently preparing for the proposed temperature control device (TCD) at Glen Canyon Dam, Arizona.

While it is critical that urgent action be taken to address the decline of endangered species in Grand Canyon National Park caused by Glen Canyon Dam's operations, the TCD initiative now underway may only further the native ecosystem's collapse. Its operation could actually bring the few remaining native fish closer to extinction, constituting an incidental take of endangered species.

The situation is particularly critical for the humpback chub, whose numbers have declined 85 percent since 1982. This decline, combined with abundant new information about the condition of the ecosystem in Grand Canyon since the TCD was recommended in 1995, compelled the BOR to halt the fast-tracking of the TCD proposal and undertake a more thorough review of the situation in Grand Canyon, including the

full range of alternatives available to address them. Specifically, I request the BOR address the following:

- 1) The present environmental review process be expanded to a full Environmental Impact Study to address the TCD and all new information that has come forward since the first Glen Canyon Dam EIS was completed in 1995.
- 2) Other alternatives to warming the water, including permanently lowering the reservoir and decommissioning the dam.
- 3) The potential for the TCD's operation to increase the population of non-native fish such as catfish, carp and brown trout, which are known to prey on the young of endangered fish species.
- 4) The effect the TCD will have on water quality, including new and increased levels of exotic animals and parasites. Specifically, it should address impacts to the New Zealand mud snail and the Asian tapeworm, which are not native to Grand Canyon ecosystem; and how will these impacts affect the recovery of the native fish, which were not addressed in the original EIS.
- 5) The TCD's potential impacts on the aquatic food web for Grand Canyon's native fish. This includes the impacts associated with the worsening drought situation and the quality and quantity of nutrients to provide carbon for the river's food chain.
- 6) The complimentary role other mitigation measures must play, especially sediment augmentation to replace the loss of 95 percent of Grand Canyon's sediment and nutrients trapped behind the dam, and the restoration of flow regimes that mimic the rivers annual, natural hydrograph.
- 7) The safety risks that these modifications to the penstocks may pose to Glen Canyon Dam, especially at low water levels.

Thank you for the opportunity to submit these comments.

Sincerely, Your name or organization

LR Letter 03/17/04

Letter of Extension for Scoping Period of TCD/EA

March 17, 2004
Ms. Nancy Coulam
Bureau of Reclamation
125 South State Street, Room 6103
Salt Lake City, UT 84138-1102
Via Fax: 801-524-5499

RE: Request for 30-day Extension of scoping comment period for Glen Canyon Dam Temperature Control Device Environmental Assessment.

Dear Ms. Coulam,

Living Rivers requests that the Bureau of Reclamation extend by 30 days, to May 2, 2004, the deadline for receipt of scoping comments for the Glen Canyon Dam Temperature Control Device Environmental Assessment.

This proposal by the Bureau represents one of the most unique and significant interventions into the Grand Canyon ecosystem at a time when a federally listed endangered fish, the humpback chub, is declining toward extirpation in Grand Canyon National park. Never before have such modifications been proposed for Glen Canyon Dam, nor temperature control experiments been undertaken in Grand Canyon. The public should be given sufficient time to comment.

Despite this significance, the public has received very little notification on the matter, and as of today, there is still no information pertaining to this scoping period on the Adaptive Management website.

Also, because of the recent disconnect of the Internet from various agencies of the Department of Interior, as ordered by Judge Royce Lamberth of the United States District Court, information access is now more limited and will delay full participation of the public.

Thank you for your attention to this matter.

Sincerely,

John Weisheit
Conservation Director
Colorado Riverkeeper

Letter to LR 03/24/04

Letter Announcing Scoping For Temperature Control Device

United States Department of the Interior
BUREAU OF RECLAMATION
Upper Colorado Regional Office
125 South State Street, Room 6107
Salt Lake City, Utah 84138-1102
FEB 23 2004
IN REPLY REFER TO: UC-720 ENV-6.00

Subject: Glen Canyon Dam Temperature Control Device Environmental Assessment

Dear Interested Parties:

I am personally inviting you to assist the Bureau of Reclamation and its partners in scoping the issues to be considered in the development of an Environmental Assessment (EA) under terms of the National Environmental Policy Act. As you will see, we are again considering the feasibility of installing temperature control devices (TCD) on the penstocks at Glen Canyon Dam, Arizona to study the potential benefits of warming the temperature of water released from the dam to the downstream Colorado River through Glen and Grand Canyons.

Prior to construction of Glen Canyon Dam, Colorado River temperatures ranged from freezing to about 85 OF. Since construction of the dam, releases from the dam have been consistently cold (about 45-50 OF), adversely impacting native fish. Reviewing the condition of the native fish in 1994, the U.S. Fish and Wildlife Service's biological opinion on the operation of Glen Canyon Dam Environmental Impact Statement required Reclamation to evaluate the feasibility of using a TCD to warm the temperature of the Colorado River below Glen Canyon Dam.

In January 1999, Reclamation released a draft EA on an eight-unit TCD for Glen Canyon Dam. Reclamation did not finalize this assessment and National Environmental Policy Act process due to questions about potential adverse impacts of the eight-unit device on downstream aquatic resources, particularly endangered fish, the need for an accompanying science plan, and concerns about the frequency of use of the TCD. Reclamation has continued studying the potential for a TCD that could warm the Colorado River below the dam and assist in the removal of jeopardy from endangered fish. Based on these additional studies, Reclamation has decided to begin preparation of a new programmatic EA analyzing the environmental effects of construction and experimental operation of a two-unit pilot project TCD. A monitoring plan and experimental program for testing the TCD using adaptive management will be designed by the U.S. Geological Survey, Grand Canyon Monitoring and Research Center.

This notice announces the opening of a 30 day scoping period. During this time, Reclamation encourages you to raise issues and concerns that should be addressed in the EA. You should focus your comments on the potential environmental effects of construction and operation of a two-unit pilot project TCD, as well as reasonable alternatives to the proposal and measures to avoid or lessen environmental impact. Comments received before April 2, 2004, will be considered during the preparation of the EA. Reclamation will use the EA in its decision-making process to determine whether to construct and test a pilot two-unit TCD or if a more detailed environmental impact statement should be prepared.

Comments should be sent to the U.S. Bureau of Reclamation, attention Nancy Coulam, UC-720, 125 South State Street, Room 6103, Salt Lake City, UT 84138-1102 or by email to ea_comments@uc.usbr.gov. If you do not want to submit comments at this time, but would like to receive a copy of the draft EA and other mailings, please contact Reclamation at the same address or email. If you need further information, please contact Nancy Coulam at 801-524-3684.

Sincerely,

Rick L. Gold Regional Director

Letter to LR 03/24/04

Federal Register Notice for TCD

United States Department of the Interior
Bureau Of Reclamation
Glen Canyon Adaptive Management Working Group (AMWG)
Notice of Meeting
Agency: Bureau of Reclamation, Interior
Action: Notice of public meeting

Summary: The Adaptive Management Program (AMP) was implemented as a result of the Record of Decision on the Operations of Glen Canyon Dam Final Environmental Impact Statement to comply with the consultation requirements of the Grand Canyon Protection Act (Pub.1. 102-575) of 1992. The AMP provides an organization and process to ensure the use of scientific information in decision-making concerning Glen Canyon Dam operations and protection of the affected resources consistent with the Grand Canyon Protection Act. The AMP has been organized and includes a federal advisory committee (AMWG), a technical work group (TWG), a monitoring and research center, and independent review panels. The TWG is a subcommittee of the AWMG and provides technical advice and information for the AMWG to act upon.

Date and Location: The AMWG will conduct the following public meeting: Phoenix, Arizona—March 3-4, 2004. The meeting will begin at 9:30 a.m. and conclude at 5 p.m. on the first day and begin at 8 am and conclude at noon of the second day. The meeting will be held at the Arizona Department of Water Resources, 500 N. 3rd Street, 3rd Floor, Conference Rooms A and B, Phoenix, Arizona

Agenda: The purpose of the meeting will be to recommend to the Secretary of the Interior the FY 2005 budget and work plan. Other items for discussion include AMWG operating procedures, environmental compliance on proposed actions, basin hydrology, public outreach, as well as other administrative and resources issues pertaining to the AMP. To view a copy of the draft agenda, please visit the Reclamation web site at: http://www.usbr.gov/uc/envprog/amp/amwg/mtgs/01mar03/mtgs1_00.html.

To allow full consideration of information by the AMWG members, written notice must be provided to Dennis Kubly, Bureau of Reclamation, Upper Colorado Regional Office, 125 South State Street, Room 6107, Salt Lake City, Utah, 84138; telephone (801) 524-3715; faxogram (801) 524-3858; e-mail at dkubly@uc.usbr.gov (5) days prior to the meeting. Any written comments received will be provided to the AMWG and TWG members prior to the meeting.

For further information contact: Dennis Kubly; telephone (801) 524-3715; faxogram (801) 524-3858; e-mail at dkubly@uc.usbr.gov.

Dated: January 29, 2004 Dennis Kubly Chief, Adaptive Management Group, Environmental Resources Division, Upper Colorado Regional Office, Salt Lake City, Utah. FR Doc. 04-3347 Filed 2-13-04; 8:45 am Billing code 4310-MN-P

LR Letter 04/01/04

The 159 (now 202) groups endorsing 4/2/02 letter to Bureau of Reclamation

Access for All (CA)
Alabama Environmental Council (AL)
Alamosa Riverkeeper (CO)
Allegheny Riverkeeper (PA)
Alliance for Sustainable Communities (MD)
Altamaha Riverkeeper (GA)
American Whitewater Association (MD)
Apalachicola Bay and Riverkeeper (FL)
Arizona Wilderness Coalition (AZ)
Audubon Upper Mississippi River Campaign (MN)
Baja California Coastkeeper (Mexico)
Biodiversity Conservation Alliance (WY)
Black Warrior Riverkeeper (AL)
Blackwater/Nottoway Riverkeeper (VA)
Bluewater Network (CA)
Bow Riverkeeper (Canada)
Buckeye Forest Council (OH)
Cahaba River Society (AL)
California Save Our Streams Council (CA)
Californians for Western Wilderness (CA)
Camp Us (CO)
Canyon Voyages (UT)
Cape Fear River Watch, Inc. (NC)
Cape Fear Riverkeeper (NC)
Cascadia Rising Ecological Defense Network (OR)
Casco Baykeeper (MA)
Center for Biological Diversity (AZ)
Central Lake Superior Watershed Partnership (MI)
Chattahoochee Riverkeeper (GA)
Chehalis River Council (WA)
Choctawhatchee Riverkeeper (AL)
Choqueyapu Riverkeeper (Bolivia)
Citizens of Lee Environmental Action Network (VA)
Clearwater Biodiversity Project (ID)

Clinch Coalition (VA)
Coalition for Jobs and the Environment (VA)
Coastal Land Trust (CA)
Colorado Plateau River Guides (UT)
Columbia Riverkeeper (WA)
Commencement Baykeeper (WA)
Community Clean Water Institute (CA)
ConservAmerica (NM)
Cook InletKeeper (AK)
Coosa River Basin Initiative (GA)
Devil's Fork Trail Club (VA)
DuPage River Coalition (IL)
Earth Island Institute (CA)
Electors Concerned about Animas Water (NM)
Endangered Habitats League (CA)
Erie Canalkeeper (NY)
Escalante Wilderness Project (UT)
Evergreen State College (WA)
Eyak Preservation Council (AK)
Eyes of Paint Branch (MD)
Flagstaff Activist Network (AZ)
Flint River Watershed Coalition (MI)
Florida Wildlife Federation (FL)
Forest Guardians (NM)
Forest Watch (VT)
Foundation for Global Sustainability (TN)
Four Corners School of Outdoor Education (UT)
Friends of Arizona Rivers (AZ)
Friends of Blackwater (WV)
Friends of Living Oregon Waters (OR)
Friends of Milwaukee's Rivers & Riverkeeper (WI)
Friends of the Animas River (CO)
Friends of the Earth (DC)
Friends of the Eel River (CA)
Friends of the Gualala River (CA)
Friends of the Nanticoke River (MD)
Friends of the River (CA)
Friends of the Riverfront (PA)
Fundy Baykeeper (Canada)
Galveston Baykeeper (TX)
Georgian Baykeeper (Canada)
Glen Canyon Institute (UT)
Global Exchange (CA)
Global Response (CO)
Grand Canyon Private Boaters Association (AZ)
Grand Riverkeeper (OK)

Grand Traverse Baykeeper (MI)
Great Egg Harbor Watershed Association (NJ)
Great Lakes United (NY)
Great Old Broads for Wilderness (CO)
Green Party of Utah (UT)
Greenaction for Health and Environmental Justice (CA)
Hackensack Riverkeeper (NJ)
Hells Canyon Preservation Council (OR)
Holiday River Expeditions (UT)
Housatonic River Initiative (MA)
Hudson Riverkeeper (NY)
Hurricane Creekkeeper (AL)
Idaho Sporting Congress (ID)
International Rivers Network (CA)
John Muir Project (CA)
Kalamazoo River Protection Association (MI)
Kansas Riverkeeper & Friends of the Caw (KS)
Kern Valley River Council (CA)
Kettle Range Conservation Group (WA)
Klamath Siskiyou Wildlands (OR)
Lake George Waterkeeper (NY)
Lake Ontario Waterkeeper (Canada)
Lands Council (WA)
Lawyers for Clean Water (CA)
Los Alamos Study Group (NM)
Lower Mississippi Riverkeeper (LA)
Lower Neuse Riverkeeper & Neuse River Foundation (NC)
Maine Rivers (ME) Maricopa Audubon (AZ)
Mattole Restoration Council (CA)
Milwaukee Riverkeeper (WI)
Montana River Action (MT)
Morava Riverkeeper (Czech Republic)
Narragansett Baykeeper (RI)
National Forest Protection Alliance (MT)
Native Forest Council (OR)
Native Forest Network (MT)
New Mexico Wilderness Alliance (NM)
New River Foundation (NC)
New York/New Jersey Baykeeper (NJ)
Northern California River Watch (CA)
Northwest Rafters Association (OR)
Northwoods Wilderness Recovery (MI)
Ocean Arks International (VT)
Ocmulgee Riverkeeper (GA)
Ohio Environmental Council (OH)
Oregon Natural Desert Association (OR)

Outdoor Adventure River Specialists (CA)
Patagonia (CA)
Patapsco Riverkeeper (MD)
Patrick Environmental Awareness Group (VA)
Pensacola Gulf Coastkeeper (FL)
Pequannock River Coalition (NJ)
Petitcodiac Riverkeeper (NB)
Protect Our Public Lands (OR)
Puerto Rico Coastkeeper (PR)
Puget Soundkeeper Alliance (WA)
Red Rock Forests (UT)
Red Rock Foundation (AZ)
Ridgeline & Open Space Coalition (CO)
Riparian Improvement Organization (CA)
River Project, The (NY)
River Runners for Wilderness (CO)
Riverhawks (OR)
Russian Riverkeeper (CA)
Sacramento River Preservation Trust (CA)
Salt Creek Watershed Network (IL)
San Diego BayKeeper (CA)
Santa Barbara Channelkeeper (CA)
Savannah Riverkeeper (GA)
Save America's Forests (DC)
Save Barton Creek Association (TX)
Save the Illinois River (OK)
Sea Shepherd Conservation Society (WA)
Seeds of Simplicity (CA)
Shundahai Network (UT)
Sitka Conservation Society (AK)
Sky Island Alliance (AZ)
Society of Environmental Communicators (AZ)
Solar Energy International (CO)
South Riverkeeper (MD)
Southern Appalachian Biodiversity Project (NC)
Southern Appalachian Forest Coalition (NC)
Southern Utah Wilderness Alliance (UT)
Spirit of the Sage Council (CA)
St. Johns Riverkeeper (FL)
Sublette Riders Association (WY)
Superior Wilderness Action Network (MN)
Tag-A-Long Expeditions (UT)
Taking Responsibility for the Earth and Environment (VA)
Taxpayers for the Animas River (CO)
Tennessee Clean Water Network (TN)
Tennessee River Revival (TN)

The 21st Paradigm (ID)
Tribal Environmental Watch Alliance (NM)
Tualatin Riverkeeper (OR)
Upper Chattahoochee Riverkeeper (GA)
Upper Neuse Riverkeeper (NC)
Upper Susquehanna Riverkeeper (PA)
Utah Environmental Congress (UT)
Ventura Coastkeeper (CA)
Virginia Forest Watch (VA)
Virginians for Wilderness (VA)
Wabash Riverkeeper (IN)
Waccamaw Riverkeeper (SC)
Wakulla/Aucilla Waterkeeper (FL)
Wasatch Mountain Club (UT)
Water Watch of Oregon
Waterkeeper Alliance (NY)
Waterkeepers Northern California (CA)
Waterkeepers of Australia
Western Watersheds Project (UT)
Western Wildlife Conservancy (UT)
Wetlands Action Network (CA)
Wild South (AL)
Wild Wilderness (OR)
Wildcoast (CA)
Wilderness Watch (MT)
Willamette Riverkeeper (OR)
Wolf River Conservancy (TN)
Wyoming Outdoor Council (WY)
Youghiogheny RiverKeeper (PA)

LR Letter 04/02/04

EIS/TCD Letter to Bureau of Reclamation

April 2, 2004
Ms. Nancy Coulam
Bureau of Reclamation
125 South State Street, Room 6103
Salt Lake City, UT 84138-11027

RE: Scoping Comments for proposed Temperature Control Device at Glen Canyon Dam

Dear Ms. Coulam,

Living Rivers, the Colorado Riverkeeper, and the undersigned organizations submit the following scoping comments pertaining to the Temperature Control Device (TCD) at Glen Canyon Dam as published in the Federal Register on February 17, 2004.

First, we find the notice in the Federal Register to be utterly vague, with no direct reference to the TCD environmental review process. Additionally, due to a Federal District Court order suspending public access to the Bureau of Reclamation via email and web pages, the public has been further inconvenienced in learning about this process. We therefore request that the scoping period be extended for at least another 30 days to adequately involve the public in this critical matter affecting the ecological integrity of Grand Canyon National Park. We also request that the Bureau of Reclamation seek consultation with the US Fish and Wildlife Service concerning the application of a TCD program for operations at Glen Canyon Dam.

While the 1996 Record of Decision (ROD) on the 1995 Glen Canyon Dam Environmental Impact Statement (EIS) addresses the need to pursue temperature control strategies at Glen Canyon Dam, it did so amidst a climate of much different information than presently exists. In fact, four years later the scientific controversy surrounding viability of such a proposal caused the Bureau of Reclamation to abandon its plans for this temperature control device (TCD). As noted below, even more information now exists to reinforce the concerns raised four years ago. This new information not only calls into question the merits of an independent TCD proposal, but the ROD's applicability to guiding Glen Canyon Dam operations as they pertain to endangered species recovery in Grand Canyon National Park. We therefore request that the proposed TCD be evaluated through an Environmental Impact Statement as opposed to the more cursory Environmental Assessment (EA) presently contemplated, and that this EIS, or a supplemental EIS, also address the areas of new information unknown or unforeseen when the 1995 EIS was prepared.

The initial EIS and ROD recommended pursuit of temperature modification strategies for Glen Canyon Dam releases amidst a range of other dam management proposals aimed at recovering endangered native fish at Grand Canyon. However, the Glen Canyon Dam Adaptive Management Program's most recent report to Congress, submitted in 2003, along with subsequent scientific conclusions clearly indicate that these programs have made little progress in meeting the mandate of the Grand Canyon Protection Act (GCPA). Nor have they met the goals established in the EIS, ROD, the Biological Opinion that analyzed the environmental impacts of Glen Canyon Dam, nor subsequent objectives set by the AMP itself.

The AMP has failed because the original EIS had inappropriate limitations, the AMP administrative process is ineffective, and the AMP lacks responsible leadership from the agencies of the Department of Interior (DOI): Bureau of Reclamation (BOR), National Park Service (NPS), US Geological Survey (USGS) and US Fish and Wildlife Service (USFWS). Unless these fundamental deficiencies are corrected, the dedicated efforts of all involved will continue to fail to restore the ecosystem in Grand Canyon National Park.

At the same time, scientific evidence shows that the AMP can not succeed in meeting program goals while constrained by the limitations set by the current EIS. It is evident that unless additional, more effective management options are implemented, the AMP serves only the purpose of documenting the decline of the Grand Canyon river ecosystem. Thus, more than enough evidence exists to require the immediate preparation of a supplemental environmental impact statement (SEIS), independent of the current TCD proposal, to examine in detail and anew the impacts of Glen Canyon Dam based on the significant failures of the present efforts and the myriad of changed circumstances that affect the Colorado River system. Since the release of the ROD in 1996, it is almost certain that the razorback sucker has joined the growing list of endangered species that have become extirpated in the Grand Canyon ecosystem. Grand Canyon National Park now faces the extirpation of yet another endangered species, the humpback chub. The ROD specifically foresaw the need for the recovery of this native fish, as well to establish a second population of humpback chub and to reestablish a population of the razorback sucker. Yet, scientific evidence indicates that neither objective will occur. The humpback chub's alarming decline and the failure to reinstate the razorback sucker tops a growing list of new scientific information that was not available or known when the 1995 EIS was completed.

As outlined below, the TCD must be evaluated through an EIS process, and this should be done in concert with a supplemental EIS process to address new information and new realities, which are also detailed below. The Bureau of Reclamation, together with her sister DOI agencies, are obligated to undertake such processes dictated by the National Environmental Policy Act (NEPA) in relationship to the operation of the Glen Canyon Dam. According to the regulations implementing NEPA: "agencies shall prepare supplements to either draft or final environmental impact statements if: (i) the agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R § 1502.9(c) (emphasis added).

Here, the dramatic decline of the humpback chub, the extirpation of the razorback, the failure of the BOR and the AMP to abide by the terms of the Biological Opinion and to meet the goals of the Grand Canyon Protection Act, and the wealth of new information relevant to the recovery of these species and their habitat combine to require such a supplement.

Listed below are the primary areas of concern:

1. New information relating to implementation of a temperature control device has not been addressed

The current drought situation has led to an increased concern over the unforeseen impacts associated with increased water temperature flowing into Grand Canyon from Glen Canyon Dam. While the original ROD encouraged managers to direct efforts to achieve warmer water temperatures to improve native fish recruitment, the EIS did not address in any detail the full range of impacts associated with such experiments. In

1999 uncertainty surrounding these impacts caused the BOR to shelve its plans to install a temperature control device (TCD) for Glen Canyon Dam's penstocks. Only the threat of legal action associated with the declining humpback chub population has resurrected the proposal. Although in 2003 the AMP Science Advisory Panel recommended full TCD testing and possible construction, along with flow modification and extensive research/monitoring, DOI has taken no action until just recently and even then, the agency suggested a program that is much downscaled. An Environmental Assessment for the proposed TCD is not adequate because of incidental take and other critical habitat factors for humpback chub that has changed since the implementation of the ROD.

Another concern surrounding the TCD involves the impact of the parasitic Asian tapeworm, which could proliferate and heighten the potential of disease for the humpback chub. Since the Asian tapeworm was not discovered in the ecosystem until after the ROD, it too constitutes new information to be addressed in a SEIS.

Certainly, some of the risks associated with the TCD could be overcome by incorporating other operational strategies, such as importing sediment into the system to disadvantage hunt-by-sight predators, and by initiating a periodic spike flow. These were not addressed in the original EIS, and therefore will also need to be incorporated into an EIS process for the TCD.

2. The AMP has failed to improve sediment balance that drives the physical ecological component of the ecosystem

New data collected since the EIS was completed confirms that the EIS needs to be modified to address sediment below Glen Canyon Dam. This is because the scientific community studying the native fish and involved in the recovery of these species, know far more about sediment dynamics than in 1992 when the EIS was developed. A core element of the ROD and the relevant Reasonable and Prudent Alternative (RPA) requires that BOR mitigate the impacts caused by the fact that sediment no longer enters Grand Canyon's river ecosystem. The plan required that experiments be conducted to conserve sediment in the ecosystem of the Colorado River. The first experiment took place in 1996 with subsequent attempts in the year 2000. In each case, efforts failed to produce permanent benefits of preserving beaches, stabilizing cultural sites, and enhancing critical habitat conditions as intended. The report to Congress and all supporting sediment research since concludes that net sediment loss from the ecosystem will continue to occur. Natural sediment inputs, combined with organic nutrients, are a fundamental pre-dam ecosystem components necessary to sustain native fish species. Returning to peak-power flows, in a weak attempt to reduce rainbow trout spawning success, will likely accelerate further the rate of sediment loss.

There are other adverse environmental impacts of sediment loss below Glen Canyon Dam not previously anticipated. The continued loss of sediment and inability to regularly enhance beaches have brought about a change in NPS management strategies concerning cultural resource protection in the river corridor. While NPS policies favor the preservation of archeological sites in situ, the BOR now finds it necessary to consider

immediate salvage operations to save what remains of sites threatened by further beach erosion. This will add federal costs to the program and increase tribal concern for these remnants of ancestral origin. These immediate and vital remedies were not considered in the original EIS.

The sobering conclusions regarding the inability to improve sediment resources have brought about discussions on how to augment sediment inputs in addition to reducing outputs. Any attempt to import sediment into the ecosystem below Glen Canyon Dam will be very costly and is not evaluated in the current EIS. In light of the inability to conserve sediment and meet Lower Basin water allotments as planned, options for improving the sediment and nutrient budget to benefit native fish and cultural sites must be explored in a SEIS.

3. The AMP is non-compliant with the Endangered Species Act and USFWS program recommendations

A. Razorback Sucker

The Biological Opinion uses urgent language to call for specific improvements of critical habitat for the humpback chub and the razorback sucker by 1998. The document states, "If the [Fish and Wildlife] Service determines a study design can not be developed that is expected to provide information to support removal of jeopardy to the razorback sucker and humpback chub populations in the Grand Canyon and associated tributaries, such will be considered new information and may be grounds for reinitiating formal consultation." (p. 35) (emphasis added)

Considering that a live, adult razorback sucker has not been observed in Grand Canyon for the last few years, many senior scientists believe that the razorback sucker has been extirpated from the Colorado River in Grand Canyon National Park. The lack of response in respect to performance criteria gives ample evidence that jeopardy has not been removed, and is sufficient ground for reinitiating formal consultation and the NEPA process immediately.

B. Humpback Chub

Monitoring by the USGS through the Glen Canyon Monitoring and Research Center (GCMRC), has documented a major and alarming decline in humpback chub population. Since 1995, when the EIS was completed, the adult humpback chub population in the Little Colorado River has declined by 50 percent. Two years ago the GCMRC scientists estimated that the population could be as low as 1,100 fish. In April of 2003, the USFWS reported, "Results of this ongoing study indicate that despite low catch rates of nonnative fishes in the Little Colorado River, humpback chub continue to decline and that aging adults are not being replaced in the spawning population." (Sponholtz, Pam and Randy Van Haverbeke)

It is undisputed that there has been a major decline in the population of adult humpback chub. Some federal scientists have recently argued that while humpback chub numbers have indeed declined, the present population is stabilizing. Yet, these scientists present no evidence to support this assertion. Privately, some of the same scientists are also saying that extirpation for humpback chub is quite likely. In any case, both this rate of

decline and the low absolute number of fish, constitute a vastly different humpback chub assessment than was assumed in developing the original EIS, and the steps necessary for humpback chub recovery.

Furthermore, there has been no progress made in establishing a second viable population of humpback chub in Grand Canyon as mandated by the ROD. Nor has a Management Plan for the Little Colorado River been implemented to protect the critical habitat of the humpback chub from pollution, reduction of instream flows, or truncation of their habitat due to unforeseen geologic events such as debris flows or landslides.

The RPA states that if sufficient progress is not made to remove humpback chub and razorback sucker jeopardy by 1998, then Seasonally, Adjusted Steady Flows (SASF) must begin at Glen Canyon Dam. This has not occurred. Additionally, the RPA also stated that in low water (drought) years, dam releases should be regulated using the SASF alternative. This, too, is not occurring.

As razorback sucker and humpback chub recovery efforts represented one of the cornerstones of the original EIS process, this new information, combined with the information we are presenting, constitutes ground to start a SEIS process.

4. Persistent drought conditions are likely to further complicate achieving program goals and are not being adequately considered or addressed

The Colorado River watershed is experiencing a fifth year of significant drought. Many climatologists are forecasting multidecadal drought conditions for the basin due to the occurrence of oscillating sea surface temperatures. This has already dropped the water level in Lake Powell reservoir by 113 feet to 44 percent of storage capacity. While specific flow recommendations were prescribed in the RPA for low water years, no assessment of management options has been conducted to address the impacts of sustained drought on achieving GCPA goals.

The reduced elevation of Lake Powell reservoir has already stimulated changes in water quality and the aquatic environment below the dam. The river's temperature has increased about 2° C, which is changing the dynamics of the food web and increasing the rates of colonization by exotic species such as the New Zealand mud snail. This particular alien species was discovered in the ecosystem after the ROD was signed. As the surface of Lake Powell reservoir continues to drop nearer to the penstocks, new pathogens, parasites and other exotic species are likely to invade the ecosystem in Grand Canyon and complicate the conservation of endangered native fish. Elevated temperatures raise questions about how this may affect alien fish populations and this predation threat to endangered humpback chub.

Furthermore, more water development projects for the Upper Basin are now being considered which would further deplete the already over-allocated waters of the Colorado River. The synergistic effects of drought and consumptive loss were not considered in the EIS. Predictions confirm that due to factors such as drought and over-appropriation, low levels will become the norm, rather than the exception, for Lake Powell reservoir. As a result, the BOR and her sister agencies must revisit its review the

environmental impacts of Glen Canyon Dam and update the analysis to account for this new development.

5. Credibility of the AMP science program is in question

A central component of the original AMP design was the development and administration of an independent, peer-reviewed science program. This program would carry out unbiased scientifically credible studies to inform the AMP's decision-making process. A small science staff (less than 12) was to administer the program through the competitive bidding process and to award research contracts to the most competent bidder. Both the bidding process and final reports were to be peer-reviewed to assure quality and non-biased reporting. The GCMRC, the science management component of the AMP, is now operating much differently than established in the original guidelines set for this administrative component of the USGS. The science staff is very large and most programs are being done in-house with no independent peer-review.

Prior to the EIS the Glen Canyon Dam Environmental Studies program was seriously criticized by the National Research Council for this same failure to meet accepted methods to assure scientific credibility. An independent review of the current AMP science program would reveal a loss of integrity and standing when the GCMRC model was abandoned in favor of what currently exists today in the GCMRC.

At a time when the Grand Canyon is about to lose another native fish species, the AMP is cutting back on scientific work, seemingly at the request of the Western Area Power Administration, whose hydropower revenues are used to fund the science. The research for the 2000 Low, Summer Steady Flow (LSSF) represents one example of how the AMP science program has been affected. First, the experiment was fast tracked, with limited opportunity for outside input or competitive bidding for the monitoring. Pre-experiment flow data was not compiled and therefore the design of the experiment may not have been properly formulated. Scientists did not start collecting data on the river until after the first spike flow occurred. Although the design of the experiment was released for the competition, the one proposed by the contractor was not accepted. Also, this experimental flow was originally proposed to benefit native fish with relatively low, steady flows in accordance with the Biological Opinion, but the final experiment allowed for less than the recommended time.

The original EIS assumed that experimentation and recovery efforts would be achieved with firm attention paid to proper scientific protocol and management of public funds toward endangered species recovery in Grand Canyon National Park. This is not occurring. In fact the opposite is occurring. The AMP has enacted budget reductions and caps without supplemental funds to adequately maintain and preferably improve monitoring and research in Grand Canyon National Park. Finally, AMP is not providing adequate management leadership while the USGS/GCMRC is not contributing credible independent data required by the mandates prescribed by the ROD, RPA and subsequent charters and guidelines. Together, these factors warrant immediate preparation of an SEIS.

6. Inability of the AMP decision-making process to address fundamental resource recovery requirements is limiting progress

The ROD called for the establishment of the AMP as a stakeholder group to advise the Secretary of the Interior on implementation of Grand Canyon programs. The application of the ROD is the sole responsibility of the AMP. The AMP has been, and continues to be, controlled by the water and energy groups, groups whose self-interest is to avoid long-term change from the status quo. These groups necessarily are not ultimately dedicated to the protection and recovery of the Colorado River and the native fish it should support.

While the make-up of the group has provided for a bias toward representing water and energy interests, it was anticipated that the program's mandate to mitigate downstream impacts of dam operations would ensure that sufficient attention would be given to the needs of the resource. This has not occurred, as exemplified by the failure to undertake RPA programs, the decline in humpback chub, the extirpation of the razorback sucker, continued loss of essential sediment, and accelerated degradation of archeological sites. A key reason for this continued program failure is that the AMP decision-making process continues to demonstrate a clear bias toward minimizing loss of hydropower. Also, the AMP evades recommendations that would create legal conflicts between the Organic Act, Endangered Species Act, NEPA and even GCPA. The workings, the make-up and the ineffectiveness of the AMP must be reevaluated in a SEIS process.

Evidence to support prejudice for one resource over another recently occurred when the trout population suppression flows were modified in a fast-track manner without proper consultation or due process within the AMP. Moreover, the current Sunday flow regime has proved to be inadequate for true trout suppression and demonstrates that concerns over hydropower prejudice for efforts to conserve endangered species. There has also been a recent suggestion for a flow regime of 5,000 to 25,000 cfs for year 2005. These proposed flows, the environmental impacts of which have never been addressed, are outside the range prescribed for the conservation of natural and cultural resources by the ROD and the Biological Opinion.

Flow experiments, especially those designed to benefit humpback chub recruitment have been of limited duration, and as such generated inconclusive results. Results of the LSSF were inconclusive because data was neither collected prior to initiating the flows nor afterwards. In this particular experiment the flow was neither timely, nor of sufficient duration for the food web to adjust and respond. The RPA recommended, "experimental flows will be conducted for a sufficient period of time to allow for experimental design, biological processes to function, and for variability inherent in riverine ecosystems to be expressed" (p. 36).

Overall, the AMP is failing to achieve GCPA goals because the ROD and subsequent program design do not allow for meaningful adjustments in key, aquatic ecosystem elements. The program continues to focus on treating the symptoms of ecosystem decline rather than what is actually causing the decline. In other words, the habitat is in dramatic decline and the AMP is doing nothing meaningful—is failing to make any hard

choices—to bring the habitat closer to pre-dam conditions. These critical ecosystem elements are well documented and include:

- A. Natural hydrograph that would redistribute sediment during the spring run-off and stimulate native fish spawning.
- B. Natural thermograph with warmer summer water temperatures and colder winter temperatures.
- C. Annual inputs of sediment, nutrients and woody debris to create generally turbid water conditions.

Again, these failures underscore the need to take a renewed look at the whole process, not just the TCD proposal, as this process has not served the Colorado's native fish and has not followed the guidelines, recommendations and requirements set forth to achieve recovery of these species.

7. Our concerns for the First Nations

The AMP has not fully engaged the process that threatens the cultural and natural heritage of the First Nations in Grand Canyon. They have also been given a minimal amount of resources to monitor their cultural properties in Grand Canyon. This is a violation of the trust that was developed with the tribes during Glen Canyon Environmental Studies and is allowing the government to continue to minimize the value of these tribal resources.

8. Recommendations

Based on the above, the following steps are legally required as part of the effort to protect and restore native fish and their critical habitat to the Colorado River below Glen Canyon Dam.

- A. The BOR must undertake an EIS for the proposed TCD. This EIS, or a supplemental EIS, must address all new information unknown or unforeseen when the original EIS was prepared.
 - B. As an EIS or SEIS could take several years and there are a number of interim actions the BOR and the AMP must take, both in terms of science and in the operations, to help impede the further decline of natural and cultural resources in the Grand Canyon while we await a new ROD.
 - C. Because an EIS or SEIS could take several years, the AMP must undertake interim actions within six months to help forestall the further decline of natural and cultural resources in the Grand Canyon until a new ROD is issued.
1. Reorganize the AMP to be proactive so that it is comprised of only the responsible agencies and sovereigns: BOR, NPS, USFWS, and the Tribes. (Participation by other stakeholders would be available through public process as explained below in #2.)

2. Require the AMP meet twice a year with a 30-day comment period prior to each meeting. This program would use interactive communication and video technology that was not available during the 1996 EIS process and would provide for more stakeholders to be heard.

3. Reorganize GCMRC to be an administrative organization outside of the DOI. This would remove or militate against agency bias and shortcomings, and be a positive step toward a truly independent science organization. Competition and protocol development should follow NPS guidelines for science activities within national parks.

D. Humpback Chub population and habitat monitoring

All reports and analyses by the AMP have focused on humpback chub numbers, and not the relative condition of the fish or health of the critical habitat. This must change. While some of this data has been collected, there has not yet been any ongoing analysis on the condition factors of the humpback as recommended by the USFWS. Additionally, factors relevant to habitat such as feeding habits, water quality, age class, genetics, and recruitment and migration patterns for all periods of the humpback chub's life span need to be documented. The new AMP must also determine the population level and changes in biological parameters that would trigger a cessation of handling humpback chub so as to avoid incidental take on the remaining population.

E. Follow the Biological Opinion for the Humpback Chub and the natural river hydrograph

As a baseline, all flow decisions should be evaluated by how well they mimic the natural hydrograph. So far, the AMP has ignored this fundamental principle of river ecology. Without it there will likely be no hope of establishing a second population for the humpback chub, or of restoring its critical habitat as called for in the RPA and required by law. AMP should continue intensive alien fish suppression at the Little Colorado River reach.

F. Expand the critical habitat throughout the Grand Canyon, including the tributary streams and the Glen Canyon reach.

G. Develop a scientifically sound monitoring program that extends current non-GCMRC programs through a SEIS process so continuity of ecosystem data sets is achieved. These data sets should be linked with water quality, lower and higher trophic levels, riparian vegetation and beach sand monitoring. GCMRC monitoring programs should be delegated to past or present contractors for one year and then all contracts should be opened for competitive bidding under the new AMP and a SEIS. If these contractors do not want the work then the Grand Canyon Science Center will conduct the monitoring as protocols dictate.

H. Initiate a comprehensive cultural site degradation abatement program throughout the entire river corridor in accordance with NPS standards.

I. Initiate development of a River Management Plan for the Little Colorado River as called for in the RPA.

In conclusion, the Grand Canyon is treasured by the citizens of the world and the natural values that make up this spectacular place must not be further compromised. We urgently request serious and immediate action to address these matters, beginning with a new EIS process.

Sincerely,

John Weisheit
Colorado Riverkeeper

[On behalf of the following 159 groups](#)

LR Press Release 04/02/04

159 groups demand new EIS to save Grand Canyon from Glen Canyon Dam

Can Grand Canyon Survive Glen Canyon Dam? National Coalition Demands New Federal Study!

Contact:

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From Alaska to Florida, more than 150 environmental, social justice and recreation groups today are calling for a new federal study of if, and how, the nation's fourth tallest dam should continue to be operated. Charging that eight years of tinkering with flows from Glen Canyon Dam on the Colorado River have failed to reverse the dam's impacts on endangered fish in Grand Canyon National Park, as required by law, the groups insist that the government is legally compelled to prepare a new Environmental Impact Statement (EIS) on dam operations.

In an [eleven-page letter](#) being submitted today to the U.S. Bureau of Reclamation, which built and operates the dam, groups reveal how despite more than \$80 million dollars invested in fish recovery efforts, one more of Grand Canyon's endangered fish species, the razorback sucker, has joined the growing list to become extinct in the Grand Canyon. Another endangered fish species, the humpback chub, has declined to only 1,100 fish from 8,000 in 1993.

In response to the decline, the Bureau of Reclamation's Glen Canyon Dam Adaptive Management Program is accepting public comments on a fast-tracked proposal to install a temperature control device on the dam to warm the water flowing into Grand Canyon.

"This represents the continuation of the same flawed, piecemeal approach that has got us where we are," says John Weisheit, director of Living Rivers' Colorado Riverkeeper Program, which is leading the coalition calling for the new EIS. "Glen Canyon Dam has robbed Grand Canyon of the natural flows, sediment and nutrients, and warm water necessary to sustain the unique ecosystem of this World Heritage Site. The public has

had enough, and wants all of these issues addressed in comprehensive manner before we lose what little we have left."

Following completion of an EIS on Glen Canyon Dam in 1995, the Glen Canyon Dam Adaptive Management Program was established to mitigate the tremendous impacts of the dam's operations on the river ecosystem in Grand Canyon National Park. The coalition's letter demonstrates how these recommendations are being ignored, and even when adhered to, are not achieving the intended results, thus warrant a new EIS as prescribed for by the National Environmental Policy Act.

- * The program has spent much of its resources attempting to conserve Grand Canyon's remaining sediment, as 95 percent of the Canyon's sediment and nutrients have been trapped behind the dam. These efforts have all failed to bring any lasting benefit to fish habitat or stabilization of cultural sites as called for by the EIS.

- * Recent attempts to use dam operations to control alien fish predation on endangered native fish have been haphazard and have yet to demonstrate any meaningful results.

- * In the event that endangered fish populations did not increase by 1998, water released from Glen Canyon Dam was supposed to shift toward a regime of at least partially mimicking the river's natural flow. This has not occurred.

- * A special set of flow recommendations for low water years was prescribed, but despite five years of drought, these recommendations have been ignored.

"Bottom line, It's numbers, and we have far fewer fish now than when they started; that's way it's critical that a new EIS be completed before installing a temperature control device on Glen Canyon Dam," says Michelle Harrington with the Tucson-based Center for Biological Diversity. "It was once thought that attempts to bring the Colorado River's water temperature to a level more consistent with native conditions would be a simple proposition. The drought has taught us that absent natural flows and new sediment inputs, that disruptions in temperature changes could affect the food supply for the remaining endangered fish, and we could also see an increase in alien fish which prey on the natives."

"As originally designed, the Adaptive Management Program was an excellent approach to addressing the serious impacts on Grand Canyon from this dam," adds David Haskell, retired Science Center Director for Grand Canyon National Park, who participated in the AMP program since its inception in 1995 and has monitored its progress since his retirement. "However, the 2002 AMP Report to Congress clearly indicated that six years of effort had not produced any beneficial results. Since then, the failure of the AMP to seek more effective methods to meet the goals of the Grand Canyon Protection Act has turned this once successful program into a dismal failure."

To date, the Glen Canyon Dam Adaptive Management program has resisted efforts to undertake a new EIS, in part because Glen Canyon Dam proponents understand that such an EIS will have to explore the possibility of decommissioning Glen Canyon Dam

as the best way to comply with the laws protecting the ecosystem in Grand Canyon's river corridor.

"Interior's actions paint a clear picture of disregard for the Grand Canyon Protection Act, Endangered Species Act, and National Park Service Organic Act," adds Steve Fleischli, Executive Director of the New York-based Waterkeeper Alliance. "Why must the public always be forced into the courtroom in order to protect a piece of our famed natural heritage from government malfeasance? That needs to change."

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Additional Information

[April, 2, 2004 Letter to the Bureau of Reclamation](#)

[List of the 159 groups endorsing the letter](#)

[Proposed temperature control device](#)

River News 04/04/04

Water ebbs, worry flows

Through several years of drought, Colorado and neighboring states have relied on Lake Powell to deliver water downstream. But as the reservoir's water levels drop, fears of a water war, or of severe shortages, rise.

By Theo Stein Denver Post Environment Writer Sunday, April 04, 2004 -

Lake Powell, the desert oasis that has served Colorado as a crucial fail-safe for water deliveries throughout the Southwest during five years of hard drought, is now more than half empty.

If the drought persists a year or two more, the 186-mile-long reservoir in Utah and Arizona could be drained dry as early as 2007, federal officials say.

That would propel Colorado - and 30 million other Westerners who depend on the Colorado River for their drinking water - into an uncertain future punctuated by recurring water shortages and decades of litigation, experts warn.

On Friday, the Bureau of Reclamation said it expects only 55 percent of the normal runoff to flow into Lake Powell between April and July. That guarantees the big reservoir, already down to 42 percent of capacity, will recede even further by 2005.

"Time is running out," said Pat Mulroy, director of the Southern Nevada Water Authority. "The drought no one thought would even happen is here."

Under the Colorado River Compact of 1922, the states of Colorado, Wyoming and Utah are required to allow an average of 7.5 million acre-feet per year to flow past a river gauge below Lake Powell for use by California, Arizona and Nevada.

The four upper-basin states have met their compact obligations during the five-year drought by releasing water from Lake Powell. But if Powell dries up - and hydrologists caution that is still a big if - the state could eventually be required to turn off the massive transmountain tunnels that have supplied Colorado River water to Front Range residents and Eastern Plains farmers for more than 50 years.

Federal and state officials have not thought through how they would react to the nightmare scenario of a severe extended drought. But Lake Powell's steadily declining levels have convinced many that the time to evaluate the vulnerability of the West is now.

"That's something we in Colorado need to address," said Scott Balcom, a Glenwood Springs water lawyer who represents the state on Colorado River issues. "These issues haven't been explored as deeply as we need to this year."

State Engineer Hal Simpson said that if the next year is dry, he will begin a formal process of developing a plan for shutting off state water users in the event that Powell drains.

Simpson, who spent most of the 1990s involved in fights with Kansas and Nebraska over Colorado's overuse of the Arkansas and Republican rivers, said developing a curtailment plan would be difficult.

"But if this year's predictions hold true and we drop Lake Powell an additional increment, we have to make sure we're in a position to administer the state's water," he said.

The forecast released Friday follows four years in which mountain runoff was 62, 59, 25 and 53 percent of average, and establishes the period as the driest five consecutive years in a century of record-keeping, Bureau of Reclamation hydrologist Tom Ryan said.

"We can handle another two or three more years like this," Ryan added. "Then it's too late to plan."

Lake Powell was created to be a 24.3 million-acre-foot water bank, storing snowmelt in wet years and releasing it in dry years. (An acre-foot is 325,851 gallons, or enough to supply two families for a year.)

As recently as 1999, the lake brimmed full, forcing engineers to spill excess water through the dam - water that was quickly slurped up by California.

But the lake's volume dipped to 10.2 million acre-feet this month, a level not seen since 1971 - when the impoundment was first filling.

Now the receding shoreline has stranded the once-bustling marina in Hite, Utah, and forced National Park Service officials to stop laying new concrete boat ramps to chase the falling waters for boaters at Wahweap, on the Utah-Arizona border.

Drought is also draining Lake Mead, Powell's slightly larger downstream sibling reservoir, which sits at 59 percent of capacity. During the past five years, the two vast impoundments have lost a volume equivalent to a full Lake Mead, officials say.

Several water experts point out that the lakes are functioning exactly as intended, and that the seven states that depend on the river still have time to prepare for a worst-case scenario - and settle contentious and unresolved issues outside of the courtroom.

"It makes you thankful for the people who had the wisdom to build Powell as big as it did," said Department of Natural Resources Director Russell George, Colorado's top water official.

Several former state and federal officials added that, at minimum, the threat of continued drought should force water managers to seriously consider questions that were once unthinkable.

For example, what would happen if Simpson had to start shutting down existing Western Slope water users to allow the legally required amount of water to flow to California, Arizona and Nevada?

Or should the administration of Colorado Gov. Bill Owens continue with plans to encourage diversions of more Western Slope water to the Front Range to provide for the estimated 2.8 million new residents the U.S. Census Bureau estimates will flood into Colorado by 2030?

"The moral is that if we think we have more Colorado River water that's developable, we'd better think again," said David Getches, dean of the University of Colorado Law School. "We may already be beyond the point of safe development of Colorado."

It's unclear whether, under a continuing severely dry scenario, there is additional water to be developed, agreed Denver Water Manager Chips Barry, whose agency is evaluating a project that will bring more water from the Western Slope.

Getches, the state's natural resources director under Gov. Dick Lamm, knows he is delivering an uncomfortable message.

"If there is a compact call, we hit the wall," he said. "We wouldn't be able to use water called by the lower basin. We have to think about that."

If Powell were to dry up, the upper basin might still have two or three years of grace before the Interior Department, which is the lower-basin river master, declares a "deficit" and orders Colorado, Wyoming and Utah to curtail their use.

The compact requires an average of 7.5 million acre-feet a year for 10 years, but the Bureau of Reclamation has been releasing 8.23 million acre-feet a year from Powell. State officials say Colorado would argue that it owed the lower basin no water until the 10-year average fell to the minimum of 7.5 million acre-feet a year.

In addition, Bureau of Reclamation officials would first drain Blue Mesa and other federally operated reservoirs in the upper basin before demanding more from the states. That might buy Colorado one more year of grace.

But after that, ranchers, ski resorts and cities whose water rights postdate 1922, the year of the compact, could be required to stop using the water they have come to depend on.

"One scenario is, we start with most junior rights and start regulating those until we get the desired amount of flow at the state line," Simpson said.

But very little of the state's western waters were developed prior to the compact, so experts warn that a call on the Colorado River has the potential to affect nearly everyone.

If the shutoffs proceeded in a strictly chronological order, the losers could potentially include:

The Colorado-Big Thompson project, which takes about 250,000 acre-feet of Colorado River water to Fort Collins, Loveland, Greeley and the farms of the Eastern Plains.

Denver Water's transmountain diversions, including water from Lake Dillon and the Fraser River Valley, which average 120,000 acre-feet a year.

Colorado Springs' supplies, including the Homestake Tunnel and the Frying Pan-Arkansas Project.

A large majority of the water users in the Gunnison Valley who draw water from Blue Mesa Reservoir - which would be one of the first to be drawn down by federal officials.

Summer mountain recreation, particularly golfing and rafting.

But Simpson said there might be an argument for spreading the shutoffs around the state's western basins based on criteria other than strict adherence to the prior appropriation doctrine.

"It gets quite complicated," he said. "And at the same time there would be some really big legal issues with other states that would have to be dealt with."

One of those issues involves whether the upper basin is required to contribute half of the 1.5 million acre-feet the United States owes Mexico every year. Colorado, Wyoming and Utah might demand credit for their contribution, several water lawyers said.

Other fights would likely erupt in the lower basin, where Arizona could get shut off completely.

"That would be the single most counterproductive thing they could do," argued Mulroy of the Southern Nevada Water Authority, whose agency is spending \$32 million this year alone to rip out turf across Las Vegas to free up more water.

Mulroy said a megadrought like those recorded in tree rings and other paleontologic records would require Westerners to suspend fiercely guarded traditions regarding water use. That could mean some residents of one state would temporarily give up the use of their water to prevent a crisis in another state, she said.

It could also mean suspending the "doctrine of prior appropriation," which has assumed an almost sacred position in Western water law, Mulroy said.

"We will have to shift from what's on paper to what's needed for homes and communities," she said. "It doesn't have to be perpetual, but in order to get through an emergency, it's going to have to happen."

Many water scholars point out that the laws governing the Colorado River, of which the 1922 compact is but one part, have never really been tested. Rather than a coherent whole, the "law of the river" - a mix of compacts, congressional acts and legal decisions - is "really a bunch of moving parts," said John Leshy, a Hastings College law professor who served as a lawyer with the Clinton administration.

"If there is a compact call, we really are in no man's land," he said. "If there can't be some sort of settlement patched together, we're looking at horrendous litigation."

Leshy said the legal fights could drag out for decades against a backdrop of severe water shortages.

"It would stack up as the biggest water war in the West."

Even if Powell doesn't bottom out, Bureau of Reclamation officials say it will take a minimum of 13 years to refill with average precipitation. With current demand in the upper and lower basins, an average inflow year will increase system storage only by about 3 percent, they said.

As long as Powell remains less than half full, Colorado could remain vulnerable to an extremely dry year.

"If Lake Powell is sitting there with 10 million acre-feet or less, we will always be at risk of the next 2002 or 2004," said Eric Kuhn, manager of the Colorado River Water Conservation District.

Others wonder whether the potential crisis may be a trial run for a rancorous new future that may be closer than anyone imagined.

"If this is the beginning of global warming," said Mulroy, "then we've got issues."

A top federal water official had a grimmer message: The massive plumbing network built to serve the exploding Western states has removed much of the cushion that was available in earlier decades.

"We're no longer fighting about the water we will need decades in the future," said Assistant Interior Secretary Bennett Raley, a former Colorado water lawyer.

"The crises we will face will be in normal years, and they'll be about meeting existing demands.

"There's just not enough water."

Letters to the editor

April 11, 2004

More serious problems

Your article on the natural draining of the Lake Powell reservoir served the public well in preparing those who rely on the Colorado River for sustenance. But the problem is actually more serious, considering other factors related to the lowering of reservoirs held back by high dams in desert regions such as the Colorado River basin.

For example, in the upper reaches of Lake Powell, the Colorado and San Juan rivers combined are currently flowing over 60 miles of exposed sediment fill. It is this sediment fill that closed the boat access at Hite Marina. Through natural erosion, these two rivers are re-mobilizing sediment and organic materials into Lake Powell. The re-mobilized sediment is advancing closer to Glen Canyon Dam and diminishing its lifespan, and the decomposition of the organic material is consuming the oxygen in the reservoir and lowering the water quality.

Another water-quality problem is that there is not enough input of fresh water, and the saline content of the reservoir is consequently much higher. Saline water is detrimental for agriculture and corrodes the plumbing systems in our homes and businesses.

Power production is also in jeopardy. When Lake Powell reaches a capacity of 6 million acre-feet, the turbines cannot be safely operated any longer. With only 10 million acre-feet in the reservoir at present, we are closer than we realize to occasional shutdowns of turbines at Glen Canyon Dam.

When a turbine shutdown occurs, the emergency river outlets must be opened to keep the river ecosystem in Grand Canyon National Park alive. This water comes from the very bottom of the dam where the water is not only very saline, but is also high in hydrogen sulfide, which is corrosive to the metal working parts of Glen Canyon Dam. It is obviously not ideal water for an ecosystem that has already lost four species of native fish.

More importantly, we are not fully aware of the amount of waste that occurs from evaporation and seepage from our reservoirs and canals. Basinwide, the total loss from such unconsumed water amounts to 3 million acre-feet per year.

Keeping Lake Powell drained and then decommissioning Glen Canyon Dam makes more and more sense. It is obvious that we have too much storage in the system and that we have planned our communities to be water-intensive, as opposed to water-conservative. If we want a healthy Colorado River ecosystem and healthy communities,

we must re-evaluate the way we manage the Colorado River system as soon as possible.

JOHN WEISHEIT

Moab, Utah The writer is conservation director of Living Rivers, a national organization that promotes large-scale river restoration, habitat preservation and water user responsibility.

Regional News 04/08/04

Shorter winters, drier summers hint at climate change

By LORNA THACKERAY Of The Gazette Staff

Early snowmelt has become a hallmark of Montana's prolonged drought. Some scientists are beginning to think that it may be much more than that.

Full-fledged climate change, which could mean shorter winters and drier summers, is already under way across the Western United States, said Steve Running at the University of Montana.

"We have every reason to believe that it will continue or even accelerate," he said.

"Absolutely, we are in a multi-decadinal change in climate."

Running is director of UM's Numerical Terradynamic Simulation Group, which makes software for NASA's environmental satellites. The group operates the Montana Climate Center, which opened last fall in Missoula.

Evidence collected over the last 50 years suggests that rising temperatures have fostered a decline in springtime snowpack of 15 to 30 percent in Montana and that springtime peak river flows now come an average of two weeks earlier, he said.

The snowpack, which holds about 75 percent of the West's water supply, acts as a reservoir that keeps streams flowing in the summer months. If the melt continues to recede earlier into spring, resulting summer water shortages could affect everything from agriculture and hydropower to fish habitat, the professor said.

It's a fear that he shares with Belgrade native Kelly Redmond, Western regional climatologist for the National Oceanic and Atmospheric Administration Climate Center in Reno, Nev.

The degree of change in spring melt varies, Redmond said, but the trend toward earlier melt is widespread across the West. Yellowstone Basin snow begins to melt five to 15 days earlier than it did 56 years ago.

The trend becomes more pronounced as waters flow west. West of the Divide in Montana and into Idaho, Washington and Oregon, spring melt comes 15 to 25 days earlier, Redmond said.

"It's kind of taken us all aback," he said in a telephone interview. "It's kind of hard to see this happening right under our nose without us noticing."

Only in the last few years has early snowmelt drawn much interest, he said, but he expects to see research and public information on the trend accelerate.

Evidence for earlier melts is strong on a lot of fronts, Redmond said.

At the top of the list are temperature statistics. Records indicate that America is warming, especially in the West, and especially in February, March and April. For most of the West, Montana included, temperatures during that critical period have increased a half-degree to a full degree every decade for the last 30 to 40 years.

March 2004 stands out as a prime example, Redmond said. It was an "exceptional" month, the climatologist said.

All across the West, it was warm and dry. For south-central Montana, 2004 produced the fourth-warmest March since 1895. It was also among the driest.

"Normally, March is a snow production month," he said. "But this year it was a deficit month." Montana wasn't alone in its lack of snowpack. Utah started the month expecting near average spring runoff for a change, Redmond said. By the end of the month, the state was bracing for one of the lowest runoffs ever.

Statistics from Natural Resources and Conservation Service snow surveys show that snowpack declined 16 percent in Montana between March 1 and April 1. The losses were more severe elsewhere in the West, including Nevada, 54 percent; Arizona, 51 percent; New Mexico, 43 percent; Utah, 39 percent; and Wyoming, 19 percent.

A warm March and a warm winter worked together. In Montana, the average temperature from October through March was 3 degrees above normal - the 11th-warmest winter on record. Even winter-ravaged northeastern Montana surpassed its winter average by 1 degree.

Running said that studies of the Missoula area showed the number of frost-free days has increased 15 days there in the last 50 years and that annual snowfall has fallen from an average of 55 inches to 40 inches.

Related, but separate evidence of earlier snowmelt comes from studying peak spring flows for more than 1,000 streams in the Western states, Western Canada and Alaska over the last 50 years, Redmond said. Those studies show snowpack disappearing from one to three weeks earlier in the spring. What researchers measured was the "spring pulse" of all those streams.

Snowmelt begins after the pack has ripened, Redmond said. It accumulates enough heat that the entire pack reaches 32 degrees, before it starts to melt.

"When the snow begins to melt, it does it in a fairly abrupt fashion," Redmond said. Scientists can go back through streamflow records and mark the date when the water starts to come down - that's its spring pulse. Records show that the pulse happens almost simultaneously throughout the region. The pulses kick in usually within two or three days of each other, he said. Research shows that, from New Mexico to Alaska, the pulse is getting earlier, Redmond said. This spring a river gauge in California's Yosemite National Park recorded the spring pulse on March 6, the earliest ever in 87 years of monitoring.

A third body of evidence originated more than 40 years ago when then-Montana Climatologist Joe Caprio began collecting data on the life cycles of lilacs and honeysuckle, Redmond said. Caprio recruited 500 observers in 11 states to record when the plants first showed signs of life in the spring and when they blossomed.

Analysis of the information indicated that the plants are blooming seven to 10 days earlier now than they did 40 years ago, Redmond said. "They all kind of give a consistent pattern," he said of the temperatures, spring pulses and blooming dates.

Warmer springs and earlier melts mean a longer growing season and that plants will be using more water, Redmond said. It may also mean that more moisture will go directly into the atmosphere, he said.

"The major thing to sort out here has been whether this is a natural variation in climate or if it is something else," he said. "There is strong evidence that a good part of it is natural."

For Running, the debate has already been resolved. He said human activity is clearly playing a significant role in climate change.

"We'd better start getting serious about energy that's not based on petroleum," he said. If the world community doesn't find some solutions, consequences will be dire, Running said.

"People are going to have to face up to it head on or get used to less and less snowpack and more and more drought," he said.

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LR in the News 04/13/04

Colorado tops list of rivers in danger

Radioactive tailings near Moab blamed
By Lee Davidson
Deseret Morning News

WASHINGTON — National environmental groups are declaring the Colorado "America's Most Endangered River," mostly because they say 110,000 gallons of

contaminated water seep into it daily through radioactive uranium tailings near Moab.

Photo caption: A pond is on top of uranium tailings at the old Atlas Minerals site near Moab in 1998. In the background is the Colorado. Environmentalists are worried that the tailings may be capped in place instead of being removed.

"The Colorado River is not yet the most polluted river in the country, but it could become so if the current problems are allowed to fester," said Rebecca R. Wodder, president of the environmental group American Rivers.

It and partner groups — ranging from the Sierra Club to the Grand Canyon Trust and Friends of the Earth — each year release a list of America's most endangered rivers. They plan to formally release it this morning at the National Press Club.

The groups explained in advance that they put the Colorado atop this year's list largely out of worry that the Energy Department may not remove tailings from the old Atlas uranium mill site adjacent to the river and instead cap them in place.

"Someday a big flood like those that raged through these canyons in the 19th century is going to lift that pile into the river and irradiate Canyonlands National Park. It is pure folly not to move this pile away from the flood plain of the Colorado River," said John Weisheit with the environmental group Colorado Riverkeeper.

Bill Hedden, with the Grand Canyon Trust, added, "As long as this material remains on the riverbank, it poisons the river every day and threatens water supplies with catastrophic failure."

The Energy Department is scheduled to release next month a draft environmental impact statement that will identify a preferred option for handling the tailings. Utah politicians have vociferously opposed capping it on site — the cheapest alternative — as have California politicians worried about radiation in their downstream drinking water.

About 13,000 tons of uranium tailings are on 130 acres at the Atlas site. Interim remediation by the Energy Department now includes dewatering the tailings and pumping contaminated groundwater to an evaporation pond on top of the pile.

However, environmental groups say an estimated 110,000 gallons of contaminated water still seep into the river from the unlined pond every day — with contaminants



including uranium, radium, ammonia, cadmium, arsenic, selenium and other heavy metals.

"Because this pile is so large and because we are so few in this remote region, they may be thinking they can save millions of dollars and justify their actions to stabilize this pile in place next to the river," Weisheit said. "Well, they would be wrong to think this way. Losing this pile to a big flood or the river's migration could affect Los Angeles as much as it would affect us here in rural Utah."

Sarah Fields, coordinator of the Nuclear Waste Committee of the Sierra Club Glen Canyon Group, said, "For thousands of years this tailings pile will remain toxic and radioactive to humans and animal life. In the scale of hundreds of years, it is inevitable that a catastrophic flood will consume this pile and devastate the down-river environment."

The environmental groups say the Colorado is also threatened — but not so dramatically — from human waste reaching it from boom towns in California and Arizona.

They say fast-growing areas there have the largest concentration of people in America that use septic tanks. They say overloaded systems are allowing high levels of nitrates to seep into the river and efforts to upgrade wastewater systems there are hampered by lack of federal support.

Also, the groups say that toxic ammonium perchlorate is trickling into the river from a former military facility near Henderson, Nev.

"Our tests last year found that perchlorate levels in winter lettuce irrigated by the Colorado were four times higher than the EPA's recommended safe dose for a glass of drinking water," said Bill Walker, vice president of the Environmental Working Group.

"The cropland irrigated by the river produces most of the lettuce and other produce sold nationwide during the winter months," he said, "which means that perchlorate is not just a local or regional problem but a concern for every American."

Wodder with American Rivers said, "The problems identified here all require immediate action, but those should be just the first steps towards a comprehensive restoration effort." She added, "We call on the nation's leaders to take the next step and develop a binding cleanup plan to ensure that the Colorado River can meet the many demands placed on it for generations to come."

LR Press Release 04/13/04

Colorado River: most endangered river for 2004

April 14, 2004

For immediate release

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Uranium Waste Pile at Moab, Utah Threatens Public Health

(Moab, UT.) - American Rivers, a national river protection and advocacy organization, today announced it has designated the Colorado River as America's Most Endangered River for 2004. Their annual report's focus is on rivers facing the most uncertain futures, not on those with the worst chronic problems.

On the Colorado River the most dangerous and volatile situation is the Moab Uranium Mill site (former Atlas Mill) near Moab, Utah. There is an estimated 110,000 gallons of radioactive groundwater seeping into the River each day from a crude, unlined riverbank impoundment where almost 12 million tons of radioactive waste is stored. The National Academy of Sciences has warned that it is "nearly certain that the River's course will run across the Moab site sometime in the future." The Department of Energy (DOE) will soon release the Draft Environmental Impact Statement the site. The DEIS will not identify a preferred remediation alternative. Donald Metzler, DOE's Program Manager for the Moab Mill Project, has stated that the DOE has not yet made a decision regarding whether the impoundment will be capped in place or moved to an off-site location. The DEIS will announce the preferred alternative for groundwater remediation so that the U.S. Fish and Wildlife Service will be able to complete its Biological Opinion.

One of the partners for the Most Endangered River Initiative is the Colorado Riverkeeper, John Weisheit, who works daily from an office that is located within a mile of the Atlas Mill site, the second largest uranium waste pile in the United States. "Visitors come from all over the world to enjoy the Colorado River through Canyonlands National Park downstream. They enjoy the scenery, the rapids and all the good things one expects to find from such a treasured landscape. Someday a big flood like those that raged through these canyons in the 19th Century is going to lift that pile into the River and irradiate Canyonlands National Park. It is pure folly not to move this pile away from the floodplain of the Colorado River."

Many other grassroots activists from rural Utah are also working with the Colorado Riverkeeper, a project sponsored by Living Rivers, a river advocacy group from Moab that promotes large-scale restoration for the Colorado River. Among them is Sarah Fields, who too resides within a mile of the pile and has engaged herself in efforts to remove the pile for over ten years. Fields is also the coordinator of the Nuclear Waste Committee of the Sierra Club Glen Canyon Group. "It is a fact that for thousands of years this tailings pile will remain toxic and radioactive to humans and animal life. In the scale of hundreds of years, it is inevitable that a catastrophic flood will consume this pile and devastate the down river environment. As irresponsible as it was to put this pile by the River, it is equally as irresponsible to let it remain by the River."

As the Colorado Riverkeeper, Weisheit has an intimate background with the river as a professional river guide, who has led more than 250 expeditions through the famous rapids of Cataract Canyon in Canyonlands National Park. "Uranium waste piles have

been mitigated before through removal by the Department of Energy, including many others sites on the Colorado River and its tributaries upstream of Moab. But, because this pile is so large and because we are so few of us in this remote region, they may be thinking they can save millions of dollars and justify their actions to stabilize this pile in place next to the River. Well, they would be wrong to think this way. Losing this pile to a big flood or the River's migration could affect Los Angeles, as much as it would affect us here in rural Utah."

Through grassroots advocacy, Living Rivers and the Colorado Riverkeeper are currently building a national and international coalition for Colorado River protection and restoration and is now supported by over 170 groups.

For more information:

American Rivers Press Release (pasted below)

[1. Fact Sheet on DOE Moab Mill Site](#)

[2. Remedial Action at the Moab Site -- Now and for the Long Term: Letter Report Committee on Long-Term Institutional Management of DOE Legacy Waste Sites: Phase 2, The National Academies, National Research Council, Board on Radioactive Waste Management, report to the Secretary of Energy on a plan for remediation for the Moab Mill, June 11, 2002.](#)

[3. "Investigation of the Hydrogeologic Connection between the Moab Mill Tailings and the Matheson Wetland Preserve," Philip Gardner and D. Kip Solomon, Department of Geology and Geophysics, University of Utah, December 11, 2003 \(with Addendum\) \[PFD 8.3m\]](#)

[5. Department of Energy Moab Mill Project](#)

[5. Utah Division of Radiation Control, Moab Mill Stakeholder Group](#)

6. Nuclear Regulatory Commission

For web-based access to the Nuclear Regulatory Commission's (NRC's) Public Electronic Reading Room for relevant correspondence between the Nuclear Regulatory Commission and the Department of Energy regarding the reclamation of the Moab Uranium Mill Tailings Site:

1. Go to <http://www.nrc.gov/reading-rm/adams.html>
2. Click on "Web-Based Access".
3. Click on "Advanced Search".
4. In "Docket Number" box, enter: WM-00110 Click on "Search" button.
5. For Atlas records related to the Moab Mill, in the "Docket Number" box, enter: 04003453

6. Click on document icon or document description to view document.

Citrix access to NRC records is also available.

#####

American Rivers
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Colorado Riverkeeper
Colorado River Regional Sewer Coalition
Environmental Working Group
Friends of the Earth
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Lake Havasu City, Ariz.
Sierra Club

Wednesday, April 14

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Colorado River "Most Endangered" Colorado #1 on annual list released today -
www.americanrivers.org

(Washington, DC) American Rivers and its partners today designated the Colorado River the nation's Most Endangered River for 2004, citing mounting problems with radioactive, human, and toxic waste in the river that have been largely overlooked during interstate conflict over water allocations. The annual America's Most Endangered Rivers report highlights rivers facing the most uncertain futures rather than those with the worst chronic problems. American Rivers and its partners warned that without a coordinated national effort to clean up the sources of contamination, pollution levels in the river will take a sharp turn for the worse in coming years.

"The Colorado River is not yet the most polluted river in the country, but it could become so if the current problems are allowed to fester," said Rebecca R. Wodder, president of American Rivers. "A concerted national solution is necessary to problems that reach far beyond the banks of the river." The most dangerous and volatile situation is the Atlas Mill site near Moab, Utah. There, an estimated 110,000 gallons of radioactive groundwater seep into the river each day from a crude, unlined riverbank impoundment

where almost 12 million gallons of radioactive waste are stored. The National Academy of Sciences has warned that it is "nearly certain that the river's course will run across the Moab site sometime in the future." The Department of Energy will soon announce its plans for the site, but has signaled its intention not to relocate the material to a safer location.

"As long as this material remains on the riverbank, it poisons the river every day and threatens water supplies with a catastrophic failure. New evidence suggests that disposing of it in an underground salt formation might be an affordable alternative," said Bill Hedden with the Grand Canyon Trust. "The Energy Department must now expedite studies of this alternative to confirm if it is truly the ideal solution." --More-- Colorado River "Most Endangered"

Page 2 of 2

Of equal concern are the rising predictions for human waste reaching the river from riverfront boomtowns in California and Arizona. This area has the largest concentration of people in the United States using septic tanks. These overloaded systems allow increasing quantities of nitrates to seep into groundwater and the Colorado River. High nitrate levels in drinking water can deplete oxygen in infants' blood ("blue baby" syndrome) and are suspected to cause certain types of cancer. Local communities' efforts to upgrade their wastewater infrastructure have been hampered by lack of federal support.

"For too long we've ignored the connections between ground and surface water," stated Robert Glennon, professor of law at the University of Arizona and author of a recent book, *Water Follies: Groundwater Pumping and the Fate of America's Fresh Waters*. "Each of these pollution problems facing the Colorado River involves contaminants migrating through groundwater and eventually emerging into the surface waters of the Colorado."

Finally, in Henderson, Nevada, the toxic chemical ammonium perchlorate is trickling into the river from a former military facility. Perchlorate has been measured in Lake Mead at concentrations as high as 24 parts per billion, interferes with proper thyroid function and disrupts the body's normal hormonal balance. Produce grown with Colorado River water often contains trace amounts of the chemical and is sold at supermarkets nationwide. Even as scientists debate how much exposure to perchlorate is safe, Congress is considering relieving the Department of Defense of the responsibility to clean up after itself at Henderson and elsewhere.

"Our tests last year found that perchlorate levels in winter lettuce irrigated by the Colorado were four times higher the EPA's recommended safe dose for a glass of drinking water," said Bill Walker, Vice President/West Coast of the Environmental Working Group, which has studied perchlorate contamination since 1999. "The cropland irrigated by the river produces most of the lettuce and other produce sold nationwide during the winter months, which means that perchlorate is not just a local or regional problem, but a concern for every American."

"The ongoing drought situation for the Colorado River basin is exacerbating our water quality problems," says the Colorado Riverkeeper John Weisheit, who lives next to the river in Moab, Utah. "Lack of freshwater inputs and high evaporation from the reservoirs are increasing the rates of salt, phosphorous, nitrates, and heavy metals. Not only is this detrimental to our health and infrastructure, it is also detrimental to our national parks at Canyonlands and Grand Canyon. "

Groups call for action The groups called for action to ensure that the Colorado River can continue to be a liquid lifeline for the Southwestern United States. The groups called on the Department of Energy to commit to removing the uranium tailings to a more secure location out of the river floodplain. They called on Congress to reject proposed cuts in federal aid to communities seeking to construct or maintain wastewater treatment infrastructure. They called on Congress to deny requests from the Defense Department for relief from its obligation to clean up contamination at former military facilities. -- More-- Colorado River "Most Endangered"

Page 3 of 3

"The problems identified here all require immediate action, but those should be just the first steps towards a comprehensive restoration effort," said Rebecca R. Wodder, president of American Rivers. "We call on the nation's leaders to take the next step and develop a binding cleanup plan to ensure that the Colorado River can meet the many demands placed on it for generations to come."

Colorado River not unique While the situation along the Colorado River is particularly urgent, it is sadly far from unique. Scientific data reveals that America's rivers, streams, and lakes have become progressively more polluted since 1998. Conservationists warned that the White House and Congress have made little effort reverse this trend -- and have in fact cut law enforcement and spending on clean water over the past three years.

About America's Most Endangered Rivers Each year, American Rivers solicits nominations from thousands of river groups, environmental organizations, outdoor clubs, local governments, and taxpayer watchdogs for the America's Most Endangered Rivers report. The report highlights the rivers facing the most uncertain futures rather than those suffering from the worst chronic problems. The report presents alternatives to proposal that would damage rivers, identifies those who will make the crucial decisions, and points out opportunities for the public to take action on behalf of each listed river.

River News 04/13/04

Colorado River is ranked most endangered by group

By Judy Fahys The Salt Lake Tribune

The Colorado, polluted by uranium milling, toxic chemicals and human waste, is the nation's most endangered river, the environmental group American Rivers planned to announce today.

After being on the group's top-10 list four times previously, the Colorado River was singled out this year not because there might be water shortages but because there is too much contamination. The "most-endangered" designation will encourage government and citizens to act swiftly to address the growing pollution threat to a resource used by 25 million people, said Eric Eckl, a spokesman for the Washington D.C.-based environmental group.

"We believe the people who hold the fate of the Colorado River in their hands are more likely to make the right decisions if they know the American people are paying attention," he said.

American Rivers identified three major threats to the Colorado:

- * The 12-million-ton uranium waste pile from the river's banks outside of Moab. Because the tailings release uranium, ammonia and other pollutants into an area of the river prized for its endangered fish habitat and for recreation, many Utah leaders and environmentalists have pushed for the waste's removal, instead of the cheapest of the five solutions the Department of Energy is currently considering, capping the waste in place.
- * The area below Hoover Dam has the nation's highest concentration of people using septic tanks, which, as they become overloaded, leach nitrates into the river that are blamed for depleting the oxygen in infants' blood and for certain types of cancer. Charlie Cassens, a spokesman for Lake Havasu City, Ariz., said contamination prompted the city's 50,000 residents to endorse phasing out the septic systems in favor of a sewer system.
- * A Cold War missile-fuel plant site in Henderson, Nev., which releases 400 pounds of ammonia perchlorate daily. An ingredient of rocket fuel blamed for hormone disruption in humans, perchlorate has been found in high concentrations in Lake Mead and in trace amounts on leafy vegetables irrigated with Colorado River water. American Rivers said Congress should toughen clean water controls and clean up the site.

Dirty River

The environmental group American Rivers put the Colorado River at the top of its Most Endangered Rivers list this year because of three pressing threats.



This year the Snake was the only other Western river on the group's top-10 list, which was developed in collaboration with environmental groups. The Colorado River made the list previously because of the Glen Canyon Dam's impacts and the endless fight over rights to its water. Bill Hedden of the Grand Canyon Trust applauded the shift in focus this year.

"Every time we dump junk into it, someone else has to deal with it downstream," he said.

"We haven't thought much about the quality of the water so many people are drinking and putting on crops," he said.

Sarah Fields, a Moab environmental activist, noted that the Energy Department is set to announce its decision on the Atlas tailings next month. Like American Rivers, she opposes capping the tailings in place instead of moving them.

"It's obvious the river will impact the [current] tailings impoundment through flooding or if the riverbed meanders," she said.

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Endangered rivers

The following is a list of the 10 most endangered U.S. rivers for 2004, according to the conservationist group American Rivers.

No. Name of River State(s)

1. Colorado Colo., Utah, Ariz., Nev., Calif.
2. Big Sunflower Miss.
3. Snake Wyo., Idaho, Ore., Wash.
4. Tennessee Tenn., Ala., Miss., Ky.
5. Allegheny, Monongahela W.Va., Pa., N.Y.
6. Spokane Idaho, Wyo.
7. Housatonic Mass., Conn.
8. Peace Fla.
9. Big Darby Creek Ohio
10. Mississippi 10 different states

Source: American Rivers.org

The Salt Lake Tribune

LR in the News 04/14/04

Colo. River named most endangered

Shaun McKinnon The Arizona Republic Apr. 14, 2004 12:00 AM
Special report

Radioactive runoff, toxic rocket-fuel chemicals and human waste threaten the health of the Colorado River as much as the growing number of people who use it, according to a conservation group that today puts the Colorado at the top of a list of rivers at risk. The 1,400-mile Colorado is the nation's most endangered river for 2004, a title bestowed each year by American Rivers to focus attention on waterways facing uncertain futures.

Although the Colorado has been caught for years in squabbles over how much water-thirsty Western states can take from it, American Rivers cites water quality rather than quantity.

"The Colorado River is not yet the most polluted river in the country, but it could become so if the current problems are allowed to fester," said Rebecca Wodder, the group's president. Cited are three pollution sources that spew millions of gallons of contaminated water into the river each year:

- An abandoned Atlas Corp. uranium-tailings site on the river's bank just outside Moab, Utah. An estimated 110,000 gallons of radioactive groundwater seeps into the Colorado daily.
- A defunct war-munitions complex near Las Vegas. Ammonium perchlorate, a rocket-fuel additive, continues to contaminate Lake Mead.
- Septic-tank systems in river communities. Seepage from the systems has increased nitrate levels in the river just miles from where water is diverted into the Central Arizona Project Canal and a canal to Southern California.

The new report is not meant to cast doubt on Arizona's drinking water, American Rivers spokesman Eric Eckl said. The river itself and the reservoirs along its length help dilute the contaminants, and municipal treatment plants remove most of what remains.

At stake now, he said, is the river's long-term health.

"We're not trying to tell anybody they should be afraid of what's coming out of their taps, but we're asking people to not take that for granted," Eckl said. "People have been so focused on the conflict over who gets how many drops that the question of how clean this water is has gone largely unasked. Now that people are starting to ask that question, the answer is not very reassuring."

Other river advocates applaud the focus on the Colorado's water quality.

"We've spent per gallon more money putting the Colorado River to use for people than any other sizable river on Earth," said Bill Hedden, executive director of the Flagstaff-based Grand Canyon Trust. He said the report highlights "problems that people have created; there are decisions on the table that could provide answers to these things." Among pending decisions:

- The Department of Energy is about to release its statement on cleanup at the Moab site. Environmental groups want the tailings moved, but a plan to leave it in place would cost millions of dollars less.

"It's true the cost of capping it in place would be less," said Sarah Fields, who works for the group Living Rivers. "But over the long term, it would probably cost a great deal more."

- Congress is considering requests from the Defense Department to exclude some current and former military sites from certain environmental rules. That could affect efforts to fully remove perchlorate-tainted soil from the Nevada munitions complex.
- The Bush administration has proposed cuts in a federal loan program that helps communities upgrade water and wastewater systems. Lake Havasu City voters approved a \$500 million bond issue to help retire thousands of septic systems in that community, but the problem is larger.

"Our voters have stepped up to the plate to correct our local problem, but that doesn't have much of an impact on all the other areas that are developing up and down the river," said Charlie Cassens, a spokesman for Lake Havasu City. "We can't do it alone."

This isn't the first time American Rivers has focused on the Colorado. It put the river at the top of the endangered list in 1991, citing the environmental effect of Glen Canyon Dam and has included all or part of the river on the top 10 list three other times since then.

River News 04/27/04

U.S. may cut water to state / Southwest drought slashes Colorado River flows

By Stuart Leavenworth
Sacramento Bee Staff Writer
(Published April 27, 2004)

The Bush administration is threatening to impose unilateral water cutbacks on California, Arizona and Nevada if the three states can't come up with a plan to deal with a historic drought on the Colorado River.

Following five years of dry weather, the two largest reservoirs on the Colorado are roughly half-empty and dropping fast, and Interior Department officials are urging water agencies to work together on a contingency plan or have one imposed on them.

"We need the three basin states to get their act together and deal with shortages," said Assistant Interior Secretary Bennett Raley in a recent meeting with water officials from California, Arizona and Nevada. If the three states can't work out a plan, he said, the Interior secretary "will have to do it."

For years, Los Angeles, Las Vegas and other fast-growing cities in the region have depended on surplus water from the Colorado - supplies that exceed their entitlements. Now, the Southwest is shifting to a much drier period, and states are facing not only the loss of surplus but also cutbacks that could affect tens of millions of people.

In California, the water squeeze is already being felt statewide. With less water from the Colorado River, Southern California is pushing conservation, more use of groundwater banks and extra pumping from the Delta.

"We are entering some new territory," said Raley, who notes that the modern Southwest has never had to deal with an extended drought.

Since 1999, Lake Mead has dropped more than 80 feet and is at 58 percent of capacity. With less water pressure going through its turbines, Hoover Dam is losing some of its capacity to generate power, and Las Vegas is preparing to deepen its water intake in Lake Mead to keep up with a moving target.

Upstream, at Lake Powell, the water loss is even more dramatic. In four years, Powell has dropped nearly 120 feet, and now holds 42 percent of its maximum water capacity. Never before have both Lake Mead and Lake Powell been at such a low state at the same time, according to officials for the U.S. Bureau of Reclamation.

Water leaders in the Southwest are closely watching these lake levels, and so are those in other Western states. Under the 1922 Colorado River Compact, the upper-basin states of Colorado, New Mexico, Utah and Wyoming must deliver 7.5 million acre-feet of water to the three lower-basin states each year. Lake Powell was built so the upper basin could deliver on that promise, but now Powell's future is in doubt.

According to federal forecasts, drought and water deliveries could drain Powell in three years. In such a situation, the upper basin would be forced to forgo river withdrawals or risk a major court battle.

To head off that prospect, water officials from seven states have been meeting regularly in recent months, said Dennis Underwood, a former reclamation commissioner who now works for the Metropolitan Water District of Southern California. The most recent meeting was held Monday in Phoenix, where officials discussed options for keeping the taps flowing.

Some of those options, said Underwood, include storing lower-basin water in upper-basin reservoirs to reduce the huge evaporation that occurs in Lake Mead. Agencies are also discussing water trades and "forbearance agreements" - paying farmers not to irrigate - to help vulnerable areas through a drought.

One such spot is Las Vegas, the nation's fastest growing city and one that draws 98 percent of its water from the Colorado. Not wanting to gamble on their future, Nevada officials have been pressing for some type of interstate water-sharing arrangement.

Pat Mulroy, general manager of the Southern Nevada Water Authority, said the recent talks are a recognition that the regional water situation is serious. "People are finally realizing that the drought is real," said Mulroy, "and not something I thought up in a bar."

In a December speech in Las Vegas, Interior Secretary Gale Norton laid out some of the possible scenarios. Under the 2001 Interim Surplus Guidelines, Norton said she is

required to cut surplus supplies to California, Arizona and Nevada if the surface of Lake Mead drops to 1,125 feet in elevation - 10 feet below its current level.

Further down the road, Norton could use her court-appointed authority as Colorado "river master" to declare a shortage and impose cutbacks. Some water experts believe Norton could make such a declaration when Lake Mead's surface level hits 1,083 feet elevation - about 52 feet below its current elevation - but the law isn't specific.

To ratchet up the pressure, Interior officials invited Southwest water leaders and a group of journalists on a boat trip this month down the Grand Canyon, where Raley repeated his warning Norton was ready to take action. "Time lost now is time we may not be able to recover," said Raley, pacing across a sand bar like Gen. George Patton.

Some environmentalists say the Bush administration is delaying tough decisions by playing this kind of drawn-out pressure politics. This year, they note, the Bureau of Reclamation declared a partial surplus on the Colorado River, which further depleted Lake Mead. Now federal officials are preaching drought preparedness.

"The bureau is dragging its feet," said Jeff Van Ee, a water watchdog for the Sierra Club in Las Vegas. "They haven't taken this drought seriously."

Raley, who oversees the Bureau of Reclamation, said he started working closely on the drought problem in January. Before that, he helped seal a landmark settlement that quantified how much water California's cities and farms could draw from the Colorado River. By agreeing to limit its water withdrawals to 4.4 million acre-feet, California was given a 13-year grace period to continue receiving "surplus" water from the river.

Now, say water officials, that grace period appears to be moot.

River News 05/01/04

Looming Colorado River shortage forcing tough choices in the West

By Seth Hettena, Associated Press

GRAND CANYON NATIONAL PARK, Arizona — The Colorado River runs cold and fast through the Grand Canyon, a postcard picture of the water wealth that greens farms and slakes the thirst of booming cities.

But there's a lot less to the Colorado than meets the eye. Five years ago, the vast reservoirs at both ends of the Grand Canyon were essentially full, brimming with water for showers, kitchen sinks, irrigation, and ornamental fountains. Today, they are both half empty as drought in the region enters its fifth consecutive year, making this the driest five-year period on record.

The river supplies water to 25 million people in seven states and more in Mexico.

But with no end to the drought in sight, the Interior Department may be nearing the first declaration of a water shortage on the Colorado River, said Bennett Raley, the department's assistant secretary for water and science. Such a declaration would mean a cut in the amount of water that can be drawn from the river, Raley told reporters during a 224-mile rafting trip through the canyon in April.

"If current trends continue ... the secretary would be forced to take action certainly within three years and potentially within two," unless the states offer a solution, Raley said.

The severity of the cut would be up to the interior secretary, but even a small reduction would ripple across the West. The 1,400-mile-long river grows U.S. and Mexican crops, generates electricity, supports a huge recreation industry, and delivers water to some of the nation's driest and hottest cities, including Phoenix and Las Vegas.

Drought is already doing what environmentalists could only dream about: It's draining Lake Powell, the reservoir just upriver from the Grand Canyon that submerged hundreds of miles of scenic canyons and countless archaeological sites.

Powell is so low that hikers are beginning to explore glorious sandstone canyons once submerged under 100 feet of water. The lake has fallen to 42 percent of capacity, its lowest since it was filled in 1970. At the downstream end of the Grand Canyon is Lake Mead, the huge lake formed by Hoover Dam. It is at 59 percent of capacity and could reach the same state as Powell as early as 2008.

Las Vegas is almost entirely dependent on Lake Mead for water and is worried about the effect continued drought could have on its explosive growth. The city is stressing conservation to avoid a self-imposed drought emergency, and water managers are ripping out water-guzzling lawns.

In a shortage declaration, Arizona would be the first to suffer. Under a 36-year-old compromise the state now regrets, Arizona would lose all the Colorado River water that now goes to Phoenix, the nation's sixth-biggest city, before California would lose a single drop.

Colorado, Utah, New Mexico, and Wyoming are worried as well. Under a 1922 accord they would be required to cut their own water to guarantee a supply to California, Arizona, and Nevada.

While the states depend on a steady source of water, nature is anything but steady. A study of tree rings at the headwaters of the Colorado River found evidence of a drought as recently as the 16th century that lasted 20 years.

In fact, tree rings have led scientists to believe that much of the past century was unusually wet and that more dry years could lie ahead, said Robert H. Webb, a hydrologist who studies the Grand Canyon for the U.S. Geological Survey and is co-author of "Floods, Drought, and Climate Change."

"We have no idea how long this drought is going to last," Webb said. "Every indication says this one's gone beyond all our past experience."

Raley is pushing the states to do something unusual: share the water. The best chance of avoiding a shortage may lie in California, Nevada, and Arizona working together to help each other. One possibility is an interstate water bank in Lake Mead that the three states could share.

However, when it comes to water, the states are more used to bickering than cooperating. Arizona and California waged legendary battles over the Colorado, including Arizona's comical effort to stop construction of a dam intended to divert water to Los Angeles by sending five soldiers to the river in 1934.

During the rafting trip, Raley asked three water managers from Arizona, California, and Nevada what they would do, hypothetically, to prevent the interior secretary from declaring a shortage next year. As they discussed the problem, the age-old feud between California and Arizona flared again.

"I'm not going to be looking to California to help me out. I'm not figuring Arizona's going to do much to help California until the reservoirs turn around," said Sid Wilson, general manager of the Central Arizona Project, the 336-mile concrete channel that carries Colorado River water to Phoenix and Tucson.

However, Wilson did say that Arizona is trying to help Nevada.

Pat Mulroy, general manager of the Southern Nevada Water Authority, says she will have to turn to Arizona or California for help if the river continues to shrink. But Mulroy isn't optimistic.

"All the legal mechanisms are set up for disaster," she said. "We can't seem to get the idea that if we share we get so much further."

LR in the News 05/02/04

Drought Settles In, Lake Shrinks and West's Worries Grow

The New York Times

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Drought Settles In, Lake Shrinks and West's Worries Grow

By KIRK JOHNSON
and DEAN E. MURPHY

POUCE, here — in the quiet and menacing, the drought that has parched much of the West is growing much harder to shrug off as a blip.

Those who worry most about the future of the West — politicians, scientists, business leaders, city planners and environmentalists — are increasingly predicting that a world of scarcity that they and younger generations anticipate may not be a passing phenomenon but rather the result of a harsh climate shift.

Contrasting this with the drought cycles even the last 600 years bears witness, strongly suggesting that the relatively wet weather across much of the West during the 20th century was a fluke.

DRY SPELL
For those and growing

across much of the West during the 20th century was a fluke. In other words, scientists who study these things and make long-range predictions are predicting that the drought of the 21st century may be one of the biggest growth spurts in the nation's history — not least because of a natural increase.

That shift is shaking many assumptions about how the West is run. Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming, the states that depend on the Colorado River, are preparing for the possibility of a new shortage for the first time since the Hoover Dam was built in the 1930s to control the river's flow. The top water official of the Bush administration, Bruce W. Bledsoe, said recently that the federal government might step in if the water crisis for the state among farmers and cities is not solved with existing supplies, a move that a lot of people here has criticized as the growing urgency.

"Before the drought, we had 30 years of a wet cycle and 30 years of the most growth ever," said John R. S. Smith, the New Mexico Basin engineer, who is responsible to find new water supplies for the suburbs of Albuquerque that still see rain a generation ago.

The lower basin water policy was set during

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Arizona's Lake Powell has lost nearly 60 percent of its water, making some boat trips unsafe.

Some photos by the New York Times

Continued on Page B1

By KIRK JOHNSON and DEAN E. MURPHY
Sunday Cover Story
New York Times

Published: May 2, 2004

DRY SPELL Articles in this series will examine the effects of prolonged drought on states in the Colorado River basin.

PAGE, Ariz. — At five years and counting, the drought that has parched much of the West is getting much harder to shrug off as a blip.

Those who worry most about the future of the West — politicians, scientists, business leaders, city planners and environmentalists — are increasingly realizing that a world of eternally blue skies and meager mountain snowpacks may not be a passing phenomenon but rather the return of a harsh climatic norm.

Continuing research into drought cycles over the last 800 years bears this out, strongly suggesting that the relatively wet weather across much of the West during the 20th century was a fluke. In other words, scientists who study tree rings and ocean temperatures say, the development of the modern urbanized West — one of the biggest growth spurts in the nation's history — may have been based on a colossal miscalculation.

That shift is shaking many assumptions about how the West is run. Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming, the states that depend on the Colorado River, are preparing for the possibility of water shortages for the first time since the Hoover Dam was built in the 1930's to control the river's flow. The top water official of the Bush administration, Bennett W. Raley, said recently that the federal government might step in if the states could not decide among themselves how to cope with dwindling supplies, a threat that riled local officials but underscored the growing urgency.

"Before this drought, we had 20 years of a wet cycle and 20 years of the most growth ever," said John R. D'Antonio, the New Mexico State engineer, who is scrambling to find new water supplies for the suburbs of Albuquerque that did not exist a generation ago.

The latest blow was paltry snowfall during March in the Rocky Mountains, pushing down runoff projections for the Colorado River this year to 55 percent of average. Snowmelt is the lifeblood of the river, which provides municipal water from Denver to Los Angeles and irrigates millions of acres of farmland. The period since 1999 is now officially the driest in the 98 years of recorded history of the Colorado River, according to the United States Geological Survey.

"March was a huge wake-up call as to the need to move at an accelerated pace," said Mr. Raley, assistant secretary of the interior for water and science.

Losing Water at Lake Powell

Photo caption: The loss of nearly 60 percent of Lake Powell's water led to cracks five feet deep in the dried lake bed near Hite, Utah, as the Colorado River cut a new channel in the sediment.

Some of the biggest water worries are focused here on Lake Powell, the vast blue diamond of deep water that government engineers created in one of the driest and most remote areas of the country beginning in the 1950's. From its inception, Lake Powell, the nation's second-largest artificial lake, after Lake Mead in Nevada, was a powerful

symbol across the West. Some saw it as a statement of human will and know-how, others of arrogance.

Powell, part of the Glen Canyon National Recreation Area, has lost nearly 60 percent of its water and is now about the size it was during the Watergate hearings in 1973, when it was still filling up. White cliffs 10 stories high, bleached by salts from the lake and stranded above the water, line its side canyons. Elsewhere, retreating waters have exposed mountains of sediment.

The tourist economy here in Page has been battered. The National Park Service, which operates the recreation area, has spent millions of dollars in recent years just to lay concrete for boat-launch ramps that must be extended every year, a process that one marina operator here called "chasing water."

Daniel C. McCool, a professor of political science at the University of Utah and director of the American West Center, says Powell is the barometer of the drought because what has happened here is as much about politics, economics and the interlocking system of rules and rights called the law of the river as it is about meteorology.

Part of the lake's problem, for example, dates to a miscalculation in 1922, when hydrologists overestimated the average flow of the Colorado River and locked the number into a multistate agreement called the Colorado River Compact. The compact, along with a subsequent treaty with Mexico, requires Lake Powell to release 8.23 million acre-feet of water each year below the river's dam, Glen Canyon, no matter how much comes in.

Because the river's real average flow was less than the 1922 compact envisioned, Powell very often released more than half of the water the Colorado River delivered. But it did not really matter because the upper basin states were not using their share. Now, communities from Denver to Salt Lake City and Indian tribes with old water rights in their portfolios are stepping forward to stake their claims. Lake Powell, which has been called the aquatic piggy bank of the upper West, is overdrawn.

If water levels continue to fall, Powell will be unable to generate electricity as early as 2007 or sooner, some hydrologists say. And it would be reduced more or less to the old riverbed channel of the Colorado River not long after that. Even now, the lake's managers say, it would take a decade of historically normal rainfall to refill it.

"If we're only in the middle of this drought, then Lake Powell might be very close to some very dramatic problems," said Dr. John C. Dohrenwend, a retired geologist for the Geological Survey who lives near the lake.

Insufficient water for the Glen Canyon Dam turbines would be only the beginning. At that point, much of the lake bottom would be exposed, creating a vast environment for noxious weeds like tamarisk and thistle. The next step in the spiral would come at what is called "dead pool," where decades' worth of agricultural chemicals at the lake bottom would begin mixing more actively with the reactivated river. The question then,

environmentalists say, is what would happen to the Grand Canyon, just south of the dam.

An Issue That May Go to Congress

"Americans won't stand for the Grand Canyon being endangered," said John Weisheit, the conservation director for Living Rivers, an environmental group in Moab, Utah, that advocates removing the dam at Glen Canyon and allowing the river to return to its natural course. "In another year, they're going to be talking more seriously about Powell in Congress."

But the fact is, no one knows: the weather could change tomorrow. Many past Western droughts have ended suddenly, with a bang of precipitation. But some dry spells persisted for generations. From about 900 to 1300, scientists say, periodic drought in the West was the norm. Only a few times during that period, according to tree-growth measurements, was precipitation anywhere near the relatively high levels of the 20th century.

"What is unusual is not the drought periods, but the above-average wet periods," said Dr. Robert Webb, a hydrologist with the Geological Survey who specializes in the Colorado River.

The uncertainty has local, state and federal officials along the 1,450-mile river scurrying to secure water allotments while also preparing for the worst.

Already in Las Vegas, the regional water agency is removing the equivalent of a football field of grass every day from front lawns, playgrounds and golf courses to save on outdoor watering. Farther downriver, Arizona officials are pumping billions of gallons of water into aquifers to save for an even less rainy day.

Electricity has become a concern. The Western Area Power Administration, the federal agency that distributes power from hydroelectric projects in the Rocky Mountain West, plans to reduce by about 25 percent the amount of electricity it can promise in future years.

Conserving on a Large Scale

In Los Angeles, a representative from the West's largest urban water agency, the Metropolitan Water District of Southern California, is among a group of Western water officials dusting off plans to help limit evaporation from reservoirs, which could save billions of gallons. One idea is to pour a nontoxic substance over the reservoirs to form a water-trapping barrier.

The group, which has been holding meetings, is even looking at far-off solutions like raising the height of Hoover Dam so that more water could be collected and saved during wet times.

"We understand we have a problem and we are working on it," said the Los Angeles representative, Dennis Underwood, a former head of the federal Bureau of Reclamation, which oversees dams and reservoirs in the West.

There are also worries downstream from Powell at Lake Mead, which serves Nevada, Arizona and California. It could drop low enough as early as next year to force officials to declare a drought emergency. That would hurt the booming southern Nevada economy through significantly higher water rates and outright bans on things like new swimming pools, said Patricia Mulroy, general manager of the Southern Nevada Water Authority.

Mr. Raley of the Interior Department said he wanted the states to consider a water bank, in which unused water could be leased or sold across state lines. Some previous efforts to create banks, with federal oversight, have been contentious because they were seen by smaller states as a means to funnel more of the river to water-guzzling California.

But the notion of cutting private water deals on the Colorado is gaining broader acceptance, in large part because of the drought. The most celebrated example was a deal last year to sell irrigation water in the Imperial Valley of Southern California to the urban water district in San Diego.

Some advocates for agriculture fear that water-to-the-highest-bidder could ravage ranches and farms if owners were induced to sell their irrigation rights. But private-market supporters say the truth, like it or not, is that farmers own most of the West's water, and ultimately there will be fewer of them.

There is some concern that if the Colorado River goes into crisis, the ensuing tangle of litigation over water rights, endangered species and border disputes could undo the system of Western water law that has evolved over the last 100 years.

Some say that would be a good thing.

"The law of the river is hopelessly, irretrievably obsolete, designed on a hydrological fallacy, around an agrarian West that no longer exists," Professor McCool at the University of Utah said. "After six years of drought, somebody will have to say the emperor has no clothes."

Water officials in Arizona and Nevada say they would also like to rethink the law of the river to put their states on a more equal footing in sharing the Colorado River. But Mr. Raley said such talk invites disaster and chaos, especially during a drought.

"This isn't the time to plunge into chaos," he said.

Other people who live here on the fringe of Lake Powell say that the West's great reservoirs have, in their very decline, proved their value in stretching out limited water resources and underlined the difference between past civilizations here that anthropologists say were wiped out or displaced by drought.

"Those people back then had nothing to catch and save their water — now we do," said Ronald W. Thompson, district manager of the Washington County Water Conservancy District in southwestern Utah.

"I'm a believer that history repeats itself — long-term drought could return," Mr. Thompson said. "But I suspect our civilization can weather this."

Kirk Johnson reported from Page, Ariz., for this article and Dean E. Murphy from Grand Canyon National Park.

LR in the News 06/01/04

Waterkeeper Alliance inaugural magazine issue

Forty years ago, an enormous public outcry stopped the construction of two major dams that would have inundated Grand Canyon National Park. The famed Colorado River and its unique desert ecosystem would be preserved-or so it was thought.

However, a less noticeable, but lethal blow had already been delivered. On Jan. 23, 1963, the United States Bureau of Reclamation began filling a reservoir behind the 700 foot-high, Glen Canyon Dam upstream from Grand Canyon National Park. Immediately Glen Canyon Dam unleashed a current of devastation on the park. Four decades and numerous violations of federal laws later, the dam has nearly destroyed all the native habitat of Grand Canyon's famed river corridor.

Ninety-five percent of the sediment and nutrients that should flow into Grand Canyon's riverine ecosystem are trapped behind Glen Canyon Dam. The loss of sediment is eroding recreational beaches, reducing sandbar habitat for native fish, disturbing prehistoric cultural sites and gives an advantage to predators, like exotic trout species, that hunt-by-sight. It's also reduced the input of woody debris that should be providing carbon for a healthy food web. In contrast, the sediment behind the dam is filling Lake Powell and has already plugged 100 miles of canyons with thick, weed infested mud flats.

Seasonal water temperatures that previously fluctuated from freezing to 80 degrees now range from 47 to 50 degrees. The lack of warm water prevents the trigger necessary for native fish reproduction, but gives a reproductive advantage to non-native fish species. These non-native fish not only compete for available food, but also feed on the few young native fish that manage to hatch.

Natural flows, which fluctuated seasonally from 3,000 to 90,000 cubic feet per second (cfs), can now fluctuate daily and are restricted to only 8,000 to 20,000 cfs. This has



been devastating to the Grand Canyon's unique desert ecosystem. Native fish, like the razorback sucker, depended on high, natural flows to spawn. Without these flows, the species has become extirpated in the Grand Canyon. In fact, of the eight native Colorado River fish, four have died out and two are struggling for survival. At least twenty-four alien fish species now thrive in the artificial environment.

Fish haven't been the only animals to suffer though. Of the 50 to 100 native insect species (nobody counted before the dam) that once formed the food base of the Grand Canyon, none remain in the Colorado River today. They have been replaced by twenty-five families of alien invertebrate species, including the New Zealand mudsnail and the Asian tapeworm.

In 2001, Living Rivers' Colorado Riverkeeper began to draw public attention to the failure of federal efforts to reverse the impact Glen Canyon Dam has had on the Grand Canyon's river ecosystem. The group has built a nationwide coalition to demand major changes in the operation of this program. It has assembled a network of scientists to aid in formulating these strategies, as well as legal experts to prepare for litigation should these strategies not be acted upon.

LR Press Release 06/16/04
New USGS report on drought

For immediate release

Contact: Owen Lammers - (435) 259-1063/(435) 260-2590

USGS says no clear evidence that "Early 21st Century Drought" is waning.

In a paper released today by the United States Geological Survey on what is now being called the "early 21st Century drought," there is no clear evidence that wetter periods lie ahead for the Colorado River basin.

Titled, "Climatic Fluctuations, Drought, and Flow in the Colorado River", the paper discusses several mechanisms for predicting future Colorado River flows. Two forecast indices reveal dry times for the next five to thirty years, and one indicates that we should be experiencing higher flows now, but they have yet to materialize.

What is undisputed, the paper notes, is that this is the driest period in 500 years for the Colorado River basin. Flows into Lake Powell reservoir are averaging just 5.4 million acre feet per year--50 percent of normal. Even the dry Dust Bowl years between 1930 and 1937 had flows that averaged 10.2 million acre feet, the paper says. (To reflect today's current rate of consumption above Lake Powell, the amount would be adjusted to 7.5 million acre feet.)

Conversely, the paper points out how data from the past 450 years show that the years actually sampled to determine the legal allocation of Colorado River water amongst the seven Colorado River states, were part of the highest ever for the historic record

(1906-1930). The paper also states that the most unusual aspects of Colorado River flows are the periods of high flow and not the periods of drought.

"Its time that we recognize the dry periods are the norm for the Colorado River basin, and that we are using far more water than the river can provide," says Owen Lammers, Living Rivers executive director. "Regardless of whether we're at the beginning of significant climate change, or just moving through a sustained drought period, the bottom line is that our use of Colorado River water is based on mistaken mathematics which must be corrected before all excess storage runs dry."

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[USGS Report: "Climatic Fluctuations, Drought, and Flow in the Colorado River"](#)
[800k PDF File]

LR in the News 06/18/04

Western drought worse than Dust Bowl

By ANGIE WAGNER
Associated Press Writer

LAS VEGAS -- The drought gripping the West could be the worst in 500 years, with effects in the Colorado River basin even worse than during the Dust Bowl years, scientists at the U.S. Geological Survey say.

"That we can now say with confidence," said Robert Webb, lead author of the new fact sheet released Thursday. "Now I'm completely convinced."

The drought has produced the lowest flow in the Colorado River on record, with an annual average flow of only 5.4 million acre-feet at Lees Ferry during the period 2001-2003, adjusted for the effect of Glen Canyon Dam. By comparison, during the Dust Bowl years, between 1930 and 1937, the annual flow averaged about 10.2 million acre-feet, the report said.

Scientists use tree-ring reconstructions of Colorado River flows to estimate what conditions were like before record-keeping began in 1895. Using that method, the lowest five-year average of water flow was 8.84 million acre-feet in the years 1590-1594. From 1999 through last year, water flow has been 7.11 million acre-feet.

"These comparisons suggest that the current drought may be comparable to or more severe than the largest-known drought in 500 years," the report said.

Environmental groups say water managers should take heed.

"The water managers, they just continue to pray for rain," said Owen Lammers, director of Living Rivers and Colorado Riverkeeper. "They just say, well, we hope that things change and we see rain."

Lammers said the report reinforces the need to figure out a better way to manage the Colorado River before reservoirs run dry.

"Once our reserve supply is gone, we have no plan of action for what to do," he said.

The report said the river had its highest flow of the 20th century during 1905 to 1922, the years used to estimate how much water Western states would receive under the 1922 Colorado River Compact.

The compact should now be reconsidered because of the uncertain water flow, said Steve Smith, a regional director for the Wilderness Society.

"We've got to figure out a new way of distributing the water that exists in the Western United States and be a lot more deliberate about our cautious and efficient use of the water," he said.

The report didn't surprise water managers.

"The big lesson is communities cannot afford to put all their eggs in the proverbial basket. You need .. a diverse portfolio of resources," said Adan Ortega, spokesman for the Metropolitan Water District of Southern California, the largest wholesale water supplier in the country.

Ortega said the water district is increasing water storage, buying water from farmers and investing in alternatives to the Colorado River.

Vince Alberta, spokesman for the Southern Nevada Water Authority, said water use in southern Nevada this year is actually down and the authority continues to enforce watering restrictions, impose fines for water waste and promote conservation.

"I think we can be successful managing this drought, but it's going to take a unified effort with everybody making sacrifices," Alberta said.

Herb Guenther, director of the Arizona Department of Water Resources, said the agency continues to plan for a continuing drought.

"It's serious, but the sky is not falling. Of course, we wish it would in the form of rain," he said.

Webb said predicting when the drought will end isn't easy because the Colorado River is difficult to forecast.

"It's sort of a split-personality river. It has headwaters up in Wyoming as well as headwaters in Colorado," Webb said. "Those two regions tend to respond to different things. ... We can't explain it very well."

Droughts seldom persist for longer than a decade, the report noted. But that could mean the current drought is only half over.

"If you're a betting person, you will bet that we will come out of this drought next year," Webb said. "It's a very severe event and these things tend to end fast. There are other indications, though, that suggest that this drought could persist for as long as 30 years.

"We don't really know."

EDITOR'S NOTE -- Angie Wagner is the AP's Western regional writer, based in Las Vegas.

On the Net:

<http://water.usgs.gov/pubs/fs/2004/3062/>

<http://www.livingrivers2.org>

<http://www.wildernesssociety.org>

LR in the News 06/24/04

Current Colo. River Basin dry spell could be worst in 500 years

April Reese, Land Letter Southwest correspondent

A new report by the U.S. Geological Survey suggests the drought parching the Colorado River Basin could be the worst in 500 years, prompting water watchdogs to warn of an impending water crisis in the region. But federal water managers say there is still plenty of the West's most precious natural resource to go around.

The USGS report -- "Climatic Fluctuations, Drought, and Flow in the Colorado River" -- summarizes the most recent data on drought and water supplies in the basin. It says the current dry spell reduced flows in the Colorado River to the lowest levels on record -- about 5.4 million acre-feet (maf) during 2001-2003.

Looking at five-year averages, 7.11 maf flowed down the Colorado between 1999 and 2003. The next-lowest five-year period occurred more than 400 years ago, from 1590-1594, according to tree ring data.

"These comparisons suggest that the current drought may be comparable to or more severe than the largest-known drought in 500 years," the report states.

USGS researchers also noted that the period used by federal water managers to divvy up the river's water under the Colorado River Compact -- 1905-1922 -- had some of the

highest flows of the 20th century. The average flow for that period was 16.1 maf, more than the twice the level of recent flows.

Gregory McCabe, a Denver-based USGS scientist who co-authored the report, said a confluence of climatic forces from both coasts is responsible for the current drought.

While alternately cool and warm currents in the Pacific Ocean have long been known to influence conditions in the Interior West, researchers have found that East Coast weather dynamics also play a role. "When you have a warm North Atlantic, you have a good chance of drought," McCabe said.

Does the current system work?

If drought is the normal condition in the Colorado River Basin, water managers need to change their way of thinking, said Owen Lammers, executive director of Living Rivers, an advocacy group based in Moab, Utah.

"Whether it's five, 10 or 15 years [long], we're going to face this at some point, so we might as well put in place a system to deal with it," he said. "In order to do that, we have to address the demand question. So let's start doing it, instead of waiting until we're in a crisis."

Storing water underground, where less is lost to evaporation and sediment build-up, could be part of the solution, Lammers suggested. But since nature is cutting the supply, water managers and consumers have to cut demand, he added. Switching from water-intensive crops such as alfalfa, which is grown to feed cattle, to less thirsty food crops and adopting municipal conservation and efficiency measures could cut the region's consumption of Colorado River water in half -- enough to bring demand in balance with supply, Lammers said.

Under the Colorado River Compact, signed in Santa Fe, N.M., in November 1922, the river's water was divided equally between upper and lower basin states, with the line drawn at Lee's Ferry, located above the Grand Canyon in northern Arizona. Colorado, New Mexico, Utah and Wyoming fell above the line, while Arizona, California and Nevada fell below.

Each basin was to receive 7.5 maf per year. Allocations for individual states vary widely, from California's 4.4 maf to Nevada's 300,000 acre-feet (Land Letter, Feb. 5).

If the drought continues, which many scientists say is likely, Lake Powell and Lake Mead could run dry, Lammers warned.

"Right now we're seeing twice as much water being used in Lake Mead than is coming [into the reservoir] from Lake Powell," he said. "At that rate, we're going to see Lake Powell empty in two to three years, then Lake Mead not long after that. In 2006, there's going to be real, real problems. That's when we may not have enough water to meet all the allocations downstream."

But Bureau of Reclamation spokesman Barry Wirth pointed out that Lake Powell and other reservoirs in the Colorado River Basin are fulfilling their purpose as a water insurance policy and so far have passed the most severe drought test since the system was built.

Bennett Raley, assistant Interior secretary for water, said that even if the drought worsens, there will be enough water.

"We think the drought is serious but not a crisis, because under any foreseeable scenario, there's going to be water for the economic engines of the West to continue to grow and prosper," he said in a phone interview from Denver, where BuRec was meeting with USGS researchers to discuss the drought. "Even under severe drought, the West doesn't dry up and blow away."

Raley noted that about 5 maf of the 7.5 maf allocated to the lower basin states is used for agriculture. If the drought worsens, some of the water consumed by farms could be transferred to cities, he said. Some urban areas have already cut deals with farmers to secure more water (Land Letter, March 18).

The federal government has a limited role to play in preparing the region for an extended drought, he added. "I just am at a loss where in the Colorado River Compact it requires Soviet-style planning," Raley said.

The federal government will step in to help resolve disputes between states, as it did when tensions over water use flared between Arizona and California, Raley said. "The federal government has said pretty strongly that if the states don't come up with a solution, it will fill the vacuum."

But so far, the states have been proactive in working together to find solutions to water challenges, he added. The upper basin states met in Salt Lake City recently, and drought was a priority topic of discussion at a meeting of the Western Governors' Association in Santa Fe this week.

LR in the News 07/06/04

Electricity output slashed as Powell water level shrinks

Article Published: Monday, July 05, 2004

By Theo Stein Denver Post Staff Writer

Plummeting water levels in Lake Powell have drastically slashed electricity generation at the reservoir's Glen Canyon Dam, forcing power authorities to cut deliveries to utilities from the Front Range to Provo, Utah.

Federal officials fear that \$100 million worth of hydropower generated annually by Lake Powell could dry up completely by 2009 - if dam managers continue releasing water at pre-drought rates.

That would deal a crushing economic blow not only to utilities that depend on cheap hydropower from Lake Powell, but also to a host of federal and state programs, including Colorado's endangered-fish recovery efforts.

Meanwhile, water levels in Lake Powell have fallen so low that Colorado and neighboring states are considering asking the federal government to preserve the lake's water for drinking supplies, which would cut hydropower production even further.

"We are looking to see if there are ways to slow down the decline of Lake Powell and Lake Mead," said Russ George, Colorado's natural resources director. "We can't make more water. We're asking ourselves: 'Are there things we can be doing to avoid taking water out?'"

Federal officials say they welcome state input on how best to manage the water supply in Lake Powell and its sister reservoir in Arizona, Lake Mead, during the drought.

On June 17, the seven Colorado River basin states - California, Arizona, Nevada, Utah, Wyoming, New Mexico and Colorado - asked the U.S. Bureau of Reclamation for a series of computer models simulating the impact of various drought and water-delivery scenarios. The results will form the basis of a report to the Interior Department offering recommendations for water management during the drought and after.

Interior Secretary Gale Norton "is very serious about the states being in the lead as long as possible," Bennett Raley, the assistant Interior secretary who oversees the Bureau of Reclamation, said last week.

Only if the states can't develop a conservation plan will the federal government step in, Raley said.

Lake Powell and Lake Mead were designed decades ago to provide drought-proof supplies of drinking water for the arid Southwestern states along the Colorado River. Cheap hydropower from Mead's Hoover Dam and Powell's Glen Canyon Dam was a side benefit that became a critical foundation for the region's 20th century urban and industrial growth.

The five-year drought has already drained Lake Powell to 43 percent of capacity, reducing the pressure of water entering Glen Canyon's turbines. That lost pressure, or "hydraulic head," has slashed the dam's generating capacity by some 30 percent, leading to higher costs for Colorado's electric utilities served by the Western Area Power Administration.

In 2002, WAPA, which sells power from dams in the Colorado River Storage Project, raised rates 18 percent. During the past two years, WAPA was forced to buy \$135 million worth of power to honor existing contracts with Colorado and Utah utilities. The power administration also had to slash deliveries by a quarter this year.

If Glen Canyon Dam's output is cut completely, "(our) power could be priced out of the market," warned WAPA's Brad Warren.

And still Lake Powell continues to fall.

Last winter's meager snows were expected to yield only half the average runoff to the Colorado River, continuing a trend that started with the onset of drought in 2000.

Powell is so low that federal hydrologists estimate there is a 20 percent chance that drought could eliminate hydropower within five years. A repeat of the disastrous 2002 drought year - or even two more marginally better years like 2004 - could interrupt electric generation even sooner.

"If hydro is curtailed, they'll be forced to go from low-cost electricity that's locked in to higher-priced power and the vagaries of the market," said Jim Owens, a spokesman for the Edison Electric Institute, a Washington, D.C.-based industry group.

Those costs are already being passed on to customers.

"We had a 10 percent rate increase in 2002 and another small increase last year," said Jim Van Someren, a spokesman for Westminster-based Tri- State Generating and Transmission, the Colorado River Storage Project's biggest customer.

This summer, the Tri-State board will probably have to consider another rate hike for 2005, he said.

If the drought worsens, falling hydropower revenues also will shrink the revolving fund that contributes \$50 million each year to environmental programs, including the state's endangered-fish recovery efforts.

Since 1988, \$138.7 million has been raised by federal and state agencies for the recovery program, which seeks to restore healthy populations of the Colorado pikeminnow, the razorback sucker, humpback chub and bonytail in the upper Colorado and San Juan river systems.

Glen Canyon has contributed about \$51 million. By contrast, Colorado, Wyoming and Utah only gave \$14.6 million during the same time period.

Protecting that federal contribution "is at the top of our agenda," George said.

Some environmental groups, such as Living Rivers of Salt Lake City, believe a more cost-effective way to recover the four endangered fish is to decommission the Glen Canyon Dam once drought drains the lake behind it.

They believe the region has entered a drier climate regime that was much more common in the past.

Owen Lammers, the group's executive director, chafes at the description of dam's hydropower as clean, cheap energy.

"That ignores the tremendous impact the dam has had on Grand Canyon and Glen Canyon," Lammers said.

Lammers said it is likely that Lake Powell will take many years to refill - if it refills at all. That will reduce electric revenues in perpetuity and put pressure on federal officials to divert money from projects meant to repair the damage caused by plugging up the river.

"If we can encourage 10 million households in the basin to put in a couple of compact fluorescent lights," Lammers said, "we can eliminate the power needed from Glen Canyon Dam - at a cost that's one-seventh of the power the dam produces."

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River News 07/10/04

Groups supporting efforts to Save Grand Canyon Again!

Access for All (CA)
Alabama Environmental Council (AL)
Alamosa Riverkeeper (CO)
Allegheny Riverkeeper (PA)
Alliance for Sustainable Communities (MD)
Altamaha Riverkeeper (GA)
American Whitewater Association (MD)
Apalachicola Bay and Riverkeeper (FL)
Arizona Wilderness Coalition (AZ)
Audubon Upper Mississippi River Campaign (MN)
Baja California Coastkeeper (Mexico)
Biodiversity Conservation Alliance (WY)
Black Warrior Riverkeeper (AL)
Blackwater/Nottoway Riverkeeper (VA)
Bluewater Network (CA)
Bow Riverkeeper (Canada)
Buckeye Forest Council (OH)
Cahaba River Society (AL)
California Save Our Streams Council (CA)
Californians for Western Wilderness (CA)
Camp Us (CO)
Cape Fear River Watch, Inc. (NC)
Cape Fear Riverkeeper (NC)
Cascadia Rising Ecological Defense Network (OR)
Casco Baykeeper (MA)
Center for Biological Diversity (AZ)
Central Lake Superior Watershed Partnership (MI)
Chattahoochee Riverkeeper (GA)

Chehalis River Council (WA)
Choctawhatchee Riverkeeper (AL)
Choqueyapu Riverkeeper (Bolivia)
Citizens of Lee Environmental Action Network (VA)
Clearwater Biodiversity Project (ID)
Clinch Coalition (VA)
Coalition for Jobs and the Environment (VA)
Coastal Land Trust (CA)
Colorado Plateau River Guides (UT)
Columbia Riverkeeper (WA)
Commencement Baykeeper (WA)
Community Clean Water Institute (CA)
ConservAmerica (NM)
Cook InletKeeper (AK)
Coosa River Basin Initiative (GA)
Devil's Fork Trail Club (VA)
DuPage River Coalition (IL)
Earth Island Institute (CA)
Electors Concerned about Animas Water (NM)
Endangered Habitats League (CA)
Erie Canalkeeper (NY)
Escalante Wilderness Project (UT)
Evergreen State College (WA)
Eyak Preservation Council (AK)
Eyes of Paint Branch (MD)
Flagstaff Activist Network (AZ)
Flint River Watershed Coalition (MI)
Florida Wildlife Federation (FL)
Forest Guardians (NM)
Forest Watch (VT)
Foundation for Global Sustainability (TN)
Four Corners School of Outdoor Education (UT)
Friends of Arizona Rivers (AZ)
Friends of Blackwater (WV)
Friends of Living Oregon Waters (OR)
Friends of Milwaukee's Rivers & Riverkeeper (WI)
Friends of the Animas River (CO)
Friends of the Earth (DC)
Friends of the Eel River (CA)
Friends of the Gualala River (CA)
Friends of the Nanticoke River (MD)
Friends of the River (CA)
Friends of the Riverfront (PA)
Fundy Baykeeper (Canada)
Galveston Baykeeper (TX)
Georgian Baykeeper (Canada)

Glen Canyon Institute (UT)
Global Exchange (CA)
Global Response (CO)
Grand Canyon Private Boaters Association (AZ)
Grand Riverkeeper (OK)
Grand Traverse Baykeeper (MI)
Great Egg Harbor Watershed Association (NJ)
Great Lakes United (NY)
Great Old Broads for Wilderness (CO)
Green Party of Utah (UT)
Greenaction for Health and Environmental Justice (CA)
Hackensack Riverkeeper (NJ)
Hells Canyon Preservation Council (OR)
Holiday River Expeditions (UT)
Housatonic River Initiative (MA)
Hudson Riverkeeper (NY)
Hurricane Creekkeeper (AL)
Idaho Sporting Congress (ID)
International Rivers Network (CA)
John Muir Project (CA)
Kalamazoo River Protection Association (MI)
Kansas Riverkeeper & Friends of the Caw (KS)
Kern Valley River Council (CA)
Kettle Range Conservation Group (WA)
Klamath Siskiyou Wildlands (OR)
Lake George Waterkeeper (NY)
Lake Ontario Waterkeeper (Canada)
Lands Council (WA)
Lawyers for Clean Water (CA)
Los Alamos Study Group (NM)
Lower Mississippi Riverkeeper (LA)
Lower Neuse Riverkeeper & Neuse River Foundation (NC)
Maine Rivers (ME) Maricopa Audubon (AZ)
Mattole Restoration Council (CA)
Milwaukee Riverkeeper (WI)
Montana River Action (MT)
Morava Riverkeeper (Czech Republic)
Narragansett Baykeeper (RI)
National Forest Protection Alliance (MT)
Native Forest Council (OR)
Native Forest Network (MT)
New Mexico Wilderness Alliance (NM)
New River Foundation (NC)
New York/New Jersey Baykeeper (NJ)
Northern California River Watch (CA)
Northwest Rafters Association (OR)

Northwoods Wilderness Recovery (MI)
Ocean Arks International (VT)
Ocmulgee Riverkeeper (GA)
Ohio Environmental Council (OH)
Oregon Natural Desert Association (OR)
Outdoor Adventure River Specialists (CA)
Patagonia (CA)
Patapsco Riverkeeper (MD)
Patrick Environmental Awareness Group (VA)
Pensacola Gulf Coastkeeper (FL)
Pequannock River Coalition (NJ)
Petitcodiac Riverkeeper (NB)
Protect Our Public Lands (OR)
Puerto Rico Coastkeeper (PR)
Puget Soundkeeper Alliance (WA)
Red Rock Forests (UT)
Red Rock Foundation (AZ)
Ridgeline & Open Space Coalition (CO)
Riparian Improvement Organization (CA)
River Project, The (NY)
River Runners for Wilderness (CO)
Riverhawks (OR)
Russian Riverkeeper (CA)
Sacramento River Preservation Trust (CA)
Salt Creek Watershed Network (IL)
San Diego BayKeeper (CA)
Santa Barbara Channelkeeper (CA)
Savannah Riverkeeper (GA)
Save America's Forests (DC)
Save Barton Creek Association (TX)
Save the Illinois River (OK)
Sea Shepherd Conservation Society (WA)
Seeds of Simplicity (CA)
Shundahai Network (UT)
Sitka Conservation Society (AK)
Sky Island Alliance (AZ)
Society of Environmental Communicators (AZ)
Solar Energy International (CO)
South Riverkeeper (MD)
Southern Appalachian Biodiversity Project (NC)
Southern Appalachian Forest Coalition (NC)
Southern Utah Wilderness Alliance (UT)
Spirit of the Sage Council (CA)
St. Johns Riverkeeper (FL)
Sublette Riders Association (WY)
Superior Wilderness Action Network (MN)

Tag-A-Long Expeditions (UT)
Taking Responsibility for the Earth and Environment (VA)
Taxpayers for the Animas River (CO)
Tennessee Clean Water Network (TN)
Tennessee River Revival (TN)
The 21st Paradigm (ID)
Tribal Environmental Watch Alliance (NM)
Tualatin Riverkeeper (OR)
Upper Chattahoochee Riverkeeper (GA)
Upper Neuse Riverkeeper (NC)
Upper Susquehanna Riverkeeper (PA)
Utah Environmental Congress (UT)
Ventura Coastkeeper (CA)
Virginia Forest Watch (VA)
Virginians for Wilderness (VA)
Wabash Riverkeeper (IN)
Waccamaw Riverkeeper (SC)
Wakulla/Aucilla Waterkeeper (FL)
Wasatch Mountain Club (UT)
Water Watch of Oregon
Waterkeeper Alliance (NY)
Waterkeepers Northern California (CA)
Waterkeepers of Australia
Western Watersheds Project (UT)
Western Wildlife Conservancy (UT)
Wetlands Action Network (CA)
Wild South (AL)
Wild Wilderness (OR)
Wildcoast (CA)
Wilderness Watch (MT)
Willamette Riverkeeper (OR)
Wolf River Conservancy (TN)
Wyoming Outdoor Council (WY)
Youghiogheny RiverKeeper (PA)

LR Press Release 07/13/04

**Federal scientists admit failure of Grand Canyon endangered fish recovery effort
Environmentalist amplify call for new approach**

Contact: Owen Lammers 435-259-1063

In a draft paper circulated last week, lead scientists for the federal program overseeing endangered fish recovery in Grand Canyon National Park noted that their principal approach has been a "failure".

For more than ten years dam managers have been emphasizing a specific flow regime from Glen Canyon Dam asserting that it would reverse the decline of the endangered humpback chub. Instead, the declines have averaged about 14 percent annually since the early 1990s the draft paper says.

"While they may still tinker with the details of their paper, the word failure will continue to ring loud and clear," says Owen Lammers, Living Rivers/Colorado Riverkeeper executive director. "We've been arguing for years that the Bureau of Reclamation heed the advice of the Fish and Wildlife Service and implement flows more consistent with the river's natural hydrograph if they want to stop the decline of native fish populations, but instead, even after admitting failure, they want to head further in the wrong direction."

The paper advocates moving away from what has been called Modified Low Fluctuating Flows, which restrict dam operators to water releases between 5,000 and 25,000 cubic feet per second. Restrictions were also place on the hourly rate for increasing and decreasing flows from the dam, not to exceed 4,000 and 1,500 cubic feet per-second per-hour respectively.

Previously, dam operators were free to increase or decrease flows based on electricity demand. The paper argues that upwards of \$50 million annually have been lost in hydropower revenues since these flows have been implemented.

"The Bureau of Reclamation wants to say they tried it and it didn't work, but they never actually implemented what was asked of them by the Fish and Wildlife Service to recover the fish," says Lammers. "They now want more variable flows which may restore revenues, but it may be game over for the last remaining humpback chub."

The authors also state their flow regimes have "failed to produce their intended benefits for sediment resources in Grand Canyon." With 95 percent of Grand Canyon's sediment and nutrients trapped behind Glen Canyon Dam, it was hoped that tinkering with flows may help to redistribute sediment to aid in fish recovery.

It was also hoped that efforts to reposition sediment would help to stabilize archeological sites disturbed by dam operations. The paper states that their experience now is that there would be exposure of some cultural sites no matter how the water is managed.

In 1994 the Fish and Wildlife Service recommended that the Bureau of Reclamation not peruse the Modified Low Fluctuating Flows, but what were called Seasonally Adjusted Steady flows. These flows would have caused releases from Glen Canyon Dam to more mimic the Colorado River's flow, which historically has ranged from 500 to more than 100,000 cubic feet per second. But since such flows would have further compromised

hydropower revenue, they were opposed by the Bureau of Reclamation ten years ago, and are absent from the discussion in this new draft paper.

"Nothing that the Bureau of Reclamation had expected to achieve when it began its recovery program a decade ago has worked," adds Lammers. "This latest information adds to the mounting evidence mandating the Bureau of Reclamation to undertake a new Environmental Impact Statement on how and if Glen Canyon Dam should continue to be operated so as to comply with federal environmental laws."

Living Rivers/Colorado Riverkeeper and more than 200 groups from across the country are calling for a new Environmental Impact Statement that evaluates the decommissioning of Glen Canyon Dam as the most effective means to restore the natural process necessary to reverse the decline of endangered species in Grand Canyon.

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[EVIDENCE FOR THE FAILURE OF THE MODIFIED LOW FLUCTUATING FLOW ALTERNATIVE \(MLFFA\) TO BENEFIT MOST ECOLOGICAL RESOURCES IN GRAND CANYON](#) [96k PDF File]

LR in the News 07/15/04

Grand Canyon Endangered Fish Fail to Recover

[Environmental Network News](#)

FLAGSTAFF, Arizona, July 15, 2004 (ENS) - Scientists for the federal program overseeing endangered fish recovery and sediment restoration in Grand Canyon National Park have come to the tentative conclusion that their main approach has been a "failure."

In a draft paper dated June 22 and circulated last week, eight scientists analyzed the results of water flow variation policies and control of fish in the Colorado River below Glen Canyon Dam.

Members of the Grand Canyon Technical Working Group concerned about ecology and those concerned about power production both show the "surprising" preference for more variable daily flows, the scientists found.

The Colorado River has cut a cleft across Arizona known as the Grand Canyon (Photos courtesy USGS Grand Canyon Monitoring and Research Center) Authors of the draft paper include four U.S. Geological Survey scientists with the Grand Canyon Monitoring and Research Center in Flagstaff, two members of the Western Area Power Administration, one scientist from the University of British Columbia, and one from Ecometric Research Inc.

Since the early 1990s, dam managers have used a specific flow regime from Glen Canyon Dam known as Modified Low Fluctuating Flows, asserting that it would reverse the decline of an endangered fish known as the humpback chub. Instead, chub declines have averaged about 14 percent annually since the early 1990s, the draft paper says.

Emphasizing that the analysis is "a work in progress," the authors suggest moving away from the regime, which restricts dam operators to water releases between 5,000 and 25,000 cubic feet per second.

Restrictions are also placed on the hourly rate for increasing and decreasing flows from the dam, not to exceed 4,000 cubic feet per-second and 1,500 per-hour.

The paper is entitled, "Evidence for the Failure of the Modified Low Fluctuating Flow Alternative (MLFFA) to Benefit Most Ecological Resources in Grand Canyon."

"While they may still tinker with the details of their paper, the word failure will continue to ring loud and clear," says Owen Lammers, Living Rivers/Colorado Riverkeeper executive director.

Lammers sees the points made in the paper as evidence for the correctness of the Living Rivers/Colorado Riverkeeper position.

"We've been arguing for years that the Bureau of Reclamation heed the advice of the Fish and Wildlife Service and implement flows more consistent with the river's natural hydrograph if they want to stop the decline of native fish populations," said Lammers.

Previously, dam operators were free to increase or decrease flows based on electricity demand. The paper states that upwards of \$50 million annually in hydropower revenues has been lost since the Modified Low Fluctuating Flow Alternative has been implemented.

The endangered humpback chub found in the Grand Canyon's Colorado River "The Bureau of Reclamation wants to say they tried it and it didn't work, but they never actually implemented what was asked of them by the Fish and Wildlife Service to recover the fish," says Lammers. "They've been promoting more variable flows which may restore revenues, but may be game over for the last remaining humpback chub."

The modified low flow alternative has not succeeded in restoring natural sediments in the canyon, while 95 percent of sediment and nutrients remain trapped behind Glen Canyon Dam. The paper states, "There is currently little debate that ROD flows have failed to produce their intended benefits for sediment resources in Grand Canyon."

In 1994 the Fish and Wildlife Service recommended that the Bureau of Reclamation not pursue the modified low flow alternative, but instead adopt Seasonally Adjusted Steady flows that would have caused releases from Glen Canyon Dam to parallel the Colorado River's natural flow, around 500 to 100,000 cubic feet per second.

But, says Lammers, since such flows would have further compromised hydropower revenue, they were opposed by the Bureau of Reclamation 10 years ago, and are absent from the discussion in the new draft paper.

The Glen Canyon dam on the Colorado above Grand Canyon. (Photo courtesy USGS)
The authors say the modified fluctuating low flow approach "provides an excellent example and warning to practitioners of adaptive management about the difficulties that scientists encounter in trying to determine the ecological impact of a policy change."
The authors suggest treating this approach as one of a range of options.

The modified low flow has benefited "the recreational rafting community and trout fishers who care more about catching lots of fish than catching big fish," the paper states, and these stakeholders will want the policy included among future experimental treatments."

But because the strategy is not a "win-win option for all stakeholders," the paper points to the ethical question of who should pay for it.

Currently, power utilities and their ratepayers are subsidizing the modified low fluctuating flows at the cost of some \$50 million annually, improving the quality of Grand Canyon for some recreational uses.

"It is one thing to impose such cost to deal with some broad public interest such as protecting an endangered species, but quite another one to impose it for the benefit of particular stakeholders," the authors say.

They urge that the cost issue be addressed "openly and quickly as part of the overall adaptive management planning process, before it leads to a breakdown in the collaboration among stakeholders that has made adaptive management possible in Grand Canyon in the first place."

Living Rivers/Colorado Riverkeeper and more than 200 groups across the country are calling for a new Environmental Impact Statement that evaluates the decommissioning of Glen Canyon Dam to restore the natural process that would reverse the decline of endangered species in Grand Canyon.

LR Press Release 07/16/04

Chasing Water: Lake Powell Launch Ramps Can't Stay Open

For immediate release

Contact: Owen Lammers - (435) 259-1063

Despite a reported \$2 million investment in 2003 and a projected \$2.8 million this year, Glen Canyon National Recreation Area has had to officially close four of its six boat launching facilities due to declining water levels at Lake Powell reservoir.

Meanwhile, signs at the recreation area's most popular launch ramp, Wahweap Marina, reads "launch at your own risk" as the reservoir has now dropped below the level of the concrete ramp extension completed earlier this year.

"It's going to be an ongoing problem as the reservoir continues to drain due to climate change," says John Weisheit Living Rivers/Colorado Riverkeeper conservation director. "In two years we may be at the end, with the reservoir surface area reduced by 77% and even the two remaining ramps left high and dry."

Publicized as "America's Houseboat Destination", Lake Powell plays host to some of the largest, most luxurious houseboats in the world. But concerns are arising that it may become impossible to launch and retrieve houseboats should levels continue to drop. "It's going to be difficult. Hopefully the park service will work with us to maintain a portion of the (Wahweap) ramp for houseboats," Len Cook, who offers houseboat management services, told the Lake Powell Chronicle this week.

During the past month the Park Service has been looking at old maps and successfully discovered the location of Wahweap's original asphalt launch ramp, which has been submerged for the past three decades. It's hoped that this historic access will be able to serve visitors in the coming months.

Declining reservoir levels and boat ramp closures have hurt Lake Powell marketing efforts. Aramark, the principal concessioner on Lake Powell, is offering to the public special savings up to \$1400 that includes \$700 in free gasoline for a houseboat rental. Aramark has also offered, to Utah residents, an additional \$200 in gasoline to drive to Lake Powell.

"It's amazing the money being invested to keep Lake Powell's houseboat industry alive," adds Weisheit. "But nature may eventually bring it all to a close. We'll know soon enough."

[Link to Park Service's launch ramp conditions](#)

[Link to Aramark's houseboat specials](#)

[Link to the Lake Powell Chronicle](#)

Regional News 07/23/04

How Drought Just Might Bring Water to the Navajo

New York Times by Kirk Johnson

Published: July 23, 2004

WHITE ROCK, N.M. - Once a week, Bennie Yazzie drives half an hour over the bone-rattling dirt roads of the Navajo Nation to get drinking water. It sloshes out a long blue hose at a cost of 3 cents a gallon - except when it doesn't. A few weeks back, the coin-fed meter was broken and no one at the little oasis of White Rock knew how to fix it.

"Another 35 miles on bad road," Mr. Yazzie said of his journey to the next-nearest pump.

The Navajo struggle for water on these unforgiving lands long predates the drought that has settled over the West in the last five years. On a reservation nearly five times the size of Connecticut, more than a third of the residents have no running water for themselves, their gardens or their livestock. So they go to water stations like White Rock, 50 miles from the nearest real town, to shower, wash clothes or socialize, making the best of a situation that would make most Americans shudder with its matter-of-fact adversities.

But in an odd and deeply paradoxical way, the drought itself - and the fundamental ways it is making many Westerners rethink the future - may finally bring running water to the Navajo. The tribal council could vote at any time on a settlement to end a 30-year legal standoff with New Mexico over how to divide the waters of the San Juan River, a major tributary of the Colorado River. Tribal leaders had contended that history and treaty entitled them to the entire flow of the river; the state said the tribe was overreaching.

A preliminary agreement reached late last year - one of the largest Native American water deals in history, gallon for gallon - reduces the tribe's claims and in return provides for a \$600 million federal pipeline that would snake south through the reservation, with feeder systems reaching into the communities, called chapters here. The pipe would also take water to the equally thirsty city of Gallup, N.M., just outside the reservation's southeast border.

It all sounds quite neat - a perfect package of interlocked, coinciding interests, which is how supporters of the plan have sold it on the reservation and off. But the vote is expected to be close. Some hard-liners on the council say that the compromise is a surrender and that the Navajo should continue to push for the whole river. Promoting the proposal has also aggravated some very old, unhealed scars and brought voice to anguished questions of Navajo destiny.

Some in the tribe say a deal that benefits Gallup is just too bitter a pill to swallow, given the long history of hostile racial relations there. Old-timers still remember the storefront signs that said "No dogs or Indians."

What brought people together, and subsequently exposed their differences, was the dawning awareness of scarcity. When water in the San Juan was abundant, people involved in the settlement say, the murky question of who had first dibs on the river's flow was not so important. But when the river nearly dried up in 2002 - the drought's worst year here so far - that mind-set abruptly changed. Tribal farmers saw the intake system for their irrigation canals come perilously close to being unusable. Non-Indian farmers feared a "call" of water rights - an emergency legal sorting out, in which the oldest claims gets priority. The Navajo claims, by far the oldest, might win, giving the

tribe the whole river. Knowing precisely who was entitled to what suddenly looked a lot better.

"The settlement is essential for certainty, and the drought has created awareness of the need for certainty," said John R. D'Antonio, New Mexico's state engineer, who is in charge of administering water rules. "It's forced us to go out and be more deliberate; the drought may be a blessing in disguise in that regard."

At the heart of the resolution, negotiators say, are interlocking trade-offs, developed so that - at least in theory - each private interest must support someone else's goals to have its own needs satisfied.

For the Navajo, that means being asked to embrace the idea that the pipeline taking water to people like Mr. Yazzie would also benefit Gallup. Non-Indian farmers, who stand to have their water rights bolstered, and made far more valuable, by having the legal issues finally settled, were asked to become boosters for the Navajo cause. Gallup officials have become enthusiastic backers of Navajo water sovereignty.

"It's a vast sea change in thinking on both sides of the cultural divide between Indian and non-Indian," said Mark Edwards, a consultant to Gallup on the water settlement. "It says that we have a common future, that we have a common direction to go in, that your doing well is important for me to do well."

But that has not made it easy.

Jason John, a hydrologist in the tribe's water management branch, visited dozens of chapters to sell the plan, and he said that in general the closer a community was to Gallup, the more opposition he faced. Gallup, which has about 20,000 residents, and about equal numbers of whites and Indians, is the closest thing to a downtown across much of Navajo country, but many people Mr. John visited said they still feel stigmatized by white-owned businesses, through higher prices or poor service.

"Even though it would mainly benefit the Navajo tribe, there were just some people there who have had a long history with Gallup, and it's understandable," he said. "All they know is what they've lived through, so it's hard for them to go and understand something I'm telling them."

Desperate for water, officials in Gallup have tried hard to smooth out their rough edges. Business groups have been armed with talking points to support the settlement. Other people are closely monitoring negotiations to watch for any hint of language that might offend.

At a recent public meeting in Farmington an engineer from the Gallup water department was describing a water treatment facility proposed for the city. It would skim the water's surface for impurities, and it was called a scalping plant. Mr. Edwards, the city consultant, all but jumped from his seat.

"Please, please," he begged the engineer. "Isn't there anything else you can call it?"

Indian and non-Indian politicians say they also struggle with widespread disbelief that anything will really happen. Congress, in addition to the Navajo Council, must approve the plan, and even under the most optimistic timetable, the pipeline would not be completed until 2016.

The Navajo settlement also has consequences downstream on the Colorado River at Lake Powell, the huge reservoir in Utah that has lost more than half its water since 1999. Under the water-law agreements called the Colorado Compact, all states that share water from the Colorado River and its tributaries get a precise annual allotment. The upper basin states of New Mexico, Utah, Colorado and Wyoming have never used their full shares, and that surplus - along with two decades of wetter than normal precipitation before the drought - is essentially what allowed Powell to be filled. The Navajo settlement, one of many pipeline projects planned around the West to tap the Colorado's flow, would gradually use up New Mexico's allotment on the San Juan, leaving only the minimum legally required amount sent downstream for use by Mexico and the lower basin states of California, Arizona and Nevada - and none left over for Powell to store except in the wettest years.

But the real heart of the deal is not hydrology but human nature.

To get backing for the pipeline plan, for example, the Navajo negotiators compromised many of the tribe's old claims, which date back to 1849 and earlier. Under the agreement, the tribe would get only 55 percent of the water available for use in the San Juan - though even that amount is immense, more water than is allotted to the entire state of Nevada from the Colorado River. In return, the tribe would get the pipeline and other benefits, including a timetable for completion of a big federal irrigation project that was authorized by Congress in 1962.

Some holdouts on the Navajo Council say they are not sure the tribe's long-term interests are being served.

"There's nothing wrong with asking for the entire river," said Irvin M. Keeswood, who represents the Hogback chapter near Farmington. Most Hogback households already have running water. Mr. Keeswood said he was undecided about his vote. "This is a one-time shot for us, so it has to be the best we can get," he said.

Other council delegates argue that the spirit of compromise must be seized, or might be lost forever.

"Like any settlement, you go in with expectations and walk out with something less," said LoRenzo C. Bates, a delegate from Upper Fruitland who supports the plan. "For the Navajo to give up its claim on more than 40 percent of the river, that's a considerable compromise. But the certainty is the thing; we'll have something now that we can say is ours."

For many non-Indians, the give-and-take has been just as difficult. One lawyer who pushed his non-Indian clients to back the settlement said that refusing to negotiate, if it led to a court-ordered settlement, could be disastrous for everyone.

"It was like playing Russian roulette - the stakes were so huge," said Gary Risley, who practices law in Farmington. "The Navajos might win and suck the whole thing up, or we might win and they'd have no water for anything."

Underpinning much of the story of the settlement is the question of the future.

The growth arc of northern New Mexico and the West as a whole, demographers say, is toward an urban future, not the agriculture-based economy on which the Colorado River basin agreements were premised. That growing consensus, and its implication that cities will probably be required to buy out farmers' water rights over time, became a dynamic in the negotiations, water experts like Mr. Risley say, as non-Indian farmers sought certainty that the water they owned could eventually be sold with no legal entanglement or uncertainty about how much water belonged to the Navajo.

Here on the reservation, by contrast, many people say that keeping young people from fleeing to the cities means doing everything possible to make life less of a hardship. Lack of water is only one of many holes in the fabric, residents say. In White Rock, telephone service, mail delivery and reliable electricity are also widely unavailable.

"The older generation was stronger - technology has made us lazy," said Jennifer Juan, an artist who lives four miles from the White Rock water station. Ms. Juan stopped by for a shower on a recent morning with her 8-year-old son, Teton. Showers cost \$1.01 each.

Ms. Juan said she once lived in Santa Fe, so she knows how strong the lure of town life can be and how much people take its luxuries for granted.

"It's amazing to think that they can just walk around the corner and take a shower," she said. "How blessed they are that they can do that."

LR in the News 07/25/04

Time to take another look at Glen Canyon Dam

Commentary
Salt Lake Tribune
Sunday, 07/25/2004

by Eleanor Inskip

This drought may be the blessing we need to take a fresh, honest look at the alternatives and the consequences of trying to continue with dams - especially Glen Canyon. And as a result, a fresh, honest look at former Congressman Jim Hansen's outdated ban on studying Glen Canyon Dam's decommissioning, now up for annual reconsideration by Congress.

This winter Lake Powell's principal purpose, water supply, is likely to be tapped for the first time in history. Never before has the reservoir's water storage been a benefit to downstream water users. During its 40-plus years, Lake Powell has lost from 30 to 40 million acre feet of water from evaporation and seepage. This water loss represents a four- to five-year supply for water users below Lake Powell, or more than 20 years of Utah's Colorado River water allocation. As the drought began we had stored only 23 million acre feet and the water supply continues to drop.

Lake Powell exists to satisfy a water accounting formula - a commitment by the states of Utah, Wyoming, Colorado and New Mexico to deliver on average 8.25 million acre feet of water per year to Arizona, Nevada, California and Mexico. Since 1922 this promise, part of the Colorado River Compact, has been met without using the stored water behind Glen Canyon Dam. But now nature is testing this antiquated compact for the first time. And dam or no dam, if nature does not provide the water, we are stuck. The federal government, as the ultimate water master, will likely pro-rate every state's allocations based on what the river is actually delivering, and the 8.25 million acre feet rule that led to Glen Canyon Dam will go the way of Prohibition.

We need to be looking at ways of saving this water. California, Nevada and Arizona are already doing so by instituting water-saving methods and storing Colorado River water in underground aquifers. Ground water storage loses as little as 1 percent without evaporation, as compared to more than 50 percent loss associated with what Lake Powell is finally providing.

And we need to be looking at ways of saving the river itself. We used to think that hydropower and dams were wholly beneficial, causing little damage to the environment. We now know differently. As the World Wildlife Fund reported in its recent study, *Rivers at Risk*, many of the benefits conferred by dams like hydropower are canceled out by wasteful water use and environmental damage. Dams disrupt the ecological balance of rivers by depleting them of oxygen and nutrients and affecting the migration and reproduction of fish and other freshwater species, the report states.

It's ironic that in addition to prolonging the ban on studying the decommissioning of Glen Canyon Dam, this year's Interior appropriations bill also includes \$64 million for the continued removal of dams and the restoration of rivers in Florida. Since 1993 taxpayers have spent \$1 billion for Everglades restoration.

We need to ask our legislators, Reps. Matheson, Cannon and Bishop, as well as Sens. Hatch and Bennett to do some house cleaning. Ask them to remove this ban and allow monies to be spent on the study of alternatives, solutions and restoration of the Colorado River.

The Colorado River is all we've got, and it's not much. Even in a good year, the Colorado River provides just 3 percent of the amount of water that annually flows down the Mississippi River. This water is precious - it is life itself for humans and all the other living creatures in the West. And while damming it up may have been the way of the past, it's not the way of the future.

Eleanor Inskip, author of *Glen Canyon Before Lake Powell*, is a Colorado River historian and program director at Living Rivers in Moab.

LR in the News 07/25/04

The Colorado's troubled waters

River Basin hasn't been this dry since the late 16th century

By BRENT ISRAELSEN for The Salt Lake Tribune

The Colorado River and its tributaries begin without drama, dripping from snowfields 14,000 feet above sea level. By the time they reach places like the Gates of Lodore in northwestern Colorado and Cataract Canyon in southern Utah, they are raging torrents, scouring the landscape with earsplitting fury before running into giant manmade dams that put an end to the river's fury!

During the past five years, the river has met an even more formidable foe: a prolonged drought.

This "early 21st century drought," as scientists now call it, is believed to be the most severe in more than a century.

Since 1999, annual water inflows to Lake Powell have averaged 7.1 million acre-feet (MAF) well below the 12.4 million acre-feet average during the previous 100 years and less than half the 15.1 MAF volume that was the basis for dividing the river among seven states in 1922. (One MAF equals about 326 billion gallons.)

This year's inflow is forecast at a dismal 5.6 MAF, according to a new report from the U.S. Geological Survey (USGS).

During the past five years, the river's average annual flow into Lake Powell is smaller than it was during the dustbowl years of the Depression, when the flow averaged about 10.2 MAF.

"We're in a nasty midterm drought," says Tom Ryan, hydrologist for the U.S. Bureau of Reclamation, which manages the dams on the Colorado River, the biggest single source of water in the Southwest.

According to tree-ring data, it hasn't been this dry in the Colorado River Basin since the late 16th century--about the time Shakespeare began writing his plays. At that time, the river was running at an annual average of about 8.8 MAF.

"The current drought may be comparable to or more severe than the largest-known drought in 500 years," states a new USGS report.

What the tree-ring and other historical evidence cannot predict, however, is what will happen in the coming years.

"The question is, where are we moving?" says David Meko, associate research professor at the Laboratory of Tree Ring Research at the University of Arizona.

Meko noted that the last prolonged drought in the river basin, in the late 1970s, was followed by an extremely wet period in the early 1980s that forced flood-control releases from Glen Canyon Dam on Lake Powell, which used to fill nearly every year in the 1980s and '90s. The current drought has pulled Lake Powell down to about 42 percent of capacity. Ryan predicts it will take 15 years of normal precipitation to fill the reservoir again, although a wet cycle like that of the early 1980s could fill it in four years.

Farther downstream, Lake Mead behind Hoover Dam in Nevada is down to 51 percent of capacity.

The surface of the lake, which supplies 85 percent of Las Vegas' water, has dropped to about 1,125 feet, becoming uncomfortably close to the 12-foot-diameter intake for one of the pipelines that sends water to Sin City.

The upper layer of the lake contains lower-quality water that can overtax water-treatment plants.

To reach deeper and cleaner water, the Southern Nevada Water Authority is spending an unanticipated \$6.4 million this summer to install a "sleeve" that would extend the intake downward another 70 feet.

"If the lake were higher, we would not have to pursue this project," said Marc Jensen, the Las Vegas water agency's director of engineering.

Despite the less-than-cheery news about low lake levels and river flows, federal officials say they are far from panic mode.

The reservoirs on the Colorado River are doing what they are designed to do, says Ryan. "People became accustomed to seeing Lake Powell full or near full. I don't think people know that Lake Powell was meant to go down."

Bennett Raley, U.S. Interior Secretary Gale Norton's point man on Western water issues, says the drought is a "serious matter" and a "wake-up call" but not a "crisis."

A few more years of this dryness, however, could test like never before the laws and officials that manage the Colorado River, arguably the most over-allocated in the nation.

"You have to be concerned because you don't know whether you're in the sixth year of a six-year drought or the sixth year of a 15-year drought," says Don Ostler, director of the Upper Colorado River Basin Commission.

Seven states, including Utah, divide the Colorado River, which is governed by interstate compacts, international treaties, several court decrees and federal statutes known collectively as the "Law of the River."

The law has worked reasonably well in recent decades, mainly because there was plenty of water to go around. The upper Colorado River Basin states of Utah, Wyoming, Colorado and New Mexico were using much less than their full share of the river. And abundant precipitation was keeping the river and its reservoirs full of water, providing a "surplus" that allowed the lower basin states of Nevada, Arizona and California to use more than their legal share.

The time of plenty on the river appears to be over.

The upper basin states along with American Indian tribes are planning to increase their take of the river at the same time Lake Powell – the "bank account" that helps the upper basin meet its obligations to the lower basin--is shrinking.

If the drought continues, Powell could reach its lowest outlet, located at 3,370 feet above sea level, in three years. At that point, only water that flows into the reservoir will be allowed to flow out of it, making contractual water deliveries to the lower basin more difficult. Power generation from Glen Canyon's hydroelectric turbines would come to a virtual standstill, as would motorized boat recreation.

"There is the potential for significant problems, particularly for the lower Colorado River Basin," says Ostler. "That basin has become accustomed to using surplus water. In a drought, you don't have surplus water. That can put them in a bind."

Arizona, which holds the most junior rights on the river, would be hit first, followed by Mexico and Nevada. California, with its senior rights, would be the last to be affected by shortages, although the state only recently has been living within its 4.4 MAF share of the river.

Las Vegas would suffer the most from shortages, because, unlike the other river users, it has no agricultural "buffer" in its 300,000 acre-foot share. Cutbacks would be passed on directly to homeowners and businesses, including the giant casinos and resorts upon which the city has built its economy.

Declaring shortages on the river will not be an easy task for the Interior Department, which would find itself caught in a heated feud between jealous states.

"There are some absolutely intriguing questions about the relationship between the upper basin and the lower basin that we'll answer as time goes on," says Raley. "But unlike prior times, when all the fights were almost always about the future, the drought will be about now."

"We only have so much water and no [interior] secretary can increase that."

But Interior, Congress and the Colorado River states should re-examine the river's limits and adjust the Law of the River accordingly, says Owen Lammers, director of Living Rivers, a Moab-based environmental group.

"We should be preparing for significantly lower flows than were planned for 80 years ago."

Lake Powell is at the heart of the battle over restoring natural flow

Shaun McKinnon The Arizona Republic Jul. 25, 2004 12:00 AM

PAGE - Stranded on a reddish rock shelf 60 feet above the surface of Lake Powell is a string of blue and white plastic floats, the kind that mark water boundaries. No one threw them up there or dropped them from the canyon rim 50 feet above. They just ended up there as the reservoir shrank.

The boats across the bay at Wahweap Marina are docked at water's edge, but the trucks, SUVs and trailers are crammed into an awkward, makeshift parking area, a rocky patch that two years ago was underwater.

Above the marina, the white "bathtub rings" etched into the canyon walls by years of subtle seasonal shifts in lake level look more like ghostly afterimages from a picture long gone, a reminder of how much of itself the reservoir has lost.

The scars chiseled by five years of drought on the Colorado River are impossible to ignore here in the shadow of Glen Canyon Dam, no matter how many boaters or fishermen continue to use the reservoir. To the West's water managers, they are battle scars, proof that the system works. Store water in amounts this vast and the 30 million people tethered to the river can survive the worst of dry spells.

But to others, the reservoir and the dam are ugly symbols of a good idea taken too far. The lake's declining volume - it is at its lowest level since it was first filled in the early 1970s - has revived talk of draining it and decommissioning the dam. At the very least, some conservationists say the conditions here, nearly 700 miles from the river's pristine headwaters, are evidence that the West's growth has come at a destructive cost to its rivers and the environment.

From a windy ridge overlooking Wahweap, John Weisheit sees the ugly symbol. A veteran river guide, Weisheit is the conservation director for Living Rivers, one of the groups arguing that unless Lake Powell is drained and the Glen Canyon Dam taken down, the river and the singular ecosystem it supports through the Grand Canyon will die.

"I've been coming here for 32 years, and it looks like it did when I first started coming," said Weisheit, dressed in faded jeans, a T-shirt and a "Colorado Riverkeeper" cap. His car is littered with books and colorful folders of literature about the Grand Canyon and how it has suffered because of the dam. "Lake Powell is draining, and we might as well get used to it," he said. "This is the way it's going to be. We need to find ways to live without the lake, because our bad water management practices are killing the Grand Canyon. We don't need Glen Canyon Dam. We never did."

Just about every Western water agency and even other environmental groups dispute Weisheit's claim. They insist that there are plans to help restore the Grand Canyon and that without Powell, this drought would have plunged the West into chaos.

What is undeniable is that the Glen Canyon Dam changed the Colorado River and the Grand Canyon in a way that has made them less hospitable for native species.

The debate over those changes has helped frame the broader discussion of how to develop the West's water resources without destroying natural habitat. Urged on by conservation groups, an increasing number of government agencies and courts say the environment should be considered a water user, like a city or a state, and among their solutions is reducing the number of dams.

Lake Powell's role

From his office at the Carl Hayden Visitors Center, Ken Rice commands one of the best views anywhere of the Glen Canyon Dam. A wide window takes in both the downriver side of the dam and a slice of Lake Powell. Rice, who manages operations at the dam for the U.S. Bureau of Reclamation, admits the sight can be distracting.

The lake's low level is obvious from up here. But Rice said he doesn't see failure, even though the bureau's own hydrologists suggest Powell could become so low in as soon as four years that the dam may not be able to release any water downstream.

"It's doing exactly what it was designed to do," he said. "You take us out of the equation and (Lake) Mead would be way down, maybe even too far down to generate power."

Lake Powell was built primarily to store water on behalf of the upper-basin river states, which are required to deliver a minimum amount of water each year to the lower-basin states. In a typical year, the Colorado River would replace the water released to the downriver states from Powell. In a drought year, the lake level falls. Five consecutive dry years have lowered Powell by more than 100 feet.

At least two sets of scientists have run models of the drought-impaired river without Powell in the system. Both concluded the lake is critical to the West's survival. One study said Lake Mead would have fallen to about 9 percent of its capacity by now, which would cut off Las Vegas from 90 percent of its water.

Hydrologists for the Central Arizona Project, which delivers Colorado River water from Phoenix to Tucson, also ran models on a Powell-less West. To start, there would have been no CAP, which was approved in part because Powell was adding new storage.

Over 40 years, the time span since the dam was completed, at least 45 million acre-feet of water, a 100-year supply for nearly 2 million people, would have flowed unused into the Gulf of California. And without Powell, Lake Mead would have fallen low enough to produce West-wide shortages in 2002, according to the model.

That's not reason enough for Weisheit and groups like his and the Glen Canyon Institute. They cite figures about how much water from Powell is lost each year to

evaporation and show evidence that government efforts to restore the downstream ecosystem have failed.

"There are so many holes in the system right now," he said. "Instead of slapping on a Band-Aid, let's start fresh. If this drought, this climate change, gets worse, it doesn't matter how many reservoirs you have, there's not going to be enough water. And even if the lake recovers, the problems will remain."

Page needs Powell

In Page, there is no debate over the value of Lake Powell. Without the lake, there is no Page, which otherwise would sit on a plateau high above the Colorado River. News reports about the lake's low level upset business owners, who say the media have painted an unfairly bleak picture of Powell.

"People who have not come here before or who come once a year are very happy with what they find," said Joan Nevills-Staveley, executive director of the Page-Lake Powell Chamber of Commerce and Visitors Bureau. "This probably is the optimum lake level for camping. We don't want it to stay there," she quickly added, "but a lot of the canyons are now accessible that weren't before."

It's not surprising to get the chamber outlook from the chamber boss, but Nevills-Staveley knows a bit about Lake Powell and the Colorado River. Her father was the first commercial river runner, taking tourists down the San Juan River and the Colorado from Mexican Hat, Utah, to Lees Ferry, beginning in 1938. Nevills-Staveley herself helped start the first concession operations on the lake's upper arm, at Hite Marina, which has closed because of the drought.

From her cramped corner of a narrow storefront office on Page's main drag, Nevills-Staveley tries to reassure people when they call that there's still ample water to boat and fish and that camping and hiking opportunities abound.

She is Page's own encyclopedia at times: "How many motel rooms do we have?" an office worker yells after picking up an incoming call. "Fifteen-hundred-and-one," Nevills-Staveley replies. She scoffs at the drain-the-lake crowd: "It's not a well-thought-out plan," she said. "Most of us thought it was funny, because it is. It's ludicrous.

Then we saw they were serious, and there's been a lot of misinformation since then." When the idea was first floated, "people called and canceled houseboat rentals and river trips through the Grand Canyon," she said. "It was scary. The standard answer here is 'Yes, there is less water, but there is still over 400 feet at the dam.' "

In 1997, a group of Page residents formed Friends of Lake Powell to help counter the anti-dam movement. Paul Ostapuk, an environmental scientist for Salt River Project in Page, said the groups behind the proposal don't have nearly the support they claim.

He also suggests their focus on restoring Glen Canyon ignores the reality of the region. "The lake when it was full only covered 13 percent of Glen Canyon," Ostapuk said. He pulls up a picture on his laptop computer, which he set up in the lobby of a hotel up the

hill from the dam. "It isn't like there was nothing to see. But that's the picture that gets painted. The lake at half-full years ago was a spectacular place to come. The lake now is still a spectacular place."

Managing nature

Above Lake Powell, the Colorado River runs wild and muddy, just as it did when Maj. John Wesley Powell first explored it in 1869. Then, the river was unpredictable, its flow fluctuating wildly with the seasons. It stirred sediment, earning its name - Colorado, or red-colored - from the rusty tinge it took on after carving its way through Utah's canyon lands.

Glen Canyon Dam changed that. Once the water is impounded behind the giant concrete structure, the silt and sediments settle. The water temperature drops as the lake deepens. By the time it passes through the power turbines at the dam, it is cool and clear.

That's not good for the native fish species, which like warm, muddy water, but it's ideal for non-native trout, which like to eat native fish. The population of the endangered humpback chub, a fish that evolved over millennia and lives only in the lower Colorado River, has fallen by nearly 70 percent since 1989, and scientists blame the dam.

Federal officials launched an adaptive management program nearly a decade ago to try to help the fish and other species. A key was to mimic the river's old flow patterns and move sediment. In 1996, then-Interior Secretary and former Arizona Gov. Bruce Babbitt oversaw an engineered flood, which was meant to move sediment and help rebuild beaches and restore fish habitat.

That experiment is now considered largely unsuccessful, but others have followed, including the removal of trout from areas where chub live.

Nikolai Ramsey works for the Grand Canyon Trust, a conservation group working to protect the Colorado River's geologic masterpiece. He is the group's representative on a regional committee that evaluates the adaptive management program.

Ramsey works in Flagstaff, a steep 130-mile drive from the dam, but he shuttles among Flagstaff, Page, Phoenix, Salt Lake City and the Grand Canyon often and has watched the work up close in the Canyon. He still believes it's possible to manage the river for human use and still find ways to protect endangered species and habitat.

"There is some human arrogance on our part in thinking we can manage the river by mimicking natural conditions," he said. "But we can take a shot. Let's push the science as far as we can and have the science drive the management actions. Let's see if we can't have both the conserving of the human values that derive from the dam being there and also the environmental values. We still think that's possible."

He said the idea of removing the dam is not without logic, but the political and practical realities are that it's there "and it does achieve its purposes."

Environmental shifts

Along the receding shorelines of Lake Powell and Lake Mead, biologists are watching the effects of the drought as it reveals long-buried box canyons and takes water back from marshes and inlets. Already, thickets of tamarisk, a fast-spreading invasive tree, have appeared on the upper end of Lake Mead, where water levels have dropped dramatically.

Tamarisk, also known as salt cedar, can kill out native plant species, but it also provides an attractive nesting spot for birds, including the endangered Southwestern willow flycatcher. That happened at Roosevelt Lake northeast of Phoenix, and the lake's operator, Salt River Project, was forced to spend millions of dollars to create a new nesting area for the bird. Without that habitat plan, SRP could not allow those areas of the lake to be inundated with water once lake levels began to rise again, eliminating critical water storage.

"That could happen up there, but we can't really predict it," said Lesley Fitzpatrick, a wildlife biologist for the U.S. Fish and Wildlife Service. "It would depend on how fast the trees grew and how long the water stays low. It happened over a long time at Roosevelt."

Early surveys haven't turned up any flycatchers in either reservoir, but Fitzpatrick said she has seen other changes. Habitat has dried up in some places, forcing birds and other wildlife to move on. In some ways, she said, the ebbing and flowing of the lakes mimic the old river, exposing habitat and then drowning it again later, but "the scale is different and the timing is different."

And that's the point, said Weisheit, the river guide and environmentalist. No amount of tinkering with the dams and the lakes will ever restore the Colorado River to the way it was. The river needs to run freer, even if that means the West has to make do with less water.

"We need to face reality," he said, packing up his car for the return trip to his home in Moab, Utah. "We live in a desert. We need to reduce our water use. As long as Glen Canyon Dam is here, the Grand Canyon is at risk." He watches another carload of tourists pull up and snap pictures.

"People will still come here," he said. "Moab makes as much money as Page, and it's not dependent on a reservoir that is consumptive, expensive and polluting. When the Grand Canyon is dead, do you think people are going to come out here? And who are they going to blame? The whole world is watching." If the drought persists and Lake Powell falls so low that it can't generate power, a level the lake could reach by 2007, then its economic value will be reduced to local recreation, especially if the bureau begins to manipulate water releases to restart the turbines.

The worst-case scenario up and down the river is dead pool, when the lake drops too low to let water out at all. The downriver states could survive on Lake Mead storage, but the river's economy would crash. A dry river would be an environmental catastrophe,

Nikolai Ramsey said, and if the lake didn't recover quickly, natural habitat could be lost for years.

But Ramsey isn't ready to buy the all-or-nothing equation yet. "We're still in a good place where there is human and environmental synergy possible," he said. "When power is lost and flows become less flexible for resource management actions, then we're in trouble. "Then it becomes more dam vs. Grand Canyon."

What keeps him and other river watchers optimistic is that even in a long drought, there's usually a year with normal rain and snow, and normal at this point would buy the Colorado time, maybe enough to keep itself alive

LR in the News 07/26/04

The next big drought may be more painful

By Brent Israelsen for the Salt Lake Tribune

If history is a guide, this six-year drought should have ended already. Chances are good it will end this year. Or next. But what if it doesn't? How many more years of below-normal precipitation can Utah withstand before the state's economy and way of life begin to suffer? What if this drought is the beginning of an epic change in climate? What happens during the next prolonged drought, 50 years from now, when Utah's population is more than twice its current size? Will there be anything left for fish and wildlife that depend on streams?

These are questions that should keep state water planners and environmentalists restless through these balmy summer nights. For now, though, Utah's chief water czar, D. Larry Anderson, appears to be sleeping just fine -- mainly because he has, as he puts it, a good "cushion." That cushion is the huge volume of water used by Utah's farms and ranches, which accounts for about 80 percent of the state's total developed water supply.

During droughts, agriculture -- which draws water directly from streams and small reservoirs -- takes the hit. Municipal supplies, which are built around large reservoirs with several years of built-in storage, are less susceptible to prolonged dry spells. "There will be some cushion," Anderson says, sporting a "Slow the Flow" T-shirt. "We have plenty of water for the foreseeable future."

The problem is, not all of it is available for drinking. Of the approximately 7.3 million acre-feet of water that flows through the state each year, only about 1.2 million acre-feet can be delivered today for culinary use. Residents consume nearly 1 million acre-feet per year. The rest of the state's water supply goes to agriculture, the Great Salt Lake, evaporation and to states downstream on the Colorado River.

Assuming current population trends and per-capita rates of consumption, culinary water demand is expected to rise to 2 million acre-feet by 2050, leaving a deficit of about 800,000 acre-feet above the deliverable supply of 1.2 million acre-feet. State water officials hope to squeeze about half of that water from people, through conservation. After all, about two-thirds of Utahns' water use is for landscaping, and experts estimate about half of that is wasted. The state hopes to cut Utahns' per-capita water consumption by 25 percent by 2050.

As subdivisions sprout up in once-irrigated fields, another 264,000 acre-feet are expected to become available, as agricultural water rights convert to municipal and industrial rights. After conservation and agricultural conversion make their contributions, Utahns in 2050 still would be short about 136,000 acre-feet.

That deficit, Anderson says, would be made up from any combination of three major new water projects now on the drawing board. Each of them would require enormous public investment at a time when existing water infrastructure, such as delivery systems and treatment plants, need to be expanded or replaced.

The Bear River is considered the next most likely source of water for the Wasatch Front, which hopes to siphon about 150,000 acre-feet a year. The total project would cost about \$600 million.

In southwestern Utah, water managers from Washington and Iron counties are eyeing a \$400 million pipeline project that would deliver water from Lake Powell, more than 120 miles away. A third, though less likely, project contemplates a 115-mile pipeline that would run from northern Flaming Gorge in Wyoming to the Weber River Basin drainages near Coalville. Estimated to cost about \$300 million, the pipeline could deliver about 60,000 acre-feet of water a year to the Wasatch Front.

Environmentalists say the new water-development projects would unnecessarily disrupt ecosystems and landscapes. They argue for more emphasis on conservation, better planning, curbs on growth and a shift in planning.

"During this drought, there's been no discussion about the environment," laments Owen Lammers, director of the Moab-based Living Rivers. "It's been people, people, people. We want to make sure the environment has a seat at the table in managing human demands."

Erica Thoen, of the Salt Lake City-based Utah Rivers Council, criticizes the state's water goal of reducing per-capita daily consumption by 25 percent by 2050 -- as too weak. Utahns, she notes, already have reached much of that goal during this current drought. In Salt Lake City, for example, residents have cut their water use by 18 percent. Today, a Salt Laker consumes about 214 gallons per day -- 10 percent less than the statewide target of 240 gallons four decades from now.

And the city's conservation director, Stephanie Duer, says she believes the city can do even better. A larger sampling of 16 major water agencies around the state suggests that, despite a growing population, total water use in Utah has declined 19 percent

since 2000. So is the state goal too wimpy? State officials defend their conservation goal, which was established well before this six-year drought began, as being achievable and sustainable without being draconian.

"Beyond [25 percent], things get tougher," says Anderson. "The environmental community wants us to do it tomorrow. We can't force it down [residents'] throats." To get more than 25 percent, water agencies would have to increase water rates and cities would have to enact restrictions on landscaping and limit the size of residential building lots, which Anderson says are too large.

He does not believe, however, in the need for government curbs on growth, noting the potential for obtaining more water through conservation and converting more agricultural shares. "We don't think water is a limiting factor," Anderson says.

However, to date the state's plans for providing water to ever-increasing populations have not factored in the possibility of climate change caused by global warming, which many leading scientists say could significantly alter how and when Utah gets its precipitation.

"We've got to get away from historic planning and look at new hydrologic realities of a shrinking snowpack and changing seasonality of runoff," says Fred Wagner, a Utah State University professor emeritus and expert on global warming. "It is potentially a serious problem that needs serious analysis."

Global warming notwithstanding, the current drought has given water officials plenty of pause. "Long-term drought cycles of many years should be expected," says Richard Bay, chief engineer of the Jordan Valley Water Conservancy District. "We'll make it through this [drought] quite nicely. The next time this occurs, with an increased population, that will be the true test."

Water consumption in Utah is down, but is it enough?

LR in the News 07/26/04

Glen Canyon Dam flow regime a 'failure,' report says

April Reese, Greenwire Southwest correspondent

A 13-year-old experiment aimed at improving ecological conditions in the Colorado River watershed below Glen Canyon Dam is failing and needs a management overhaul, according to a draft report by a group of scientists that monitors the dam's environmental effects.

Since 1991, Glen Canyon Dam has operated under "modified low fluctuating flows" (MLFF), intended to help recover the endangered humpback chub and other species

downstream in Grand Canyon National Park without scaling back power production or recreational activities such as rafting.

MLFF involves daily variations in flow. For example, on weekdays in July, daily fluctuations vary from 10,500 cubic feet per second (cfs) during the late evening and early morning off-peak hours to 18,500 cfs during peak times in the late afternoon and early evening. Still, the MLFF is a highly regulated version of the river's historic flows, which seasonally ranged from as little as 500 cfs to as much as 100,000 cfs.

Under the current flow regime, the endangered humpback chub, which once thrived throughout the Colorado River Basin but now occupies only the lower basin in the Little Colorado River, continues to spiral toward extinction, declining by an average of 14 percent each year, according to the draft report.

"One of the justifications for the MLFF policy was apparently an assumption or prediction that MLFF would have beneficial ecological effects relative to the more violent diurnal flow variations that preceded it," the report says. "We show that no such beneficial effects are evident in the ecological system (except to abundance of exotic trout), and in fact the move to MLFF is correlated with a relatively sharp decline in humpback chub recruitment."

Hydropower production has also declined under the low fluctuating flows, the report notes. The Western Area Power Administration, which sells power from Glen Canyon Dam, has had to cut its electricity generation by roughly 25 to 30 percent, or 400 to 440 megawatts, in recent years. To make up the difference and meet power contract commitments, WAPA purchases power from other producers -- an expensive stopgap measure.

In fact, the only beneficiaries of the modified low fluctuating flow regime have been exotic trout that eat endangered chub and the rafting industry, the report concludes.

"At present, power utilities and their ratepayers are essentially subsidizing, at considerable cost, improvement in the quality of Grand Canyon for some recreational uses," the report reads. "It is one thing to impose such costs to deal with some broad public interest such as protecting an endangered species, but quite another one to impose it for the benefit of particular stakeholders."

The issue of flows from the dam needs to be addressed "openly and quickly" before it "leads to a breakdown in the collaboration among stakeholders that has made adaptive management possible in Grand Canyon in the first place," the authors warn.

Management of Glen Canyon Dam and the Colorado River's resources in the park is overseen by a diverse group of stakeholders called the Adaptive Management Work Group, which monitors how well policies are working and suggests changes in course when necessary. Participants range from Bureau of Reclamation officials to fisheries biologists, environmentalists, hydropower interests and American Indian tribal representatives. The stakeholders periodically examine the latest scientific information

on the river and make management recommendations to the Interior secretary, who decides whether to implement them.

The draft report, written by the technical arm of the group that advises the stakeholders on scientific matters, suggests that a switch to a more variable flow pattern may benefit both ecological resources and power production in the Grand Canyon.

Carolyn Hinkley, a spokeswoman for the Western Area Power Administration, agrees. "It has cost us \$50 million a year more with the modified low flows," Hinkley said. "When we have fluctuating flows, it does allow us to meet demand more easily."

Experimental flows over the past two winters that have increased daily fluctuations in an attempt to reduce the exotic trout have enhanced power production, Hinkley said.

But others contend dam managers should embrace more variable flows that mirror natural, seasonal fluctuations. These "seasonally adjusted steady flows," which were recommended by the Fish and Wildlife Service a decade ago, would attempt to mimic the Colorado River's highly dynamic natural flow, advocates of such measures say.

But mimicking the river's historic low-flows would result in drastically reduced power production and revenues for WAPA, said Owen Lammers, executive director of Living Rivers, an advocacy group based in Moab, Utah. Lammers and other critics of current management practices charge that WAPA has too much influence over management decisions, a charge the agency dismisses.

"We have one vote just like any of the other representatives on that group," said Hinkley, the WAPA spokeswoman. "It takes two-thirds of the group to decide on what direction to take."

The ecosystem's needs are not the only factors to be considered, stakeholders point out. Through the adaptive management work group, they must also weigh the needs of boaters and other recreationists, American Indian tribes, irrigators and cities that depend on the dam for hydroelectric power and its reservoir, Lake Powell, for water supplies.

Lammers said the draft report provides further evidence that BuRec, which operates the dam, needs to consider a new approach for dam operations. "There's been an abundance of new information that reinforces that we need to take a much different look at what's needed to recover the resources in Grand Canyon," he said. "Right now, they're operating without a net."

Living Rivers and about 200 other environmental groups have asked BuRec to draft a new environmental impact statement that would examine both seasonally adjusted steady flows and the decommissioning of Glen Canyon Dam, either of which they say could reverse the decline of the humpback chub.

Hinkley said WAPA and other stakeholders are meeting to sort out an experimental flow regime to address the concerns laid out in the draft report.

[EVIDENCE FOR THE FAILURE OF THE MODIFIED LOW FLUCTUATING FLOW ALTERNATIVE \(MLFFA\) TO BENEFIT MOST ECOLOGICAL RESOURCES IN GRAND CANYON](#) [96k PDF File]

LR in the News 08/01/04

Odds seem long, time short for Canyon chub

By Mitch Tobin
ARIZONA DAILY STAR

LITTLE COLORADO RIVER - Pitted against a 710-foot dam, blue-ribbon trout fishery and the water demands of 25 million people, humpback chub are swimming upstream to survive.

The prehistoric-looking minnows once numbered around 100,000 in the Grand Canyon. But today - four decades after Glen Canyon Dam transformed the Colorado River from warm, muddy and variable to cold, clear and calculated - the population is down to about 3,000.



"It's as if you took a rhino or an elephant out of the African heat and tried to raise them in Alaska," said David Haskell, who ended his 33 years with the federal government as science director of Grand Canyon National Park from 1994 to 1999.

Tens of millions of dollars already have been spent to help the chub. An even bigger bill may be coming as officials consider retrofitting the dam or altering its releases, now regulated more by the Sun Belt's demand for air conditioning than nature's ebb and flow. Even if society doesn't fully accept the ethical, aesthetic, ecological and educational rationales for saving rare creatures like the chub, the strict Endangered Species Act could make the spending mandatory.

The radical change to the Colorado let rainbow trout thrive below the dam and helped many of the river's other introduced fish species, some of which feast on the natives. But the frigid water has made it virtually impossible for chub to spawn in the Colorado, forcing them to swim up the last 10 miles of a tributary, the Little Colorado, to reproduce.

Just since 1989, the estimated number of chub in the Grand Canyon has fallen by two-thirds, drawing the fish further down a path to oblivion already blazed by the bonytail chub, roundtail chub, razorback suckers and Colorado squawfish.

"The population may be so small now that it's ecologically extinct and can't come back," said Chuck Minckley, a U.S. Fish and Wildlife Service biologist whose doctorate examined the chub's history since 1908.

Environmentalists have long dreamed of decommissioning the dam that created Lake Powell, with radical factions fantasizing about blowing it up and the mainstream arguing it will back up with sediment anyhow and be vulnerable to collapse.

Activists vow they'll sue by year's end to force a new study of how and whether to operate the dam - a linchpin of the plumbing system that feeds Tucson and Phoenix via the 336-mile Central Arizona Project canal, plus Las Vegas and Southern California.

The first environmental impact statement, finished in 1995 after 50,000 public comments, was funded by \$104 million in hydropower revenues.

With record drought gripping the Colorado's basin - Lake Powell hasn't been this low since it was filling in the 1970s - federal officials say the reservoir is more valuable than ever.

"If we did not have the Glen Canyon Dam, Arizona would be in a serious crisis today," Interior Secretary Gale Norton said in Phoenix last week. "You don't survive a long-term drought unless you have storage."

The Bureau of Reclamation, overseen by Norton, won't even consider damming the dam, but is again contemplating a major modification to the upstream face that would let warmer water pass through its turbines - and cost up to \$160 million.

It wouldn't be the first time the chub altered how the dam is run. In 1996, former Arizona Gov. and then-Interior Secretary Bruce Babbitt opened its 8-foot- wide floodgates with much fanfare to re-create spring floods. Weeks later, the experiment was hailed as a success in creating beaches for boaters and backwaters for chub. But researchers now say whatever gains were made were fleeting. Sand bars washed away within a year.

More experimental floods in the spring of 2000, followed by low flows all summer, forced the dam to cut power generation when it's most lucrative, hitting energy buyers with \$21 million in extra costs, according to the Colorado River Energy Distributors Association.

Falling water spinning blades of turbines lets Glen Canyon Dam produce 1,300 megawatts at full capacity and power 3 million homes. Cutting that supply means utilities must find more costly substitutes, said LaVerne Kyriss of the Western Area Power Administration, which markets the dam's energy.

Environmentalists counter that the dam's power supply could be offset if 10 million homes replaced two standard light bulbs with energy-saving compact fluorescents.

A river transformed

Before the government's 20th-century dam-building campaign, the Colorado's flow was as uneven and mercurial as the topography and climate of its 244,000-square-mile basin, which extends from sand dunes in Mexico to the glaciers of Wyoming's Wind River Range.

In spring, the river could roar with turbid snowmelt at 100,000 cubic feet per second, only to shrink to a trickle of 3,000 cfs in summer. Water temperatures ranged from near freezing to more than 80 degrees.

Today, just below the dam, the Colorado is a nearly constant 46 degrees because water is drawn through turbines from hundreds of feet below the surface, where sunlight can't penetrate. Rafters who fall overboard may flirt with hypothermia in July. Young chub that survive the thermal shock are often paralyzed and vulnerable.

Though fickle in its flow, the Colorado has become the lifeline of the Southwest. Starting with Hoover Dam in the Great Depression, colossal dams and aqueducts were built to capture floods and survive the droughts. The Sierra Club and its leader, David Brower, blocked plans in the 1960s to plug the river in the Grand Canyon, but only after they had accepted Glen Canyon in exchange for the government's scrapping a dam that would have submerged part of Dinosaur National Monument in Colorado.

Brower carried regrets to his grave. And for people like former Tucsonan Dave Foreman, a disenchanted D.C. lobbyist for the Wilderness Society, the 5.4 million cubic yards of concrete epitomized the perils of political compromise. On the 1981 spring equinox, Foreman and other founders of Earth First staged their first protest.

Egged on by Tucsonan Edward Abbey, whose novel "The Monkey Wrench Gang" depicts a band of saboteurs plotting to blow up the dam, they unfurled a 300-foot, black-plastic banner down the dam's ivory face, making it look as if they'd cracked their concrete demon.

Even before the dam, chub had to compete with non-native fish introduced as early as the late 1800s, sometimes by the agencies now struggling to recover the endangered fish.

The rainbow trout fishery at Lees Ferry, which would disappear if the dam did, now attracts anglers from around the globe, provides hundreds of jobs and brings in \$20 million per year, said Terry Gunn, co-owner of Lees Ferry Anglers and the adjoining Cliff Dwellers Lodge.

"Every dollar is important to this (economically depressed) area," he said.

Brown trout prey on chub, he said, but the impact of rainbow trout is overblown since they're insect-eaters and studies have found other fish in the stomachs of fewer than 1 in 100 rainbows.

Recent experimental flows and limited removal of non-native fish have been both costly and ineffective, he said. "We're all in favor of the recovery of the humpback chub. But, so far, they haven't done anything to really help the chub."

Little Colorado sole nursery

Because the Colorado's main stem is so cold and clear - giving sight-based predators a leg up on their prey - the Little Colorado has become the sole maternity ward for the

Grand Canyon's chub. The LCR, as it's known, starts on 11,403-foot Mount Baldy in the White Mountains, then snakes to the northwest, often as a trickle, before reaching the Painted Desert and Navajo Reservation.

Near the confluence with the Colorado, the river glistens like one of the turquoise necklaces fashioned thousands of feet above on windswept plateaus dotted with hogans and sagebrush. Up close, the river looks more like skim milk and the shores are encrusted with a white ring. The dissolved minerals also emerge from solution to form small dams and falls in a process similar to the creation of stalactites and stalagmites.

You could drink the water in an emergency, river rats say, but soon you'd be losing as much fluid in diarrhea. So the researchers who arrive here by helicopter bring their own water, along with a half-ton of other supplies, to support their 12-day surveys.

Biologists set about 20 hoop nets a day. They return the following morning to measure the fish, record their reproductive status and use syringes to inject half-inch, \$4 transmitters similar to the microchips used to reunite pets with their owners. Scientists can infer population trends and growth rates by continually recapturing the fish because each tag, when passed through a special wand, emits a unique 12-character code.

"That's his social security number," said Dennis Stone, a Fish and Wildlife biologist who has spent up to 120 days a year in the Canyon.

In 1993, Stone saw the LCR at 20,000 cubic feet per second. Three months ago, the 70 degree river was at its base flow of 240 cfs, fed entirely by Blue Springs.

"If Blue Springs ever dries up, these fish are toast," he said.

Below Lower Atomizer Falls, Stone swims across the river to check nets, a wad of tobacco between cheek and gum, only his bespectacled head visible. The call of canyon wrens cascades from red spires along with the slanted sunlight, creating a setting so sublime as to appear unreal, like a 19th-century, Romantic-era landscape painting.

On the shore, the smell is almost marine, the mud sometimes becomes quicksand and the thick ribbon of riparian vegetation - mesquite, acacia, cattails and salt cedar - lashes the researchers' shins. Atop a sand terrace, volunteer Bill Pine and biologist Josh David pluck captured fish from a plastic bucket, struggling to hold the muscle-bound creatures in their hands.

"This is a fish made to run the rapids," said Pine, a scientist at the Mote Center for Fisheries Enhancement in Sarasota, Fla. "It's a body shape built for speed, and it's highly evolved for this river."

Embedded scales make the chub feel leathery, and its nostrils have flaps to keep out sediment. Its big, sickle-shaped tail, like a tuna's, propels it through swift water. The namesake hump is thought to act like a rudder and help keep it near the bottom of the river.

"They're about as charismatic as a fish gets," David said.

The LCR's chub have become one of the nation's most intensively studied fish populations, but much of their biology remains shrouded in mystery. Some scientists, however, fear repeated handling of the chub could be hurting them.

David suspects young chub may be eaten while in the nets. He'd like to use underwater cameras to examine that, plus the escape rate from nets and spawning behavior, which has never been observed directly.

"Know anyone with \$15,000 for a chub study?" he asked.

Search for warmer water

Federal officials will need a lot more than that to make Glen Canyon Dam chub-friendly.

The proposed temperature-control devices - derided by critics as band-aids - would draw water from closer to Lake Powell's sunny surface, instead of the reservoir's chilly depths.

Getting Congress to fund the project will be a challenge, but it could be operational as soon as 2007, said Dennis Kubly of the Bureau of Reclamation.

Fitting just two of the dam's eight penstocks, at a cost of \$20 million each, would probably gain the most bang for the buck, Kubly said. The trick, scientists and federal officials agree, is to warm the releases enough to help the chub, but not so much that its non-native predators benefit even more.

Similar technology is already used at Flaming Gorge Dam in Wyoming, Shasta Dam in California and some five dozen other sites Reclamation studied.

"In almost every example, the outcome has been positive," Kubly said.

The devices won't, however, do anything to stop the dam from trapping 95 percent of the Colorado's sediment.

Replicating the natural system would require adding up to 10 million tons of silt per year, the 1995 environmental study said. Proposals have been floated to use trucks, barges or a slurry pipeline that would have cost \$50 million to build in 1995 and \$10 million per year to run.

Environmentalists say the sediment is crucial not only for chub, but the rest of the Grand Canyon ecosystem. But the cost would be astronomical, requiring four tandem-trucks to dump silt every minute, in perpetuity, said Owen Lammers, executive director of the Moab, Utah-based Living Rivers.

"When you look at trying to restore the natural process in the Grand Canyon, the cheapest way to do it is decommissioning the dam," he said.

Lammers and other dam foes say Lake Powell's storage could be handled upstream in existing reservoirs, thus saving billions of gallons lost to evaporation behind Glen Canyon Dam.

"We only need it because we're incredibly an overconsumptive basin in terms of water use," he said. "We've been used to living high on the hog, and what it's gotten us is a destroyed Grand Canyon."

Contact Mitch Tobin at 573-4185 or mtobin@azstarnet.com.

LR in the News 08/01/04

Let the Colorado run again

The Denver Post, Sunday, August 1

Writers on the Range by John Weisheit

As our rafts bounced through what was supposed to be the last rapid on the Colorado River before its transition to the slack water of Lake Powell, we were surprised to hear the rumble of whitewater downstream.

The half-mile-long Imperial Rapid, submerged for three decades, had re-surfaced. The natural draining of the nation's second-largest reservoir was underway, but how far would it go?

Climate change in the region has lowered the reservoir 120 feet over the past five years. This drop should have been sufficient to expose half the remaining 21 rapids that were also submerged by the reservoir, yet only Imperial has come out so far. A look around from the raft revealed the problem: We were floating over a massive slab of sediment that had built up in the decades since Glen Canyon Dam was finished.

The remainder of our descent was through a ditch framed by gray cliffs of sand rising 25 feet on either side, with dump-truck-sized chunks calving off like icebergs.

The ditch widened as we caught up with the slack water of the reservoir, now 30 miles below Imperial Rapid but still 140 miles from Glen Canyon Dam.

Although Lake Powell reservoir is just 40 percent full and has lost 50 percent of its surface area, it has dropped only 20 percent in elevation. The reservoir is still 445 feet deep near the dam. It's like a wide funnel: There's more water stored at the top. But scientists predict it will fall more rapidly if present climatic conditions persist.

The reservoir's elevation could also drop three times faster over the next three years than it has over the past five. If that happens, it would cause hydroelectric power production at the dam to cease in 2006. By 2007, a condition known as "dead pool"

would be created, which means the dam would basically become useless as a power generator. The reservoir, however, would still stretch 104 miles upstream, contain approximately 2 million acre-feet of water and sediment, and rest 234 feet above the original river bed at Glen Canyon Dam.

Still submerged would be most of Glen Canyon's 125 signature side canyons, which inspired the canyon's pre-dam river runners along with the mounting numbers of present-day advocates for Glen Canyon's restoration. Nature's crash course in water scarcity is helping to amplify the mounting economic and environmental liabilities associated with Glen Canyon Dam and Lake Powell, raising the prospect of decommissioning the dam and uncovering the remainder of the canyon.

Glen Canyon Dam was completed in 1963, as a water-storage facility for downstream users. Because of other storage facilities built in the basin, principally Lake Mead behind Hoover Dam, it will be this winter before Lake Powell's storage will, for the first time, actually contribute to downstream water use.

Over the years, Lake Powell will have lost 40 million acre-feet of water from evaporation and seepage, while providing only 23 million acre-feet in storage. This lost water represents nearly three years of the entire annual flow of the Colorado River. It's not surprising that people are looking for more efficient ways to save this valuable water. California, Nevada and Arizona are already doing so by storing Colorado River water in underground aquifers. They lose as little as 1 percent of the water to the environment, compared to the more than 60 percent of water that is lost at Lake Powell.

Concern is also mounting over the damage Glen Canyon Dam is causing to the downstream ecosystem in Grand Canyon National Park. Four of the Canyon's eight native fish are already gone, as are otters, muskrats and a host of birds, insects and reptiles. Despite more than \$200 million invested in efforts to mitigate the dam's impacts, biologists say these declines will continue.

As the drought continues, a growing number of scientists are questioning whether there will ever be enough water to fill Lake Powell. But I have a different question: Once the reservoir dies a natural death, shouldn't we finish the job and let the river run again?

John Weisheit is conservation director for Living Rivers.

LR Press Release 08/09/04

Solution Proposed for Failing Federal Program to Save Grand Canyon.

Contact: Owen Lammers - (435) 259-1063

(Phoenix) Living Rivers/Colorado Riverkeeper, the lead advocate for protection of the Colorado River, called for immediate action to address the main impediments to failing federal efforts to recover endangered native fish in Grand Canyon National Park.

At the semi-annual meeting beginning today of the Glen Canyon Dam Adaptive Management Working Group (AMWG), Living Rivers/Colorado Riverkeeper presented a [letter](#) emphasizing that the continued decline of critical resources including endangered species in Grand Canyon's Colorado River is a result of the program's lack of effective management strategies needed to comply with the Grand Canyon Protection Act.

"It's so simple. All they have to do is follow their own charter," says Dave Haskell, former science director for Grand Canyon National Park and now policy director for Living Rivers/Colorado Riverkeeper. "But they merely focus on implementing increasingly complex research projects that continue to fail to achieve the stated program goals."

Since established in 1996, the AMWG has spent more than \$100 million on efforts to change the operations of Glen Canyon Dam, but has failed in its principle objective, recovery of endangered, native fish. Since the program began, the razorback sucker has disappeared from Grand Canyon, while the humpback chub has declined 14 percent per year to as few as 1,000 adult fish.

This week's meeting has been extended an extra day to discuss future strategy, and follows an unprecedented three-day retreat held last month in an attempt to fix the ailing program.

"Any strategy must define what constitutes program success, and there in lies the problem," adds Haskell who is attending the meetings. "The stated goals are lofty but there is no clearly defined strategy to attain them. They state that it may not be possible to mitigate some of the impacts caused by the dam, but they do not indicate which ones. It will be impossible to determine when the program has actually met the goals."

Living Rivers/Colorado Riverkeeper is requesting that not only does AMWG make its goals clear to the public, but that it execute its authority to implement a range of activities which its science has determined are needed to recover Grand Canyon's deteriorating river ecosystem: Annual inputs of large amounts of nutrient laden sediment, seasonal variability of water flows that creates the dynamic physical environment, and seasonal variability of water temperature. "The very foundation of National Park System natural resource stewardship is the protection of ecosystem processes, for it is these processes that sustain the diversity, abundance and distribution of native species.... The success of this AMP [Adaptive Management Program] must be measured by how well it protects and enhances these critical ecosystem processes." the letter states.

The letter further points out that the AMWG charter allows it far reaching authority "...if needed, [AMWG can] develop recommendations for modifying the Glen Canyon Dam Environmental Impact Assessment Record of Decision, associated [dam] operating criteria, and other resource management actions pursuant to the Grand Canyon Protection Act."

"There's no question that the AMWG has greater authority to restore the natural integrity of Grand Canyon's famed river ecosystem, the question is, will they use it," says Haskell.

More than 200 organizations have joined Living Rivers/Colorado Riverkeeper in demanding that AMWG exercise its mandate and undertake a new environmental impact statement on the operations of Glen Canyon Dam, including evaluating the dam's decommissioning as one alternative for meeting Grand Canyon Protection Act goals.

[Living Rivers' August, 9 2004 letter to Michael Gabadlon, Deputy Director of Operations, U.S. Bureau of Reclamation.](#)

[Glen Canyon Dam flow regime a 'failure,' report says](#)

[Grand Canyon Protection Act](#)

[Glen Canyon Dam Adaptive Management Program](#)

[Adaptive Management Working Group Charter](#)

LR Letter 08/09/04

Demanding BuRec action to correct failing federal program to recover Grand Canyon native fish.

Michael Gabaldon
Deputy Director of Operations
U.S. Bureau of Reclamation
Department of the Interior
1849 C Street, NW
Washington D.C. 20240

RE: Comments Relative to the Reporting Requirements and Congressionally Mandated Goals of the Glen Canyon Dam Adaptive Management Program.

The Glen Canyon Dam Adaptive Management Program (AMP) has been in operation for nearly eight years, and a comprehensive research and monitoring program has been functioning for over 15 years. Progress in understanding the ecological processes that drive the aquatic ecosystem of the Colorado River in the Grand Canyon has been reported and is generally considered to be meeting the science program goals as stated in the EIS ROD and AMP Charter. In contrast, the relative success of the AMP in using this information to achieve the goals of the Grand Canyon Protection Act (GCPA) has been poorly and inconsistently reported. The GCPA requires the AMP to submit an annual report to Congress and the Governors of the basin states. As defined by item E of the AMP Charter, the AMWG is to "review and provide input on the report required in Section 1804 (2) of the Act The report will include discussion of dam operations, the operation of the AMP, status of resources, and measures taken to protect, mitigate, and improve the resources defined in the Act." To date, only a single report combining the

information for water years 1999-2001 has been submitted. Progress in mitigating the adverse impacts to Grand Canyon resources during 2002 and 2003 has yet to be reported. The AMP is obligated to ensure that Congress and the public are kept up to date as to whether this program is succeeding. Duties, Section F of the AMP Charter charges the AMWG to "Annually review long-term monitoring data to determine the status of resources and whether the AMP Strategic Plan goals and objectives are being met. More importantly, the AMWG is directed to "if needed, develop recommendations for modifying the GCDEIS ROD, associated operating criteria, and other resource management actions pursuant to the Grand Canyon Protection Act.

The science program has identified the key ecosystem processes that create and maintain the ecological integrity of the Colorado River in the Grand Canyon. There are: Annual inputs of large amounts of nutrient laden sediment, seasonal variability of water flows that creates the dynamic physical environment, and seasonal variability of water temperature. The very foundation of National Park System natural resource stewardship is the protection of ecosystem processes, for it is these processes that sustain the diversity, abundance and distribution of native species. The National Park System was created by Congress to protect the health and diversity of our nation's unique natural and cultural heritage. The success of this AMP must be measured by how well it protects and enhances these critical ecosystem processes.

The single report submitted to date clearly indicated that none of the dam related impacts to key ecological processes or other affected resources such as the Humpback Chub had been successfully mitigated. In fact, many of these components and critical resources were in a state of decline. It is unclear how the AMWG defines success. The minutes of your recent retreat indicate this unfortunate ambiguity, as one participant asked, "How do we get to the end" Although the ROD provides for the AMP to operate "indefinitely". Fiscal responsibility alone requires that at some point either the goals are achieved, or its admitted that they can't be achieved. It's critical that the AMWG review how it defines program success, and does so in terms of the conditions of Grand Canyon resources.

In summary, considering the continued decline of the ecosystem taking place in Grand Canyon National Park, it is imperative that the AMWG rededicate itself to achieving the goals of the GCPA, or recommend a new program that can. The AMWG must clearly define success in terms of the condition of Grand Canyon resources, meet the reporting requirements of the GCPA, clearly articulate the success or failure of adaptive management actions in these reports, and immediately request a Supplemental EIS and a new ROD that will enhance the AMWG's ability to achieve the success contemplated by the GCPA.

Living Rivers/Colorado Riverkeeper and our supporting groups from across the country look forward to hearing from you as to how and when the AMWG will address these matters.

Sincerely,

David Haskell
Policy Director, Living Rivers

LR in the News 08/11/04

Lake Powell a liability to water management

Arizona Republic OpEd

Rather than grouching about a name change for Lake Powell proposed by a handful of Colorado residents, I suggest that The Republic move on from opining on this trivia to discussing the hard facts regarding the detrimental effects Lake Powell will have on the availability of water in the future ("It's a lake, dammit," Editorial, Aug. 1).

Undisputable scientific data now point strongly to the fact that Lake Powell has become a water-management liability, and the situation is only going to get worse. The average annual flow of the Colorado River up until 1990 was 12 million acre-feet. During the past decade the flow has dropped to 10 million acre-feet. The Department of Energy estimates that the long-term climate change will reduce the flow to less than 7 million acre-feet by 2050.

The upper basin states are now using 5 million acre-feet of this water and the lower basin states and Mexico are using 8.25 million. There is now an annual deficit of 3.25 million acre-feet. To make matters worse, Powell loses a half-million acre-feet each year to evaporation, increasing the deficit to 3.75 million acre-feet a year. There are only 9.5 million acre-feet of water left in Powell.

In the very short term, use of this water will delay the crises, but there will not be enough water to fill the reservoir again. In order to maximize the availability of any future excess water, it should be stored in underground aquifers that eliminate evaporation. The governor should be praised for supporting this innovative concept.

David Haskell, Camp Verde
The writer is policy director, Living Rivers Arizona office.

LR in the News 08/14/04

Pressure to restore river corridor intensifies

April Reese, Greenwire Southwest correspondent

Environmentalists monitoring an 8-year-old federal program to restore the Grand Canyon below Glen Canyon Dam this week called on the government to better define

its strategies, conduct more on-the-ground restoration and revise the environmental impact statement (EIS) governing the effort.

In a letter to the Glen Canyon Dam Adaptive Management Work Group, the nonprofit group Living Rivers ticked off a litany of complaints about the restoration program and urged its managers to rethink its strategy for the lower canyon. The work group is comprised of 26 stakeholders with some management responsibility for Grand Canyon National Park's river corridor.

The restoration program was enacted by the Clinton administration to meet provisions of the Grand Canyon Protection Act, which directed the Interior Department to "protect, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established."

Participants in the work group range from Bureau of Reclamation officials to independent fisheries biologists, environmentalists, hydropower interests and tribal representatives. The stakeholders periodically examine the latest scientific information on the river and make management recommendations to the Interior secretary, who decides whether to implement them.

The letter, written by Living Rivers policy director Dave Haskell, a former director of Grand Canyon National Park's Science Center, charges the work group with failing to review the latest scientific data on the canyon's resources. The program's charter instructs the work group to annually evaluate monitoring data to assess conditions in the canyon and to determine if the program's objectives are being met, Haskell noted.

The letter states that scientists have identified three critical actions that are necessary to restore pristine conditions in the Grand Canyon: annual inputs of large amounts of sediment, seasonal variability of water flows and seasonal variability of water temperature.

Living Rivers and about 200 other environmental groups have asked BuRec to examine a range of alternatives to meet those goals, including the decommissioning of Glen Canyon Dam. But so far no serious consideration has been given to that proposal, critics say.

Living Rivers maintains that other attempts to improve conditions in the canyon have largely failed and that a new EIS should be drafted to address new and emerging concerns, including the dam itself. Haskell urged the group to exercise its authority to recommend undertaking a new review.

"Considering the continued decline of the ecosystem taking place in Grand Canyon National Park, it is imperative that the AMWG rededicate itself to achieving the goals of the Grand Canyon Protection Act, or recommend a new program that can," Haskell wrote.

"Any strategy must define what constitutes program success, and therein lies the problem," added Haskell, who delivered the letter to the work group at its meeting in

Phoenix this week. "The stated goals are lofty, but there is no clearly defined strategy to attain them."

The letter is the latest in a series of critical missives from groups unhappy with the program's progress. But environmentalists are not alone in their complaints.

Last month, the working group's own scientists raised questions in a report about the effectiveness of the Colorado River flow regime adopted by the group (Greenwire, July 26). According to the report, the endangered humpback chub, which inhabits a small area of the canyon near the confluence of the Colorado and Little Colorado rivers, is declining at an average rate of 14 percent despite efforts to help the fish. The science advisers recommended a 24-month review of the program, beginning in October.

BuRec spokesman Barry Wirth, who attended the meeting of the adaptive management work group this week, urged patience. Recovery of the Grand Canyon ecosystem will be a long process involving plenty of trial and error, he said.

"We've committed substantial resources in working on these issues," including recovery of the humpback chub and sediment replenishment, he said, citing as examples several projects to control trout, which compete with the chub.

BuRec contends that the experimental nature of the program has allowed managers to better understand the ecological dynamics of the Grand Canyon -- an essential step in improving conditions there.

Experimental flows, while unsuccessful in replenishing beaches over the long-term, nevertheless produced valuable data that can be used to improve the next round of experimental flows. And the new effort to remove non-native fish from the river may be helping the chub, although the results of that experiment will not be known for another year or two (Greenwire, March 8).

Wirth also emphasized that the work group includes 26 representatives from a range of interests, all of whom have a say in management of the canyon. "It's a diverse effort, and I think the reality is a substantial amount of effort has gone into addressing these issues," he said.

As the work group continues to wrangle with its mission, environmentalists are also urging Congress to kill a long-standing rider to BuRec's appropriations bill that prohibits expenditures on studies for decommissioning Glen Canyon Dam. The provision was first added to the agency's spending bill in 1996, and it remains in this year's House-approved bill for fiscal year 2005.

"What's wrong with allowing science to look at this?" asked Owen Lammers, executive director of Living Rivers. "Isn't that what the adaptive management program is all about?"

LR in the News 08/16/04

Colorado River 'at critical juncture'

By Michael Gardner San Diego Union Tribune

August 16, 2004

SACRAMENTO - Struggling Utah farmers sacrificed water to save a school on the verge of shutting down because its well ran dry. Montana ranchers are selling off their herds. In Arizona, the Marines pitched in to help build watering holes to keep rare sheep from dying of thirst.

A persistent drought has upset lives and livelihoods from Montana to New Mexico, drawing comparisons to the Dust Bowl days. Fields have been left unplanted. Homeowners are being paid to tear out lawns. Hydropower generation is threatened. Ducks are disappearing and forests are becoming kindling.

"The drought threatens to change the very fabric of Montana's rural communities and landscape, placing the birthright of descendants of pioneer families on the auction block," Gov. Judy Martz said in a recent speech.

Although Mother Nature has punished the West for several years in a row, the developing crisis also can be traced to other factors: growth, resistance to tough conservation, global warming and an overly optimistic estimate of the Colorado River's ability to deliver water.

The spine of the West - fused by the Colorado River and the Rockies - has been hit the hardest. Although supplies of water have been squeezed along the coast, from Seattle to San Diego, the pain there is not as widespread or as deep.

Urban water purveyors across California, while nervous, say there is no need for rationing this year because of average-sized snowpacks in the north and adequate storage.

For now, climate experts can offer only hope that relief will arrive.

"I don't think we can discount the possibility of a recovery, but the likelihood is one out of four, maybe one out of five, for a really wet year," said Dan Cayan, a climatologist at Scripps Institution of Oceanography in La Jolla.

Scarier still is this emerging question: What if stubborn dry spells are the norm and the traditional cycle of normal-to-wet bounty is the exception? Tree ring records and other data suggest the West may be in for longer, drier periods in the coming decades, some experts say.

Scramble for water

This latest string of dry years has hit states dependent on the Colorado River basin, at one time a seemingly eternal well for 25 million people, millions of acres of farmland and an assortment of endangered and other animals.

Lakes Powell and Mead, the two massive reservoirs that catch the Colorado, are less than half full, exposing long-submerged landscapes to direct sunlight for the first time in decades. It could take a 10-year run of average rain and snow to refill the reservoirs.

Lake Powell, which straddles the Utah-Arizona border, is at a historic low level. Nevada's Lake Mead has been lower only twice before, counting the period when Lake Powell was filled for the first time.

"We are at a critical juncture in the history of the Colorado River, a river we all depend on for our lives," said Jack August, an Arizona historian who studies water trends.

California draws enough water out of the Colorado for more than 1 million households a year. Seventy percent of San Diego County's drinking water comes from the river.

The frantic hunt for more supplies has states pondering expensive options. Colorado and Nevada are scouting pipeline routes to ship water to parched regions. Some farmers may be paid far more than their crops are worth to leave fields unplanted. Las Vegas home builders have been banned from planting grass in front yards.

California plans to increase the size of a handful of reservoirs, but squabbles over who should pay for the work have slowed progress.

Shrinking Colorado River flows sent Metropolitan Water District, the Los Angeles-based wholesaler for most of Southern California, scurrying to secure more water from Lake Oroville, north of Sacramento.

In Colorado, reservoirs remain about half full. New Mexico's largest lake, Elephant Butte, is critically low. In Oregon, southeastern farmlands are in dire straits. Wyoming's thirst is the worst it's been in 110 years.

"My cattle are gone," lamented Montana rancher Bob Redfield, forced to sell 100 head because there was no water for hay.

Said Utah farmer Charlie Holmgren: "We always thought we were invincible." That mood has darkened with each day of blue skies. His water source, Bear Lake, "is pretty well gone."

"It will force some people out of agriculture in this valley," Holmgren said. "We're hanging on - this year."

Farther south, farmers in Blanding, Utah, decided to put classrooms before crops. When the school's well ran dry, they gave up water to keep kids from being bused out of town, Mayor Toni Turk said. Power generators and water purveyors grow more nervous as Lake Powell evaporates.

The coal-fired Navajo Generating Station in northern Arizona may be forced to spend millions to extend a water line that draws cooling water from Lake Powell.

"Without that water, a major coal-fired plant goes down," warned Sid Wilson, general manager of the Central Arizona Project, the state's major water supplier.

The facility generates the power to pump water throughout Arizona and helps keep the lights on in Los Angeles, Las Vegas and Tucson.

The Western Area Power Administration, which delivers energy to 15 states, has for the first time formed a drought emergency planning team. It has spent \$500 million over the past few years on outside power, much of it in response to drought-imposed limits on hydropower generation.

Outside Las Vegas, Lake Mead, which stores water for Southern California households and Imperial Valley farms, is circled by bathtub rings. If the lake's level continues to drop, even power out of mighty Hoover Dam could be at risk.

Recreation tourism, a large part of the West's economy, may suffer if the drought persists. Rivers without rapids are no fun to run and shriveled streams are no lure to fish.

"If you own a vacation cabin in Bear Lake you used to have waterfront property. Now you have beachfront property," said Larry Anderson, Utah's director of water resources.

In California, docked boats already have been ordered out of Folsom Lake. In Page, Ariz., the National Park Service has spent \$5 million to extend boat ramps to Lake Powell and its 145 miles of shore. Ramps are open, but "launch at own risk" signs are posted in some spots.

Looking on the sunny side, National Parks Service official Char Obergh said, "I don't say it's bad. The lake looks different. People who have never been here don't realize it's low."

Wildlife concerns

Wildlife is suffering, too. Resource managers are working to save bighorn sheep in the Cabeza Prieta refuge in Arizona, prairie chicken along the eastern plains of New Mexico and silvery minnow in the Middle Rio Grande.

"The effects are going to be tougher on wildlife than I've ever seen," said Dale Hall, southwest regional director for the U.S. Fish and Wildlife Service. Conservation groups report dramatic reductions in the number of fish and ducks in some areas. The Dolores River, which runs 250 miles through Colorado and Utah, has lost 75 percent of its trout.

Anxious federal fish and wildlife officials are mapping plans to net rare fish and hold them in captivity, a distasteful but perhaps necessary step to preserve some species.

Duck numbers are down 11 percent nationally, pressuring officials to scale back season and bag limits.

Water development has almost always clashed with the environment. If the drought deepens, so, too, will that rift.

In Las Vegas, for example, plans to drill wells could deplete groundwater needed for a nature refuge. Environmentalists worry about Metropolitan Water District's bid to acquire more water from Northern California.

"The big question is how much water can you divert without the environment going to hell," said Tom Graff, an attorney with Environmental Defense, a nonprofit organization.

MWD officials insist there are adequate safeguards for fish and wildlife.

Elsewhere, bark beetles have overrun trees weakened by drought. Subsequent infernos devour forests and the firefight consumes billions of gallons of water.

"The precious water we did have was being used to put out fires" during a miserable 2002, said Dawn Taylor Owens of the Colorado Department of Water Resources.

Pressured by shortages and the U.S. Interior Department, water managers along the Colorado River basin for the first time are scrambling to map emergency responses. They are negotiating deals to clear historic legal and political barriers to water sharing and storage. Farmers across the West will likely be pressured to sell more of their water.

Closed-door talks have been "animated" and "at times, intense," said Bennett Raley, the Bush administration's lead negotiator on water issues. "The history of the Colorado River is, if the states fail to solve issues, the federal government steps in."

Environmentalists and water managers say the drought is more than just a lack of rain and snow over the past five years. Some cities were slow to impose restrictions. Financial woes and environmental foes have stalled storage projects. And experts say pollution may be accelerating a warming trend, reducing the number and intensity of storms.

Yet lingering dry spells are nothing new. Some believe the West has been blind to the Colorado's limits, relying on overly optimistic projections for more than 80 years. Original calculations done in 1922 to divide the river were based on a wet year.

"Demand is far more than the river can deliver," said Owen Lammers, executive director of Living Rivers, a Utah environmental group.

Population pressures

Growth is exploding in areas more suited for saguaros than subdivisions.

Nevada's population increased from 500,000 in 1970 to nearly 2 million in 2000. During that same period, Arizona grew from 1.8 million to 5.1 million people, Utah increased from 1 million to 2.2 million residents and Colorado's population nearly doubled, topping 4.3 million.

Sprawl also has exacerbated problems in California. As more families migrated to inland from the coast or to the Central Valley from San Jose, outdoor water use has skyrocketed to keep lawns lush and pools filled.

There are nearly 36 million Californians, compared with 20 million three decades ago. Riverside County's population more than tripled to 1.5 million during that period. San Bernardino County had 700,000 residents in 1970. Now it has 1.7 million.

Previous droughts have inflicted harsh lessons on the Southern California, forcing strict conservation. Residents use less water today than they did in 1990, according to the Metropolitan Water District. The MWD also spent \$2 billion to build an 800,000 acre-foot reservoir near Hemet in Riverside County that could supply more than 1 million households if needed.

"Conservation has become a way of life," said Dennis Underwood, an MWD vice president.

The past winter and spring delivered some relief in a few states, but not enough snow fell to refill depleted lakes and groundwater basins. A warm spring accelerated the melting of snow, making it difficult in some areas to capture flows.

California's outlook remains tenuous after a hot, dry spring. The state's fortunes seemed to be looking up in February, said Maurice Roos, California's chief hydrologist.

"Things looked pretty bright," he said. "Then the bottom fell out."

River News 09/01/04

NPS Press Release on Navajo Generating Station

National Park Service
U.S. Department of the Interior
Glen Canyon National Recreation Area
691 Scenic View Dr.
P.O. Box 1507
Page, Arizona 86040
(928) 608-6208 -- Phone
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GLEN CANYON - NEWS RELEASE
For Immediate Release
Char Obergh
September 1, 2004

GLEN CANYON NATIONAL RECREATION AREA (GLCA) ANNOUNCES
OPPORTUNITY FOR PUBLIC INPUT FOR NAVAJO GENERATING STATION (NGS)
WATER INTAKE MAINTENANCE PROJECT

PAGE, AZ The National park Service has initiated work on an environmental assessment for the installation of new water intake facilities for NGS on the grounds of the existing pump house facility. The current facility is located adjacent to Lake Powell at an elevation of 3,734 above sea level on land leased to Salt River Project (SRP) by the Navajo Nation.

The purpose of the project is to ensure the future availability of cooling water for NGS operations due to the continuing decrease of water surface elevation of Lake Powell associated with the ongoing drought. The full pool elevation of Lake Powell is 3,700 feet above sea level. Current projections indicate that lake surface elevation could fall below the existing NGS water intake elevation of 3,470 feet above sea level by 2009. If severe drought conditions persist, these reduced lake levels could be reached as early as 2006

The work will include slant drilling through sandstone bedrock of five new 54-inch diameter holes in which new water intake pipes and submersible pumps will be installed to withdraw lake water at an approximate elevation of 3,350 feet above sea level. The new intake structures will require Salt River Project to obtain a new easement within the boundary of the GLCA prior to construction.

Borings from the drilling will be transported by truck to land applied at a large ash disposal site on NGS grounds. The proposed modified water intake structure will not change the annual volume or the seasonal pattern of water withdrawals from those already being made by NGS.

This notice is an opportunity for the public to identify any issues or concerns they may have regarding this project. All comments are due by September 24, 2004, and should be mailed to :

EcoPlan Associates, Inc., 701 W. Southern Avenue, Suite 203, Mesa, Arizona 85210 or email dsmith@ecoplanaz.com or 480.733.6666; fax 480.733.6661

-NPS-

GLCA 2004-30

Additional Information:

[Living Rivers/Colorado Riverkeeper](#)

[September 1, 2004, National Park Service News Release on Navajo Generating Station Navajo Generating Station](#)

[Glen Canyon National Recreation Area](#)

[Letter from the Environmental Planner at EcoPlan Arizona](#)

[Map of NGS pumping plant](#)

[Comment letter from Living Rivers to EcoPlan Arizona](#)

LR Press Release 09/01/04

Lake Powell Draining: Water Intake Tubes for Coal Plant to be extended

Contact: John Weisheit - (435) 259-1063

Today it was announced a major coal-fired power plant adjacent to Lake Powell reservoir may be left high and dry by rapidly falling reservoir levels, unless it receives approval from the National Park Service to begin a major extension of its water intake infrastructure.

Environmental clearance is being sought to extend the water intake tubes for the Navajo Generating Station 120 feet to the near-natural elevation of the Colorado River. What the National Park services is calling a "maintenance project." involves five 54-inch-diameter holes being bored 150 feet through Navajo sandstone for the installation of pipes and submersible pumps to move 17 million gallons of cooling water per day from Lake Powell to the power plant.

"This is not maintenance, but a multi-million dollar undertaking in an effort to preserve outdated and terribly polluting technologies," says John Weisheit, conservation director for Living Rivers/Colorado Riverkeeper. "We must prepare for the end of Lake Powell by investing resources into more appropriate energy paths such as conservation or solar and wind, not trying to prolong dirty coal and dams."

Due to climatic changes over the past five years, Lake Powell's water level has fallen 127 feet to 3573 feet above sea level, and is now declining at a rate of 21 inches per week. It is projected that absent a major change in rainfall patterns, that Navajo Generating Station's power plant intakes will be exposed as early as 2006. The hydroelectric power plant at Glen Canyon Dam will suffer a similar fate, but will have to be shut down as lowering its intakes is not technically feasible.

The Navajo Nation has benefited little from power from either Navajo Generating Station or Glen Canyon Dam over the past four decades, as many homes still do not have electricity. Small photo-voltaic power stations and wind turbines are now being used to provide energy to individual homes on the reservation.



"Our prayers continue to be answered," says Thomas Morris Jr. a Navajo medicineman working for decommissioning Glen Canyon Dam. "Let the power plant fall idle, as it has brought nothing but asthma and other illnesses to our people in exchange for a few jobs. We must follow nature's lead, and the revival of the Colorado through our land, not the past mistakes."

Navajo Generating Station was completed in 1974 to provide the electricity necessary to pump Colorado River water from Lake Havasu reservoir to Phoenix and Tucson through the Central Arizona Project. It was built as a substitute for dams proposed in Grand Canyon National Park that were defeated by public opposition in the 1960s. The Bureau of Reclamation is the largest shareholder in the Navajo Generation Station at 24.3%. Other partners include Salt River Project, Los Angeles Dept. of Water & Power, Arizona Public Service Company, Nevada Power, Tucson Electric Power.

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Additional Information:

[Living Rivers/Colorado Riverkeeper](#)

[September 1, 2004, National Park Service News Release on Navajo Generating Station](#)

[Navajo Generating Station](#)

[Glen Canyon National Recreation Area](#)

[Letter from the Environmental Planner at EcoPlan Arizona](#)

[Map of NGS pumping plant](#)

[Comment letter from Living Rivers to EcoPlan Arizona](#)

LR in the News 09/01/04

Conservationists protest Utah lease offers

By Dan Nailen for The Salt Lake Tribune

The federal government set a record with its June oil and gas lease auction in Utah, offering 281,000 acres of Utah lands for development as part of the Bush administration's push toward more domestic energy production.

Records are made to be broken, though.

The next quarterly lease auction slated for Sept. 8 easily outpaces the June sale, with 362,665 acres spread across 223 parcels. Among the leases up for purchase, all or portions of 21 of the parcels - 19,338 acres in all - contain wilderness characteristics, according to the Bureau of Land Management, inspiring howls from conservationists both inside and outside of Utah.

"The Bush administration is once again exploiting wilderness-quality public lands for private gain," said Rep. Maurice Hinchey, D-NY., lead sponsor of America's Redrock Wilderness Act, a bill aimed at designating 9.1 million acres of Utah BLM land as wilderness. "The BLM should not be sacrificing the nation's natural heritage for short-term profit when it has acknowledged that some of these lands have wilderness characteristics."

The Outdoor Industry Association, National Outdoor Leadership School and Trout Unlimited all filed protests of different aspects of the upcoming lease sale.

The BLM did defer sales on 30 parcels of wilderness-quality land, including areas near Fisher Towers, Desolation Canyon, Jack Canyon, Labyrinth Canyon and White River. At the same time, many of the leases being offered in Utah are in areas seldom explored in the past, including parts of Juab, Millard, Sanpete and Sevier counties.

"The underlying, driving force is clearly the economics of oil and gas, with oil [prices] hitting record highs and the gas demand outstripping our ability to produce," said Kent Hoffman, who directs the BLM's mineral programs in Utah.

Hoffman noted that the record amount of acreage involved in the auction is due in large part to the Forest Service playing catch-up with a backlog of Forest Service land nominated by oil and gas industry entities for exploration.

"On this particular sale, the Forest Service gave us over 100,000 acres," Hoffman said. "On prior sales, they've been probably 25 percent of that or less. Even less than that. Sometimes nothing."

Plans for auctioning leases on Forest Service land near Strawberry Reservoir raised a red flag for members of Trout Unlimited, a group dedicated to preserving and restoring fish habitat. In a protest letter to the BLM, Paul Dremann, the vice president for conservation of Utah's Trout Unlimited chapter, outlined the millions of dollars spent through the years in restoring the Strawberry Reservoir fishery and expressed concern that oil and gas exploration nearby "has a high potential of severely impacting" the fishery.

"We've been working for so darn many years on fishery restoration there that we kind of feel like we kind of have ownership in helping that restoration," Dremann said Monday. "So this has been kind of discouraging."

Also of particular concern to conservationists are available leases along the Green River and along the southern parts of eastern Utah's Book Cliffs. While BLM officials note that available tracts along the Green River have "no surface occupancy"

stipulations - meaning there could be no roads or drill pads within a half-mile of the river - people like John Weisheit, co-founder of the Colorado River Plateau River Guides organization for outfitter employees, say that's not good enough.

"You can still hear it," Weisheit said, describing similar "no surface occupancy" projects, noting that on trips down Montezuma Creek, the sound of nearby drilling projects is easily heard in the middle of the night. "And if there's any lights at all, you can still see them."

Weisheit is worried that opening up areas along Utah's most scenic rivers to drilling will only provide minimal oil or gas, while adversely affecting the livelihoods of guides and outfitters forever.

"What's the point of doing a river trip if you have to hear and smell and see all this oil development?" Weisheit said. "Our point is, is nothing sacred? Do we have to drill every inch?"

The BLM's Hoffman notes that of the 18 million acres of Utah land available for oil and gas exploration, only four million are currently spoken for - a far cry from a one-time high of 16 million acres under lease. With the current drive for domestic energy production, he said, the industry will no doubt keep driving the acreage under consideration for drilling higher and higher.

"The industry is clearly in the mode of trying to increase their lease space so that they have opportunities to explore," Hoffman said. "That is the underlying, driving force for all of this stuff."

LR in the News 09/09/04

On the range, gas trumps wildlife

<http://www.csmonitor.com/2004/0909/p13s02-sten.html>

Mark Clayton Staff writer of The Christian Science Monitor

09/09/2004

At Sand Wash, Utah, a dusty slice of back country 45 miles from the nearest paved road, river-raft guide John Weisheit lectures tourists about the history of the Green River and the wilderness experience that will soon unfold for them.

Climbing into rafts, they float on chocolate waters, following the path of 19th century explorer John Wesley Powell, beneath the cliffs of Desolation Canyon. No car engines or cellphones mar this trip far away from it all.

But soon, Mr. Weisheit says he may chop all wilderness references from his little lecture. They'll ring hollow, he says, if Sand Wash, a onetime crossing for pioneers and cattle, echoes instead with the sounds of diesel engines and drilling rigs exploring for oil and gas.

Wednesday, in the biggest sale of its kind in Utah history, the federal Bureau of Land Management (BLM) offered at auction oil- and gas-exploration leases on more than 360,000 acres of rugged back country - including UT-201, a 120-acre chunk of Green River flood plain that abuts Sand Wash, and another 16,000 acres a few miles away.

Not long ago such remote regions seemed on track to one day become officially protected wilderness areas. Now they're part of a huge debate over the proper use of public lands in the United States. At issue: When does energy security trump wilderness protection?

No one claims the oil and gas from public lands will free the nation from dependence on foreign oil. The amount of oil in the Rocky Mountain West is negligible - less than a year's supply for the nation. But the region's gas could supply the nation for a few years and, by lowering prices, save consumers billions of dollars. So should the US encourage such energy development wherever it's economically viable? Or, in the case of wilderness, does some higher standard apply?

To hear the White House and the oil and gas industry tell it, gaining access to public lands is a key to greater energy self-sufficiency.

"Basically, we've taken large chunks of the country and put it off-limits to any kind of exploration or development," said Vice President Dick Cheney at a town hall meeting in Hot Springs, Ark. "We don't drill off the East Coast, we don't drill off the West Coast.... Large parts of the Rocky Mountain West are off-limits."

Some 29 percent of the Rocky Mountain area's gas reserves are "effectively off limits" because of conditions that limit drilling, estimates a 2003 report done for the US Department of Energy by the National Petroleum Council, an industry lobby group. If such restrictions were removed nationwide, that easier access to public lands could save consumers \$300 billion over 20 years, the report says, thanks to lower natural gas prices.

But such figures almost certainly overstate the case, energy analysts and environmentalists counter.

For example, domestic energy production is apparently not being held up by a lack of oil and gas leases. Since 1982, the US has leased or offered for lease 229 million acres of public land for oil and gas development across 12 Western states, according to a new report by the Environmental Working Group (EWG), a Washington-based environmental organization. That represents nearly 9 of every 10 BLM acres and covers an area bigger than Colorado, New Mexico, and Arizona combined.

That doesn't leave much to exploit. In the five richest geological basins in Montana, Wyoming, Colorado, Utah, and New Mexico, only 15 percent of the oil and 12 percent of the gas reserves on federal lands are off-limits, according to a 2003 joint study by the US departments of Energy, Interior, and Agriculture.

Drilling for gas is already on the upswing in the region. Five Rocky Mountain states saw drilling activity in August rise to their highest levels in a decade. Wyoming had 84 rigs

operating versus an annual average of 38 over the past decade - 121 percent higher. For Utah, the 22 rigs operating are 76 percent higher than the average over a decade. For New Mexico, it's 30 percent; Montana, 166 percent; and Colorado, 171 percent.

Yet the energy produced from public lands is minuscule. Interior Department records show that only enough oil was produced between 1989 and 2003 to supply the nation for 53 days and enough natural gas for 221 days at current rates of consumption, the EWG report adds.

"These numbers put a hole in the argument you hear all the time from the oil industry and their allies that, 'If we could only get access, we could reduce our dependency on foreign oil,' " says Dusty Horwitt, coauthor of the EWG report. "In fact, they've had almost unfettered access, but dependence on foreign oil has increased significantly."

Nor are energy companies knocking each other down to drill more. EWG analysts say BLM's data show about 13 percent of public land is leased and 4 percent currently producing oil or gas. The US Department of the Interior, which oversees the BLM, reports smaller totals: 8 percent and 1 percent, respectively.

"You need to remember we are not talking about significant quantities of oil - or natural gas, for that matter," says Gal Luft, executive director of the Institute for the Analysis of Global Security in Washington, which focuses on energy security. "Tactically it may sound like a lot, but strategically it is not a lot of oil or gas."

But the federal study, which estimated there were 123 trillion cubic feet of "technically recoverable" natural gas in areas already open to leasing - enough to fuel the nation's needs for about six years at current consumption rates - may be too rosy.

Such numbers overstate the case because only about half of technically recoverable gas is likely to be found, says Michael Lynch, president of Strategic Energy & Economic Research in Winchester, Mass. "It will help on the margins - and of course the industry would rather have it than not," Mr. Lynch says. "But any notion that you're going to change the US energy balance significantly is an exaggeration."

Despite this, the federal government is pushing to open more public land anyway. A series of land-use decisions and proposals over the past four years shows the US is gearing up to make an average of 12.7 million acres a year available to oil and gas drilling, says the EWG report.

"We're not challenging the vast majority of these proposed leases," says Liz Thomas of the Southern Utah Wilderness Alliance, an environmental organization, in Moab, Utah. "What we oppose is leasing these very remote places." Her group has been trying to block energy exploration on what she calls "wilderness quality" lands.

No land is being stripped of protections, says Rebecca Watson, assistant secretary for Land and Minerals Management at the Department of the Interior. She concedes, however, that in some areas where seasonal drilling prohibitions intended to protect wildlife overlap, these will be adjusted to give companies time to get in to drill for oil and gas.

"Nobody's advocating going into wilderness areas or parks," Ms. Watson says. "We're simply asking: 'Are all those constraints necessary, or are there other ways to protect these lands?' "

In fact, the BLM in Utah set aside from Wednesday's auction tens of thousands of acres of land that might otherwise have been leased - much of it for further environmental review, officials say.

Rather than a lack of land to lease, the real obstacle may be the leasing stipulations and conditions placed on exploration and development - conditions environmentalists say are vital, but oil men decry.

"The problem for us wasn't getting leases; the problem was being able to drill and develop those leases," says Geoff Ice, exploration manager at Rosewood Resources Inc. His Dallas oil and gas company has been working with three other companies for several years to get the necessary environmental approvals to drill on an 80,000-acre parcel near the Book Cliffs region of Utah. "It's just been ridiculous things holding us up. We got to the point where we're not as active in Utah anymore. We just got tired of fighting it."

Even so, environmentalists aren't optimistic such lands will be protected. The Book Cliffs region of Utah - a 250-mile-long escarpment with cliffs 2,000 feet high - is the longest such continuous formation in the world and serves as home to mountain lions, bald eagles, and peregrine falcons. But it sits on the edge of a zone of major oil and gas production. Back at the Green River, environmentalists worry scores of wells could be operating within a few miles of historic Sand Wash within a few years.

"Despite talking about protecting these lands, all the BLM has done is open them to oil and gas," says Nada Culver, a Wilderness Society attorney based in Denver. "They went through the full analysis for thousands of acres that met all the legal requirements for wilderness - but now they're not going to designate them wilderness, they're going to drill on them."

Who owns the land?

* The United States government owns nearly a third of US land, but the share varies widely by state - from a high of 88 percent in Nevada to a low of 0.4 percent in New York.

* Throw in the amount owned by states and government holdings account for 40 percent of US land.

* In China, the state owns all the land. Reformers leased it to farmers in the '80s. But as the economy boomed, local officials began taking it back for roads, dams, and other projects. More than 30 million have lost their farms.

Sources: National Wilderness Institute; Los Angeles Times

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Regional News 09/11/04

Interior Secretary Norton in Moab to Sign Three Rivers Mining Withdrawal

[Click here](#) to read this story by Jeannine Wait of the *Moab Times-Independent*

Photo caption: John Weisheit of Living Rivers and Secretary of Interior Gale Norton discussing Colorado River issues at the BLM's Big Bend campground near the Colorado River on Highway 128 (The River Road above Moab, Utah). Photo by Liz Thomas.



LR Press Release 09/14/04

Release of Flaming Gorge Dam Draft EIS

September 14, 2004

For immediate release

Contact: John Weisheit - (435) 259-1063

Comprehensive basin-wide plan needed to avoid extinction

The Bureau of Reclamation (BuRec) announced the completion of a draft plan to halt the path toward extinction of four native caused by the operation of Flaming Gorge Dam on the Green River in Utah. After more than three years of delay, the draft environmental impact statement calls for modifying dam operations to mimic the conditions of a natural river, as BuRec has implemented elsewhere on the Colorado watershed.

"This is the same failed strategy that BuRec applied to Glen Canyon Dam to help restore native fish in Grand Canyon, yet the agency provides no rationale as to why it will work any better at Flaming Gorge Dam," says John Weisheit, conservation director of Living Rivers and Colorado Riverkeeper from Moab, Utah.

Flaming Gorge Dam, located near the Utah and Wyoming border on the Green River, is a water storage and hydroelectric facility that can store 3.8 million acre-feet of water for downstream consumption. The facility became fully operational in 1964. The Green

River is the major tributary of the Colorado River. The native fish became endangered because high dams, such as Flaming Gorge and Glen Canyon, have altered the natural river conditions that native fish require to reproduce and reach adulthood, namely water temperature, seasonal flow, the suspension of sediment and nutrients, and the ability to migrate freely through the tributary streams.

Before the dams and diversions of the Colorado River system, the native fish thrived in vast numbers for millions of years throughout the Colorado and its tributaries. "There is no way we are going to protect these endangered species through a piecemeal approach to dam operations," adds John Weisheit. "We must work toward the restoration of habitat throughout their entire historical range, which necessitates a comprehensive EIS to address the operations of all dams throughout the basin."

The draft EIS for Flaming Gorge Dam fails to analyze the significant problems associated with the vast plumbing system of dams and diversions on the rivers of the Colorado basin. These issues include the inefficiency of having too much storage in the system and the consequent water losses due to evaporation. Today the Colorado River system has the ability to store over 60 million acre-feet of water. On average the Colorado River produces 14 million acre-feet of water and the total annual loss due to reservoir evaporation alone amounts to 2 million acre-feet per year.

In the last decade, state water management agencies have initiated programs to store Colorado River water in depleted underground aquifers near cities and farms. Such programs offer a reasonable and prudent alternative to reservoir storage, which would in turn provide more water for humans and help to restore river habitat for the endangered fish.

The Colorado, Green and San Juan rivers carry incredible amounts of sediment into the reservoirs of the basin. Sediment loads during the 20th century were estimated to vary from 45 to 180 million tons annually. The problems associated with sediment accumulation in reservoirs was acknowledged by the Bureau 100 years ago, but the agency has never provided a systematic program to solve the impending problem. Sediment impairs the ability of a reservoir to store water as space is displaced by sediment fill. Impaired reservoir storage also impacts the ability to safely bypass waters around dams during big floods.

These will be key topics that Living Rives and other groups will reiterate at public meetings planned for October 12 - 21 in Utah cities that include, Moab, Salt Lake City, Dutch John and Vernal; a meeting in Wyoming at Rock Springs is also scheduled. Written comments from the public on the draft EIS are due November 15, 2004.

###

[Link to Living Rivers' comments of November 15, 2004, DEIS Flaming Gorge Dam EIS](#)

[Link to BuRec press release](#)

[Link to the Flaming Gorge Dam DEIS](#)

[Link to Living Rivers' scoping comments of July 2000, Flaming Gorge Dam EIS](#)
[Biological Opinion from US Fish and Wildlife Service](#)

LR in the News 09/15/04

Flaming Gorge may alter flows, temperatures for native species Endangered: Dam seeks to revive fish

By Joe Baird for The Salt Lake Tribune

Native fish have been missing their spawning cues and pools for so many years along the Green River that four species are now endangered.

Last week, the Bureau of Reclamation released a proposal to address the problem, essentially by modifying the water flows and temperatures at Flaming Gorge Dam to more closely mimic seasonal water conditions that existed downstream before the dam was built in the 1960s.

By doing so, bureau environmental specialist Beverly Heffernan says the razorback sucker, humpback chub, Colorado pikeminnow and bonytail can be revived - both through higher spring flows that will signal the spawning season and the creation of sand bars and side channels where eggs will be better protected from predators.

"What we're trying to do is provide a more natural flow to the river while continuing to meet our obligations to provide a storage reservoir and hydroelectric power under the Colorado River Storage Act," said Heffernan, who is based in the bureau's Provo office.

But the draft environmental impact statement - now in the public comment period - has been panned by environmentalists. Fishing guides who operate in the trout-rich waters below the dam also have expressed concerns.

For John Weisheit, conservation director of Moab-based Living Rivers, the issue is one of shortsightedness. Contending that this same proposal has failed elsewhere, he calls for a whole new assessment of the Colorado River system - of which the Green is a main tributary.

"The needs of the fish, the environment, the national parks were never addressed when decisions were made about how to allocate water from the Colorado River and its main tributaries, so we have these big problems now," said Weisheit. "The problem with this is, it doesn't work. They tried experimental flows in the Grand Canyon and at Glen Canyon Dam, and there is no record of success."

Weisheit says what's needed is "a big picture" review of the Colorado system, which he predicts will eventually result in the dismantling of dams such as Flaming Gorge and Glen Canyon because of decades-long sediment buildup in the reservoirs.

Heffernan says that issue is beyond the scope of her agency's charge.

"Decommissioning is not an option," she said. "The question isn't a matter of doing everything you can to save all of the fish; it's helping the fish survive under the mission we are given. What this [environmental statement] tells us is that we can achieve the flows and temperatures recommended without harming any of the other resources or purposes of the dam."

Among the resources below the dam is one of the nation's most acclaimed trout fishing areas. And at least one outfitter has conflicting emotions about the bureau's proposal.

"It all depends on how radically they alter the stream flows," said Dennis Breer, who owns a fly fishing guide service in Dutch John. "I've been involved with this process since 1990, when they began experimenting with the flows, and we saw some strange things happen. We've also seen in some cases that what's good for the native species is also good for the trout. But every time they move [the water flow] up and down it impacts the trout. So what we're concerned about is the extremes."

Heffernan says those concerns will be addressed.

"Under some circumstances the water could be too warm for the trout," she said. "We're working with [the Utah Division of Wildlife Resources] to further analyze these areas."

jbaird@sltrib.com

Flaming Gorge public hearings

All meetings begin at 6 p.m.

Oct. 12: Moab, Ramada Inn, 182 S. Main St.

Oct. 13: Salt Lake City, Downtown Marriott, 75 S. West Temple

Oct. 19: Rock Springs, Wyo., Holiday Inn, 1675 Sunset Drive

Oct. 20: Dutch John, Conference Hall, South Boulevard

Oct. 21: Vernal, Western Park Convention Center, 300 East and 200 South

LR in the News 09/17/04

BuRec proposes boosting Flaming Gorge Dam flows to aid fish

Sept. 17 - April Reese, Greenwire reporter

The Bureau of Reclamation has proposed releasing more water from Utah's Flaming Gorge Dam to reverse the decline of four species of endangered fish on the Green River. But the proposal, included in a draft environmental impact statement last week, will not be enough to recover the fish, environmentalists contend.

The 40-year-old dam, authorized by Congress as part of the Colorado River Storage project in 1956, was built to create a 91-mile-long reservoir for water users in the upper Colorado River Basin. As the largest dam on the Green River, Flaming Gorge also provides vast quantities of hydropower, roughly 217 million kilowatt hours (kWh) in 2002.

Federal wildlife biologists began to suspect the dam was harming native downstream fish as far back as the 1980s, and in 1992 the Fish and Wildlife Service issued a biological opinion stating that the dam was aiding the decline of four endangered fish: the razorback sucker, Colorado pikeminnow, humpback chub and bonytail.

That prompted BuRec, which operates the dam, to study how changing the dam's operation might reduce harm to fish (Land Letter, June 12, 2003). FWS followed with an updated biological opinion in 2000, including flow recommendations for Flaming Gorge. That biological opinion provided the basis for the draft EIS.

The new proposal calls for releasing as much as 8,600 cubic feet of water per second (cfs) from the dam during years with abundant water supply and 4,600 cfs during dry years. Under current operations, reservoir releases range from 800 to 4,600 cfs.

BuRec and FWS are hoping that an increase in flows will help create sandbars and side channels, which serve as nurseries for the fish, and otherwise improve habitat. The plan also calls for the warming of water released from the deepest parts of the reservoir to more closely mimic ambient river temperatures. Dam operators will tweak an existing "temperature control device" to warm the flows, officials said.

"Our proposal is to re-operate the dam to help the fish but maintain the other authorized purposes," such as water storage, power generation and recreation, said Beverly Heffernan, an environmental specialist at BuRec's Provo, Utah, office. Operating the dam to simulate natural flows should not have a significant effect on power generation, Heffernan said.

Larry Crist, a fisheries biologist with FWS's Utah office who helped write the 2000 biological opinion, said the draft EIS does a good job of incorporating FWS's recommendations. "It will provide a way of operating that allows for the recommendations to be met," Crist said.

Unlike some dams, Flaming Gorge does not cut off endangered fish from historical spawning grounds, he said. Most of the habitat for the endangered fish is downstream of the dam.

But John Weisheit, conservation director for Living Rivers, a Moab, Utah-based environmental group, questioned whether increasing releases from the dam will help the fish. Similar efforts at Glen Canyon Dam to aid endangered humpback chub in the Grand Canyon have not been successful, he said (Land Letter, Nov. 20, 2003).

"They're just slapping a bunch of Band-Aids on a bunch of gaping wounds," Weisheit said. "From the top of the [Colorado River] drainage to the bottom, it's the same thing: The temperatures are wrong and the flows are wrong. We're not working with the river; we're forcing the river to work for us."

Living Rivers is pushing for a more comprehensive EIS to evaluate what can be done to recover endangered fish throughout the Colorado River Basin while addressing human water needs.

"There is no way we are going to protect these endangered species through a piecemeal approach to dam operations," Weisheit said. "We should be looking at this more holistically. Which dams should we get rid of to help endangered fish and minimize evaporation loss? Why aren't we storing this water in places like aquifers where it won't be evaporated?"

But in the case of Flaming Gorge Dam, higher flows already have a proven track record of making a positive difference for fish, Heffernan said. Working under an earlier 1992 biological opinion that called for experimental increases in flows, BuRec saw improvements in fish habitat, she said. That experiment is what led FWS and BuRec to try releasing more water from the dam, she added.

Environmentalists had asked the bureau to include decommissioning the dam in its list of alternatives in the EIS, but the agency decided not to consider that option, citing its mandates under the Colorado River Storage Project and the Flaming Gorge National Recreation Area acts.

"Congress, in its wisdom, directed us to build the dam, and we did," Heffernan said. "We were authorized to build the dam, and to operate it. We don't have the authority to decommission the dam. That would take an act of Congress."

Furthermore, public comments on the draft EIS "overwhelmingly" opposed decommissioning, she said. "There are a lot of people who use the reservoir and the river for recreation, and they would like to see that maintained."

Crist said removing or breaching the dam is not necessary to improve conditions for endangered fish. "I think it's still possible to have the dam and recover the fish," he said. "The other way [decommissioning the dam] would work too. But I think it's possible to have the benefits of the dam and help the fish."

The higher flows are part of a larger recovery effort that includes controlling non-native fish that compete with endangered species and restoring habitat, Crist said.

If the new proposal is approved, BuRec and FWS will monitor the effects of the increased flows and temperatures and revise dam operations if necessary, Heffernan added.

"We acknowledge we don't have all the answers yet, but this is based on the best available science," she said. "This is really just part of an ongoing effort. It will take a number of years to get some good data to determine whether it's working or not."

The bureau will hold a series of public hearings on the draft EIS in Utah and Wyoming in October, Heffernan said.

LR Letter 09/23/04

Comments: Living Rivers to EcoPlan Associates

From: Living Rivers
Colorado Riverkeeper
PO Box 466
Moab, UT 84532
435.259.1063
September 23, 2004

To: Mr. Don Smith
EcoPlan Associates, Inc.
701 W. Southern Avenue
Suite 203
Mesa, AZ 85210

VIA EMAIL: dsmith@ecoplanaz.com

RE: Environmental Assessment (EA) for proposed water intake structures at Navajo Generation Station near Page, Arizona.

Dear Mr. Smith:

Thank you for allowing Living Rivers and Colorado Riverkeeper this opportunity to provide public comments for the proposed construction of water intake structures at Navajo Generation Station (NGS). This facility is administratively managed by Salt River Project (SRP). The facility adjoins lands administered by the National Park Service and the tribal government of the Navajo Nation.

Concerns for better due process

We are very dissatisfied in the minimalist approach concerning due process for this environmental assessment. We feel that the general public was not adequately informed about this EA and hope that public notification from the National Park Service and the Salt River Project will improve in the future, and will also include more

accessibility to information. For example, this would include more contact information with the administrative agencies, and include resource information for public dissemination through the Worldwide Web and local public libraries.

We therefore ask formally that the process for gathering public comments be extended for 30 days and that measures are taken to better engage the public within this 30-day extension.

Concerns about SRP energy policy

The need and purpose for this proposed construction project is the result of climate change. Climate change has produced an unprecedented, but not unexpected, drought in the Colorado River basin. The average Colorado River flow has been reduced by 50 percent in the last six years. Climate change occurs naturally, but it is now accepted that humans do impact climate through the consumption of fossil fuels, which increases the temperature of the atmosphere and the surface of the oceans. NGS burns fossil fuel and thus contributes to the degradation of the world's climate. The management of NGS must be aggressive and accountable in their policies concerning a positive transition from burning fossil fuels to providing alternative energy programs that will eliminate toxic pollution and greenhouse gases from the atmosphere.

This would also include eliminating impacts from fossil fuel consumption and how it affects local and regional residents as it relates to known health problems such as asthma and exposure to toxic heavy metals such as mercury.

We ask that SRP conduct public meetings and to specifically consult with all regional stakeholders with the purpose of developing a progressive policy for providing an alternative to fossil fuel consumption that will protect the atmosphere from further degradation and to improve human health.

Concerns about water rights

The contract for the water rights at NGS is to be renewed in 2009. It would be reasonable and prudent that SRP first secure their water rights before investing a significant amount of money to finance this proposed construction project.

Concerns about bore drilling

The diameter and quantity of the drilling bores appears excessive. Please explain why five bores must be drilled and why at 54 inches in diameter?

Impacts to Traditional Cultural Properties and critical wildlife habitat

It is not clear that new lands are to be developed for the pumping station, service roads or waste facilities for this proposed construction project. We ask that the specialists at the National Park Service and Navajo Nation be consulted and provide clearance for this project's proposal as it relates to the cultural resources of the First Nations in the region of the Colorado Plateau.

We also ask that the US Fish and Wildlife Service be consulted concerning impacts to threatened and endangered species. This would include the potential mortality the intake structures would pose to endangered fish species.

Concerns for the geologic integrity of the host rock

There is considerable spalling of rock that is naturally occurring along the margins of the reservoir due to drought-diminished reservoir levels. We are assuming that the strength of the host rock of Lake Powell reservoir has weakened due to decades of water saturation from the reservoir. We would ask that if construction does proceed at NGS that the core samples from the drilling operations be analyzed by a professional consultant to determine how much structural integrity in the host rock has been lost. We believe this knowledge can be extrapolated for the structural integrity of man-made structures such as Glen Canyon Dam, and natural features that are federally protected, such as Rainbow Bridge.

Impacts from sediment storage in Lake Powell reservoir

The NGS facility is located downstream of Navajo Canyon, which is a large tributary drainage that erodes considerable amounts of soft Mesozoic shale and sandstone into Lake Powell reservoir. A sediment study should be conducted to determine when sediment from Navajo Canyon would impact the water intake structures at NGS.

This would also include the sediment accumulation due to natural turbidity flows along the inundated river channel of the Colorado River. This information on sediment fill should be shared with the National Park Service and with Bureau of Reclamation to provide to them better information in the management of their facilities. Especially as it relates to safety at Glen Canyon Dam.

Impacts to visitors at Glen Canyon National Recreation Area

The impacts to noise levels, the view shed and light pollution should also be addressed at the pumping station. Visitors and campers to Glen Canyon National Recreation Area would appreciate that such impacts be eliminated.

Thank you for this opportunity to provide comments and questions. Please do not hesitate to contact us should you require further assistance.

Sincerely yours,

John Weisheit Conservation Director

Cc: Ms. Barbara Wilson Environmental Specialist Glen Canyon National Recreation Area

LR in the News 09/28/04

Norton Excels as Water Spin Doctor

September 28, 2004

By David Haskell for My Turn/Arizona Republic OpEd

The recent editorial by Secretary of Interior Gail Norton followed the format frequently used by administration "spin doctors". It starts with a positive title, "Water Use Takes Wisdom". If the title rings true there is an implication that the messages to follow are also true. Unfortunately this is rarely the case. This ploy was also used by Norton to tout the Administrations Clear Sky Act, legislation that substantially damaged decades of past Congressional progress in cleaning up sources of air pollution. Examination of the points made by Norton in this article reveals the lack of timely leadership and wisdom associated with her Colorado River management policies.

Her first message was that Arizona is not in a water crisis. The entire Southwest is in a water crisis and the quicker we realize this fact the better chance we have in avoiding the most serious consequences. Most long-range weather pattern experts predict that we are in the 6th year of a multi-decade severe draught. Substantial water conservation measures and actual reductions in use throughout the basin are needed to reduce future impacts on the economy and natural resources. This is particularly true for cities that depend on Colorado River water.

The presence of Lake Powell will certainly not prevent a crisis. Reservoirs do not create water they only store it during years when flows exceed the total annual use. The 1922 Colorado River Compact allocated 15 million acre feet of water to be used by the seven basin states. Even though Colorado River flows were at historically high levels during recent decades, the average annual flow has only been 13 MAF. If the draught experts are correct this flow will be reduced to about 9.5 MAF by 2050. It is clearly evident that from now on there will be little excess water to be stored by these reservoirs, and the 500,000 acre feet of water lost by Lake Powell each year from evaporation will make the situation even worse. In future years Lake Mead will provide all of the storage needed in the lower basin.

Perhaps Norton's least wise policy has been to declare that there is "surplus water" in the Colorado River system. Declaring a surplus each year allows the states to continue to use their inflated Compact allocation even though the river has not delivered that amount of water for nearly a decade. The severity of the current situation could have been reduced if Norton had declared a shortage three years ago, requiring a reduction in water use before a crisis occurred. Actually achieving significant reductions in water use in the seven basin states will take several years. Waiting until we run out of water before starting to initiate cutbacks can only result in the chaos of hastily implemented mandated emergency measures.

Norton implies that the Gila River water adjudication process will somehow result in helping the draught situation. Regardless of which entity ends up with legal rights to the CAP allocation, this process will not increase Arizona's Colorado River allocation or conserve water. The Salt River Project managers have been reducing CAP water deliveries for agricultural purposes for the past three years. This is a very prudent action. Further reductions in use should be implemented and water saved stored in underground aquifers.

Secretary Norton did make one important point, "water is the Southwest's most precious resource, and we must work together.... to wisely use and manage the Colorado River". Unfortunately, we have seen little evidence of "wise" leadership from this Secretary of the Interior.

David Haskell
Policy Director, Living Rivers

Living Rivers is a river advocacy group based in Moab, Utah with an office in Camp Verde, Arizona

Regional News 10/10/04

Artificial recharge of aquifer at Las Vegas

Sunday, October 10, 2004 Copyright © Las Vegas Review-Journal

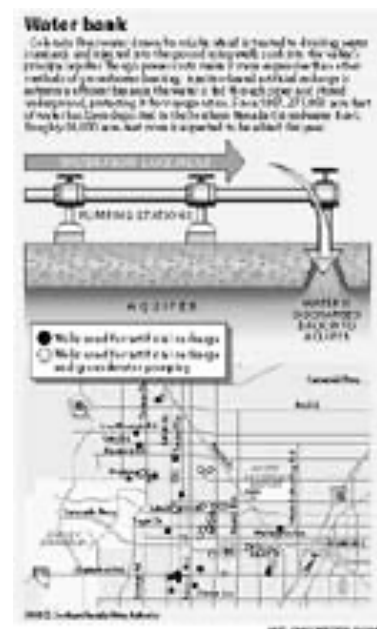
Valley has two water savings accounts

Local providers have been socking away water since 1987
By HENRY BREAN

J.C. Davis, spokesman for the Southern Nevada Water Authority, stands next to a well at the water authority's North Well Field on Valley View Drive. The pumps draw groundwater to supplement what the valley gets from the Colorado River.

It's a warm fall day, neck deep in the worst drought on record, and the pumps are churning at the Southern Nevada Water Authority's North Well Field on Valley View Drive.

At the moment, and throughout the hottest part of the year when water use is at its peak, the pumps are being used to draw groundwater to supplement what the valley gets from the Colorado River.



Soon, however, that flow will be reversed, and over the next six months or so several billion gallons of treated drinking water from Lake Mead will be pumped directly into the ground.

That may sound like a reckless waste, but it's really the opposite.

Since 1987, local water providers have socked away 275,000 acre-feet of water using a process called artificial recharge. About 13,000 acre-feet was injected into the ground during the first three months of this year. Another 17,000 acre-feet is due to be pumped down by year's end.

An acre-foot is 325,851 gallons, roughly the amount of water consumed by the average Las Vegas Valley household every 17 months.

"A lot of the public is not even aware that we've been squirreling away water for years," said J.C. Davis, spokesman for the water authority. "It's important they understand that we aren't operating without a net."

It is called the Southern Nevada Groundwater Bank, but local water officials didn't invent it. They only gave it a name.

The storage area itself has been here far longer than people have, trapping melted snow from the past 10,000 winters in a 1,000-square-mile matrix of dirt and rock generally found 500 to 1,200 feet below the surface.

Now the valley's principal aquifer is being used much like a common savings account.

Each year, Nevada is allowed to consume 300,000 acre-feet of water from the Colorado, minus any surplus water that might be available during wet years. Any portion of the 300,000 acre-feet that isn't used goes into the bank, so the less water the valley consumes, the more it can save.

"It's a two-for," said Pat Mulroy, water authority general manager. "The community creates a drought cushion for itself by conserving."

"There in that bank is the water we might need in a protracted drought."

And in the use-it-or-lose-it world of water law, artificial recharge allows Nevada to get the full benefit from its comparatively meager share of the river, even when the water is not immediately needed to meet demand.

The practice is nothing new. Artificial recharge has been around for thousands of years, helping humans grow crops and survive in arid climates from ancient Persia to 1930s California.

Arizona, a state almost entirely dependent on its groundwater supplies, began large-scale banking 10 years ago and has put away more than 1.8 million acre-feet so far.

Artificial recharge also is used to stabilize and replenish areas where groundwater has been overpumped, causing the earth to subside and wells to fail. Over the past three

years, the Las Vegas Valley Groundwater Management Program has injected more than 7,000 acre-feet of water into selected parts of the valley for just that purpose.

"Most people forget that aquifers are finite, and it takes a long time to replenish them. Nature does that very, very slowly," said Tom Harbour, water planning supervisor for the Central Arizona Project. "With artificial recharge, we're kind of helping nature along."

The water authority and its member agencies operate the largest injection-based artificial recharge system in the world.

The system employs 77 wells, most of them in the northwest part of the valley. Some of the wells are used both to put water into the ground in the fall, winter and spring and take water out in the summer.

On paper, the water authority has yet to make a withdrawal from its bank, though technically at least some of the water put in has been pumped out again by the roughly 9,000 residential and commercial groundwater wells throughout the valley.

"I don't think we'll need to tap the bank for some time. I hope that's the case," said Kay Brothers, the water authority's deputy general manager for engineering and operations.

When the valley is forced to use its bank -- if, for example, the drought reduces the state's Colorado River allocation or local water use surpasses supply before new resources can be tapped elsewhere in the state -- there should be enough water put away to supplement what we get from Lake Mead for at least a decade, Brothers said.

Then there is Nevada's other water savings account, one forged not by pumps but by policy.

Through a cooperative agreement struck in 2001, the water authority has secured 110,000 acre-feet of credits in Arizona's groundwater bank.

Nevada hasn't had to tap that bank either, but when it does, the only thing flowing from Nevada to Arizona will be money.

Cashing in the credits works like this: Arizona surrenders some of its 2.8 million acre-foot Colorado River allocation to Nevada, which pulls the water from Lake Mead. If necessary, Arizona replaces that water by tapping its groundwater reserves or paying farmers not to irrigate some of their crops. Nevada pays Arizona for any costs associated with pumping and delivering the groundwater Arizona needs to replace the Colorado River water it has given up.

Unlike Nevada's injection-based system of artificial recharge, Arizona benefits from permeable soils that allow the use of spreading basins, which Harbour described as "very, very leaky ponds" that can let up to 7 feet of water seep into the ground each day.

The state also channels water into normally dry streambeds with similar results.

The Central Arizona Project, which channels water 350 miles from the Colorado River to Phoenix, Tucson and farms in between, has five spreading basins in operation, one

under construction and another in the design and permitting phase. Water also is banked by the Salt River Project and the Arizona Water Banking Authority.

The agreement between Nevada and Arizona allows the Silver State to bank a total of 1.25 million acre-feet in Arizona through 2050. So far, though, little progress has been made toward that goal because Arizona must first satisfy its own water needs before it can start setting aside water for another state.

Larry Dozier, deputy general manager of the Central Arizona Project, said that by 2016 officials in Arizona hope to have met most of that state's water storage targets and have close to 1 million acre-feet set aside for Nevada.

"The darned river hasn't cooperated," Dozier said. "It got dry, and there hasn't been a lot of surplus water."

The two states are now discussing a way around that. "What we're talking to Arizona about is firming up the 1.2 million acre-feet," Mulroy said.

In effect, the plan being discussed involves Arizona extending Nevada a line of credit.

"We would let them take their water out before they put it in," said Dozier, who sees the idea as a way of building the kind of cooperative spirit long absent from Western water politics. "Our answer is, we think we have the capability to do it, and it's good to have friends when there is a drought on the river."

Dozier added that a number of "policy and political implications" will have to be addressed, but he thinks some kind of agreement could be reached by the end of the year.

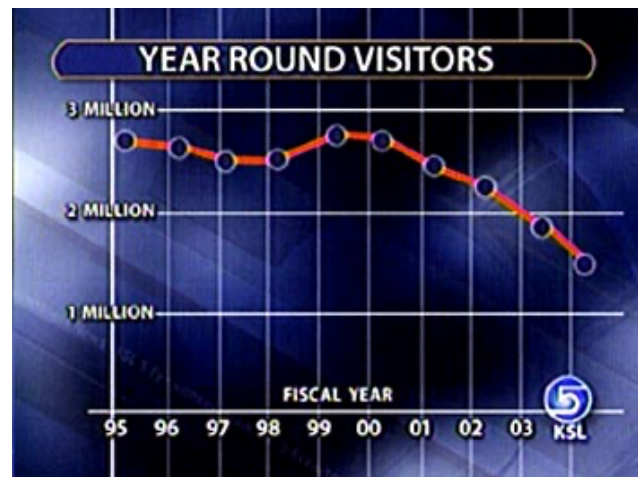
Regional News 10/20/04

Lake Powell services closing for the winter

Lack of visitors, chance to renovate led to the decision

By Ray Grass Deseret Morning News

For the first time since Lake Powell was a mere puddle, the lodges and restaurants, lakewide, will close for the winter season.



Even though Lake Powell is 130 feet below "full-pool," it's the lack of visitors that's forcing the closure.

It was announced late Tuesday that Lake Powell marinas will shift into a seasonal winter schedule.

"We will close down all lodging and restaurants on Nov. 15 and they will remain closed until March 14," said Steve Ward, director of public relations for ARAMARK. "There will be limited service with respect to boat rentals, tours and fuel."

ARAMARK, which owns concessionaire rights to five marinas on the shores of the lake, has been in negotiations for three months with the National Park Service to initiate the closure.

The park service gave its approval last week and since then ARAMARK management has been working through details involved in the closing.

Those individuals with room reservations at the lakeside properties, mainly Wahweap and Bullfrog, will be relocated to Page, Ariz., the city a few miles south of Wahweap.

Those calling the marinas for reservations will be offered room options in Page.

"This is not something that has resulted from the low lake level," Ward said. "We've been experiencing a drop in visitation since 1999. And it didn't happen just at Lake Powell. Other parks, such as the Grand Canyon, have experienced the same slowdown. With lower visitation we've had to reduce staff."

"Last year we did not have the staff to take care of all the tourists and do the season maintenance that was required. This winter we want to renovate three buildings, more than 100 rooms and 60 houseboats. This winter the staff will concentrate on those projects."

When the lake first started to fill, Wahweap would close when temperatures began to cool. At the time it was the only marina on the lake offering restaurant and lodging facilities.

A few years later, however, marinas went to year-round operation and have remained open since.

Uplake, at Bullfrog, the Defiance House Lodge and gift shop, the Bullfrog marina store and the fuel dock at Halls Crossing will close Nov. 1.

Wahweap lodging, the Rainbow Room restaurant and gift shop, and the store at Dangling Roper will close Nov. 15. All will reopen on March 14.

The onshore facilities at Hite will not reopen until May 1.

What will remain open are:

- * At Bullfrog, the on-water convenience store, service station, fuel dock and trailer units.

- * At Hite, the campground, trailers and an on-call status for essential groceries and supplies.

* At Hite, the pay-at-the-pump fuel station.

* At Dangling Rope, the fuel dock.

* And at Wahweap, the boat tours, campgrounds, limited boat rentals, the marina store and fuel.

"Like most national parks, Lake Powell is considered a seasonal destination by most visitors," according to Dale McFarland, district manager, Lake Powell Resorts & Marinas. "Our guests will be best served if we use the winter months to prepare for the peak season. "

Currently, the lake level is down about 130 feet from "full-pool."

Boat owners are being told they can launch at Wahweap and Bullfrog ramps at their own risk, and that the best ramp is at Halls Crossing. The public ramps at Antelope Point and the Stateline are closed.

For more information about the winter 2004-05 seasonal schedule, you may log on to www.lakepowell.com or call 1-800-945-LAKE.

E-mail: grass@desnews.com

Regional News 10/20/04

Coachella Valley aquifer recharge program

Balancing growth and water supply Summit called to vet ideas to avoid possible shortage of high-quality water

By Benjamin Spillman The Desert Sun October 20th, 2004

Every year, the aquifer under the Coachella Valley is "overdrafted" by enough water to serve 300,000 households.

That means that though the underground water supply is vast, users are taking out much more water than goes back in.

"We are living on borrowed time," said Mark Beuhler, assistant general manager of Coachella Valley Water District.

That, one estimate says, could mean an end to the "high-quality" water supply in less than 80 years. Or, it could mean ground collapsing into an emptier aquifer.

To combat these possibilities, more restrictive water rules, pipelines that would tap Colorado River and Northern California water supplies and increased scrutiny of homeowners' landscaping could all be in the Coachella Valley's future.

Water stewards and community leaders in the desert region known for cheap water, abundant golf and lush lawns will meet today in Indian Wells for a discussion of what steps to take to maintain the water supply that built a multi-billion tourism and agriculture industry in the area.

The water symposium, sponsored by the water district, will include leaders of area water districts and communities, farmers, golf course operators and environmentalists.

That this diverse collection of groups, often at odds over water management, is coming together at the symposium shows there is increasing focus on ensuring the valley's long-term water future.

A 35-year water plan

The water district has already embarked on a 35-year, \$250 million to \$300 million water management plan it says will reverse the ongoing overdraft, now estimated to be about 150,000 acre-feet annually. An acre-foot is enough water to supply up to two households for a year.

The water plan aims to reduce overall water consumption in the Coachella Valley by about 7 percent. It also calls on increasing the annual imported water supply from about the current 400,000 to about 560,000 acre-feet.

It suggests dividing water conservation among domestic users and typical businesses, farms and golf courses. Under the plan, domestic users will use 10 percent less water by 2010, golf courses will use 5 percent less by 2010 and farmers will use 7 percent less by 2015.

The imported water, which will come from Northern California via the State Water Project and the Colorado River via the Coachella Canal and the Colorado River aqueduct, will be used to recharge the underground water supply.

Collapsing ground?

The aquifer has shrunk an estimated 5 million acre-feet since 1936 and is estimated to have a 30 million-acre-foot capacity, Beuhler said.

But despite the massive size of the aquifer, he said implementing the water management plan is important to avoid future problems like ground subsidence.

Beuhler said there have already been isolated instances of subsidence, a phenomena that occurs when the ground collapses into an emptied aquifer, around the valley.

He said by the time the problem is widespread it could be too late to solve it.

"Everything sinks, the buildings, their foundations can crack," Beuhler said. "It is not a significant problem yet but it is coming."

Not just quantity, quality

Although CVWD aims to avert problems associated with the aquifer overdraft, the water management plan has been criticized, in part, for not taking water quality into account.

For example, the Agua Caliente Band of Cahuilla Indians are wary of the plan to recharge the high-quality ground water, the result of thousands of years of snowmelt from the mountains and rainfall, with lower quality water from the Colorado River.

River water has more salt and other contaminants. The tribe, which has its own water rights, estimated in 2002 that under CVWD's plan the "high-quality" groundwater supply would be gone in 80 years.

Beuhler said that estimate though, was a "gross oversimplification," though he conceded that Colorado River water has more salinity than local groundwater. All over Southern California, water users, including those in Los Angeles, use water from the Colorado River.

Nonetheless, in a letter to CVWD, the tribe recommended using Northern California water from the State Water Project to recharge the aquifer.

But that could require building a costly pipeline toward Beaumont or Yucca Valley, the closest physical connections to the Northern California water.

Golf course questions

Others suggested further strengthening conservation measures and increasing the cost of water for golf courses and other large users.

"There is no respect for water," said Joan Taylor, president of the Palm Springs branch of the Sierra Club. "It shouldn't be so cheap that they can squander it on golf courses."

Taylor said golf courses should rely more on recycled and imported water, not ground water. Currently, about 72 of the valley's approximately 115 golf courses rely on groundwater.

Robert White, vice president of the Hi-Lo Desert Golf Superintendents Association said the golf community has already reduced water consumption on courses by 11 percent in the last three years.

Many local golf courses are converting to irrigation systems that read the weather and there is research into hybrid grasses that use up to 21 percent less water, White said.

"We are just very, very careful with the amount of water," said White.

He said much of the wasted water in streets comes from homeowners who over-water lawns.

Bermuda or creosote?

Steve Robbins, general manager of CVWD said convincing homeowners to convert from lawns to desert landscaping is another important water management goal.

The district may consider offering incentives to remove grass, Robbins said. Las Vegas, for example, has paid homeowners as much as \$1 for every square foot of turf they remove.

"That becomes very, very expensive water," Robbins said.

So far CVWD has focused on educational campaigns to alert homeowners to "lush and efficient" desert foliage. It is also promoting a landscaping ordinance that would reduce the amount of water available to new developments by 25 percent.

But many homeowners in the desert are accustomed to keeping lush, green lawns.

"I believe (lawns) should have grass," said Rick Sullivan, of Palm Desert.

Sullivan recently watered a patch of grass at his Palm Desert Country Club home.

He said without grass, the area would resemble more isolated desert communities like Lake Havasu City, Ariz., where he also has a home.

"It's green, it gives off oxygen, it's pretty," he said of the benefits of maintaining a grassy lawn.

Landscaper Karen Lien, also of Palm Desert, said desert homeowners with roots in wetter climates seem to prefer grass to desert landscaping.

"They want a tropical looking courtyard," Lien said. "They don't care about water, at all."

Benjamin Spillman can be reached at 760-778-4643 or by e-mail .

Aquifer facts

*Since 1936, the 30 million-acre-foot aquifer has diminished by 5 million acre feet. Every year, the aquifer is overdrafted by 150,000 acre-feet. That's enough to supply service to 300,000 households.

*Water plans calls for households to reduce use by 10 percent and for golf courses to reduce use by 5 percent.

*Another way to re-charge the aquifer is to pipe in water from rivers or water sources elsewhere.

WATER-SAVING TIPS

*When planning a garden, plant items with similar watering needs together and chose water-efficient plants, including local, native vegetation.

*Integrate rocks, bricks and gravel into landscaping.

*Lawns with grass should be watered before sunrise or after sunset to maximize water absorption into the soil and minimize loss due to evaporation.

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Coachella Begins Groundwater Recharge New facility can recharge Valley's aquifer with up to 40,000 acre-feet annually. By: Compiled by staff Published: Jun 18, 2009 The same amount of water used by approximately 40,000 desert households each year will be pumped back into the ground over the next 12 months thanks to a new project by the Coachella Valley Water District. CVWD recently began replenishing groundwater in the east valley at its newest recharge facility in south La Quinta. The new facility can recharge the Coachella Valley's aquifer with up to 40,000 acre-feet of water annually. One acre-foot is 325,851 gallons.

"With this latest project, CVWD responds to the statewide water crisis and takes another step towards protecting our local water resources," says General Manager-Chief Engineer Steve Robbins.

Every year, the Coachella Valley uses almost 400,000 acre-feet of groundwater, but on average only 63,000 acre-feet is replenished naturally through rain or snow melt. Over time excess pumping depletes the aquifer, threatens water supplies to the local population and compromises future growth in the valley.

To replenish groundwater, the new facility uses Colorado River water delivered to the valley via the Coachella Canal, across 120 miles to Lake Cahuilla in La Quinta. The water then travels along existing irrigation pipes, is pumped into 39 recharge basins and left to percolate into the ground.

Extensive scientific modeling and a pilot program were conducted by CVWD over the past decade to locate sites in the east valley that would most impact the aquifer level. In 30 years, the groundwater level in the eastern Coachella Valley will be an estimated 25-105 feet higher than it would have been had CVWD not built the new recharge facility.

"Recharge at this new facility will help reverse two decades of groundwater depletion in the La Quinta-Indio area," says Robbins.

As a responsible steward of the Coachella Valley's groundwater resources, CVWD now operates four groundwater recharge facilities that replenish water back into the ground. Combined, these sites have recharged over 2.2 million acre-feet of water since 1973. Two facilities at Windy Point and Mission Creek are jointly operated with Desert Water Agency in Palm Springs using water from the agencies' entitlements to the State Water Project.

Because the aquifer lies below the entire valley, recharge benefits all local residents and businesses. By replenishing the aquifer, CVWD ensures that a reliable supply of groundwater will continue to be available, across the entire valley, now and for future generations.

CVWD recharge programs are partially funded by fees charged to large water users that pump more than 25 acre-feet of groundwater per year, such as farms, golf courses and Home Owners Associations.

The Coachella Valley Water District serves over 106,000 residential and business customers across 1,000 square miles, primarily in Riverside County, but also in portions of Imperial and San Diego counties.

LR Letter 11/15/04

Comments: DEIS Flaming Gorge Dam

Mr. Peter Crookston
Bureau of Reclamation
Provo Area Office
302 East 1860 South
Provo, Utah 84606

RE: Comments on Draft Environmental Impact Statement on operations at Flaming Gorge Dam

Dear Mr. Crookston,

Living Rivers and Colorado Riverkeeper submit the following comments on the Draft Environmental Impact Statement (DEIS) for the re-operation of Flaming Gorge Dam to benefit endangered fish, as released on September 7, 2004.

While the four-year effort to produce this document has proved useful in generating a better understanding of the challenges facing the recovery of endangered fish below Flaming Gorge Dam, the analysis is not yet sufficient to support the proposed action. The water supply and hydrograph assumptions do not correlate with present trends. The role of endangered fish recovery relative to other operational objectives has yet to be properly clarified. The proposed action fails to address the pitfalls in the structure and mandate associated with the proposed Adaptive Management Program as experienced with Reclamation's recovery efforts for endangered fish at Grand Canyon. The DEIS did not properly review the merits of recovery efforts through a dam decommissioning alternative. Lastly, as noted in our scoping comments of July, 2000, Colorado River endangered fish recovery should be tiered to a programmatic EIS that evaluates recovery needs and barriers throughout the historic range of these endangered fish species. We hope these matters will be properly addressed prior to completion of the Final EIS (FEIS).

1. Water availability

The DEIS failed to sufficiently address how long-term water availability will impact fish recovery in the lower Green River, and as a result did not sufficiently demonstrate whether the proposed recovery efforts can be successful in this limited stretch of river.

Flow scenarios did not take into consideration the prospect of how climate change will affect river flows. The present drought has demonstrated that flows may be significantly

lower than forecasted as precipitation patterns for the Green River watershed may be changing. The Department of Energy has forecasted how western rivers as a whole may experience a 30 percent reduction in flows over the next 50 years due to climate change.

2. Action Alternative is not consistent with the natural hydrograph

The DEIS acknowledges the recommendation to manage the recovery of endangered fish species on a dam-controlled river by mimicking the historic natural hydrograph and thermograph, as much as possible. We believe that the flow recommendations of the DEIS departs from this prescribed treatment. We believe the spring peak flow of the Action Alternative is much reduced and therefore diminishes the success in achieving the goal to recover endangered fish. We also believe that the Action Alternative's base flow, from the summer to winter season, is higher than the historic hydrograph and too does not reflect compliance with the biological data.

Furthermore, instead of timing releases from Flaming Gorge Dam with the natural flow of the Green River, the flow recommendation of the Action Alternative is timed to meet the natural hydrograph of the Yampa River, a tributary of the Green River downstream of the dam. We believe this too diminishes the recovery of endangered fish in the Green River, especially in Reach One (Flaming Gorge Dam to the confluence with the Yampa River).

We believe the DEIS overlooked the benefits associated with the Run of the River Alternative, as suggested by the National Park Service. We encourage Reclamation to scrutinize further the possibilities of implementing such an action plan. We believe strongly that matching the historic attributes of the river is what will eventually provide a greater measure of success in the recovery of endangered fish species, until which time the dam can and will be successfully decommissioned, as is inevitable.

3. Clarify the priority of satisfying the Endangered Species Act

The DEIS sometimes refers to the recovery of endangered fish as distinct from the authorized purposes of Flaming Gorge Dam (Sec.1.1). At other times the DEIS implies that the authorized purpose of Flaming Gorge Dam does include the improvement of critical habitat for fish and wildlife. The FEIS must make clear that fish recovery is paramount as the Bureau of Reclamation must comply with the Endangered Species Act first and foremost, then allow for other dam operational benefits to be pursued accordingly.

4. Adaptive Management Program protocols

The DEIS indicates that the Action Alternative includes the implementation of an Adaptive Management Program concerning the future operations at Flaming Gorge Dam. This program will consist of the Flaming Gorge Working Group and a Technical Working Group. The purpose of the Flaming Gorge Working Group is to provide a check and balance system for the purposes that authorized Flaming Gorge Dam, including the

recovery of endangered fish. The purpose of the Technical Working Group is to provide scientific expertise for the program.

Such a program has been underway for nearly ten years at Glen Canyon Dam, but the results have been disastrous. One more species has gone extinct, the Razorback Sucker, and the Humpback Chub has declined to nearly irreversible numbers. This has occurred for the lack of: a) a clear mandate for independent, peer-reviewed science that is removed from politics, b) to guide the decision making process by placing fish recovery at a priority below power generation, c) not ensuring there are sufficient funds to operate the program.

Reclamation must identify how the Flaming Gorge Dam Adaptive Management Program will avoid the pitfalls that have plagued the program at Grand Canyon.

Reclamation must also outline how this program will address uncertainties associated with the operations at Flaming Gorge Dam, and how future supplemental National Environmental Policy Act compliance will be required.

We believe that such uncertainties could include, but not limited to: progressive global warming, extended and prolonged drought, extreme flood events, higher sediment transport, increased human consumption, modifying selective withdrawal (temperature control), and the control and removal of exotic fish.

This should also include a call by the Lower Basin to deliver the minimal annual requirement of 8.23 million acre-feet at the Compact Point (Lee's Ferry, Arizona). As well as dam operations that further compromise the ecosystem values that authorized the creation of Dinosaur National Monument, Ouray National Wildlife Refuge, and Canyonlands National Park.

We also believe that another management decision of the immediate future should include a fish passage at the Tusher Wash Diversion Dam near Green River, Utah. This would include a device that prevents mortality of endangered fish from entrapment in the irrigation and hydropower projects associated with this diversion dam.

Therefore, we do expect that the working groups and the general public will have comprehensive access to all information that pertains to the operations of the Green River and Flaming Gorge Dam. This should be accomplished through the web pages of the Bureau of Reclamation and through a regular newsletter that is mailed to all interested parties.

For the agencies, scientists and the general public to be well informed, it is imperative that all program information is made available promptly and that this information is disseminated liberally and is not discretionary. It is also imperative that adequate time be allowed for the public to process this information in a timely manner so as to maximize public outreach opportunities in the NEPA decision making process.

5. The Decommissioning Alternative

The DEIS dismissed the decommissioning alternative without sufficient justification or analysis, other than to say, "[decommissioning] does not meet the purpose and need for the proposed action." The principle objective in fish recovery programs is to restore natural processes, which include seasonal flows, temperature, sediment, nutrients and migration.

Decommissioning Flaming Gorge Dam can best meet these objectives and thus should be thoroughly evaluated. While the dam makes some contributions to water storage, power generation and recreation, these contributions are not significant regionally, and are replaceable, whereas the endangered fish are not.

The DEIS also did not fully evaluate the potential for dam failure, and the impacts this may have on endangered fish recovery, as well as other downstream impacts to Dinosaur National Monument and Canyonlands National Park.

6. Basin-wide concerns

Reclamation continues to address fish recovery in the Colorado River watershed in a piecemeal fashion without consideration of the natural species' range, or macro-social and environmental changes that may be affecting the watershed. It's critical for Reclamation to develop a programmatic EIS involving all the recovery needs of endangered fish species in the watershed and the best approaches to resolve them.

We believe the overarching problems that must be thoroughly studied in such a system wide, programmatic approach would include, but not limited to:

- Diminished water supply and water quality • Increased water demand • Over allocation of water rights • Quantifying the water rights of the First Nations • Impacts to national wildlife refuges, parks and monuments (including the international biosphere at the Colorado River delta) • Removal of exotic species • Sedimentation in the reservoirs • Dam safety • Modernizing the Law of the River • Alternative energy production and conservation • Water storage and conservation alternatives

We believe such a study would show conclusively that the Colorado River system would benefit by having some of its infrastructure removed and that alternative storage strategies, such as the artificial recharge in depleted aquifers, can provide:

- Increased habitat for endangered species • Restore the natural attributes of the river and its tributaries • Reduce water loss from evaporation • Reduce salinity • Provide protection from extended drought • Eliminate the consequences of high dam failure • Prompt a sediment management plan

7. Closing statement

Thank you for this opportunity to comment on the DEIS for Flaming Gorge Dam. We encourage the Bureau of Reclamation to proceed in producing a Final Environmental Impact Statement and we look forward to the subsequent Record of Decision. Please feel free to contact us at any time should you require any additional information or assistance from us.

Sincerely yours,

John Weisheit
Living Rivers, conservation director
Colorado Riverkeeper

LR Letter 11/16/04

Comments: Supplemental EA for experimental flows in Grand Canyon

November 16, 2004
Mr. Dennis Kubly
Bureau of Reclamation, Upper Colorado Region
125 South State Street, Room 6107
Salt Lake City, Utah 84138-1102

Re: Draft Supplemental Environmental Assessment. Proposed Experimental Actions For Water Years 2005–2006, Colorado River, Arizona, in Glen Canyon National Recreation Area and Grand Canyon National Park.

Dear Mr. Kubly,

Living Rivers and Colorado Riverkeeper submit the following comments on the Supplemental Environmental Assessment (EA) concerning proposed experimental releases from Glen Canyon Dam to conserve sediment and to disadvantage non-native fish at Grand Canyon National Park, as released on November 5, 2004.

1. Introduction

Living Rivers is keenly aware of the rapidly declining Humpback Chub population, as well as other Grand Canyon native fish species, caused by the operations of Glen Canyon Dam. This also includes the acute reduction in stored fine sediments, which are needed to provide rearing habitat for endangered fish, to preserve the cultural heritage of the First Nations and to provide camping beaches for visitors in Grand Canyon National Park.

While the purpose of this EA is in response to modify the operations of Glen Canyon Dam to conserve both sediment and endangered fish and to test methods to mitigate such impacts, the proposed actions, especially as they pertain to sediment retention and habitat-building, are fundamentally flawed. Of critical concern to us is how the EA does not evaluate any alternatives for increasing the sediment load below Glen Canyon Dam, as the dam is entirely responsible for blocking 95 percent of historic sediment load from ever entering the river ecosystem in Grand Canyon.

To adequately address the problems associated with sediment retention and augmentation, as well as the problems associated with non-native trout species,

necessitates a Supplemental Environmental Impact Statement (EIS) and not the cursory analysis undertaken in this EA. Such an EIS must fully evaluate the decommissioning of Glen Canyon Dam in addition to other appropriate alternatives to meet sediment needs and to disadvantage non-native trout populations in Grand Canyon.

We believe the need for a Supplemental EIS stems far beyond the above and includes a host of other issues affecting the dramatic decline in Grand Canyon Humpback Chub populations. This would include water temperature, water quality, historic seasonal flows, nutrients for the food web and the ability to migrate in response to the environmental needs of endangered fish. The reduction in adult Humpback Chub population constitutes significant and new information to that which was evaluated in the 1994 Fish and Wildlife Service Biological Opinion and the 1996 Final EIS on Glen Canyon Dam operations.

Lastly, the public process for this proposed action has been wholly unsatisfactory once again, as when the initial EA was first presented in October of 2002. The Bureau of Reclamation (Reclamation) and its Adaptive Management Program (AMP) for Glen Canyon Dam must overhaul its procedures for public participation.

2. Insufficient sediment to justify further experimentation outside of augmentation

The EA focuses on utilizing experimental flows from Glen Canyon Dam to manage sediment for the benefit of Humpback Chub populations. However, the abundance of study and experimentation done previously has already demonstrated conclusively that in the long-term, little to nothing will be gained from the proposed action. The sediment conserved during this experiment will return to the river and flow downstream to Lake Mead. The resources of Reclamation and the AMP would be better invested in aggressively pursuing alternatives that stand a greater likelihood of achieving this goal.

Ninety five percent of the historic sediment load for Grand Canyon native fish remains trapped in Lake Powell. In theoretical optimum conditions, such experiments, as proposed in the EA, could manage only five percent of the sediment that would exist in natural conditions. This five percent has already proven insufficient to meet the sediment and nutrient requirements to recover native fish. Sediment is a key missing component for advancing the recovery of native fish in Grand Canyon (Rubin, et. al., EOS v83, n25, 2002). The proposed action focuses solely on flood releases to store this minimal amount of sediment on the margins of the river, while at the same time failing to demonstrate any long-term availability of sufficient sediment to aid recovery in the future. Reclamation must therefore address through an EIS process methods to augment sediment into the system.

3. Climate change and the associated effects on long-term habitat improvement

The EA ignores climatic factors that will affect the proposed experimental releases. The Colorado River watershed is experiencing much lower flows than were anticipated when such spike flows for sediment conservation were first conceived in the original EIS. The US Geological Survey (USGS) has reconstructed the historic climate conditions for the Colorado River basin. Their findings indicate that a sustained and severe drought could

lie before us and that such a climate regime would affect resource management challenges (Webb et. al. 2004) (Meko et. al. 2004). Furthermore, the Department of Energy projects that the Colorado and other Western rivers will see a 30 percent decline in flows over the next fifty years due to climate change (Accelerated Climate Prediction Initiative 2002).

This is already proving to be a problem for the proposed action. Sediment conservation strategies require a sufficient amount of water in Lake Powell to generate optimum flood flows. USGS scientists have stated that the ideal flood magnitude for sediment conservation in Grand Canyon should be 60,000 cfs (Weile 2003). At present the spillway portals, which must be utilized to achieve this target, are perched above the current reservoir level. The EA ignores this and now suggests that the maximum flow for this experimental release need only be 41,000 cfs. It is quite possible that this flood magnitude will not prove sufficient in 2004, much less in subsequent years should river flows remain below that necessary to refill the reservoir.

4. Timing of spike flows and sediment deposition will provide no benefits to native fish rearing

Under ideal circumstances sediment inflows from the Paria River would be better conserved through dam releases at low flow, with the spike flow commencing in conjunction with the natural rearing of Humpback Chub in the spring and summer. Past experiments have already demonstrated that much of the habitat building from spike flows disappears within six months after the spike. Since the proposed action would occur six to seven months in advance of the Humpback Chub's ability to benefit from it, there is no justification to time such flows so far in advance. To be of any benefit such spike flows should be timed to coincide with the natural high flows entering Lake Powell.

5. Proposed flows ignore Fish and Wildlife Service opinion for the recovery of Humpback Chub

The EA of 2002 stated that the present flow regime from Glen Canyon Dam (Modified Low Fluctuating Flow or MLFF) has failed to benefit the habitat of the Humpback Chub. This conclusion resulted from data provided by the Grand Canyon Monitoring and Research Center (Coggins and Walters 2001), which found that a dramatic reduction in the Humpback Chub population has occurred since this flow regime was implemented.

This flow regime was selected as the preferred alternative by the Secretary of Interior despite objections by the Fish and Wildlife Service (FWS) in its 1994 Biological Opinion. That opinion specifically stated that the MLFF alternative would "likely destroy or adversely modify designated critical habitat." FWS recommended the alternative known as the Seasonally Adjusted Steady Flow (SASF). FWS, in conjunction with the Department of Biological Sciences at Northern Arizona University, reiterated these recommendations in their September, 2002 report, Monitoring and Research: The Aquatic Food Base in the Colorado River, Arizona during 1991-2001 (Benenati, et. al., 2002). This report states, "We recommend a decade of Seasonally Steady Flow alternative, with spring beach building flows as the climate permits and unlimited hydropower ramping within 10% of the predicted seasonal mean. We feel these flows in

combination with alien fish suppression and thermal modification of GCD could make Grand Canyon a sanctuary for native fishes of the Colorado River basin."

The proposed experimental releases outlined in the EA will continue to conflict with these recommendations in two ways. First, as noted above, the habitat-building releases do not occur at the preferred time-period of the annual, historic snowmelt, to which these native fish are naturally attuned. Second, the prescribed fluctuating flows for non-native fish suppression would disrupt the food supply for the native fish species and transport sediment out of the Grand Canyon river system.

Additionally, the EA does not sufficiently analyze the impacts to other habitats with their associated species caused by experimental releases inconsistent with the river's natural hydrograph.

6. Water quality

As the reservoir is now only 38 percent full, the potential exists for water quality problems to materialize during the experimental release, which were not addressed in the EA and must be prior to any experimentation. The reservoir water extracted at the depth near the river outlet works may be high in sodium, phosphorus, nitrogen, hydrogen sulfide, dissolved oxygen and heavy metals. We are curious how Reclamation and US Geological Survey will monitor the water quality should this experiment proceed, and will these chemicals impair the food web and habitat of the endangered fish of Grand Canyon?

7. Public review process

Reclamation did not fully comply with the spirit of the public review process as outlined by NEPA and the AMP Charter. Two weeks notice was given to submit comments for this Supplemental EA and to our knowledge no public meetings were scheduled or noticed.

The AMP is charged to fully involve the public in all its activities. Similar insufficient outreach occurred during the EA in 2002 and we voiced our dissatisfaction then, asking Reclamation to assert greater diligence in the future. Once again we are compelled to remind Reclamation that public participation must include ample time for citizens to learn about, and to become engaged in, all activities pertaining to the operations of Glen Canyon Dam and its associated impacts to Grand Canyon National Park.

8. Supplemental EIS needed

The proposed actions in this EA, either separately or in combination with other actions contemplated by Reclamation and the AMP, are not seriously addressing the precipitous decline of endangered Humpback Chub in Grand Canyon National Park. This decline, described by key investigators including Lew Coggins, Carl Walters and others, while not surprising considering the lack of management activities given on behalf of the Chub, was not anticipated when the Record of Decision was signed. Therefore, under National Environmental Policy Act (NEPA) regulations found at 40 CFR 1502.9(c)(1)(ii), these new data represent "significant new circumstances or information relevant to

environmental concerns," triggering a requirement to prepare a Supplemental EIS (SEIS) to the 1996 Glen Canyon Dam EIS.

The Bureau of Reclamation, the National Park Service and other agencies are likely in violation of the Endangered Species Act and the Grand Canyon Protection Act for failing to ensure protection and recovery of the Humpback Chub population in Grand Canyon National Park. Reclamation, in conjunction with National Park Service and other relevant agencies, should immediately begin work on such an EIS for the full recovery of the Humpback Chub populations in Grand Canyon National Park. Such an EIS must address all issues affecting the Humpback Chub. This would include water temperature, water quality, seasonal flow, a healthy food web, sediment and nutrient loads and impacts from non-native fish. Most importantly the EIS must evaluate the decommissioning of Glen Canyon Dam as one of the alternatives to meet Humpback Chub recovery objectives.

9. Conclusion

Living Rivers and Colorado Riverkeeper finds this EA and the experiment proposed to be a waste of public resources. The crisis facing the Humpback Chub in Grand Canyon is quite serious, but it has yet to be taken seriously by Reclamation and the AMP. We believe the AMP process favors power and water resources, which are replaceable, over endangered species, which are not replaceable. The proposed habitat-building experiment is unlikely to materialize any benefits due to general lack of sediment in the system. Even if such sediment were available, it would not be distributed in a timeframe to benefit the Humpback Chub. Regardless, such sediment would be insufficient to mitigate the loss of 95 percent of sediment and nutrients now trapped behind Glen Canyon Dam.

This EA further demonstrates Reclamation's and the AMP's unwillingness to follow the recommendations of FWS, and as a result, will lead to the further declines in the Humpback Chub populations in Grand Canyon National Park. Reclamation must abandon this EA and proposed experimentation and conduct a full EIS on new operating regimes for Glen Canyon Dam, including decommissioning, to fully recover endangered fish habitat in Grand Canyon National Park.

Thank you for the opportunity to submit these comments and recommendations.

Sincerely,

John Weisheit
Living Rivers, conservation director
Colorado Riverkeeper

[Biological Opinion: Glen Canyon Dam. US Fish and Wildlife Service](#)

LR in the News 12/02/04

Glen Canyon Dam test flow raises questions about future management

LAND LETTER Thursday, December 2, 2004
COLORADO RIVER

April Reese, Land Letter Southwest reporter

GLEN CANYON DAM, ARIZ. -- Eight years after an experimental flood aimed at boosting the faltering ecosystem in Grand Canyon National Park, dam operators have opened the bypass tubes once again. But whether or not the experiment fares better than its failed predecessor, Grand Canyon stewards say it will undoubtedly raise difficult questions about how the dam should be managed in the future.

Beginning Nov. 21, the Bureau of Reclamation, which operates Glen Canyon Dam, unleashed 224,000 acre-feet of water through four giant bypass tubes over 90 hours. Scientists and dam managers hope the high flows, rushing down the canyon at 41,000 cubic feet per second (cfs), will stir up sediment flowing in from tributaries downstream from the dam and deposit sand in the Grand Canyon's river channel, building beaches and sandbars to help endangered fish and provide camping areas for rafting expeditions.

"This is amazing," said Sam Spiller, lower Colorado River coordinator with the Fish and Wildlife Service, watching cylindrical torrents of water blast through four bypass tubes at the base of the dam. "Even during a drought season, we're going to go ahead and take advantage of the sediment."

The experiment was initially scheduled for January, but dam managers decided to release the high flows in November to capitalize on recent storms that have swelled the Colorado River's tributaries with sediment in recent weeks.

"The sediments have come down from these storm events," Spiller said. "The question is, can we put these sediments up [on the banks] and restore some of our beach habitat?"

The deposition of sediment creates pools and ripples that provide important habitat for the humpback chub, one of four endangered fish that persist in the Colorado River, and encourage willow growth, which supports southwestern willow flycatchers, an endangered bird.

"The sediment, sand, mud and silt play an important role in the ecosystem," said Chip Groat, director of the U.S. Geological Survey.

An earlier 45,000 cfs test flow in 1996 failed to keep deposited sediment in the system long enough to benefit the ecosystem, largely because the release was too long, eventually scouring the beaches and sandbars it had built, scientists said.

"If there's too much [water], the sediment just erodes -- it goes down to Lake Mead," said Denny Fenn, director of the Geological Survey's Southwest Biological Science Center.

The test flow was the result of a proposal from the Glen Canyon Dam Adaptive Management Work Group, which makes recommendations on dam management and protection of downstream resources, as required under the Grand Canyon Protection Act. The group is comprised of hydropower interests, environmentalists, Park Service officials and other stakeholders.

The release dropped the level of Lake Powell, now down to about 375 feet, by 2-and-a-half feet. But the water sent downstream will go to meet delivery obligations under the Colorado River Compact, which divvies up the river's water among seven western states. Releases from the dam will be lowered in the coming months to offset the high flows sent downstream during the experiment, Bureau of Reclamation officials said.

The Western Area Power Administration, which generates power from the dam, estimates that it lost almost \$2 million during the test flow, which bypassed water around the power plant. But the loss of power generation will be made up for during fluctuating flows over the next few months, said Clayton Palmer, who represents WAPA in the working group.

While the long-term effect of the experiment will not be known for at least a year, preliminary measurements suggest the flows have deposited sediment onto beaches and sandbars. But it remains to be seen whether enough sediment has been loaded into the river to offset the constant erosion that occurs during normal releases from the dam, said Scott Wright, a hydrologist with the Grand Canyon Monitoring and Research Center.

"What we've seen in the past is there's consistent erosion of sand in the canyon under normal power plant operations," he said. "The question is whether ... we can overcome the erosion that happens during regular plant operations."

Scientists are taking a trip down the river this week to examine the new sandbars, he said. "I think they will be there, but there's also a question of how long the sandbars will last." Monitoring will continue over the next year and a half.

A changed ecosystem

Even if the test flow proves to be a long-term success, the Grand Canyon ecosystem faces a myriad of other problems, scientists note. The water in the river is cooler than it was historically, because most of the water that flows downstream has languished in the deep, cool reservoir behind the dam before being released. And while dam managers have altered flows to help the ecosystem, the river no longer rages and whimpers the way it did historically (Land Letter, Dec. 11, 2003).

Those changes, along with the invasion of exotic fish, are largely responsible for the extinction of four species of native fish and for the endangered status of the four

remaining native fish species in the Grand Canyon, including the humpback chub (Land Letter, Oct. 30, 2003).

Today, the Colorado River, named for its historic reddish hue, is a very different river. "It's clear, it's cold, it's got a lot of trout, which compete with the native fish, and the flow regime is drastically different from what it used to be," Wright said.

And while the test flow may have helped carry sediment loaded into the river by its major tributaries, most of the sand that would flow downstream is trapped by the dam. Managers estimate that 92 percent of the sediment that would be carried downstream by an undammed river is settling behind Glen Canyon Dam -- a growing underwater sandbox that also limits water storage capacity.

Some environmental groups question whether such experiments will be enough to recover the ecosystem in the Grand Canyon.

"The proposed habitat-building experiment is unlikely to materialize any benefits due to general lack of sediment in the system," wrote John Weisheit of Living Rivers in a letter to dam managers. "Even if such sediment were available, it would not be distributed in a timeframe to benefit the humpback chub."

But Nikolai Ramsey, who represents Grand Canyon Trust in the working group, said he hopes the test flow will have a positive ecological effect. "This experiment is a watershed event," Ramsey said. "It's possible that many resources will benefit -- so much is tied to sediment."

What next?

If the test flow is effective, such flows would need to be replicated on a regular basis to help the ecosystem recover over the long-term, scientists say. But working group members disagree on whether the law allows for regular bypasses of the power plant. WAPA believes it does not; environmental groups insist that it does.

"The issue is, can you conduct those kind of flows on a regular basis and conform to the law?" Palmer asked. "The 1968 Colorado River Basin Act doesn't allow bypasses of the power plant, unless it's hydrologically necessary. ... That is going to be a problem. So we're not advocating at this point that [high flows] be conducted on a regular basis."

But if the test flow demonstrates that regular high flows are what the ecosystem needs, managers should adjust dam management accordingly, Ramsey argued. "If this experiment works, why shouldn't we do this every year?" he asked.

On the other hand, if the experiment fails, managers are left with another difficult dilemma.

"During the eight years of adaptive management, we tried various things, and the resources continued to decline," Ramsey said. "If this doesn't work, it's going to be highly suggestive that the Grand Canyon resources will not be able to be restored to

any kind of health with the dam still there. So if this experiment doesn't work, what do we have left?"

There is at least one option that has not yet been tried. Dam managers have suggested building a sediment slurry pipeline that would deliver sediment from behind the dam into the river on the other side. But some working group members contend that would be expensive and may not work. Scientists are currently doing a feasibility study on the pipeline proposal.

Another option might be to try the high test flow again when more sediment is coming into the Colorado River from its tributaries, Wright said.

"What's left are very difficult and expensive alternatives," Palmer said.

One solution the working group will not discuss, Ramsey said, is decommissioning the dam, an option that Living Rivers and a handful of other groups have been pushing for several years. The working group's approach has been to restore the Grand Canyon's resources to the greatest extent possible while maintaining the human benefits from the dam. But with little left to try, that unacknowledged "gorilla in the room" may become increasingly difficult to ignore, Ramsey said.

"The dam has generated significant benefits, but if its existence is tied to the Grand Canyon's demise, well it's just not worth it," he said. "If we learn that there's nothing we can do, I think we'll inevitably be on the side that we'll have to look at removing the dam. Those are strong words, but I think this experiment will have those kinds of implications for a lot of us."

LR in the News 12/19/04

Colorado Compact: Ageless or dried up?

12/19/2004 12:57:57 AM

Water storage revisited: As Western officials tout the system for weathering the drought, critics say increasing demand makes it untenable

By Joe Baird
The Salt Lake Tribune

LAS VEGAS - The refrains were uttered again and again during a yearly gathering of Western water officials here last week: The Colorado River Compact is working. The historical seven-state agreement, signed in 1922, will survive the current drought. The half-full reservoirs are a sign of success, not failure.

Whether their tone was defensive or simply reassuring, Colorado Compact supporters felt compelled to speak up for a system that is being tested as never before. The worst

drought in 100 years has placed unprecedented strains on water users in both the upper and lower parts of the Colorado River Basin. Planners are now on a crisis footing, and reduced allocations are in the offing. The real hunkering down may be yet to come.

Critics call the compact, and particularly a reservoir system anchored by Lake Powell and Lake Mead, an anachronism, a relic of wetter, headier times that has been overtaken by the West's rapid urban growth.

But without the compact, which allocates 15 million acre-feet of water annually among Utah, Wyoming, Colorado, New Mexico, Nevada, Arizona and Colorado - plus 1.5 million acre-feet for Mexico - advocates argue that the current situation could be a lot more dire than it is. "During this early 21st century drought, this system has continued to provide resources," Colorado Supreme Court Justice Gregory Hobbs told members of the Colorado River Water Users Association. "Even with severely ranging characteristics, in high-flow years and low-flow years, it has worked. And it has proven vital."

The current drought, now in its sixth year, "is our wake-up call in the Colorado River Basin," acknowledged Steven Griles, deputy secretary of the Interior. "But there are lots of signs that the [compact] states will meet the challenge."

Colorado River Compact detractors call such talk wishful thinking. The template has changed, they say. And water officials have been slow to adjust to what they call a new reality for the Colorado and its water storage assets.

David Haskell, policy director for the environmental group Living Rivers, believes the original compact was signed and allocations made under incorrect assumptions. Tree-ring science, he says, now shows that the 1900s was one of the wettest centuries on record, and that the 1980s - when Lake Powell was filled - was the wettest decade in that wet century. As a result, the compact states have been living large, artificially.

"Saying the compact is working is like sitting in a room full of food and never being hungry," Haskell said. "But now they're down to their last few hamburgers and everything is changing."

"What we've got now is a whole lot of demand and less supply," he added. "It worked up until now because it was an extremely wet century and the '80s was an extremely wet decade. Were it not for that decade, Lake Powell would never have been more than half-full. It would be empty now. What you've seen is a system that has been working under very beneficial circumstances."

Water officials beg to differ. The compact states have weathered the drought very well, they say. And regardless of history, a Lake Powell now 130 feet below capacity is still providing users with both power and water. The compact system predicted periods of drought and shortage. The system is working exactly as it was intended to.

If anything, compact state participants say they are getting better at their jobs, and they cite a number of recent developments as evidence:

* A landmark deal struck last week in which Arizona agreed to sell Nevada 1.25 million acre-feet of its share of Colorado River water for \$330 million over the next 15 years.

* California's commitment two years ago to live within its annual 4.4 million acre-feet allotment of Colorado water.

* An adaptive management plan for Glen Canyon that calls for the removal of non-native fish species, such as trout, while at the same time rehabilitating native species, such as the Humpback Chub.

* Last month's experimental test flow at Glen Canyon, designed to return sediment to the Grand Canyon, restoring beaches and creating backwater habitat for native fish species.

"In the last four years we've seen some remarkable practices," said undersecretary Griles.

But again, compact critics, such as Haskell, wonder which century Western water officials are living in.

"The question now is, how do we plan for the future now that we know what kind of water deliveries are likely?" he said, citing projections that show a future average annual allotment of 13.5 million acre-feet - or 3 million less than is allocated now, when one includes Mexico's annual share of Colorado water.

Living Rivers, like the Glen Canyon Institute and other environmental groups, is calling for the decommissioning of Glen Canyon, moving a portion of that water into the more efficient Lake Mead and using underground aquifers - as Arizona does now - to bank the rest. "We've got far more underground storage capacity than storage capacity in the Colorado River system," said Haskell. "Powell has outlived its utility and become a liability. You can't deny that Lake Powell hasn't delivered during the drought, but that's really the wrong question. It's not a sustainable system."

But that has been, and continues to be a catastrophic alternative to Western water officials, who consider Powell and Mead the linchpins of the entire Colorado River Basin. Pulling the plug on Powell would invite economic disaster, they say. "These dams were built to fluctuate," said Colorado justice Hobbs. "The reality is, without the Colorado River Compact, our water storage problems would be much worse than they are right now."

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Regional News 12/21/04

St. George Pipeline

Dixie likely to need a pipeline
Arid county could grow to 648,000 people by 2035

By Joe Bauman

Deseret Morning News
Washington County's population is skyrocketing, leading to projections that by 2050 — and perhaps as soon as 2035 — as many as 648,000 people will live in Utah's arid southwest.

When that happens, said Ron Thompson, director of the Washington County Water Conservation District, the county will have to supply about 210,000 acre-feet of water to serve those residents. At present, developed water supply is only 72,000 acre-feet, he said Monday during a meeting of the governor's Water Delivery Financing Task Force.

Gov. Olene Walker organized the group to devise recommendations about two big water projects, the Bear River Project and a pipeline from Lake Powell to supply Washington County, mostly St. George. (A spur pipeline to Cedar City is possible, too.)

Projections about the number of people who would be served by the Bear River Project are still being formulated and should be released soon. But amazing predictions already are on the record for booming Washington County.

"Our county has gone from just under 90,000 in 1990 to today, just under 116,000 people," Thompson said.

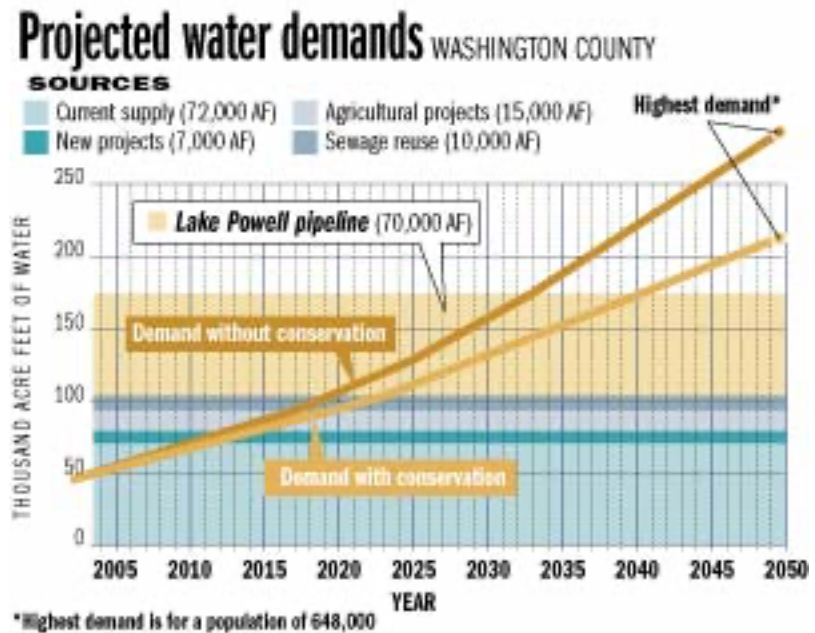
One steadily rising curve, the one that Thompson believes is more realistic, shows the 648,000 level by 2035; another, based on state projections, shows that many people by 2050.

Complicating the picture is that the 210,000 acre-feet projection is based on Washington County's managing to conserve an enormous amount of water. Without that conservation, according to Thompson, the need would be another 80,000 acre-feet.

Either way, the huge water demand can't be met without the pipeline, according to a chart Thompson released. It shows the lion's share of new potential water, 70,000 acre-feet, will come from a Lake Powell pipeline.

The 120-mile pipeline and its Fort Pearce Reservoir would cost \$370 million in today's dollars. Assuming they would be built in 2018, and adjusting for expected inflation, Thompson said the cost at that time would be \$593 million.

"The route for the pipeline essentially follows the state highway system," he said.



The problem with that is the highway not only goes through two counties, it also dips into Arizona and back to Utah.

Along the way, U.S. 89 climbs through rugged terrain called the Cock's Comb, south of Paria, Kane County. The site is 3,000 feet higher than St. George, necessitating a pumping station for the pipeline. From the Cock's Comb, the water flows downhill. Thompson expects the revenue from hydroelectric power would pay for the pipeline's operations and maintenance.

However, that doesn't cover the construction costs. Even if water users repaid most or all of the construction cost, state funding may be needed if the project is to be built.

With two states, a pair of counties and a huge initial expense, a regional project involving the state of Utah may be the way to build the project, according to Thompson.

"This cannot be accomplished without a strong state-local partnership," he added.

Larry Anderson, director of the Utah Division of Water Resources, said 1,370,000 acre-feet of Upper Colorado River Basin water belongs to Utah. About 1 million acre-feet is used today. Some of the remaining amount — perhaps as much as 200,000 acre-feet — is water Indian tribes are entitled to.

That leaves 74,000 acre-feet in the Colorado River system. In order to take water out of Lake Powell for a St. George pipeline, the state may have to pay the federal government for storing the water in that reservoir.

State treasurer Ed Alter wondered if an incremental approach, such as acquiring rights of way and reservoir sites, might be the best approach for large water projects.

"The way to make these feasible is not to put them off for 15 years but to start eating the elephant in small bites," he said. "I'd like to see the state plan to get involved and accumulate resources."

Otherwise, he warned, prices could "escalate on us" until the cost becomes almost insurmountable.

"Environmental work needs to get started now," said Thompson.

Rep. Ron Bigelow, R-West Valley, noted the Legislature faces many other funding demands.

"Every time we do the budget, the question is where do we spend the funds," he said in an interview after the meeting. "There are always many needs."

Transportation needs are high on the state's considerations and there are the normal funding requirements. "And now you throw in water" projects, he said. "The task of the Legislature is to identify priorities and determine which of the priorities gets funding."

Bigelow said he has questions about whether big water projects can be funded within the next couple of years.

Merritt Frey, executive director of the Utah Rivers Council, who attended the meeting as an observer, said conservation should be stressed in Washington County.

"St. George has an incredibly high per-capita water use, compared with the rest of the state, which is already pretty high," she said. "So we would say conserving should be the first order of business down in St. George."

Frey said southwestern Utah could do much more to save water.

E-mail: bau@desnews.com

LR in the News 12/24/04

Canyon river runner numbers may increase

Ananda Shorey
Associated Press
Dec. 24, 2004 12:00 AM

More river runners may soon be challenging the rapids of the Colorado River through the depths of the Grand Canyon, under a proposal by the National Park Service.

The agency wants to increase the total yearly passengers by 3,856 - from 22,461 to 26,317 - as part of a revised Colorado River management plan.

A panel of scientists, geologists, professors and consultants is considering increasing the passenger totals, while reducing the number and length of trips, as well as group sizes for some areas.

Some launches also may be shifted into non-peak seasons. The number of months that non-motor boats use the river could increase from three to six months.

"People will still have plenty of opportunities to go down the river, but there will be some changes in the way the system operates," said Rick Ernenwein, who is heading up the plan.

The public has until Jan. 7 to comment on 13 alternative plans for the 277 miles of Colorado River from Lees Ferry, south of Lake Powell, through the Grand Canyon to the edge of Lake Mead. A group of experts will then analyze the comments before submitting a final environmental impact statement.

A final environmental statement could be completed by spring, Ernenwein said.

Once the regional director of the Park Service approves a plan, some parts could be implemented immediately, Ernenwein said. Others could take a year or longer.

Eight alternatives are being considered for the river from Lees Ferry to Diamond Creek, through the heart of Grand Canyon National Park. This is the section where the majority of river trips are conducted.

On another section of the river stretching from Diamond Creek to Lake Mead, the Park Service wants to lower pontoon boat use and cap the number of passengers at 150 daily.

The park wants to increase the overall operations in this area while reducing the group sizes. It would also like to eliminate peak use by spreading trips out. Five alternatives are being studied.

Experts began discussing in January 2003 on whether to alter the number of recreational and commercial river runners allowed to use the Grand Canyon.

A panel of experts then came up with suggestions about how to better manage the corridor.

The main purpose of the 10-year plan is to protect the natural and cultural resources while allowing as many people as possible to enjoy the area, Ernenwein said.

"If we don't protect the resources in the river corridor, it will change the type of experience people have," Ernenwein said.

Some environmentalists are critical of the Park Service's plan. David Haskell, policy director for Living Rivers, a group that promotes river restoration, said it doesn't go far enough.

"We feel like the Park Service has fallen short, in particular in not addressing the group size of commercial groups," Haskell said.

Besides further decreasing the commercial group sizes, Haskell said the Park Service needs to phase out or stop allowing motorized boats on the river.

"It's a money issue rather than a resource-protection issue," Haskell said.

LR Letter 02/01/05

Grand Canyon CRMP DEIS comments

February 1, 2005
Mr. Joseph Alston, Superintendent
Grand Canyon National Park
P.O. Box 129
Grand Canyon, AZ 86023

Re: Draft Environmental Impact Statement for the Colorado River Management Plan at Grand Canyon National Park

Dear Mr. Alston,

Living Rivers and Colorado Riverkeeper submit the following as comments on Grand Canyon National Park's Draft Environmental Impact Statement (DEIS) for the Colorado River Management Plan.

On August 1, 2002, Living Rivers provided scoping comments for the DEIS process (see attached), which specified that it was paramount that the National Park Service (Park Service) not limit the DEIS scope to merely addressing human activity in the river corridor of Grand Canyon National Park (Grand Canyon). The ecological and cultural integrity of the river corridor is in serious decline, and its must not be ignored by any management plan pertaining to the river. Such an omission violates the spirit of, if not the letter of, the Organic Act, Endangered Species Act, National Historic Preservation Act and Grand Canyon Protection Act.

These earlier comments also stressed that the stewardship goals of the Park Service for this EIS include necessary criteria to restore critical river corridor habitat of the threatened and endangered species within the Park's jurisdiction, and that this responsibility be tiered with the stakeholders of the Adaptive Management Program, especially the Fish and Wildlife Service, the Bureau of Reclamation, and First Nations.

The DEIS, however, has ignored this responsibility. It considers the fate of the Grand Canyon's broad ecosystem problems to be subservient to the Park Service's views on the needs and expectations of human visitation within the river corridor. This approach wholly ignores resource protection, the Park Service's prime directive.

As a result, the deteriorating river ecology in Grand Canyon will be exacerbated should Preferred Alternative H (Alternative H), as presented in the DEIS, be implemented. This alternative should be abandoned, and the Park Service should refocus the plan on developing a management plan that will first satisfy the urgent needs of the ecosystem, then address how visitors should interact with it.

To achieve this, the Park Service should implement the following:

1. Properly Define the Problem

This public process has been a valuable opportunity for the Park Service to build support for the prudent management of the resource. Indeed, most participants have indicated a strong preference for a healthy Grand Canyon ecosystem. What is controversial is the role humans will play in the management of Grand Canyon, and this must not be limited to visitation but other impacts as well, especially Glen Canyon Dam. Alternative H is a marginal job addressing the former, and pays little attention to other impacts.

Alternative H attempts merely to placate the wishes of non-commercial and commercial boaters, while doing nothing to benefit the resource. Indeed, Alternative H is little more than a political compromise arising from the historical controversy regarding human access to the river, with no regard for the health of the river itself.

Alternative H will not unite human interests behind the critical management goal of placing the resource first. What is good for the river is good for its visitors, but not vice-versa. The Grand Canyon cannot adjust to the demands of people, but people can and must adjust to the demands of the Grand Canyon. This is especially true now as the Grand Canyon's native river ecosystem is nearing a state of total collapse, and it's the job of the Park Service to reverse this. It is the resource that the public comes to visit. It should not be devoid of the ecology, which belongs there, because the Park Service is too focused on whom, how and for how long humans can play on the river. The Park Service has the legal, scientific, and public responsibility to redirect its approach to correct this.

2. Wilderness Management as a Preferred Alternative

Considering that the Wilderness Act contains provisions to improve the ecological integrity of wilderness areas such as Grand Canyon, Alternative B provides a more logical choice from which to develop the management plan. But this too, will require some enhancement.

For example, beaches and sandbars have diminished significantly because of Glen Canyon Dam operations. These sand deposits are essential for the recovery of endangered native fish, for preserving Traditional Cultural Properties (in-situ), and for human recreation. Guidelines must be established regarding the level of impact these critical habitat components can sustain. Alternative H wholly ignores this and advocates increasing use contrary to published reports from the Grand Canyon Monitoring and Research Center (GCMRC), and others, that conclude the habitat is degraded. If the resource cannot be sustained under the present use, how can this use be increased?

When looking at the sandbar situation alone, visitor numbers must be reduced. Moreover, as the beach habitat continues to decline, so should the number of visitors present in the river corridor. Visitor numbers must be determined by the amount of available sand in the system as determined by GCMRC monitoring information.

Conversely, the Grand Canyon beaches can only sustain more use if more sediment is supplied. The experimental flows of 1996 failed to provide any lasting sediment augmentation, and there is yet no evidence to suggest that further experimental flows will improve the situation. The Park Service has done little to assert its role as guardian of this critical habitat component. At minimum, the management plan should be arguing ways to improve the sediment/beach situation. The management plan should argue for seasonally adjusted steady flows while opposing load following generator operations, which have proven to be more detrimental to maintaining a minimal sand balance.

Given the extensive new information since new Glen Canyon Dam operational guidelines were first established, mainly the continued decline of endangered fish populations and the conservation of sediment, this management plan should establish as a priority an aggressive advocacy position for the river corridor within its capacity as a member of the Glen Canyon Dam Adaptive Management Program. The CRMP should demand that the river corridor receive the necessary sediment, and other habitat modifications, to allow for the recovery of endangered fish as directed by science.

Recognizing the inherent constraints built into the Glen Canyon Dam Adaptive Management Program, the CRMP should also require the Park Service to engage the Secretary directly if recovery efforts continue to fail. Specifically, the Park Service should advocate for a supplemental EIS on the operations of Glen Canyon Dam, to explore the full range of alternatives available to achieve endangered fish recovery in the Grand Canyon, including decommissioning the dam.

Another means of increasing camping sites within the river corridor is to more aggressively pursue the eradication of exotic vegetation, which has encroached on camping areas. The management plan should explore programs to engage river runners in such activities. Special permits should be available for river runners who want to participate in such restoration efforts. With proper training, supervision and tools, the exotic plant problems could be managed in a matter of years, at a limited cost. When completed, the camping carrying capacity could be adjusted upward accordingly.

3. Concerns for Threatened and Endangered Native Fish

a. The Refuge at the Little Colorado River

Since Glen Canyon Dam became operational the sole remaining rearing habitat for endangered Humpback Chub has been the Little Colorado River (LCR). In addition to the Park Service's recommendation to change human use regulations as described in the DEIS, swimming in the LCR should be eliminated until which time the recovery goals for the endangered fish of the Colorado River has been achieved. The only exceptions to this rule should be provided to the reasonable needs of the First Nations and the fishery biologists.

Living Rivers does not concur with the Park Service view that motorized trips have less impact on Humpback Chub than oar trips. A motorized boat should never approach the Little Colorado River for any purpose, including scientific research. Moving parts and

accidents from petroleum products must be avoided at all costs, especially until such time as it is demonstrated that the Humpback Chub is in full recovery.

Additionally, a component of this management plan should include an action item to mitigate toxic spills that might occur in the drainage of the Little Colorado River in and above the Grand Canyon.

b. Consultation by US Fish and Wildlife Service

The consideration of endangered and threatened native fish in the Colorado River at Grand Canyon within the DEIS is not adequate and requires consultation with the US Fish and Wildlife Service.

4. Climate Change and Global Warming

The Park Service must evaluate the impacts, and the Colorado River corridor management actions to be taken, should reduced water releases from Glen Canyon Dam occur as a result of drought and climate change.

The Department of Energy and others have advised water managers to expect the volume of water produced by the Colorado's watershed to be reduced significantly and progressively due to climate change. Their reports state that the Colorado River reservoir levels will be reduced by more than one-third and water releases by as much as 17 percent, which will result in reductions in hydropower generation by as much as 40 percent. Scientists have also warned that the Upper Basin may not meet its obligation to deliver its full requirement of water to the Lower Basin before 2010. Such changes in Grand Canyon will reduce fine sediment storage, concentrate rocks and boulders at rapids, degrade water quality and compromise fish recovery plans. They may also impact the types and number of boats that run the river, and the number of days it may take them to complete the trip.

5. Recreational Access to the River Corridor

The DEIS fails to solve the disparity of the access issue between commercial and non-commercial river runners. The DEIS largely favors access for concession contractors in the summer and non-commercial river runners in the winter. This suggests segregation and discrimination. Access should be equitable for all users and at all times. A common pool system, such as has been implemented at the Boundary Waters and the Deschutes River, is the access model that should be pursued by the Park Service in Grand Canyon.

Conclusion

Living Rivers recognizes the effort the Park Service has made in developing this DEIS. But it's clear that despite all the hard work, the Park Service has ignored its stewardship mandate as prescribed in the 1916 Organic Act. Without the natural ecological integrity of the river, which carved it, Grand Canyon itself loses its integrity, as does the Park Service and the stakeholders in this process. The principle objective of the Final EIS must be the restoration and recovery of the natural processes and native species to

Grand Canyon's river corridor that are impacted by the activities of humans, and with a management plan that articulates how this can best be achieved.

Thank you again for the opportunity to submit these comments on the DEIS.

Sincerely yours,

John Weisheit
Living Rivers, conservation director
Colorado Riverkeeper

Attachments:

[Scoping comments by Living Rivers, August 1, 2002.](#)

Regional News 02/11/05

Parched Colorado River Basin struggles to write drought plans

GREENWIRE Friday, February 11, 2005

WATER RESOURCES

April Reese,
Greenwire Southwest reporter

SANTA FE, N.M. -- For the first time since the Bureau of Reclamation began building the elaborate plumbing system to deliver water to Colorado River Basin states in the 1930s, the West is bracing for severe and potentially long-lasting water shortages.

Five years of drought and explosive growth in the basin's booming cities have drawn down reservoirs to half capacity or less as the seven states scramble for strategies to cope with what some meteorologists predict could be a 20-year dry spell.

The states are facing a federal ultimatum: Write a drought plan by April 1 or have one imposed by Interior Department bureaucrats.

"Although we do not know how long or severe the drought will be, we must face our collective responsibility to plan for the likelihood that water supplies may be limited in the lower basin over an extended period of time," Interior Deputy Secretary Steven Griles warned the Colorado River Water Users Association in December.

Droughts are notoriously hard to predict. So while some basin states -- Arizona, New Mexico and Utah -- have been periodically soaked since last fall, it's too early to say if the increased precipitation is an anomaly or the end of a dry spell that's now in its sixth year. Scientists say the conditions now are similar to those that plagued the West in the 1950s, the region's last major drought.

"One good year doesn't solve the drought," said Dennis Underwood, vice president of the Metropolitan Water District of Southern California. "It would take a number of years of good years like this to recover."

Even if the heavens open and the basin recovers quickly, the experience of the past few years underscores the need for a drought strategy, water managers say.

Booming population stresses Colorado River

Called the "River of the West," the Colorado supplies water to 25 million people and 3.5 million acres of farmland. Under the Colorado River Compact, the landmark agreement for managing the river signed by the states' delegates in 1922, water is divided between the upper basin states -- Colorado, New Mexico, Utah and Wyoming -- and the lower basin's Arizona, California, and Nevada.

Each basin receives 7.5 million acre-feet a year under the compact, and Mexico receives 1.5 million acre-feet under a separate agreement. An acre-foot is the volume of water covering an acre to a depth of a foot, translating into 325,851 gallons -- a year's worth of water for two households of four.

Until now, the river and region's two biggest reservoirs, Lake Powell and Lake Mead, have yielded enough water to ensure that all the states received their allotted shares.

But population growth in the basin has worn thin the safety net provided by the water management system. The river's water is already over-allocated, and the Bureau of Reclamation reports that Lake Powell was just 35 percent full and Lake Mead 58 percent at the start of February.

As water supplies have declined, population has grown. Between 1980 and 2000, the West's population increased 47 percent. There were 1 million people living in Arizona in the 1950s, for example; today, the state is home to almost 5 million.

So rain or shine, the states must keep working hard on their water-shortage plans. During a speech in Denver last week, Interior Secretary Gale Norton tried to keep the pressure on the states. "I trust that the basin states will continue to work with us on drought mitigation strategies," she said. "Time is of the essence."

The basin's water managers say the basin will eventually draft a water shortage plan that everyone can agree on, but probably not in time to meet Interior's deadline. "There's not going to be shortage criteria in April," said Larry Dozier, deputy general manager of the Central Arizona Project, which delivers water to the Phoenix and Tucson and regional farmers. "That's a given."

The states have agreed to come up with recommendations for a shortage strategy by mid-April, to be followed by a plan in the ensuing months, according to Dozier and other state officials who participated in a conference call with Interior last Friday. The plan will be folded into an environmental impact statement and vetted through a public process dictated by the National Environmental Policy Act. The EIS would probably take about two years, they said.

Strategies start taking shape

Two strategies being mulled by the states appear particularly promising, Anderson and other water officials say. One calls for building a small reservoir in the lower basin to capture "over-delivered" water that would otherwise run downstream after storms, and starting the Yuma desalting plant in southwestern Arizona. Building the new reservoir and cranking up the desalting plant would save about 200,000 acre-feet of water a year.

Getting the Yuma plant running would, in effect, provide a new water source for Mexico, freeing more water from the Colorado River that could be diverted upstream for the states (Land Letter, Aug. 21, 2003).

Even though it would be expensive to bring the Yuma plant on line -- the bureau has put the price tag at \$25 million -- avoiding economic damage from water shortages could make the project worth it, said Dennis Underwood, vice president of the Metropolitan Water District of Southern California.

"It's like your car or your house," said Underwood, who was a former BuRec commissioner when the agency discovered the plant's design flaws. "If you keep deferring the maintenance, eventually you pay the price."

The basin states are also considering changing the operations of the river's two biggest reservoirs to balance declining water levels. When Lake Powell's levels rise, for example, it could release water so Lake Mead recovers more quickly, water managers say.

Several states have taken their own steps to deal with the drought as well, including paying farmers to temporarily fallow their lands and "banking" water in underground storage or in neighboring states for future use.

If Norton were to order water cutbacks in the basin -- something no Interior secretary has ever done -- the Central Arizona Project would be the first area hit because it is considered a junior partner under terms of the river compact.

Central Arizona officials say the hierarchy is unfair. They urge that all the states share the pain of a shortage equally, but they recognize their chances are slim. "We'd love to get that changed, but the political stars have to be aligned just right," Dozier said.

So far, the drought's pain has been greatest in the upper basin. Under the compact, the upper basin states must deliver 8.23 million acre-feet to the lower basin states and Mexico. The upper basin has met that obligation, but at a price. Farm production is down 40 percent in many areas, the Upper Colorado River Commission says. Meanwhile, the lower basin continues to receive its full share of Colorado River water, lessening the impact of the drought there (Land Letter, Oct. 7, 2004).

Just as drought and population growth test the limits of the Colorado River delivery system, the rules of the compact appear to be at odds with the basin's hydrology, providing a perverse incentive for the states to use as much of their legal share of water as they can. By storing water for Nevada, Arizona will take more of its Colorado River apportionment -- a strategy it hopes will buffer it against any future claims on unused water, most likely by California (Land Letter, Dec. 9, 2004).

And Colorado, concerned that the drought could force cutbacks in the upper basin, is exploring ways to tap its unused Colorado River water. It has said it will take the necessary steps to defend its water rights in case an interstate shortage strategy fails.

Despite their different agendas, the basin states share a common desire to come up with a fair solution to deal with potential shortages and stay out of court, water officials said.

"People are always predicting these big fights in the basin. ... But we've mostly been able to stay away from that, and I think that is the goal of every state -- not to go to court," said Larry Anderson, director of the Utah Division of Water Resources. "We certainly want to determine what our own destiny is, and not leave it up to the hands of judges."

LR Letter 02/18/05

Moab Mill tailings pile: Comments DOE's DEIS

February 18, 2005
Mr. Don Metzler
Moab Federal Project Director
U.S. Department of Energy
2597 B 3/4 Road
Grand Junction, CO 81503

Re: Remediation of the Moab Uranium Mill Tailings, Grand and San Juan Counties, Utah, Draft Environmental Impact Statement (DOE/EIS-0355D).

Dear Mr. Metzler,

Living Rivers, Colorado Riverkeeper, Colorado Plateau River Guides, River Runners for Wilderness and Colorado Outward Bound West submit the following comments concerned with the Draft Environmental Impact Statement (DEIS) for the Moab Uranium Mill Tailings. Collectively our mission statements promote protection of the natural and cultural heritage of rivers. We would like to thank the Department of Energy (DOE) for their efforts to prepare this DEIS for public review and appreciate this opportunity to participate.

1. Summary

It is our position that the Moab Mill's tailings pile be moved by the existing railroad to an off-site disposal area in the Mancos shale deposits north of Moab. We agree with the Environmental Protection Agency that the Off-Site Disposal Alternative at Crescent Junction is superior to the disposal alternative at Klondike Flats. The site at Crescent Junction is more isolated from human activity, has a thicker deposit of shale and is more protected from the agents of erosion.

It is also our position that the ground water pollution from the Moab Mill site should be remediated to successfully remove all jeopardy to the threatened and endangered species of the Colorado River downstream, including the wetlands of the Moab Sloughs. We are convinced that this can not be accomplished by leaving the pile capped on-site and adjacent to the Colorado River.

Our position also includes moving the pile off-site to eliminate future risks to human health for residents of developed areas along the Colorado River downstream, and to the visitors of federally protected public lands downstream. These public lands include the national parks at Canyonlands and Grand Canyon, the national recreation areas at Glen Canyon and Lake Mead, and the wildlife refuges of the Lower Colorado River Complex. This also includes the water users identified by the Colorado River Compact, specifically Arizona, Nevada, California and the Republic of Mexico.

It is also our position that the White Mesa Mill Alternative in San Juan County should be abandoned for the reasons stated by the Ute Nation from the White Mesa Reservation, as presented to the DOE at the public meeting held there on January 27, 2005. This alternative will affect the Ute Nation's quality of life and their values concerning the protection of their cultural heritage and their sacred sites.

The DOE must also acknowledge the official position of the City Council of Moab and Grand County Council, which have identified the Off-Site Disposal Alternatives at either Klondike or Crescent Junction as superior. This alternative will meet the objectives and goals of the local citizens in order to remove them from environmental and social harm.

The members of our organizations that live in Grand County strongly object to moving the toxic contents of the Moab Mill site to any other county in Utah. This is a Grand County problem and the impacts from these toxic materials should not be passed on to our neighbors in San Juan County.

2. The DOE is unsuccessful in removing doubt concerning the compromise of the On-Site Disposal Alternative during a probable maximum flood

We are convinced that the tailings pile at the Moab Mill must be moved away from the Colorado River because the suggested reasons identified with the On-Site Disposal Alternative in the DEIS are, at best, speculative.

a. The Moab Mill site was originally chosen for reasons of convenience and not for reasons of providing long-term environmental protection from the consequences of historic flooding along the Colorado River.

b. The federal government has already moved uranium waste piles away from the floodplains of the Colorado River and its tributaries and it is reasonable to expect the federal government to remain consistent with this precedent.

c. Independent scientists have demonstrated that it is reasonable to suggest that Colorado River flooding may compromise the Moab Mill's tailings pile during a probable maximum flood in the next 200 to 1000 years. That ground water remediation may not be geologically feasible with the pile capped in place. These scientists are associated

with the National Academy of Sciences, U.S. Geological Survey and academics from the state universities at Salt Lake City and Tucson.

d. The Bureau of Reclamation manages high dams, both concrete and earthen, on the Gunnison and Dolores rivers. These dams will likely be decommissioned in the next 200 to 1000 years. At some point in this time-period these dams will no longer provide flood control for the downstream environment. It is also possible that, as these dams age and fill with sediment, the spillway mechanisms will experience flood flows greater than the original design specifications, which could result in a possible catastrophic breach that could subsequently compromise a tailings pile capped in place at Moab Valley.

e. The threat of flooding that could compromise the On-Site Disposal Alternative is significant when considering the intent behind the legislation for protection of downstream resources. This legislation includes the National Park Service Organic Act, the National Historic Preservation Act, the Clean Water Act, the Rivers and Harbors Act and the Endangered Species Act. This would also include Executive Orders such as #11990 (wetlands protection) and #13007 (sacred sites).

3. The DOE must ensure consultation with the work performed by the University of Utah at Salt Lake City and the University of Arizona at Tucson

We request that all findings from Mr. Phil Gardner and Mr. Kip Solomon, at the University of Utah at Salt Lake City, be included as a part of the public record for the Final Environmental Impact Statement (FEIS). These studies indicate that ground water remediation at the Moab Mill site would best be served by moving the pile from the river.

We also request that all findings, pending the completion of work now being performed by Mr. John Dohrenwend and Mr. Victor Baker from the University of Arizona at Tucson, be considered as part of the public record for consideration by the FEIS. These studies will concern the effects of a probable maximum flood at the Moab Mill site and would serve as a valuable exercise in the peer-review process of DOE's contractor-based science and engineering reports that are deemed speculative.

We would also request that the work already completed by Mr. Dohrenwend be submitted as part of the public record for the FEIS. Mr. Dohrenwend's reports were recently published in the Times-Independent, the weekly paper of Grand County. By using existing photographic evidence from over-flight and satellite imagery, Mr. Dohrenwend has demonstrated that the findings of the DOE contractors concerning river migration are speculative and that a reasonable doubt does exist to conclude that the Moab Mill site could be compromised by a probable maximum flood.

4. The DOE must ensure consultation with applicable federal agencies

The DEIS is not thorough because consultation with the Bureau of Reclamation (Bureau) was not sought in an official capacity. This is an oversight on the part of the DOE that must be corrected. The Bureau is the federal regulatory agency that has jurisdiction over water quality for the Colorado River. The Bureau is also a partner in the Upper Colorado River Endangered Fish Recovery Program and the Lower Colorado

River Multi-Species Conservation Program. The Bureau has already produced publications analyzing and modeling a probable maximum flood in the Colorado River drainage and their expertise in this regard should be fully considered.

Some of the dams that the Bureau has designed have had engineering components that have become problematic. Some Bureau dams have failed entirely, such as Teton Dam. The Colorado River basin dams that have had design problems include Fontenelle, Flaming Gorge, Navajo, Glen Canyon and Hoover. The problems include seepage erosion at the earthen dams and river outlet and spillway failures at the concrete dams.

Living Rivers brought this oversight to the attention of the Bureau of Reclamation at Salt Lake City on January 27, 2005. We formally ask DOE that consultation with the Bureau is initiated and that their comments be included in the FEIS.

We also remind DOE that a full consultation with the U.S. Fish and Wildlife Service (USFWS) concerning the Endangered Species Act is required for the FEIS. This would include the reasonable and prudent alternatives of USFWS's Biological Opinion.

We also request consultation with the U.S. Geological Survey in the FEIS concerning this agency's recent analysis and modeling of a probable maximum flood in the Moab Valley; Report 2005-5022 became publicly available on February 11, 2005.

We also request that the State Department should be allowed to weigh in on FEIS concerning U.S. treaty obligations with the Republic of Mexico, and because the Colorado River delta has been designated as an International Biosphere Reserve.

IV. Global warming and climate change

The DOE sponsored the Accelerated Climate Prediction Initiative (Initiative), which was administered by the Pacific Northwest National Laboratory. Much of the consequent analysis and modeling from this Initiative has been recently published and would be useful in the consideration of alternatives for the Moab Mill's tailings pile. We request the DOE consult with the principle scientists of the Initiative for the FEIS concerning the effects of climate change on the Colorado River. The report of the Initiative acknowledges that extreme variables of climate are likely to occur and due to the impacts of increasing greenhouse gases in the atmosphere. Examples of impacts from climate change would include reduced water quality as a result of diminished flows, increased sediment loads, channel narrowing of the river, and catastrophic flooding in local and regional watersheds.

V. Cost analysis

Human health, national parks, endangered species and cultural heritage are priceless things. We will support the DOE to save taxpayer money so that the savings could be applied to other worthwhile service projects to protect the general health and welfare of the American people. However, because it is reasonable to assume that the On-Site Disposal Alternative may fail and that subsequent clean-up costs would be astronomical, the On-Site Alternative should be abandoned for reasons that it would

potentially save taxpayer's money in the long-term. The Off-Site Disposal Alternative, though more expensive, provides greater economic and environmental security. The additional cost is therefore justified and potentially serves to be the most affordable alternative in the DEIS.

VI. The river community

People depend on the Colorado River for economic security and for the enrichment of their lives through visitation at Canyonlands National Park and Glen Canyon National Recreation Area. Living Rivers, Colorado Riverkeeper, Colorado Plateau River Guides, River Runners for Wilderness and Colorado Outward Bound West represent various parts of a constituency we call the river community. The intent of this community is to partake in the organizing and participation of river trips through Canyonlands National Park and Glen Canyon NRA. The reasons include recreation, employment, education in the sciences and arts, and the monitoring of the Colorado River's environmental quality and cultural heritage.

The professional river guides represent the day-to-day users of the Colorado River. Over 300 active professional river guides have hundreds of multiple-day river trips and thousands of one-day trips that have spanned a career, for some, as long as 40 years. Their clients (numbering in the thousands annually) include the general public, special populations, and educational and cultural institutions. Another large constituency of the Colorado River users that are represented by the thousands are the non-commercial river runners who come to enjoy the benefits of Canyonlands National Park for the same reasons as stated above, which includes employment through incidental support services.

The On-Site Disposal Alternative must be abandoned for the reasons that this river community would suffer economic and social hardships should the Moab Mill's tailings pile fail in a probable maximum flood with the eventual outcome of irradiating the river corridor of Canyonlands National Park and Glen Canyon NRA. This could also affect the river community of Grand Canyon National Park and Lake Mead NRA.

In conclusion the risk to the downstream ecosystems and the health of millions of people is much too high to justify keeping the Moab Mill site along the shores of the Colorado River. The principle objective of the Final EIS must be the safe removal of the pile from the Colorado River, to stop the groundwater contamination of the Colorado River and the Moab Sloughs, and to contain these toxic materials at an off-site location in a responsible and efficient manner.

Thank you again for this opportunity to provide comments. Please do not hesitate to contact us should you require assistance in regard to this letter.

Sincerely yours,

John Weisheit, Conservation Director
Living Rivers and Colorado Riverkeeper

On behalf of the following groups:

Colorado Plateau River Guides
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Moab, UT 84532

River Runners for Wilderness
PO Box 17301
Boulder, CO 80308

Colorado Outward Bound West
PO Box M
Moab, UT 84532

[Detailed comments of Sarah Fields](#)
[Nuclear Waste Chair, Glen Canyon Group Sierra Club](#) [95k PDF File]

Regional News 02/19/05

Communities still face drought, tree-ring researchers say

Tree rings in West indicate drought may not be abating
Scientists say wet periods are not historically uncommon in the midst of long dry spells

By Arthur H. Rotstein
The Associated Press

TUCSON, Ariz. - A vigorously wet winter has buoyed spirits in Arizona and other Southwest states parched by drought. But history recorded in tree rings suggests it's far too soon to even think the region is near an end to its long dry spell.

Researchers say tree rings have shown that wet periods aren't uncommon during droughts. So the wet weather that has greened up Arizona, made dry rivers run and even caused flooding isn't necessarily a sign of things to come.

Wet breaks in past big droughts usually have lasted only a year or two before a return to dry conditions, said David Meko, a principal researcher at the University of Arizona's Laboratory of Tree-Ring Research.

Scientists can see a historical record of past droughts by looking at the thickness of a tree's rings. Since trees grow more during wet periods, the rings will grow thicker at those times. Trees grow less in dry times so those rings will be thinner.

According to tree ring analysis, there have been numerous extended droughts throughout the West over the last 500 years. The current drought has been partly blamed for the proliferation of tree-killing insects and has contributed to enormous wildfires of recent years.

How long it takes to overcome a drought varies.

Building up depleted reservoirs, restoring soil moisture and allowing vegetation to recover, particularly trees whose crowns and roots have been damaged by prolonged lack of water, could take years, said Thomas Swetnam, director of the tree ring laboratory.

"This is a deep deficit, many years in the making," said Kelly Redmond, Nevada state climatologist with the Western Regional Climate Center in Reno. "You wouldn't want to see the kind of thing that would get you out of it in one year," because it would mean inundation and massive flooding, with its own consequences, he said.

Besides, Redmond said, only part of the West has really seen strong rain or snowfall: California, most of Utah and Nevada, Arizona, New Mexico and southern Colorado. Elsewhere, it's been lackluster at best, he said. Still, some people are just happy to see the wet weather that has been moving regularly through the area in recent months.

"The lakes are filling and it looks pretty promising," said Bob Prosser, who runs the Bar-T-Bar Ranch in northern Arizona. "I think it's late enough and wet enough that it'll certainly do some good." At a minimum, he said, he'll have a good forage crop for his cattle this spring.

Bob Ginn, a retired Air Force colonel and flight instructor in Tucson, said he sees the rainfall "as a definite plus."

"I like the rain as a change from normal Tucson, dry and windy, and I like what it does because we garden, and I'm somewhat of a nature photographer so I expect a lot of wildflowers," Ginn said.

Regional News 03/02/05

Moab tailings could wash into Colorado River

Moab tailings could wash into Colorado River
A matter of when, not if, U. professor says of uranium-mining waste

By Joe Bauman Deseret Morning News

If the Moab uranium tailings pile stays where it is, eventually a big flood will wash it into the Colorado River.

"Not could. It will happen. It's just a matter of when," says one of the authors of a report on the subject, D. Kip Solomon, a University of Utah professor of geology and geophysics.

Even if no giant flood hits in the near future, radioactive and chemical contamination apparently has leached from it and migrated under the river. On the other side of the Colorado are a nature preserve and the city of Moab.

About 11.9 million tons of uranium tailings and contaminated soil were left near the Colorado River, three miles northwest of Moab, when Atlas Minerals Corp. stopped production in 1984. According to the U.S. Department of Energy, the wastes cover 130 acres and were placed in an unlined impoundment.

Atlas "placed an interim cover over the tailings pile in 1995," the DOE adds. The department has been preparing an environmental impact statement about what to do with the tailings, which at the closest point reach to within about 1,000 feet of the river.

Gov. Jon Huntsman Jr. recently wrote to the DOE expressing his determination that the pile should be hauled away from the river as soon as possible.

"Recent flooding in the St. George and Santa Clara regions of Utah also demonstrated the swift and immense force of moving water in the desert," he wrote.

Huntsman's concerns are backed by studies, including one published in December 2003 by Solomon and Philip Gardner, a graduate student at the U.

DOE studies found ammonia and uranium in gravel below the Matheson Wetlands Preserve across the river, the researchers wrote.

"The magnitude of these concentrations and the location of the highest values suggest that groundwater from the mill tailings is flowing under the Colorado River and impacting groundwater" beneath the preserve, they added.

"We believe that there are fluids that have migrated underneath the river," Solomon said in a telephone interview.

Contrary to earlier expectations of the DOE, the river was not a barrier to the flow. A lot of contaminated fluids are discharging into the Colorado, he added. But some of it goes under the river to the Moab side.

Whether this occurs depends on the amount of water in the river and how much groundwater pumping is going on.

When the uranium mill was working, operators leached out material they needed by pouring fluids on the tailings. This caused material to leak out of the pile.

"They were pushing fluids beneath the river toward Moab," he said. Now that operations have ceased, whether the flow is still occurring "is a little uncertain."

The study uncovered "very, very permeable gravel deposits beneath the mill tailings, beneath the river and beneath the entire Matheson Wetlands Preserve," Solomon added.

Permeable gravel is important for two reasons, he said:

- The layer amounts to a hydrological "superhighway." It's a pathway along which groundwater can migrate under the river. If enough pumping takes place on the tailings side, water might flow toward it. If the reverse is true, water could flow from the tailings toward Moab.

In that case, some controls may be possible through pumping.

- The "very coarse gravels" show that the Colorado River has flooded in the past, bringing in gravel and boulders. "The river has migrated laterally over very large distances through geologic time," he said.

Above the gravel is about 15 feet of fine, silty material. The tailings are on top of the silt, approaching within 1,000 feet of the river in one place.

The tailings amount to "a house that's literally built on sands and silts," Solomon said. "They're not founded on any really competent material," meaning they could easily wash away.

At 24 and 30 feet below the surface, geologists uncovered organic material. A lab in Florida checked the age of the wood and peat through carbon dating.

Radiocarbon dates for samples from the two floods ranged between 1860 and 1980 for the most recent, and between 990 and 1090 AD for the earlier material. That is about when flood waters carried them in.

The samples were taken from a bore hole on the Moab side of the river. But the debris indicate the river's violence throughout the zone.

The report by Gardner and Solomon explains, "The radiocarbon ages of these two samples indicate that there have been two flood events in the last 1,000 years that have scoured down to 24 and 30 feet below present land surface, respectively, at a distance of more than 260 feet from the present river channel."

During January's flooding, the Santa Clara River in southwestern Utah rapidly ate away at its banks.

"The biggest meander was 700 feet," said Jan Sandberg, engineer for the city of St. George. "There was a lot of meandering in lots of areas." "In the city of Santa Clara, it took a huge bite, took out a bunch of prime real estate," said Dean Cox, emergency services director for Washington County.

An erosion of 700 feet would not quite bring the Colorado River onto the Moab tailings. But the Santa Clara destruction happened with just one flood, and that river is far smaller than the Colorado.

If a big enough flood were to race through the Colorado, said Dianne Nielson, executive director of the Utah Department of Environmental Quality, "We're going to have uranium mill tailings strewn along the banks and sandbars along that river for distances downstream."

That, Nielson added, is unacceptable.

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LR Press Release 03/03/05

Another Step towards Extinction for Grand Canyon Native Fish

March 3, 2005

For immediate release

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Another Step towards Extinction for Grand Canyon Native Fish

Recovery Experiments Fail Again

Phoenix, AZ. Leaders of the ten-year old federal program responsible for guiding recovery of endangered native fish in Grand Canyon National Park are undertaking their annual meeting today amidst a climate of mounting bad news.

A major experiment they undertook last November has likely contributed to further declines in fish counts, pushing the dwindling Humpback Chub population much closer to extinction.

Known as the Glen Canyon Dam Adaptive Management Working Group (AMWG), the team is charged by the Secretary of Interior to reverse the environmental decline of Grand Canyon's river ecosystem resulting from the operation of the 710-foot Glen Canyon Dam upstream.

New data being discussed at today's meeting reveal that a key recovery indicator, the number of juvenile fish, declined 63 percent following an experimental release from Glen Canyon Dam that began on November 21.

"It is very unfortunate for Grand Canyon's resources that the Adaptive Management Working Group is faced with an impossible task, as these declining ecosystem conditions simply can't be mitigated with the dam in place. Rather than report this fact to the Secretary of the Interior, they continue to tinker with expensive minor adjustments in dam operations that always have failed to achieve any meaningful long-term success," says David Haskell, policy director for Living Rivers. "They've spent nearly a decade tinkering with Glen Canyon Dam's operations while the ecology of Grand Canyon continues to collapse."

Adult fish populations have been estimated to be as low as 1,000 as compared to 8,517 in 1993, the year following passage of the Grand Canyon Protection Act. The 90-hour, 41,000 cubic-feet-second release was supposed to help restore beach and sandbar

habitat for the native fish. Ninety-five percent of the sediment and nutrients Grand Canyon would normally receive are now trapped behind the dam. The experiment was designed to work with inputs of sediment from the tributaries below Glen Canyon Dam in an effort to preserve and redistribute the five percent that is still available.

Analysis following the flows revealed that indeed improvements in sandbar habitat had occurred, but the high dam release, a winter storm, or both, caused the young Humpback Chubs to be flushed downstream into Lake Mead.

Additionally, as was documented following a similar experiment in 1996, these habitat improvements are only temporary as the sandbars are again deteriorating due to a lack of continued inputs from upstream.

"At best this can be described as a more successful failure," adds Haskell. "These experiments, will never succeed because they ignore fully restoring the natural processes the native fish require, which includes the pre-dam flow of sediment and nutrients."

Because of the ongoing decline of endangered native fish, Living Rivers and coalition of 200 groups across the country are calling for a new Environmental Impact Statement of Glen Canyon Dam that evaluates the merits of decommissioning the dam to achieve habitat recovery and restoration in Grand Canyon. ###

[GCMRC Synopses of Experimental Flow](#) [776k PDF File]

LR in the News 03/04/05

Data shows dam had negative effect on fish

By SALLY SPAULDING The Daily Sentinel

An experiment at Glen Canyon Dam designed to build beaches below the dam may have damaged endangered fish, according to preliminary data.

Initial results from the November experiment show evidence that young fish in the river system declined during the experimental high flows released from the dam for 60 hours in late November. That may mean a decline in young endangered fish such as the dwindling Humpback Chub.

"We caught two-thirds fewer fish when we sampled after the experiment," said Lew Coggins, a fish biologist with the Grand Canyon Monitoring and Research Center, the science division of the Glen Canyon Dam Adaptive Management Program that is charged with maintaining the Grand Canyon's river ecosystem.

"We anticipated, at least in the short term that (the experiment) would have somewhat of a negative effect on young fish in the system, and we saw some evidence of that," Coggins said.

Coggins said it was speculation, however, to say the number of juvenile fish in the system truly dropped by two-thirds, saying testing conditions changed because of flooding during sampling times.

The turbid water during sampling after the experiment made it difficult to say the data was conclusive.

Coggins said the experiment was not designed to benefit endangered fish but was focused on building new beaches.

That's what bothers environmental groups such as Living Rivers, a Moab-based group that advocates the decommissioning of Glen Canyon Dam.

"Beaches are short-term successes because it will continue to wash down to Lake Mead without more sand being allowed into the system," said David Haskell, policy advisor for Living Rivers. "Beaches only last a few months, and the fish are suffering."

Sally Spaulding can be reached via e-mail at sspaulding@gjds.com.

Utah dam failures

DAM	COUNTY	YEAR	CAUSE	TYPE FAILURE
Strates	Sanpete	2005	Seepage	Partial
Sand Cove	Washington	2001	Seepage	Complete
South Creek	Washington	1998	Erosion	Engineering*
Long Park	Daggett	1996	Seepage	Engineering*
Silver Lake	Utah	1994	Seepage	Engineering*
Graff	Iron	1993	Slip	Partial
Aspen	Iron	1993	Seepage	Engineering*
Baker	Washington	1993	Seepage	Engineering*
Alves	Weber	1993	Seepage	Complete
Kelly Creek	Weber	1993	Spillway	Partial
Indian Creek	Beaver	1993	Maintenance	Complete
Hins Beach	Washington	1992	Seepage	Engineering*
Bells Canyon	Salt Lake	1991	Seepage	Engineering*
Quail Creek Dike	Washington	1989	Seepage	Complete
Chicken Creek	Utah	1987	Spillway	Complete
Hins Beach	Washington	1986	Slump	Partial
Forsythe	Sevier	1986	Cracking	Partial
Hancock	Utah	1986	Spillway	Complete
Trial Lake Dike	Summit	1986	Seepage	Complete
Notch Lake Dike	Summit	1986	Seepage	Complete
Gordon	San Juan	1985	Slump	Partial
Blue Creek	Box Elder	1985	Spillway	Partial
Wilkinson	Morgan	1985	Slump	Partial
Corn Creek	Millard	1984	Spillway	Complete
Settlement Canyon	Tooele	1983	Outlet	Engineering*
Hobbs	Davis	1983	Slump	Partial
Wales	Sanpete	1983	Seepage	Partial
DMAD	Millard	1983	Spillway	Complete
Gunnison	Sanpete	1983	Seepage	Engineering*
Twin Lake	Sanpete	1983	Foundation	Engineering*
Brown Duck	Duchesne	1981	Outlet	Partial
Enterprise	Washington	1980	Seepage	Partial
Goshute	Utah	1978	Spillway	Complete
Little Creek	Rich	1975	Slump	Partial
Electric Lake	Carbon	1975	Seepage	Partial
Fool Creek No. 1	Millard	1974	Seepage	Complete
Upper Browns	Garfield	1973	Seepage	Partial
Box Lake	Utah	1973	Seepage	Complete
Kent's Lake	Beaver	1973	Seepage	Partial
Wilcox	San Juan	1973	Seepage	Complete
Newcastle	Iron	1973	Spillway	Engineering*
Roundy	Garfield	1973	Spillway	Complete
Duck Creek	Sanpete	1973	N/A	Partial
Center Creek No. 1	Wasatch	1973	Seepage	Complete
Bullock Draw	Utah	1971	Seepage	Complete
Ash Creek	Washington	1969	Seepage	Complete
Hancock	Utah	1965	Spillway	Complete
Little Deer Creek	Duchesne	1963	Slump	Complete
Percupline	Cache	1963	Spillway	Partial
Brush	Sanpete	1952	Spillway	Complete
Newton	Cache	1942	Seepage	Partial
Scotfield	Carbon	1942	Outlet	Engineering*
Willow Creek	Sanpete	1942	Slump	Complete
Rox	Sevier	1940	Outlet	Complete
Blanding No. 2	San Juan	1940	Foundation	Complete
Valley City	Grand	1940	Spillway	Complete
Navajo Lake	Kane	1940	Slump	Complete
Beaver Meadow	Summit	1939	Spillway	Complete
Five Point	Duchesne	1939	Spillway	Partial
Spectacle	Garfield	1938	Spillway	Complete
Forsythe	Sevier	1938	Seepage	Engineering*
Zaugg	Weber	1937	Seepage	Complete
Kent's Lake	Beaver	1937	Slump	Engineering*
Garrison	Millard	1936	Spillway	Engineering*
Smith & Morehouse	Summit	1935	Spillway	N/A
Lake	Wasatch	1935	Spillway	Complete
Tropic	Garfield	1935	Spillway	Complete
Beaver Dam	Beaver	1935	Seepage	Partial
North Creek	Garfield	1932	Spillway	Complete
Valley City	Grand	1929	Spillway	Complete
Lewis Larsen	Sanpete	1929	Foundation	N/A
Little Creek	Rich	1929	Erosion	Engineering*
Scotfield	Carbon	1928	Outlet	Partial
Twin Pits	Duchesne	1927	Foundation	Complete
Valley City	Grand	1926	Spillway	Complete
Adams	Davis	1924	Outlet	Engineering*
Hobbs	Davis	1924	Slump	Partial
Holmes	Davis	1924	Slump	Partial
Rocky Ford	Beaver	1922	Seepage	Engineering*
Forsythe	Sevier	1921	Spillway	Partial
Santa Clara	Washington	1919	Seepage	N/A
Chatfield	Box Elder	1919	Seepage	Engineering*
Grass Valley	Washington	1917	Seepage	Engineering*
Mammoth	Carbon	1917	Spillway	Complete
Lewis Larsen	Sanpete	1917	Foundation	N/A
Duxford	Sevier	1916	Spillway	N/A
Hatchtown	Garfield	1914	Seepage	Complete
Hatchtown	Garfield	1910	Spillway	Complete
Delta-Millville	Millard	1910	Foundation	Complete

*Engineering failure means emergency actions prevented loss of reservoir

SOURCE: Utah state dam safety records

LR in the News 03/05/05

Efforts to Hide Sensitive Data Pit 9/11 Concerns Against Safety

New York Times

By CHRISTOPHER DREW

They are just pieces of cardboard, and they cover less than a square foot on the side of railroad tank car. But behind them lies a post-9/11 competition between public safety and national security.

For decades, emergency-response teams approaching train wrecks have peered at the signs through binoculars to see what dangerous chemicals might be leaking. But federal officials will soon decide on a proposal to remove the placards from all tank cars. Their fear is that terrorists could use them to lock in on targets for highly toxic attacks.

The idea has sparked an outcry from firefighters and rail workers, who say removing the signs could endanger their lives. They say federal officials seem more focused on guarding against a terrorist attack than on the daily threat of accidents.

"There's this feeling that you have to secure everything possible in every way possible for every possible kind of terrorist attack," Garry L. Briece, executive director of the International Association of Fire Chiefs, said.

The dispute illustrates a growing push to mask sensitive data about the nation's industrial base from the prying eyes of potential terrorists. In the tug of war over tank cars and other industrial information, critics question whether the move toward secrecy is overwhelming safety concerns and even chilling debates over how to eliminate the vulnerabilities.

People who live near chemical and nuclear plants, dams and oil and gas pipelines complain that it has become harder to find out about disaster plans and environmental hazards, and some have sued for more information. Engineering reports have been stripped from government Web sites, and several agencies are creating new controls on sensitive information that go far beyond the wide-ranging classification system built in the cold war.

Federal officials say although they are trying to strike a reasonable balance, some clashes are inevitable, and more are likely to occur. If delicate information leaks out, "it gives our adversaries too much of a picture of what our vulnerabilities are," Jack L. Johnson Jr., chief security officer at the Department of Homeland Security, said.

Internal government e-mail messages show that months before the train bombings last March in Madrid, transportation officials stopped the Defense Intelligence Agency from releasing a report on rail vulnerabilities in the United States.

The messages, which were obtained by The New York Times from a former federal official, show that the report was intended to spark debate among officials on improving rail security. But after complaints from the industry, one senior transportation official helped block the report by arguing that if it became public "I could foresee this paper being a handout in the next session of Al Qaeda's rail-attack course."

A similar secrecy question is unfolding in Washington. On Tuesday, the District of Columbia Council extended a ban on shipping hazardous cargo through Washington.

Even as it opposed the ban, the CSX railroad company quietly re-routed some cargo away from Capitol Hill last spring. But citing security, railroad and security officials refused for months to tell the Council about the rerouting. It turns out that the railroad simply shifted the cargoes to tracks in other neighborhoods. Federal and railroad officials said the other tracks seemed less likely to be targets.

A Council member, Kathy Patterson, said, "There was just a total alliance between the homeland security and railroad officials that was very disheartening."

Another hot area of debate over secrecy is the atomic energy industry. The Nuclear Regulatory Commission has stashed away an enormous trove of documents about nuclear power plants, suspending access to much of its Web site while weeding out reports that might aid terrorists.

A spokeswoman for the commission, Sue F. Gagner, said that access to 380,000 documents was suspended last October and that 120,000 had been made available again.

"We think it's very important to be diligent about having information that could potentially be helpful to a terrorist," Ms. Gagner said.

The commission has also issued classified orders on how the plants guard against terror attacks, and citizens' groups have been fighting in court to demand public input.

"You can hide the information, but if the vulnerability still exists, the bad guys will find it," said Gary D. Bass, executive director of OMB Watch, a group in Washington that supports more openness. "So let's reduce the vulnerability instead."

Mr. Bass said similar debates had prompted some complexes like a sprawling sewage plant in Washington to switch to less-toxic chemicals.

In some instances, new dictates have eclipsed broader health and safety concerns.

Living Rivers, an environmental group in Utah, sued a federal agency after it had refused to release flood maps showing what areas would be inundated if major dams failed. A federal judge ruled for the agency, saying he agreed that releasing the maps "could increase the risk of an attack on the dams."

The shift to greater secrecy began after the Sept. 11, 2001, attacks. Mr. Johnson, of the Homeland Security Department, said a captured training manual showed that Al Qaeda

expected to glean 80 percent of what it needed to plan attacks in the United States from open sources.

The government has turned to a smorgasbord of new controls for withholding sensitive - but unclassified - information.

The Homeland Security Department has designations like "Sensitive Homeland Security Information" and "Protected Critical Infrastructure Information." Airport workers use "Sensitive Security Information" to hold back the details of pat-downs. The Federal Energy Regulatory Commission stamps "Critical Energy Infrastructure Information" on pipeline maps.

Officials said many companies had long resisted disclosing security flaws to the government out of fear of leaks. Mr. Johnson said that the department was blending what it obtained from the companies with intelligence about terrorist intentions and that it intended to share much of that analysis with local officials who agree to keep it confidential.

Sometimes the battles are more visible. Since chlorine leaking from a derailed tank car killed nine people and injured hundreds last month in South Carolina, the fight over the railroad placards has emerged as the most potent symbol of the debate.

The Homeland Security and Transportation Departments have been considering whether to remove the placards since August.

Firefighters, railroad workers and large chemical companies are adamant about keeping the placards. Statistics show that chemicals leak from dozens of rail cars a year and that deaths occur periodically.

The chlorine placard is black and white. It has a skull and crossbones and the number 1017, the chlorine code. Without placards, "we'd be completely in the dark" at many crashes, said Joe Ashbaker, a supervisor in the San Bernardino County Fire Department in California.

The railroads have their doubts. "We were for the placards, until 9/11, when it became clear they presented a security risk," the industry's lobbying group, the Association of American Railroads, said in a statement.

The railroads also say they are working to create a system that meets security and safety needs.

But two studies by the Transportation Department have shown that the alternatives, electronic systems that could transmit lists of chemicals on a train by radio or satellite, would be more expensive, cumbersome and less effective on safety. Texas A&M University is finishing another study.

Jamie Conrad, a lawyer for the American Chemistry Council, which lobbies for large chemical makers, said he could see how a placard might "advertise a little bit" the best cars to attack.

"But where we come down is that if you take it off, you know that people will be killed in accidents," Mr. Conrad said. "And you're basically balancing that against the theoretical prospect that terrorists might be lurking on that corner."

Walt Bogdanich and Jenny Nordberg contributed reporting for this article.

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LR in the News 03/07/05

Fish numbers drop after Grand Canyon flood

ARTHUR H. ROTSTEIN

Associated Press

TUCSON, Ariz. - The number of juvenile endangered fish recovered in the Colorado River declined dramatically after officials flooded the Grand Canyon in an effort to aid them and their fragile ecosystem. But scientists aren't sure what the fish decline means or why it happened.

"We're trying to get the same answer," said Jeff Lovich, chief of the Grand Canyon Monitoring and Research Center in Flagstaff. "We don't know what their fate is."

Following a 90-hour experimental water release from Glen Canyon Dam into the canyon in November, 63 percent fewer endangered humpback chub juveniles were trapped than before flooding.

Lovich said there are three possible explanations: The fish were washed downstream, they died, or they're still in the river and scientists couldn't accurately sample them after the simulated flood.

During the flooding, the Bureau of Reclamation released as much as 41,000 cubic feet of water a second from four of the dam's giant steel tubes. Scientists hoped to redistribute 800,000 metric tons of sediment to create beaches, substrate used by plants and backwaters and pools to help the fish breed.

The dam, built 40 years ago to assure the West's water supply, has altered the landscape dramatically. The chub is the last of four endangered fish species surviving in the canyon and one of only four native species of fish left among eight that once swam through it.

Scientists set out hoopnets centered around the mouth of the Little Colorado River - a spring-fed tributary into the Colorado - and at two other locations downstream to catch the juvenile humpback chubs to count, tag and release before the flooding.

The fish, which belong to the minnow family and spawn primarily in the warmer-water Little Colorado, were counted again after flooding.

The fish caught after the flooding tended to be somewhat larger, up to a bit over 7 inches in length. That suggested that the smallest fish declined most significantly, said Lew Coggins, a fisheries biologist.

Water releases from the Glen Canyon Dam are much colder, generally between 46 and 54 degrees Fahrenheit. The humpback chub's eggs have a much higher survival rate in the Little Colorado's temperatures of about 61 degrees.

Scientists are looking at installing temperature control devices in the future to release warmer water closer to the surface of the reservoir.

They also note that sampling conditions were different during the flood because of an unexpected natural flood in the Little Colorado.

"We have to admit that all of our results have to be interpreted with that caveat - that we had different conditions," Coggins said.

The change in conditions could have affected fish behavior.

"People want to know right now what did the fish do, and sampling showed this reduction of about 63 percent," Lovich said. "But we don't have the answer right now."

Officials estimate there may be about 3,000 fish in the Grand Canyon today, down from about 10,000 in the last decade.

Environmental critics such as Living Rivers, based in Moab, Utah, said the flooding likely pushed the dwindling chub population closer to extirpation. It contends that the dam, which creates Lake Powell along the Arizona-Utah line, is exacerbating the collapse of the Grand Canyon's ecosystem and should be decommissioned.

"It makes sense to get rid of Glen Canyon Dam, because it's the one changing the ecosystem of the Grand Canyon," said spokesman John Weisheit. "It's dying."

ON THE NET

Grand Canyon Monitoring and Research Center: <http://www.gcmrc.gov/>

Living Rivers: <http://www.livingrivers2.org/>

LR in the News 03/11/05

Glen Canyon Dam experiment brings mixed results

April Reese
Land Letter Southwest reporter

SANTA FE, N.M. -- Three months after an experiment aimed at improving habitat for the endangered humpback chub in the Grand Canyon, the preliminary results are in, and it appears the fish did not fare well.

Following a 90-hour experimental release of 224,000 acre-feet of water from the Glen Canyon Dam into the canyon in November, the number of juvenile humpback chub dropped 63 percent, according to Barbara Ralston, a biologist with the Grand Canyon Monitoring and Research Center.

Ralston said that other factors aside from the test flow may have contributed to the decreased numbers. Natural flooding in the Little Colorado River may be partly to blame for the flushing of the fish downstream or scientists may have undercounted the fish in muddy, post-flood conditions, she said.

During the flooding, the Bureau of Reclamation released water into the canyon at a rate of 41,000 cubic feet per second (cfs) from four giant bypass tubes. Scientists and dam managers hoped the high flows would stir up sediment flowing in from tributaries downstream from the dam and deposit sand in the Grand Canyon's river channel, building beaches and sandbars to help the humpback chub (Land Letter, Dec. 2, 2004).

The hope was that the deposited sediment would create pools and ripples, which provide important habitat for the chub, one of four endangered fish that persist in the Colorado River.

John Weisheit, conservation director for Living Rivers, said that even without the unexpected variable of high flows from the Little Colorado River, the chub would probably not have benefited much from the experiment.

"Whether they got flushed out of the Little Colorado doesn't really matter, because once they get in to the main stem, it's too cold for them, it stuns them, and they become prey to non-native fish," said Weisheit, who advocates breaching or removing Glen Canyon Dam to restore the Grand Canyon ecosystem. "As long as Glen Canyon Dam is still there, they're going to continue to have losses like this."

However, scientists note that the latest experiment has been more successful than previous test flows. A 1996 experiment, which sent 45,000 cfs down the river, failed to keep deposited sediment in the system long enough to benefit the ecosystem, largely because the release was too long, eventually scouring the beaches and sandbars it had built.

Three months after the shorter test flow in November, a considerable amount of sand has remained in the upper area of the canyon, although below that 40-mile stretch, deposition was "a bit of a wash," Ralston said -- sand was deposited in some areas, but eroded from others. Scientists will travel the river again in a few months to see how much of the newly deposited sand is still there, she said.

Ralston said the preliminary results of the November experiment are encouraging enough to merit further test flows, and the Grand Canyon Monitoring and Research Center is discussing a long-term plan for conducting periodic artificial floods.

But David Haskell, a former Grand Canyon National Park employee who currently works as the policy director for Living Rivers, which is calling for a new environmental impact statement of Glen Canyon Dam that evaluates the merits of decommissioning it, says the latest experiment is not much of an improvement.

"At best this can be described as a more successful failure," he said. "These experiments will never succeed because they ignore fully restoring the natural processes the native fish require, which includes the pre-dam flow of sediment and nutrients."

Nikolai Ramsey of the Grand Canyon Trust was more equivocal. Grand Canyon scientists are only three months into a year-and-a-half-long monitoring effort, and it's too early to make sweeping conclusions about the experiment's effectiveness, he said.

Ramsey, who represents the Trust on the Glen Canyon Dam Adaptive Management Work Group, which makes recommendations on dam management and protection of downstream resources, said experimental high flows may work -- with better timing.

"The sediment improved in some cases, and didn't improve in others," he said. "We need to know how often and when to do this kind of thing, and we need to know how to protect the chub from unintended impacts," he said.

One option may be to unleash experimental flows when juvenile fish are not at the confluence of the Little Colorado and Colorado rivers, he said.

Regional News 03/20/05

Dam safety: High hazard dams

Terrorism poses new threat to dam safety

121 are perched above populated areas across Utah

Copyright 2005 Deseret Morning News By Lee Davidson Deseret Morning News

State records show that eight unsafe dams loom upstream from Salt Lake City. Three others sit above Provo. Four are above the Ogden area. Eleven sit above the wall-to-wall cities of Davis County.

A crew from the U.S. Bureau of Reclamation — Scott Jensen, left, Brad Winters, Lenny Washburn and Chip Todhunter — drill holes below Echo Reservoir dam in as part of efforts to examine stability of the earth levee. Jason Olson, Deseret Morning News

In fact, state officials say 121 unsafe dams are perched above populated areas in 26 of Utah's 29 counties and would likely kill people if they fail.

"It's not that they are crumbling and are ready to fall down immediately — they're not. But they don't meet minimum standards of safety. And in some sort of extreme event, like major flooding or an earthquake, they are not considered safe," said David Marble, assistant state engineer for dam safety.

That may be disconcerting as this year's mountain snowpack is far heavier than during the recent extended drought, posing a tougher-than-in-years test for dams during upcoming spring runoff. One dam in Utah has already partially failed this year (the first in four years), with tense moments occurring elsewhere amid early flooding.

But the good news is that big strides have been made to improve Utah dam safety over the past 15 years. The most dangerous dams have been repaired or replaced (and repair work disclosed they often were in worse shape than feared). Governments also vastly improved monitoring of major dams.

"But we still have a long way to go," Marble said. At recent spending levels, decades could be needed to fund all the upgrades needed at those 121 unsafe dams. Meanwhile, officials hope for no more repeats of the 89 full or partial dam failures that have occurred in Utah historically.

Making progress

A computer-assisted analysis of state records shows Utah has made much progress since the last time the Deseret Morning News looked in-depth at the condition of state dams — 17 years ago in 1988.

At that time, officials rated as safe a mere 7 percent of those dams classified as "high hazard," defined as those where failure would likely kill people and cause extensive damage. (Also, that 1988 story reported that several Utah dams had broken in the '80s after not acting on earlier federal studies that warned they were unsafe).

Photo: The Lower Enterprise Dam, in Washington County, had water flowing over its top for a time this year. Matt Lindon, State Of Utah

In comparison, now 44 percent of such Utah "high hazard" dams meet all minimum safety standards — more than a sixfold improvement. But that still means 56 percent of such dams are considered unsafe during extreme events.

A few months after the old 1988 Deseret News story, one of the few dams that was then considered to be safe — the then relatively new, 4-year-old Quail Creek Dike on the Virgin River — broke early on New Year's Day 1989.

It sent a 40-foot-high wall of water toward St. George, making 1,500 New Year's revelers scramble for high ground early in the morning. No one died, but 50 to 60 homes were destroyed or damaged, and hundreds of livestock animals were killed.

Marble said all that created political pressure to improve Utah's dam safety program. The Legislature passed a law in 1990 aimed at improving safety. Among other things, it led to studies that raised minimum standards for dam safety. It also required dam owners to perform studies of what steps are needed to bring their dams up to those higher standards.

With concern that resulting repair costs could bankrupt some dam owners, the Legislature passed a law saying the state could not order upgrades to dams until the state offered a grant covering at least 80 percent of the cost.

Since then, the state has awarded more than \$40 million in grants to help upgrade or replace dangerous local dams. Such construction has been completed at 21 "unsafe" locally owned dams and is ongoing at three others. Meanwhile, work at 118 other "unsafe," state-inspected dams is awaiting funding.

Additionally, the federal government owns or inspects 25 high hazard dams in Utah — and says they meet safety standards or are undergoing construction to meet them. Many of those federal dams also have been repaired or upgraded in recent years.

Are cities safe?

The state developed a risk rating system to identify and prioritize for repair those dams that it considers to be unsafe. Results show that the most heavily populated areas in Utah also have the most "unsafe" dams.

Salt Lake County has 18. Utah County is close behind with 16, and Davis County is third with 11. All counties except Daggett, Kane and Grand have at least one unsafe dam.

Photo: A crew from the U.S Bureau of Reclamation get ready to drill holes below Echo Reservoir dam. Jason Olson, Deseret Morning News

The city with the most "unsafe" dams immediately above it — eight — also happens to be the state's largest: Salt Lake City.

Unsafe dams in or immediately upstream from Salt Lake City include: Rotary Glen Park Dam; Red Pine Dam; Red Butte Dam; Chandler Drive Dam; School Pond Dam; Sugarhouse Dam; Federal Heights Dam; and Shriners Dam.

Sandy in Salt Lake County has the second-most "unsafe" dams above it, seven.

Heber, Payson and Whiterocks (Duchesne County) each have four unsafe dams immediately above them.

Six cities have three "unsafe" dams immediately above them: Bountiful, Center Creek (Wasatch County), Centerville, Huntington, Kaysville and Provo.

Eleven cities have two "unsafe" dams immediately above them. And 50 sit beneath at least one unsafe dam. (See accompanying charts for a list, location and rating of all unsafe dams.)

Dangerous data hole

Photo: Scott Jensen, left, and Brad Winters of the U.S. Bureau of Reclamation examine a core sample they retrieved while drilling holes below Echo Reservoir dam. Big strides have been made to improve Utah dam safety over the past 15 years. And governments

also have vastly improved monitoring of major dams to prevent problems. Jason Olson, Deseret Morning News.

The state's risk rating system has a problem. It relies on engineering studies that dam owners were ordered to complete about work needed to bring dams up to current standards. But such studies have never been completed on 35 "high hazard" dams.

So, they have been left off priority lists, and their true risk is unknown.

"We don't really know whether they are safe, or exactly where they would fit on priority lists," said Marble, who became head of the state's dam safety program last year. "At this point, we can't document that they are safe, so we're going to assume they are unsafe."

He said the state has begun a push again for completion of those studies by owners. With that, he said, 20 of those dams are at the point that they have started exploratory drilling or are well under way with preparations for studies. Most of the other 14 have started some preliminary work or expressed willingness to do so, he said.

He said the state has the power to restrict operations at a dam if an owner will not do the work in a reasonable period, "but we try to work with them in a positive proactive way." That includes reminding them of the "carrot" of state funding for upgrades.

Repair priority

For the 143 state-inspected, high-hazard dams where detailed engineering studies have been completed, the state created a risk score to prioritize them for repairs.

Risk scores could range from zero to a possible 775, based on numerous factors about dam conditions and how many people they could endanger. A score of zero meant the dam met all current minimum safety standards — and 45 dams initially received that score (or were constructed after standards were raised).

All others had problems and had an average score of 111.

Among the worst initial scores were: 635 by the Piute Dam on the Sevier River near Marysville; 588 by the Holmes Dam on Holmes Creek above Layton; 480 by the Porcupine Dam above Avon, Cache County; 380 by Logan First Dam above Logan; and 363 by Rocky Ford Dam above Minersville.

All of them have since been repaired or replaced, although a second phase of construction at Piute is still under way. After construction, the dams' scores essentially become zero as they then meet all minimum safety standards.

"Holmes Creek Dam was a big concern," Marble said, talking about the highest risk dams. It is just two miles above Layton and the rest of the heavily populated Davis County.

"It was built in the early 1900s by a method we call hydraulic fill, or sluicing. Essentially, they took a sand pile on top of a hill, and ran water over it and collected it between

some dikes. They would wash the sand in and let it settle out, " he said, adding many early dams in Utah were built that way and are essentially sand piles.

"They have been shown to be problematic, especially in an earthquake. They have a very high potential for liquefaction," he said. Holmes also had extra seepage, which could lead to internal erosion of a dam that could cause it to break apart. In fact, Holmes had partially failed in 1924 and 1983, with some repairs made thereafter.

"What we did is went in and completely removed the dam and completely rebuilt it. Interestingly enough, the bulk of the construction was out of the same material," but modern construction techniques provide better compacting and density of material, plus drains to control interior seepage, Marble said.

Other repairs Deseret Morning News graphic

Another dam of highest concern was Logan First Dam. Its old spillway could pass only 1 percent of the potential maximum flood expected there. The U.S. Army Corps of Engineers say dams should pass 100 percent of such flooding and consider it an emergency situation when a dam can pass only 50 percent. (If flood waters go over the top of a dam, they often cause quick, extreme erosion and failure.)

While state inspections had for years urged upgrades, the dam's owner, Utah State University, repeatedly said it could not afford them unless the Legislature came up with money. It finally did through the upgrade program it passed for all dams in 1990. Logan First Dam now meets all minimum standards, Marble said.

Also, Mountain Dell Dam in Parley's Canyon was long one of the biggest concerns in the state and had an initial risk rating score of 250. Salt Lake City Public Utilities Director LeRoy W. Hooton Jr. remembers how that dam scared officials during heavy snowmelt runoff flooding in 1983.

Officials figured they came within an hour of having water go over the top of the dam that year (which could easily lead to quick erosion and failure). It was saved only as they released as much water as they could through outlets and spillways, even though that flooded downstream areas and turned 1300 South Street into a long "sandbagged river."

"We couldn't take a chance of overtopping the dam, but we still got awfully close," he said about that year when the mountains went from "freezer to furnace" almost overnight to produce record snowmelt runoff flooding. He said vibration at the concrete dam was so intense when all outlets were open that officials feared it would cause cracking.

After the 1983 floods, officials took several steps to prevent further problems at Mountain Dell. The biggest was building the modern Little Dell Dam just upstream in 1993. After it was completed, Mountain Dell was never allowed to fill to more than two-thirds its capacity.

Also, Hooton said numerous improvements were completed at Mountain Dell, including raising its height and performing studies to ensure it should be safe during an earthquake. "The improvements have really taken the worry out of running that dam," Hooton said.

Surprise inside

Marble said repair work has often brought unhappy surprises once crews dug into dams for repairs.

For example, at Rocky Ford Dam, he said, officials worried that extra seepage they had observed could eventually lead to erosion and create sinkholes that could break it apart. Once they started digging to put in some drains, "We found a very large sinkhole already developing. . . . We worried it could happen and found it already had."

Marble said similar findings came in repairs at many dams. For example, at Porcupine digging showed that seepage and saturation was much more extensive than feared — and had saturated almost the entire dam. "It wasn't something that you could just look at the dam (from the outside) and see from a safety inspection," he said.

To help find hidden and unpleasant surprises among the many dams awaiting upgrades, Marble said, virtually all have added special equipment in recent years to help monitor interior saturation, seepage and dam movement. He said that helps give early warning if conditions are deteriorating and quick action is needed.

That is a vast improvement over conditions found back in 1988.

"In 1988, I would bet there were no more than 10 high hazard dams that were fully instrumented for performance evaluation," Marble said. "Now virtually all of the high hazard dams are instrumented."

Also of note, records show that all high hazard dams overseen by the state are being inspected every year now, which was not always the case back in 1988. However, Marble said, plans call for inspecting some rarely filled flood control dams every other year to allow more attention on higher risk dams that constantly store water.

Also, all but eight of the high hazard dams in Utah have completed "emergency action plans" — about how to handle emergencies and failures and whom to contact downstream. Few had them back in 1988, but they were later required by law. The only dams lacking them now have only recently been elevated to "high hazard" status, which triggers requirements for such plans.

Federal efforts

The federal government has also made big strides in recent years to upgrade the large dams it owns or inspects.

In 1988, more than half the federal dams were rated as poor or had their condition unknown. Now, all are considered to meet safety standards or are undergoing

construction to meet them, said Ed Vidmar, Resource Management Division director for the Bureau of Reclamation's Provo Area Office.

He added that all dams have an intensive "Comprehensive Facility Review" every six years, with major engineering studies conducted by Reclamation's Denver Technical Service Center.

At the midpoint between such reviews, engineers from the bureau's regional office in Salt Lake City perform a somewhat less intensive safety review. And once a year, inspectors from the bureau's Provo Area Office conduct safety reviews of dam exteriors and key features.

Some dams get even more attention. For example, the massive, 50-story Flaming Gorge Dam, the largest in Utah, receives exterior inspections monthly, said Walter Payne, a maintenance official in the bureau's Salt Lake City regional office.

Additionally, he said, "Measurement of movement (by the dam structure) is done monthly," as is measurement of movement of water under the dam. Also, he said, flows from drains are checked four times a year, as is seepage.

Some of the major ongoing work of federal dams includes upgrading the large Deer Creek Dam in Provo Canyon. Vidmar said once construction relocates roads and traffic off the top of that dam, the bureau plans spillway modifications to improve safety.

The bureau is also finishing a second set of modifications to the large Pineview Dam above Ogden. During one of the regular re-evaluations of that dam, Vidmar said, engineers found that earlier improvements in 1991 did not meet "new standards that came because of the Kobe, Japan, earthquake. Some of the materials used tend to liquefy (in an earthquake), so the standards were changed," he said.

2005 outlook

Utah has been in a long drought, which Marble notes means "spillways have not really been tested a lot in recent years." But with mountain snowpack heavier this year, long-forgotten concerns about dam safety are suddenly becoming more important.

One dam already partially failed this year. "Strates Dam in Sanpete County failed. It washed out (because of interior erosion) under the spillway. It was about 25 feet tall, and the top 7 feet of the reservoir came off," he said. That was a "moderate hazard" dam that did not threaten any populated areas.

Marble said, "The only area we're really keeping an eye on right now with concern for the spring is the Enterprise area" in Washington County.

Some tense moments came at the Lower Enterprise Dam there during flash floods in January. That concrete dam had water flowing over its top for a time, with its spillway unable to handle heavy rainfall that filled its reservoir to overflowing.

"It (the dam) actually performed fairly well. But there has been some damage, of which we are concerned, and which will require some remedial work," Marble said.

"While we are concerned, we are not alarmed. It is very important we do not raise a panic and make people think they need to evacuate," Marble said. "There are concerns, but we do not see anything at this point" to make officials believe the dam cannot handle spring runoff or that it needs to have its storage restricted.

While Marble said that "any of the dams that do not meet our current standards we would call unsafe," that is only for extreme events, such as heavy flooding or earthquakes.

He said most of the dams rated as "unsafe" can handle routine years and operations safely, or inspectors would take actions to close them. He does acknowledge, however, that some dams in the state "are leakers and saggies."

Still, Marble stressed that any dam in the state that inspectors believe could pose an immediate threat would face emergency actions, such as restricting storage. "If there is something we can see and determine that it's deteriorating, something that is an imminent safety concern, we can deal with that immediately."

He said the monitoring equipment at virtually all high hazard dams in the state should help residents feel more safe, as should the repairs and replacements of the most dangerous dams in recent years.

"For those who haven't had their dams fixed, I would emphasize again that . . . we are out there inspecting and monitoring these dams. We've got all the high hazard dams now instrumented. We are collecting that data. We are reviewing that data," Marble said.

"I can't say that's 100 percent sure, but we are doing all that is possible to address the safety concerns, even before they get fixed. If there is anything we can do to prevent a catastrophe, we will do that," he said.

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Regional News 03/31/05

Western states to miss drought plan deadline

Proposal would determine Colorado River allocations in event of water-shortage declaration

By HENRY BREAN
REVIEW-JOURNAL

The seven Western states that depend on water from the Colorado River will not have a drought management proposal in hand by the Friday deadline set by the U.S. Department of the Interior, Nevada's top water official said.

No such proposal has been developed and representatives from the seven states are not slated to meet again until next week, said Pat Mulroy, general manager of the Southern Nevada Water Authority.

"I don't think we are any closer than we were," Mulroy said. "I think we're going to need more time."

In December, Deputy Interior Secretary Steven Griles called on the states to accelerate discussions on how they would divide up a shortage on the drought-stricken river. Griles used the same news conference at the Las Vegas convention of the Colorado River Water Users Association to announce the April 1 deadline.

Federal officials have never declared a water shortage on the Colorado, and no rules presently exist that spell out how the river allocations of Nevada and the six other states would be cut in the event of such a declaration.

Some experts were predicting that a shortage could be declared as early as 2006, but Mulroy said this year's record wet winter appears to have bought river users some time.

Most pressing now, she said, is for the states to reach a consensus about how much water to release from Lake Powell this year.

The upper basin states of Colorado, New Mexico, Utah and Wyoming want to reduce the 8.23 million acre-feet of water that traditionally is released from Powell each year to allow the lake to recover, Mulroy said.

Five years of drought, coupled with normal water deliveries downstream to Nevada, Arizona and California, have caused Lake Powell to shrink to about one-third of its capacity.

Mulroy said Nevada is agreeable to a reduced release from Powell, so long as the resulting drop in Lake Mead does not jeopardize the intakes Southern Nevada uses to draw about 90 percent of its drinking water supply from the lake.

Mulroy expects the states to agree on a preferred release from Powell by mid-April, before federal officials conduct their midyear review of the 2005 Annual Operating Plan for the Colorado River.

But complicating the interstate discussions is the weather. "Nobody knows if this is the end of a dry cycle or just a wet year in the middle of the cycle," Mulroy said.

As for the larger task of developing shortage criteria for the river, Mulroy predicted the process will take at least two years, with or without input from the basin states. "It's pretty academic. If the states don't do it, the (Interior) secretary will," she said.

Mulroy has said that Nevada's share of a shortage probably will be 12,000 to 18,000 acre-feet a year, though the state would be able to replace that lost supply with banked water here or from its recent water agreement with Arizona.

There are about 326,000 gallons in an acre-foot. The average Las Vegas Valley household uses slightly more than two-thirds of an acre-foot of water each year.

"Nobody wants to tackle these ugly issues until they absolutely have to," Mulroy said. "But the possibility of the lower basin going into a shortage within two years is real."

That's why the Interior Department came up with the April 1 deadline: to push the states into talks on shortage criteria, Mulroy said.

"And quite honestly, we're going to push back. I still want to know what, if anything, the federal government is doing to engage Mexico on shortage criteria. There is no way Arizona and Nevada can bear the brunt" of a shortage if Mexico doesn't take a hit, she said.

Under the terms of a 1944 treaty, the United States is obligated to allow 1.5 million acre-feet of Colorado River water to flow into Mexico each year. However, that obligation is not governed by the 1922 Colorado River Compact or subsequent federal laws that divvy up the river among the seven states.

Mulroy and her fellow basin-states representatives are slated to meet behind closed doors in Las Vegas on Monday.

LR in the News 04/04/05

Federal effort to ease Western tensions getting mixed reviews

April Reese, Greenwire Southwest reporter

An Interior Department initiative aimed at averting water wars in the West is getting mixed reviews as it heads into its third year.

Regional water managers praise "Water 2025" as an important first step toward easing tensions, but environmentalists largely dismiss the program for enhancing irrigation infrastructure while ignoring damage to rivers and other resources.

But the program's critics and backers do agree on one thing: Water 2025 needs more money.

With a budget that has grown from \$8.4 million in fiscal year 2004 to \$19.5 million in fiscal 2005, the Bureau of Reclamation program provides grants aimed at enhancing conservation, improving the efficiency of irrigation systems, and developing new technologies to increase water supplies. It has funded 19 projects so far -- ranging from lining irrigation canals to reduce seepage to creating a "water bank" to buffer against shortages.

The Bush administration is asking Congress for \$30 million for the initiative in fiscal 2006, and Avra Morgan, who directs the program, said the additional cash would be

welcome. The initiative received more than 100 applications for grants in fiscal 2004, but could award only 19 grants, she said. BuRec is expected to announce the next round of grant recipients by July 1.

Despite the relatively small number of projects funded so far, Morgan predicted that Water 2025 would prove its worth in water-shortage hot spots. "I do have confidence that these projects, once they're completed and under way, will help reduce tensions over water," she said.

But critics say the initiative is tantamount to putting Band-Aids on broken arms. Laura Ziemer, director of Trout Unlimited's Montana Water Project, called the program, which is implemented by the Bureau of Reclamation, a "lofty and noble endeavor," but one that puts too much emphasis on increasing efficiency of existing water-supply infrastructure and not enough on restoring rivers.

"I would broadly characterize it as a missed opportunity," Ziemer said. "It was a well-conceived notion and an opportunity ... for the bureau to take a broader view of what it means to have fundamentally altered many of the waterways of the West. Unfortunately, they've failed in taking that opportunity."

Interior launched the program in May 2003, seven months after farmers and other water users in Oregon's Klamath Basin clashed with federal agencies that sought to provide water for endangered fish during a drought.

"I think what they're trying to do is prevent any future Klamaths from sneaking up on them, because it was a black eye for the department," said Tom Donnelly, executive vice president of the National Water Resources Association, which advocates for rural and municipal water districts and supports the program.

Announcing the program's first round of challenge grants, Interior Secretary Gale Norton touted Water 2025 support for "realistic, cooperative approaches and tools that have the most likelihood of successfully addressing water challenges in basins where crisis and conflict are preventable."

Enviros want more attention for ecosystems

But environmentalists maintain that Water 2025 largely ignores the need for restoring the ecological health of river systems, which they say is essential for averting water conflicts. Ziemer said a Trout Unlimited project that would have created a reservoir to store wastewater to be used by irrigators on the Sun River in northwestern Montana was rejected by Water 2025 gatekeepers.

Most Water 2025 projects, which primarily involve improvements to irrigation systems, could have been funded through other means, such as the Reclamation Reform Act program, she said. "They're doing the same kinds of things they were doing before, and just calling it a new name," Ziemer said.

John Weisheit of the advocacy group, Living Rivers, based in Moab, Utah, said the initiative has proven itself to largely be a public relations exercise with few real results.

Water banking, farm-to-urban transfers, and irrigation efficiency projects will not be enough to prevent future water conflicts, he said, especially at current funding levels.

"We think it would definitely help, but it would require a lot of money," Weisheit said. "It's very limited funding."

Furthermore, Interior waited too long to come up with a plan to help address the West's water challenges, Weisheit added. "Unless they put lots and lots of money into this," he said, "it's a little too late."

Optimistic water managers hope for more federal cash

Tim Martin, executive director of Western Resource Advocates in Colorado, said the initial Water 2025 report was "a pretty good roadmap for how to move forward" but that the limited funding behind the initiative hinders its ability to achieve its stated goals.

"There's only so much you can do with the amount of money that has been allocated," Martin said.

Interior has targeted the basins facing the greatest risk of water conflicts, but critics say there is still not enough money to fund all of the ditch-lining, water banking and conservation projects that need to be done.

But Mark Limbaugh, deputy commissioner of BuRec, said a little can go a long way. "The reality is we're in tight times, the federal government is not going to come in and solve this all by itself," Limbaugh said. "I'd rather have some drops in the bucket than none at all."

Getting projects going on the ground can help build momentum and "start a healing process that helps people resolve conflict," Limbaugh said. "These are projects on the ground, working every single day to alleviate conflict to help these communities not have to go through what we've seen in the Klamath Basin."

The program focuses on irrigation systems because agriculture is the biggest water user in the West, Limbaugh said. And improving efficiency in agricultural systems can save water that can be left in the river to help increase flows, which benefits fish and wildlife, he said.

While Reclamation Reform Act funding does support efficiency improvements, those projects tend to be on a smaller scale than Water 2025 projects and are more directly tied to Reclamation-managed systems, Morgan added.

"I do believe," she said, "these are projects that would not be able to go forward without our Water 2025 funding."

A sampling of Water 2025 grants

Projects funded in part by Water 2025 include: * The San Juan River Dineh Water Users Association in New Mexico replaced three unlined canals with pipelines in an effort to reduce evaporation and seepage, providing a potential water savings of 5,600 acre-feet

per year, Morgan said. An acre-foot is about 325,850 gallons, a year's water supply for a family of four. Water 2025 picked up \$200,000 of the project's \$751,000 tab.

* The Central Oregon Irrigation District teamed with cities and tribes to create a water bank, a pool of donated or temporarily leased water that can be used to help meet demand during dry times, that could save up to 326,522 acre-feet of water a year, BuRec says. The bureau provided \$233,750 of the project's \$588,750 cost.

* The Medford Irrigation District in Oregon replaced 2,200 feet of open canal with a pipeline, saving about 94 acre-feet of water per year, BuRec says. The project will also remove three fish passage barriers and enhance habitat for federally protected coho salmon. Water 2025 grant will cover \$300,000 of the \$900,000 project.

LR Press Release 04/06/05

DOE: Announces preferred alternative to move uranium waste pile away from the Colorado River

April 6, 2005

For immediate release

Contact: John Weisheit - (435) 259-1063/(435) 260-2590

Sarah Fields - (435) 259-4734

Washington DC - The Department of Energy (DOE) announced today that their preferred alternative concerning the fate of the uranium waste pile adjacent to the Colorado River near Moab, Utah, is to move it to a location 30 miles away from the Colorado River. The location of this preferred waste storage facility is near Crescent Junction (the junction of Highway 191 and Interstate 70), which the Environmental Protection Agency recommended as a superior site in their comments to the DOE. This site is in the shadows of the Book Cliffs, which is considered a desirable place to relocate the pile because it is isolated, protected from potential flash floods, and where a thick layer of shale will better prevent the contamination of local ground water resources.

The alternatives not chosen as preferred include capping the pile in place; moving the pile to Klondike Flats, which is about 17 miles north of Moab and a popular place to recreate; and pumping the waste in a slurry via pipeline to a uranium processing plant near the White Mesa Ute Reservation, which is about 80 miles south of Moab.

"We are delighted with this announcement from the DOE about their preferred alternative," says John Weisheit from Moab, who is the conservation director at Living Rivers and the Colorado Riverkeeper. "This decision was not wholly unexpected considering the issue to move the pile to the north had overwhelming support from our city, county and tribal councils. A decision to the contrary would have started a

contentious situation from a determined local citizenry that considers the pile a threat to human health and endangered fish species."

Besides the local city and county representatives, the citizens of Moab, and concerned citizens of the White Mesa Tribe, other groups and agencies were also in favor of moving the pile away from the river.

"We are very happy to hear how the combined efforts of the communities down river, the State of Utah, federal agencies and our representatives in Congress, has resulted in sound decision by the DOE to remove the tailings from the floodplain of the Colorado River. We hope the final decision will include congressional action to appropriate all the necessary funds in a timely manner to remove the pile and remediate the local ground water," said Sarah Fields, who is the project coordinator for Living Rivers and the chair of the Nuclear Waste Committee, Sierra Club Glen Canyon Group.

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See DOE's press release below:

April 6, 2005

DOE Announces Preferred Alternatives For Moab, Utah, Uranium Mill Tailings

WASHINGTON, DC - The U.S. Department of Energy today announced the department's preferred alternatives for remediation of the Moab, Utah, Uranium Mill Tailings Remedial Action Project Site: active groundwater remediation, and offsite disposal of the tailings pile and other contaminated materials to the proposed Crescent Junction disposal site.

These preferred alternatives will be included in the Department of Energy's Final Environmental Impact Statement (EIS). Previously, the department did not identify a preferred alternative, in its draft Environmental Impact Statement on the remediation of the Moab, Utah, Uranium Mill Tailings Remedial Action Project.

The preferred alternatives do not indicate that the department has reached a final decision on remediation of the Moab site. The department continues to review comments it has received from the public on the site.

A Final EIS on the Moab, Utah, Uranium Mill Tailings site and the remediation of the site is in preparation, and the final department Record of Decision will be issued following the release of the Final EIS for the Moab site.

Media contact: Joe Davis, 202-586-4940

Regional News 04/07/05

Activists hail the proposal to move toxic tailings away

By Lisa Church
Special to The Tribune

MOAB - News that the Energy Department will move almost 12 million tons of radioactive waste away from the banks of the Colorado River brought tears to Bill Hedden's eyes.

The department said Wednesday that it will recommend in an upcoming final environmental impact statement that the Cold War-era uranium mill tailings be moved by rail to a site 30 miles north from where they now sit four miles from Moab along the bank of the Colorado River across from Arches National Park.

For Hedden, a former Grand County councilman, and other residents and government officials, the announcement was especially sweet after years of pushing to have the unsightly and unhealthy tailings moved away from this red rock tourist destination.

"I actually cried this morning when I got the call. I surprised myself with that reaction," said Hedden, now executive director of the Grand Canyon Trust, an environmental group that has lobbied Congress on the tailings issue.

"Our democracy works slowly sometimes, but frequently we end up in the right place. This was a roller coaster."

The decision is a victory long overdue for Western politicians, county officials and environmentalists who have argued for years that toxic chemicals leaching from the pile are contaminating the Colorado River, the major source of drinking water for about 25 million people in Utah, Arizona, Nevada and California.

"This just goes to show what a small town can do when people work together," Grand County Councilwoman Joette Langianese said of the Energy Department's decision. "The fact that we got this decision is amazing. Just a year ago, everybody was feeling like it wouldn't happen."

The relocation effort, which probably will take five years, also will bring jobs to Grand County, Langianese said. And many feel having the 130-acre site cleaned up will boost tourism.

"I'm looking forward to the time when we can drive down Moab Valley and see its beauty instead of seeing a toxic pile," Langianese said.

"This is a good day for Grand County."

Moab activist Sarah Fields, who spent years researching the environmental impact of the tailings, said pressure from other state and federal agencies made it almost

impossible for the Energy Department to recommend leaving the tailings at their current site.

"I'm sure the [Energy Department] felt they wouldn't have a leg to stand on," she said.

Ute Mountain Ute tribal leaders and residents of White Mesa, a small community in southeastern Utah, had opposed one cleanup alternative that would have transported the tailings to the White Mesa processing mill located on tribal lands south of Blanding.

"It took a tremendous amount of time and money to discuss the White Mesa alternative, even though it was a ridiculous idea," said Tom Rice, director of the Ute Mountain Environmental Department.

"We're pleased that the decision was made to move it to a less populated area."

Regional News 04/13/05

Colorado River users at odds over flow

By Theo Stein
Denver Post Staff Writer Staff

The seven states that share the Colorado River are unlikely to agree on how much to refill Lake Powell this year, leaving the decision to Interior Secretary Gale Norton, Colorado's top water planner said Tuesday.

Five of the driest years on record have left Lake Powell, the giant impoundment on the Utah-Arizona line, two-thirds empty.

Meanwhile, record precipitation this winter has helped produce a dramatic rebound in Lake Mead, Powell's equally large downstream sibling, which is now nearly two-thirds full.

To help restore balance to the system, Colorado, Utah, New Mexico and Wyoming want the Bureau of Reclamation to capture more water than planned behind Lake Powell's Glen Canyon Dam. They plan to make that request next week.

"It's just common sense at this point," said Rod Kuharich, executive director of the Colorado Water Conservation Board.

But Kuharich said consensus among the seven states is unlikely by federal officials' Tuesday deadline.

That would leave Norton to make a decision in early May.

Upper Basin states such as Colorado want Lake Powell to fill because the lake plays a critical role in providing water for downstream users - especially during dry years.

If the lake empties, California, Nevada and Arizona, which have a senior claim on the Colorado River, would be able to take water from the river that Front Range residents now use.

"It's our protection," Dave Merritt, chief engineer of the Colorado River Water Conservation District in Grand Junction, said of Lake Powell.

The debate was cast last fall when officials, wary that the drought could deepen, agreed to an unprecedented midyear review of Glen Canyon's operations.

Lower Basin officials argue no change of course is needed. They point out that the reservoir's annual operating plan, which is set each September, assumed continued drought in the Upper Basin would reduce runoff into the reservoir to 77 percent of normal. Instead, runoff is forecast to be 107 percent of normal.

"That's 30 percent better than the estimate used in setting the operating plan," said Herb Guenther, director of Arizona's Department of Water Resources.

In addition, Lower Basin officials say, the two reservoirs are headed in opposite directions.

The runoff season, which is just starting, will raise Lake Powell's level to 49 percent of capacity by summer's end.

Meanwhile Lake Mead's level will drop to about 54 percent by the end of the year, officials said.

"So they'll be getting pretty close equalizing on their own," said Dennis Underwood, chief executive of Southern California's Metropolitan Water District, which serves Los Angeles and San Diego.

But Upper Basin officials are frustrated by the Lower Basin's reluctance to let Powell fill.

After all, they argue, Lake Powell's water is destined for California, Arizona and Nevada anyway. Refilling the reservoir means more reliable supplies to the lower basin if drought returns.

A fuller Lake Powell produces more power, and hence more revenue, from the turbines in Glen Canyon Dam.

And, because Powell is higher in elevation, the vast lake surface loses less to evaporation than Mead, they say.

Lurking below the surface is lingering uncertainty about what next year will bring.

"The drought in the Colorado River basin has eased," said Tom Ryan, a Bureau of Reclamation hydrologist.

"We can't say that it's over."

The issue

Should Interior Secretary Gale Norton reduce water released from Glen Canyon Dam to help Lake Powell refill more quickly?

Upper Basin states: Yes.

Norton should cut the planned annual release from 8.23 million acre-feet to perhaps 7.5 million acre-feet, Colorado, Utah, New Mexico and Wyoming say. That would allow Powell to capture an additional 730,000 acre-feet of water. An acre-foot is enough water to serve two average families for a year.

Lower Basin states: No.

California, Arizona and Nevada say runoff expected in the Upper Basin is greater than was anticipated when the 8.23 million acre-foot objective was set in September.

Regional News 04/14/05

Biologists to see if latest experiment on Colorado River helped fish habitat

Deseret News

An experiment regarding fluctuating flows in the Colorado River below the Glen Canyon Dam ended last week.

Now, biologists will begin collecting data to see if the fluctuating flows actually helped the endangered humpbacked chub.

In November 2004, a second high-flow experiment, which involved the release of 41,000 cubic feet per second during an 60-hour period, was conducted in an attempt to scour the beaches and shorelines through the Grand Canyon, and to help the endangered humpback chub.

Scientists hoped to redistribute 800,000 metric tons of sediment through the Grand Canyon to create and resurface beaches, build substrate used by plants and backwaters and pools to help the fish breed. Then, from early January through April 8, flows were periodically changed, from roughly 5,000 cfs to 20,000 cfs.

Chubs, over eons of time, have adapted to the fluctuating flows of the Colorado River, while non-native species, such as trout, have not.

What biologists found after the high release of 41,000 cfs, however, was that there were 63 percent fewer juvenile chubs in the river than before the release.

The belief was that the fish were either washed downstream or were holding in areas not studied.

The chubs are the last of four endangered fish still living in the river running through the Grand Canyon.

Consensus was that fluctuating flows would keep the non-native fish, such as rainbow and brown trout, out of the river and holding in tributaries. This would stop the trout from competing against the chubs for food, and would stop the trout from preying on young chubs and eggs.

Biologists also believe that the fluctuating flows would thin the trout population, which is overgrowing the available habitat between the dam and Lee's Ferry, which is approximately 16 miles of very popular fishing waters.

Researchers have found that since 1991, when such fluctuations ended, the trout population dramatically grew at the probable expense of the native chub population.

Scientists are trying to determine if the fluctuating flows can keep the trout population in check by impacting their spawning and other aspects of their lifecycle

Additionally, another ongoing experiment has been the mechanical removal of non-native fish, primarily trout, near the confluence of the Little Colorado River and the mainstream Colorado River. The area is prime humpback chub habitat as the endangered fish move between both rivers. The removal effort, using electro-fishing techniques, reduces competition by physically removing trout. Early indicators from last summer's work have shown positive results.

The initial portion of the experiment was conducted this year from January through March and resulted in removing 7,573 fish, with 6,703 of them rainbow trout. There were also 130 brown trout and 135 common carp removed.

"Now we will have to monitor to determine if reduced non-native numbers result in a benefit to the humpback chub. That's why it is called adaptive management. You try something, if it works, you can repeat or expand the process to achieve greater results. If it doesn't work, you move on and try something else," said Steve Gloss, a scientist with the U.S. Geological Survey.

The endangered humpback chub is one of eight native fish species that were once abundant in the 277-miles of river flowing through the Grand Canyon.

The humpback chub is a "big-river" fish that grows to 20 inches. It is superbly adapted to survive in the wild and turbulent Colorado River that had historic flows ranging from 500 to 300,000 cfs.

As with earlier releases, biologists and scientists will now collect needed data to see if, in fact, the experiment worked.

Regional News 04/21/05

Feds will referee Colorado River fight

Storm runoff ups ante for 7 states

Shaun McKinnon
The Arizona Republic

Winter storm runoff that should have eased fears of water shortages along the Colorado River has instead fueled new fighting among the seven states that use the river.

At issue is whether the states along the upper river - Colorado, Utah, New Mexico and Wyoming - can withhold water from the lower-river states of Arizona, California and Nevada, which benefited more from the winter storms.

What's really at stake isn't so much the water that flows downriver this summer - the storms ensured there would be no shortfall - but whether the seven states can agree on how to manage a resource that has steadily weakened under the pressures of growth and drought. advertisement

The federal government will be forced to settle the short-term question of how water from the river will be divided for the next six months. But fallout from that decision, expected by May 1, could sour longer-range discussions about the river's future and hurt Arizona's efforts to protect its supply during a drought.

"We've approached (the upper-river states) three times to get a consensus on this," said Herb Guenther, director of the Arizona Department of Water Resources.

"They've chosen to use it as bully pulpit against us. I think it's already kind of spoiled the atmosphere."

Representatives of the seven states will meet Tuesday in Las Vegas to discuss how much water should be released from Lake Powell downstream into Lake Mead this summer. They aren't expected to reach an agreement, leaving the final call to Interior Secretary Gale Norton.

Typically, the river's use is planned out one year in advance, from October to October, but because the drought had taken such a toll on Lakes Powell and Mead, the states agreed this year to revisit the numbers after six months. The two sides disagree on what the midyear numbers mean.

- The Upper Basin states say Powell, which is at 33 percent of capacity, needs help in recovering from the drought. They argue that Mead received extra water this year from the heavy winter runoff and want the secretary to reduce the water released from the reservoir downriver to Mead by 500,000 acre-feet or more, a reduction of about 6 percent compared with a normal year.

- The Lower Basin states say there's no reason to change the original plan because the upper river is set to receive more runoff than predicted last fall. Powell will rise by as much as 50 feet this spring and summer, they say, and won't need the extra protection sought by the upper-river states.

Both sides acknowledge that the drought has cut deeply into the West's water storage. Hydrologists say the river in 2005 should receive nearly normal runoff for the first time in six years, but by the end of the summer, Powell will still be less than half full and Mead will have settled just slightly above the half-full mark.

"From our perspective, we can see no reason why the secretary should make an adjustment when conditions are better than they were when the plan was agreed to by all the states," said Sid Wilson, general manager of the Central Arizona Project, which delivers Colorado River water to Phoenix and Tucson. "Colorado just seems hellbent on pushing those changes."

'Thinking about future'

The Colorado General Assembly has adopted a resolution calling on the Interior Department to reduce water deliveries from Powell, and state water managers are marshalling the other Upper Basin states to support that position.

"We're not thinking about this year, we're thinking about future years," said Eric Kuhn, general manager of the Colorado River Water Conservation District, which represents river users in 15 Colorado counties.

"This would give us more assurances down the road. We don't know what the future will bring."

Although it stores water for use by the Lower Basin states, Powell was built to help the Upper Basin states, which are required by the Colorado River Compact of 1922 to deliver water to the Lower Basin states each year. The Lower Basin states take their water from Powell, allowing the Upper Basin states to divert more of the river upstream.

Since Powell began operation more than two decades ago, the Upper Basin states have always released a minimum of 8.23 million acre-feet a year to the lower states. An acre-foot is 325,851 gallons, enough to serve one or two average households for one year.

But Upper Basin officials are now citing specific passages from the compact that say they are not bound to deliver that amount of water each year but rather a total of 75 million acre-feet over 10 years. Over the past 10 years, they say, total releases from Powell have topped 100 million acre-feet.

Extra water

The problem, those states suggest, is that the faster-growing lower states have grown accustomed to the extra water.

"In the long run, if things go dry again, the Lower Basin has a problem," Kuhn said. "It uses more water than it can rely on. The sooner the Lower Basin gets on to try to

address that problem, the better off we are." Lower Basin states are furious about what they describe as posturing by Colorado, which is fighting its own internal battles over how to meet increasing demands for water from the river.

"For the Upper Basin states to dig their heels in and demand some token reduction this year is distracting and is jeopardizing the long-term discussions we need to have," said Pat Mulroy, general manager of the Southern Nevada Water Authority. "This is all about posturing, and that's where the frustration sets in for the Lower Basin. This is a position we did not want to be in."

For Norton to withhold water based on the river's current condition would be difficult, Lower Basin officials say, because there are no immediate risks to water users or power producers.

"The midyear review was to see if conditions got worse," Guenther said. "They didn't. They got better, so there's no need to make an adjustment."

The dispute has slowed work on a plan to manage drought-related shortages on the river, although the Lower Basin states are prepared to submit a preliminary plan to Norton, who had set an April deadline. The Interior Department is now ready to begin work on the shortage plan with or without the states' involvement.

Arizona's interest in resolving supply-related issues is especially keen: If the Interior secretary was ever to declare a shortage on the Colorado, the Central Arizona Project Canal would lose its entire supply before any other user suffered. State officials are working to protect the CAP in case the drought deepens.

The Bureau of Reclamation will begin seeking public input next month and hopes to include as much from the river states as possible.

"We would definitely like to have a consensus from the seven states," said Bob Johnson, commissioner of the Bureau of Reclamation Lower Colorado Region. "We would prefer to hear them speaking with one voice. But the reservoirs are low, and even with a normal year, the drought's not over. We need to move ahead."

Regional News 04/27/05

States fail to agree on drought rules; Norton takes over

Feds to map river plan

By Jerd Smith, Rocky Mountain News

LAS VEGAS - Seven Western states failed to reach agreement Tuesday on how to manage the mighty Colorado River in times of drought, an impasse that means the federal government will begin crafting its own plan May 1.

"We've tried to come to a consensus, but it hasn't been possible for us to do that," said Larry Anderson, director of the Utah Division of Water Resources.

Anderson and more than 40 other water officials met in Las Vegas in a last-ditch effort to meet an April 30 deadline imposed by U.S. Secretary of the Interior Gale Norton. Norton wanted the states to come up with at least the rudiments of a drought-management plan for the river and its two main reservoirs - Lake Powell and Lake Mead.

A key issue has been the request by Colorado and three other states to hold more water in Lake Powell this year to help it recover from the drought.

But weeks of talks leading up to the final meeting Tuesday failed to deliver any consensus on how the river could be equitably shared if shortages arise, or whether releases from Lake Powell to Lake Mead should be reduced this year.

Norton will decide by the end of the week whether to alter releases from Lake Powell, but she plans to spend much of the next two to three years holding public hearings to build a federal drought-management plan for the river.

"The idea was that the states would develop some middle ground," said Tom Weimer, assistant secretary overseeing water issues at the U.S. Department of Interior.

"We clearly didn't get there. So we'll begin briefing the secretary tomorrow and we'll continue briefing her Thursday and Friday until she's prepared to make her decision."

Riding on Norton's drought-management plan are potentially historic new legal precedents in Western water law and millions in recreation dollars and electric power sales from Glen Canyon Dam at Lake Powell and Lake Mead's Hoover Dam.

Under a 1922 compact, Colorado River water is divided equally between the Upper Basin states, Colorado, Wyoming, Utah and New Mexico, and the Lower Basin states, California, Nevada and Arizona. Each basin gets 7.5 million acre-feet.

Last December, John Keys, commissioner of the U.S. Bureau of Reclamation, warned the seven states they needed to begin resolving long-standing differences to get at a potentially bigger issue: how some 25 million people who depend on the river can share its waters if chronic drought becomes the norm, as it has been for the past five years.

As part of the drought talks, the Upper Basin states sought a reduction of as much as 700,000 acre-feet in the amount of water released from Lake Powell this year to help it recover from the drought. The giant storage pond on the Utah-Arizona border is just 34 percent full, its lowest level since 1969.

If the lake drops too low, Colorado and the other Upper Basin states might have to deliver more of their own supplies to ensure that cities such as Phoenix, Las Vegas and Los Angeles get their fair share under the 1922 compact.

Such a situation, though unlikely, has Colorado water officials scrambling to figure out how they would cope with such a demand for extra supplies.

The headwaters of the Colorado River occur high in the Never Summer Mountains in Rocky Mountain National Park and supply about half the water used on Colorado's Front Range.

Colorado's General Assembly and the state's congressional delegation have also weighed in, asking Norton to protect Lake Powell's supplies until it can recoup some of its losses.

"We think it is definitely within her authority to make a modification in the release," said Randy Seaholm, a manager at the Colorado Water Conservation Board, who has been representing Colorado in the talks.

But officials from California and Nevada on Tuesday, though tight-lipped, made clear they were unwilling to go along with anything that would reduce their share of river water this year.

"We in the Lower Basin states believe the hydrologic conditions do not justify any change in the release," said Gerald Zimmerman, a representative from California.

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Regional News 05/03/05

Norton turns down proposal for Powell

Upper Basin states hoped to hold more water in reservoir

By Jerd Smith
Rocky Mountain News

Secretary of the Interior Gale Norton on Monday rejected a plea to hold more Colorado River water in drought-stricken Lake Powell this year, dealing a blow to the efforts of Colorado and three other states to shore up the giant holding pond on the Utah-Arizona border.

"It's disappointing, but I feel as if we got a very fair hearing from the secretary," said Russell George, executive director of Colorado's Department of Natural Resources.

Last December, Norton warned Western states that they must come up with a drought plan for managing the Colorado River and Lakes Powell and Mead or the federal government would develop a plan for them.

But last week the seven Colorado River basin states acknowledged that they could not reach a consensus on long-term drought issues or, in the short term, whether deliveries from Lake Powell should be reduced this year. That failure opens the door to creation of a federal drought plan for the river.

George and other Colorado water officials refused to class Norton's Lake Powell decision as a defeat, saying it was only the first round in what will become historic talks on how to manage the Colorado River in times when water is scarce.

"This thing is way too complex to be thinking in terms of winning or losing at this point," George said.

Even as she rejected the request to hold more water in Lake Powell, Norton said that she would review the situation again next year, in case the drought worsens and stored water supplies continue to drop.

About 25 million Americans rely on the Colorado River, from Wyoming to California. In Colorado, it supplies nearly half the drinking water for the Front Range, keeps snowmaking machines going from Winter Park to Vail, and irrigates peach orchards and wineries along Colorado's western border.

Under the 1922 Colorado River Compact, the river's water is divided equally between the upper basin - Colorado, Wyoming, Utah and New Mexico - and the lower basin states of Nevada, Arizona and California.

According to the compact, the Upper Basin gets to keep at least 7.5 million acre-feet of water annually and must deliver another 7.5 million acre-feet to the Lower Basin states.

In addition, the Upper Basin states deliver another 730,000 acre-feet from Lake Powell each year to help meet the Colorado River's obligation to Mexico, bringing total minimum deliveries from Powell to Lake Mead to 8.23 million acre-feet. Lower Basin states contribute water to Mexico, as well.

Until the current drought struck, enough water has been stored in Lakes Powell and Mead to ensure that Nevada, Arizona and California and Mexico get their share, even in dry years.

But if the reservoirs' stored supplies continue to shrink, greater pressure will be put on Upper Basin states to provide more.

Last fall, as worrisome forecasts showed storage at Powell continuing to shrink - it now stands at just 34 percent of capacity - the Upper Basin states asked Norton to slash deliveries to help the lake recoup water supplies lost to the drought.

But forecasts improved dramatically over the winter, showing that for the first time in five years Lake Powell would see above-average inflows.

"I don't think it's a devastating blow," Eric Wilkinson, manager of the Northern Colorado Water Conservancy District, said of Norton's decision. "But if this downward trend continues, we'll be asking her to do the same thing next year."

In Los Angeles, Dennis Underwood, manager of the giant Metropolitan Water District of Southern California, struck a conciliatory tone, saying the need to cooperate in the drought talks was more important than winning or losing the first round.

"This was an operational decision for 2005," he said. "This is the first time in history we've had the reservoirs where they are. We've never had to look at 'is there a better way to operate.' But there is no victory here."

In a letter to the seven basin-state governors on Monday, Norton restated her concern about the lingering drought and the need to develop new drought rules for the river to ensure that all seven basin states have adequate supplies.

Norton said Monday she wants the drought plan done in 30 months - by the end of 2007 - and she wants meetings to begin by May 31.

Norton's decision on Lake Powell is "understandable . . . but we'd hoped to keep more water in the Upper Basin," said Scott Balcomb, a Glenwood Springs water attorney who represents Colorado on the Upper Basin Commission and in talks among the seven basin states.

Norton's decision, however, didn't sit well with a Lake Powell boating enthusiast, one of thousands who live in Colorado.

"They had a chance to get some capacity in Powell and you'd have thought she'd be all for that," said Dave Dunder, of Grand Junction, part-owner of a houseboat. "So the water will keep dropping so all those folks in Arizona and California can keep their swimming pools full. It's not right."

Staff writer Ellen Miller contributed to this report.

Regional News 05/17/05

Water Wars Move Underground

Los Angeles Times

Cities seek to refill aquifers emptied by extensive pumping. But another agency claims control over reserves.

By Jia-Rui Chong, Times Staff Writer

Since Southern California was settled, communities have lived and died on their access to water, fighting mercilessly for their rights to pump it. Now, the focus has shifted as cities see the depleted underground aquifers as a potentially valuable resource.

A group of cities in southeast Los Angeles County, including Downey and Lakewood, are asserting their rights over the vast aquifers and hope to eventually use the porous sediments to store portions of their water supply. They believe they can save money by pumping imported water into the ground rather than pay for expensive water storage facilities and pipelines.

Water storage can be expensive: The Metropolitan Water District, the region's main water wholesaler, spent \$2 billion completing Diamond Valley Lake, a reservoir that holds 800,000 acre-feet of water and required flooding a valley in Riverside County. An acre-foot is enough water to supply two average families for a year.

"I could spend a lot of money, find land, build a pipeline to that land because there's no land around here, but it would be very expensive," said Desi Alvarez, the director of public works in Downey. "Why would I give up a relatively inexpensive resource right under our jurisdictional boundaries?"

But exactly who controls the valuable aquifers is a matter of dispute. The Water Replenishment District of Southern California also claims authority over what happens in the aquifers. The district was formed in 1959 because local agencies had drawn out so much water that the aquifers were dangerously low. It was charged with refilling the aquifers so that agencies with rights to the water could continue pumping.

Water district officials fear that cities or other groups with water rights, such as private water companies, want to use the fragile water system to generate revenue. They worry about the aquifers being leased out to the highest bidder or agencies that will distribute the water elsewhere. That, they said, could result in misuse of the system.

"It's like deregulating energy," replenishment district General Manager Robb Whitaker said. "You saw what happened. If people put water in whenever they want to put it in and we have no ultimate authority over what occurs, we'd be left to clean up the mess."

Aquifers form when water saturates loose layers of earth - sand and gravel in the Los Angeles Basin - that are separated by dense silt and clay. Under certain conditions, water percolates from the surface into these underground reservoirs. Some aquifers lie just below the surface and others spread out at a depth of about 1,000 feet. Cities and water agencies drill wells to recover the water.

Not all areas have aquifers. Bedrock underlies San Diego, for example, so not enough water can accumulate to supply the county.

In the Los Angeles Basin, much of the natural water had been drained from the wells by the 1960s. In the decades after that, no one really sought to use empty space in the aquifers.

But that changed a few years ago.

Voters passed ballot initiatives in 2000 and 2002, making millions of dollars available for local groundwater storage projects. Underground storage is attractive not just because of the lower costs but because less water evaporates than in a surface reservoir.

In southern Los Angeles County, geologists believe the 10 aquifers that spread underground from Manhattan Beach to Whittier could safely store 450,000 acre-feet of water. That's enough to fill more than half a million Olympic-sized swimming pools.

The region's main importer of water, the Metropolitan Water District, has already joined water officials in Orange County to slowly fill aquifers with about 60,000 acre-feet of imported water. In exchange for the storage space, the MWD used the bond money and its own construction funds to pay for new pipes to bring the water into the Orange County Water District's system.

The eight cities participating in the project will also get free wells so it is easier to draw the stored water. The cities could draw the water as soon as 2007, officials said.

Cities in Los Angeles County are now talking about reserving a portion - perhaps half - of the aquifers beneath their own communities.

They would use the space to capture additional storm runoff and store imported water, a move they said would save them the cost of contributing to big water storage projects.

In drier years, the cities would still have to import water from sources in Northern California and the Colorado River, among others, to put into storage. But they could take advantage of natural aquifers, instead of paying a water wholesaler to build its storage systems. With plenty of water in hand, the cities could also avoid surcharges the wholesalers sometimes add in times of drought.

Several cities said they had no immediate plans to sell off that storage space to other counties and funnel the money back into police departments or other city services.

But, Alvarez, of Downey, added: "I see nothing wrong with that."

LR in the News 06/02/05

Flaming Gorge test flow blamed for flooding crops

April Reese, Land Letter Southwest reporter

A test flow unleashed by the Bureau of Reclamation in late May to aid endangered fish in the Green River flooded farms along its banks, prompting an angry backlash from farmers and local government officials that may culminate in legal action.

The razorback sucker, humpback chub and Colorado pike minnow -- all listed under the Endangered Species Act -- have been in decline for decades, and biologists say Flaming Gorge Dam, completed in 1962 as part of the Colorado River Storage Project, is partly to blame.

But the Fish and Wildlife Service and the Bureau of Reclamation, which operates the dam, have come up with a plan to recover the fish while keeping the dam in place. The key, they say, may be experimental, increased flows from the dam that mimic historic flows on the Green River, which is fed by the free-flowing Yampa River in Dinosaur National Park. At the behest of FWS, BuRec launched a test flow in late May, allowing a

torrent of water to surge downstream for several days in hopes that the flows would help create sandbars and side channels, which serve as nurseries for the fish.

But officials in Uintah County, Utah, and some area farmers say the experiment, which boosted flows to 19,500 cubic feet per second near the confluence of the Green and Yampa rivers, flooded farmland and destroyed crops. Some farmers along the river have had to pull their irrigation pumps, said Mike McKee, a Uintah County commissioner.

"We have some real concerns about how this has affected farmers," McKee said. "To spend hundreds of thousands of dollars and have this kind of thing happen ... taxpayers should be pretty frustrated right now."

The county argues that a smaller test flow would have been just as beneficial to the fish. Their requests to ratchet down the flows went unanswered, McKee said.

"This whole flooding tragedy could have been avoided," McKee said.

But Beverly Heffernan, an environmental specialist at BuRec's Provo, Utah, office, said the test flows are no higher than flows during wetter years in the basin. In 1996, 1997 and 1999, flows exceeded 20,000 cfs -- less than the peak of the test flow.

"It seems bigger to everyone because we've had 6 years of drought," she said.

And the test flows are required under a 1992 biological opinion from the Fish and Wildlife Service that calls for boosting flows for at least a week every spring to help recover the fish, Heffernan added.

After receiving complaints from Uintah County, BuRec asked FWS for approval to decrease the flows, but the service said the flows had to be in keeping with the requirements of the biological opinion, Heffernan said.

Furthermore, without the dam in place, flows would be higher, she noted.

"There's a reason it's called a flood plain," she said. "They're saying we're causing an unnatural, high flow, but actually it's an unnatural low flow compared with what it would be like if the dam weren't there."

When asked why the county has allowed farming and development on the banks of the river, McKee said it's difficult to determine where to draw the line in a flood plain to protect property.

"The problem is, what is a flood plain -- is it 500 years, 100 years?" he said, referring to the frequency of floods that is often used to characterize a flood plain. "How far do you go?"

Uintah County likely will file suit against BuRec for losses incurred by farmers during the test flows, McKee said.

BuRec and FWS have gotten flack over the test flows from environmental groups as well, which say the influx of water is unlikely to help endangered fish.

"I'd like to see them doing something as positive as experimental flows are supposed to be to help recover fish," said John Weisheit, conservation director for Living Rivers in Moab, Utah, which has advocated for the removal of Flaming Gorge Dam.

Southwest reporter April Reese is based in Santa Fe, N.M.

Regional News 06/09/05

Water expert warns Colorado River shortages may be inevitable

ASSOCIATED PRESS

BOULDER, Colo. – Water shortages in the Colorado River are almost inevitable by 2011 and could force feuding Western states to cooperate on managing the river, an expert said.

"All the states are at risk," said Jim Lochhead, former executive director of the Colorado Department of Natural Resources. "And when all parties are at risk, there is potential for a mutually beneficial (resolution)."

Lochhead spoke Wednesday at a University of Colorado symposium on the river's problems.

A long drought has left Lake Powell and Lake Mead, the river's two major reservoirs, dangerously low. Abundant snow last winter will raise both reservoirs, but not enough to replace what the drought and a booming population have drained.

"We wiped out the bad year of 2004 by having a wet 2005," said Terry Fulp of the U.S. Bureau of Reclamation. "But there is still an impetus to get some agreement."

The 1922 Colorado River Compact divides the river's water between the Upper Basin states – Colorado, New Mexico, Utah and Wyoming – and the Lower Basin states – Arizona, California and Nevada. So far, the river has been able to satisfy the demand, but population growth is expected to outstrip the available water, officials said.

The Interior Department has begun writing a drought management plan for the river after the seven states failed to reach an agreement. The plan is expected to be finished by December 2007.

Regional News 06/16/05

Meetings to focus on Colorado River water pact

Comments will lead to seven-state sharing agreement

By Jerd Smith, Rocky Mountain News June 16, 2005

Federal water officials, hoping to break a seven-state impasse over a new drought plan for the Colorado River, will launch the first round of public meetings in Utah and Nevada next month on what such a plan should contain.

Late last year, federal officials warned the states that if they couldn't agree on a drought plan, the U.S. Bureau of Reclamation would do it for them.

"The drought has placed a lot of pressure on everybody," Bob Johnson, director of the Lower Colorado Region at the U.S. Bureau of Reclamation, said Wednesday. "Now decisions have to be made."

U.S. Interior Secretary Gale Norton has said she wants the water-sharing agreement finished by the end of 2007.

In April, the seven states that comprise the Colorado River Basin missed the deadline to come up with their own plan.

Today the stalemate continues as states from Wyoming to California contemplate a future of shrinking water supplies.

"Now it's who blinks first," said Herb Guenther, director of Arizona's department of water resources.

Tensions rose in May when Norton refused to hold more water in Lake Powell this year, as Colorado and others had requested.

Any new drought plan is likely to include triggers for determining when releases from Lake Powell to Lake Mead, the river's two main storage banks, can be reduced.

But that's something Arizona and other states have vigorously opposed because it means they would have to get by on less water.

Under the 1922 Colorado River Compact, the river's water is divided between the Upper Basin states - Colorado, Wyoming, Utah and New Mexico - and the three Lower Basin states - Nevada, Arizona and California.

Lake Powell holds extra water generated in the Upper Basin until it is needed farther downstream in Lake Mead. But if Lake Powell drops too low, Upper Basin states such as Colorado could be forced to cut back their own take from the river to ensure those farther south get their legal share. The river provides about half the water used on the Front Range.

In the past, there always has been enough extra water to satisfy growing demands on the river. But the recent drought has shown all of the states how difficult it is to manage when the river's supplies are short.

Water officials estimate that the Upper Basin states did without more than 400,000 acre-feet of Colorado River water - enough for more than 800,000 households - during the dry spell that began in 2000.

Even if the drought ends and there is a return to wetter weather, the need to provide drinking water to millions of new residents throughout the West will strain the river to the breaking point, water officials say.

The main problem: Writers of the 1922 compact believed the river produced, on average, nearly 17 million acre-feet of water, more than enough to supply the Upper Basin and Lower Basin with 7.5 million acre-feet each.

Now, water officials believe the river produces much less - from 13 million acre-feet to 14.5 million acre-feet.

"The river has been overdeveloped based on the water supply we now know is there," said Scott Balcomb, Colorado's representative on the Upper Colorado River Commission and a negotiator in the seven-state talks.

Last week, at a University of Colorado conference on the river, several Western water officials said the only way to break the deadlock is to find new water supplies, using such techniques as cloud seeding to produce more snow or desalination plants on the West Coast.

How to comment

Public hearings on the Colorado River Drought Plan:

- July 26: Henderson, Nev., 10 a.m to noon (PDT), Henderson Convention Center, 200 S. Water St.
 - July 28: Salt Lake City, 10 a.m. to noon, Hilton Hotel, 255 South West Temple St.
 - Officials will take written comments through Aug. 31 for the Lower Colorado region at Strategies@lc.usbr.gov, or by fax at 702-293-8156.
 - For the Upper Colorado region, the e-mail address is Strategies@uc.usbr.gov, or fax 801-524-3858.
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Regional News 06/21/05

APS dam removal releases Fossil Creek

Central Ariz. plant closures let stream flow again

Mary Jo Pitzl The Arizona Republic Jun. 19, 2005 12:00 AM

FOSSIL CREEK - It started as a trickle, a small finger of water stretching across a sunbaked slab of granite. But it had the force of a flood, heralding a historic event and the beginning of a new era for this central Arizona stream.

At high noon Saturday, Arizona Public Service Co. abandoned the dam that has held back Fossil Creek for nearly a century and let the water flow unabated. advertisement

It marks the first time in anyone's memory that an Arizona dam has been taken out of commission in the name of restoring a river. On Fossil Creek, the water had been diverted to power two hydroelectric plants run by APS.

"This represents a watershed event," said Andrew Fahlund, vice president for protection and restoration at American Rivers, a conservation group. "To do something like this in Arizona is extraordinary." It's extraordinary for a number of reasons, as speaker after speaker said during a creekside ceremony that marked APS' retirement of the Childs and Irving hydroelectric-power plants northwest of Payson.

"This is just another benchmark in the long history of Fossil Creek," said Jack Davis, president and chief executive officer of APS. When future generations come to Fossil Creek, he said, "they'll remember that short period of time - 100 years - when Fossil Creek was used for economic development."

"APS gave Fossil Creek a gem," said Duane Shroufe, director of the Arizona Game and Fish Department. The creek is one of the few perennial streams in Arizona, running even on hot summer days. The water is rich in calcium carbonate, which will grow into travertine formations under the force of the increased water flow, creating pools and basins reminiscent of those found at Havasu Falls.

Hiking enthusiasts will have a 14-mile waterway to follow on hikes along the tree-lined stream, and wildlife is expected to be drawn to the once-again flowing creek.

Fossil Creek also is on the brink of becoming a prime spot for native fish, such as the humpback chub, the speckled dace and the longfin minnow.

State and federal fishery officials airlifted native fish to ponds along the creek last fall, and the ensuing months have been productive.

"There's lots of little fish that spawned," reported Dave Weedman, an aquatic-habitat specialist with Game and Fish.

But don't grab your fishing pole just yet. Game and Fish wants to give the fish at least two years to establish a healthy population before opening the area to anglers.

Saturday's event was highlighted by Davis and representatives of six other groups flipping a symbolic switch to turn "off" the dam.

This triggered dam operators to open the gates on the dam, several miles upstream. Two hours later, the first trickles of Fossil Creek flow reached the grounds of the Irving power plant. Plant operators figured it would take four hours for the full force of the 43 cubic-feet-per-second flow to reach the plant, and estimated it would raise the creek 10 inches.

Davis said the shutdown of the only two hydropower plants in its network wouldn't cause a ripple in APS' power supply. Combined, the plants were producing less than 1 percent of APS' total electricity. The return of water to Fossil Creek came about through an unusual alliance between the utility company, various environmental organizations and the Yavapai-Apache Nation.

In 1999, APS decided to drop plans to recommission the power plants.

Tribal Chairman Jamie Fullmer fought back tears as he contemplated the significance of Saturday's event.

"To us, water is sacred," Fullmer said. "And with the water now flowing, it will bring back a new energy to our community in the Verde Valley and to Arizona." Just as the power plants were key to Arizona development, their decommissioning also plays a big role, he said.

The Childs plant was built in 1909, Irving in 1916. Both were powered by an above-ground pipeline that channeled the force of Fossil Creek to produce power for central Arizona mining operations. Later, some of the power was directed to Payson and Phoenix.

Robin Silver of the Center for Biological Diversity put in a plug for the National Environmental Policy Act, which he said gave environmental groups the right to speak out against continued damming on the creek. The law is currently the subject of congressional scrutiny, including a public meeting Saturday in Show Low.

"The two laws that made this happen are being destroyed," he said referring to NEPA and the Endangered Species Act, which protects the habitats of endangered plants and animals.

The creek's restoration puts more pressure on officials with the Coconino and Tonto national forests, where the creek runs, to manage the people that are expected to visit the area.

Long-term planning will start soon, said Nora Rasure, the Coconino superintendent. And in the short term, some hiking trails may be closed as APS deconstructs the power plants.

The utility plans to leave a section of the flume and one or two structures at the Irving plant; everything else, including a new temporary bridge, will be dismantled and removed.

Perhaps the looming threat to Fossil Creek is that it will be loved to death, proponents say.

But U.S. Sen. John McCain, R-Ariz., plans to introduce legislation that would include Fossil Creek in the Wild and Scenic Rivers system, providing federal protection and dollars.

Reach the reporter at maryjo.pitzl@arizonarepublic.com or at (602) 444-8963.

LR in the News 07/14/05

Scientists investigate Colorado River paleoflood deposits

The Times-Independent
Moab, Utah

Fieldwork for Phase 2 of a Living Rivers uranium waste research project was recently completed along the banks of the Colorado River. Living Rivers is a Moab-based non-profit river restoration organization that is conducting the study with a grant from the Department of Energy's Citizens Monitoring and Technical Assessment Fund.

This project was completed with the cooperation of three professors of geomorphology at the University of Arizona, namely John Dohrenwend, Victor Baker and Noam Greenbaum. The purpose of this work is to provide sound scientific evidence to describe the nature of past floods along the Colorado River and how such floods, if they occur again, could potentially lift the pile into the river, thereby causing serious contamination problems for all downstream users for generations to come.

Dr. John Dohrenwend, who assessed that the Colorado River was migrating towards the Moab Mill site, conducted the first study last winter. The results of Dohrenwend's findings were published with much detail in the Times-Independent.

See: [Times-Independent.pdf](#) [7.2 MB File]

The second study was conducted in the last four weeks under the direction of Dr. Noam Greenbaum, who is currently on a sabbatical at the University of Arizona. Dr. Greenbaum is a professor at the University of Haifa, Israel, and an expert in the study of paleofloods.

A paleoflood refers to a past or ancient flood event that occurred prior to the time of human observation or direct measurement by modern hydrological procedures. Such floods usually leave evidence along the margins of watercourses that include sediment deposits, driftwood lines, and buried organic material.

In late March an excellent study site was discovered across the river near the BLM boat launch along Highway 128 near milepost 10.3. The site included surface driftwood, imbricated rocks (rocks stacked like shingles by moving water), and high water flood deposits.

"For the purposes of this study it was critical to find a pristine site close to the Moab Mill downstream of the Dolores River," said Dr. Greenbaum. "To discover such a potentially productive site was indeed a very fortunate occurrence for us."

The site is located in Arches National Park and the permit to begin investigative work was issued by the park superintendent. During the excavation of 14 test pits (up to 2 meters deep), which were dug by hand by the staff of Wildland Scapes, a certified archeologist was present to ensure that no cultural properties were jeopardized at the work stations – which fortunately was the case.

Of the 14 pits that were carefully examined, described and sampled, 13 pits provided evidence of several large floods that have occurred on the Colorado River. The findings in the pits include also four samples of organic material that will be analyzed by the University of Arizona for Carbon 14 radiometric dating. These samples will provide ages of at least 4 paleofloods. Additionally, sediment samples were also collected to undergo another dating process called Optically Stimulated Luminescence.

Another phase of the second project included measuring the river geometry including 25 cross-sections, longitudinal profile and elevations of flood deposits with a total station – an instrument that uses a laser range finder to accurately record the maximum stages of these historic floods. Approximately three miles of the Colorado River segment was sufficiently measured, starting downstream from Sandy Beach.

Said Dr. Greenbaum on the extent of the flooding, "We hope to produce a public report of our findings this fall. In the meantime, we feel confident in our preliminary findings to conclude that part of the floods we are currently analyzing were much bigger than the historic flood of 1884, which was measured at Loma, Colorado at a discharge of 125,000 cubic feet per second."

The final report will be submitted to all the management agencies that utilize the resources of the Colorado River, especially the Department of Energy as it relates to the mitigation of the Moab Mill tailings pile. It is the intention of this report to provide information to aid the DOE concerning their pending Record of Decision and to encourage Congress to provide the necessary funding to move the pile in a timely manner. This report should also provide the people of Moab and other settlements along the Colorado River a long-term and more reliable flood frequency analysis to improve flood risk assessment for any engineering design along the Colorado river.

"What is really exciting about this project was the filling of a scientific void through the initiative of citizens of Moab and Grand County. This study will in turn benefit all the people downstream who depend on the Colorado River for sustenance," says John Weisheit who is the conservation director at Living Rivers and the Colorado Riverkeeper of the Waterkeeper Alliance.

Says Professor Victor Baker, "We thank the citizens of Moab for their persistence to get this work done. It is our hope that Dr. Greenbaum's study will initiate further funding to investigate the paleoflood deposits of the Green and San Juan rivers as well. By doing this, agency managers will have much needed information to safeguard public resources and private property along the Colorado River."

LR in the News 07/25/05

Two-hour comment period on river set up

LAS VEGAS SUN

The federal government is providing two hours Tuesday for Southern Nevada residents to contribute their thoughts toward what ultimately would be a new policy governing shortages along the Colorado River, the source of 90 percent of Southern Nevada's drinking water.

The Interior Department and the Bureau of Reclamation are working to design rules to govern how the seven states along the Colorado River would share the pain from cuts to the river resource if the volume of water in the river continues to fall.

The impetus for the rule-making process has been more than five years of drought that caused water supplies in the river to drop to about half of what it has been in wet years.

Although last winter's relatively wet season helped the Colorado River recover somewhat, the volume is still just 56 percent full. Regulators worry that an extension of the drought could require cuts for the states that use the river water, among them Nevada, Arizona and California.

Before drafting the rules for "shortage criteria," the Bureau of Reclamation is working to define how the rule-making process should go forward. The meeting from 10 a.m. to noon at the Henderson Convention Center, 200 S. Water St., is one of the first steps toward setting the process. A second meeting will be Thursday in Salt Lake City.

People will be able to submit written or verbal comments at the public meeting.

Robert Walsh, a bureau spokesman, said despite the narrow, two-hour period for the public meeting, people will have ample opportunity to comment.

"This is a scoping process," he said. "We have left that period open to the end of August. People can send us a letter. They can fax us information. They can send us e-mails. There's full opportunity to participate even if they can't attend the meetings."

As the policy is constructed over the next several years, there also will likely be other public meetings, Walsh said.

"There will probably be other opportunities for input and comment," he said.

One group that promises to attend the two-hour meeting is Living Rivers, which is dedicated to conserving the Colorado River. The group is probably best known for advocating the removal of Glen Canyon Dam, which spans the river from Utah to Arizona and forms Lake Powell.

Although Nevada and federal water officials have said Lake Powell has been a critically important upstream reservoir, Living Rivers members argue that Lake Powell has led to an unsupportable loss of water from the Colorado River system because of evaporation.

The main concern of the group is that the two-reservoir system with Lakes Powell and Mead is contributing to the demise of endangered species along the river.

"The Grand Canyon ecosystem is falling apart," said John Weisheit, Living Rivers conservation director. "They are sacrificing the Colorado River, is what they are doing."

Doug Hendrix, a spokesman for the Bureau of Reclamation's division that manages the upper Colorado River, including Lake Powell, said the upcoming meetings will not address the long-simmering debate over Glen Canyon Dam. Hendrix noted that operation of the dam and Lake Powell is congressionally mandated "for the long term use by the states that depend on that water."

He said the upstream reservoir with Lake Mead have been very important in regulating the water supply on the river. Southern Nevada and its neighbors have had a reliable source of water despite severe drought, he said.

"They have certainly proven their worth over the last five consecutive years of drought," Hendrix said. "That's what they were designed to do."

The Southern Nevada Water Authority, the water wholesaler for the region, also will have officials attending the meeting, said Vince Alberta, Water Authority spokesman.

He said the economies of all seven basin states, from Wyoming to California, depend on effective management of the river.

"The primary objective in developing these guidelines must be the conservation of the water supply, consistent with the purposes for which Mead and Powell were authorized by Congress," Alberta said.

For information about the development of strategies to manage shortages in Lake Mead and Lake Powell, call Bureau of Reclamation at 293-8156.

LR Press Release 07/25/05

The One-Dam Solution: Hoover Dam alone the solution for managing dwindling Colorado River water.

Report calls for decommissioning Glen Canyon Dam as the primary action needed to reduce current and future economic and ecological impacts of dam operations to the Southwest.

Contact:

John Weisheit - (435) 259-1063/Mobile: (435) 260-2590

David Haskell - (928) 567-9873

As the Bureau of Reclamation begins developing plans for re-operating the nation's two largest dam and reservoir complexes with public meetings at Las Vegas and Salt Lake City this week, a new report released by Living Rivers reveals that Southwestern water users and the ecological health of the Colorado River would both be better served if one dam were removed.

"Hoover and Glen Canyon Dams may have been icons of 20th century civil engineering, but continuing to operate them in their present fashion is wasting water that could support more than six million people. In addition, Glen Canyon Dam is devastating the ecological integrity of the Grand Canyon and is creating a dam safety problem due to advancing sedimentation in Lake Powell," says John Weisheit, Living Rivers conservation director.

The analysis reveals that increased water use and decreasing supplies raise questions about the need for both dams, especially in light of their tremendous evaporation losses. The report concludes that it would be more efficient to eliminate Glen Canyon Dam from the system and utilize Hoover Dam and adjacent underground storage to capture the limited amounts of surplus water that may be available in the future.

Key findings of the 24-page The One-Dam Solution include:

More efficient water storage strategies are needed.

When Glen Canyon Dam was built, nearly 2.6 million acre feet (MAF) of surplus water flowed into Lake Powell annually, allowing the reservoir to fill in 17 years. However, increasing demand upstream has nearly eliminated these reserves. Demand has risen 100 percent since the dam was built and is projected to increase another 23 percent by 2020--placing demand well above the rivers' 13.5 MAF average annual flow.

Since 1979 there have been warnings that the Colorado River would fail on the supply-side because 11 percent more water has been allocated than the river can historically provide. Even more problematic is that Department of Energy research forecasts that climate change will cause Colorado River flows to decline 18 percent by 2040.

Precious water is being lost from the system

On average, Lake Powell and Lake Mead lose 1.3 MAF of water annually to evaporation, nearly ten percent of the river's annual flow.

It was not until the Autumn of 2004 that Lake Powell's storage actually factored into the water usage of people downstream. Prior to this time it caused the loss of 36 MAF due to evaporation and to seepage into the surrounding sandstone. Underground Storage should be more widely utilized

Depleted groundwater aquifers along the Colorado River represent a storage solution that could eliminate much of the water now being lost. In California and Arizona alone it is estimated that suitable sites containing a total of 41 MAF of storage are available along the system, and potentially another 46 MAF nearby. Aquifer recharge infrastructure in place now have the capacity to recharge 1.4 MAF of Colorado River water annually.

There is one dam too many in the Southwest desert.

Removing Glen Canyon Dam from the system, using Hoover Dam to capture annual flows while expanding groundwater storage could recover 810,000 acre feet annually now being lost to evaporation. This is enough water to support 1.6 million households of four people each.

The Destruction of Grand Canyon Resources must be stopped.

More than \$200 million has been spent in failed efforts to halt the demise of Grand Canyon National Park's river ecosystem due to the impacts of Glen Canyon Dam. Four native fish are now extinct, one is in jeopardy and another is of special concern. Glen Canyon Dam has trapped the sediment necessary to maintain habitat and beaches for wildlife and recreation, as well as the stabilization of archeological sites.

Accumulating Sediment Presents a Serious Looming Problem.

Sediment is a major unresolved problem threatening the long-term operations of both Hoover and Glen Canyon Dams. Ultimately, sediment will have to be removed from one or both of these reservoirs. Removing sediment from Lake Mead rather than Lake Powell is the most feasible and least expensive likely alternative. While original estimates projected that sediment would not effect the safe operations of Glen Canyon Dam for another 60 years, scientists now warn that major problems could occur sooner.

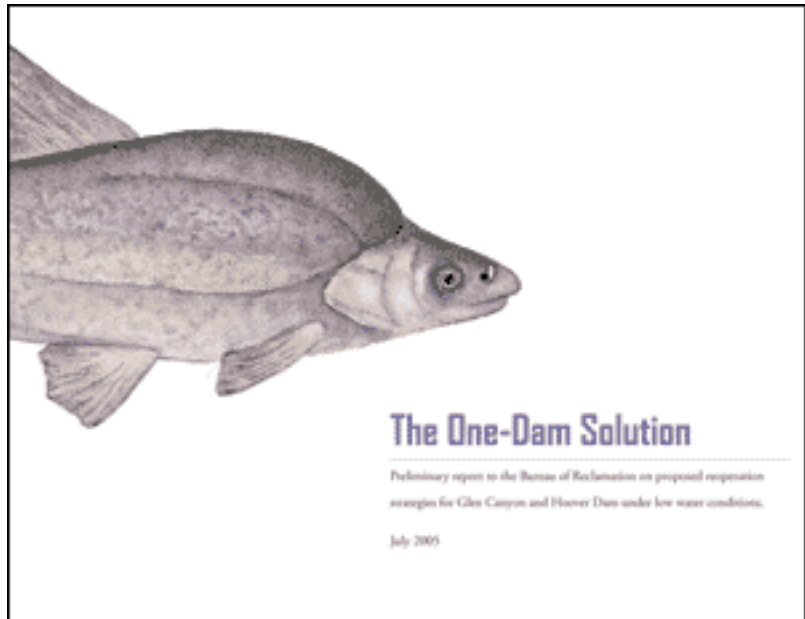
Hydropower and Recreation are Incidental Benefits

Lower reservoir levels have already resulted in reducing Glen Canyon's power production by 40 percent. This loss has been seamlessly absorbed elsewhere in the energy market. The same is true of recreation, which at Lake Powell has dropped 50 percent in the past 15 years. Such uses were deemed "incidental" to water management when these dam were authorized, and should be treated similarly as new management strategies are developed.

"There will be no efficient solution to managing the growing crisis in Colorado River water management without seriously rethinking how these dams are used, or not," adds Weisheit. "And when doing so, it's clear than when it comes to saving precious water, and restoring Grand Canyon in the process, one dam is better than two."

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[Click here](#) to download a pdf of *The One-Dam Solution*: Preliminary report to the Bureau of Reclamation on proposed re-operation strategies for Glen Canyon and Hoover Dam under low water conditions



LR Testimony 07/25/05
The One-Dam Solution

[This report](#) by Living Rivers calls for decommissioning Glen Canyon Dam as the primary action needed to reduce current and future economic and ecological impacts of dam operations to the Southwest.

The One-Dam Solution is supported by a growing list of [national and international non-profit groups](#).

The analysis reveals that increased water use and decreasing supplies raise questions about the need for both dams, especially in light of their tremendous evaporation losses. The report concludes that it would be more efficient to eliminate Glen Canyon Dam from the system and utilize Hoover Dam and adjacent underground storage to capture the limited amounts of surplus water that may be available in the future.

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Boulder City, NV 89006-1470

Mr. Rick Gold
Regional Director
Bureau of Reclamation, Upper Colorado Region
Attention: UC-402
125 South State Street
Salt Lake City, Utah 84318-1147

Dear Mr. Johnson & Mr. Gold,

Living Rivers, Colorado Riverkeeper, and the 144 undersigned organizations submit the following report, The One-Dam Solution, as scoping comments for the development of management strategies for operations at Lake Powell and Lake Mead, on the Colorado River, under low reservoir conditions.

With current demand for Colorado River water nearly at the river's historical annual flow of 13.5 million-acre feet (MAF) and rising, and government-sponsored scientists anticipating average annual flows to decline 18 percent by 2040, the prospect of ongoing low water conditions for Colorado River reservoirs is a near certainty. The average flow of 60 percent into the system for the past six years is firm evidence of this.

For more than 25-years, government scientists and administrators have warned that shortages would be occurring now. This action is the first to reexamine the flawed operational strategies that have been in place as far back as 1922 when the Colorado River Compact allocated 11 percent more water than the Colorado River has to give.

Reexamining these two reservoirs is critical, as they constitute more than two-thirds of the system's storage capacity, which with declining inflows and increased demand are proving excessive.

Meanwhile, these two reservoirs can cause the loss of upwards of ten percent of the river's average annual flow due to evaporation—valuable water for critical habitats and water users downstream.

Furthermore, the challenges facing the future operations of these reservoirs go beyond water allocation and storage inefficiencies. Sediment entering Lake Powell will eventually compromise Glen Canyon Dam's safety. Despite recent warnings that this could happen sooner than the 40-year-old estimate of 2060, there has been no comprehensive monitoring or analysis conducted to address this inevitable problem.

Lastly, despite more than \$200 million already spent, no gains have been made to restore the critical habitat for endangered species in Grand Canyon National Park impacted by Glen Canyon Dam's operations. The mandates of the Grand Canyon Protection Act and the Endangered Species Act in particular are being ignored to maintain Lake Powell even though it is proving to be both wasteful and unnecessary for water storage.

It is therefore critical that the Bureau of Reclamation broadly reexamine the operations of these facilities in accordance with preparing an Environmental Impact Statement to address the following:

- 1) Pursue transfers of Lake Powell and Lake Mead storage to groundwater aquifers.
- 2) Develop a sustainable sediment management program for Lake Powell and Lake Mead.
- 3) Determine the costs and benefits of decommissioning Glen Canyon Dam to restore natural flows through Glen and Grand Canyons.
- 4) Identify new water allocation guidelines to reflect the amount of water the Colorado River actually provides, how it should be distributed and what amounts are needed to protect critical habitats in Grand Canyon and elsewhere.

A water management crisis is looming on the Colorado River. The federal government, as Water Master, has the responsibility to help avert this. Most of the issues addressed in the attached report are not new, but continuing to ignore them will only worsen the impacts once the crisis arrives.

Thank you for the opportunity to submit these comments. We look forward to assisting the Bureau of Reclamation in developing this Environmental Impact Statement concerning the protection of water resources from the Colorado River in times of shortage.

Sincerely yours,

John Weisheit Conservation Director, Living Rivers Colorado Riverkeeper

Attachment: [The One-Dam Solution](#)

Submitted July 26, 2005 at Henderson, Nevada

On behalf of the following groups:

A Critical Decision
Alabama Environmental Council
Alaska Coalition
American Wildlands
Animas Riverkeeper
Appalachian Forest Coalition
Audubon Society of Greater Denver
Ballona Institute

Black Warrior Riverkeeper
Blackwater/Nottoway Riverkeeper
Bluewater Network
Boulder Regional Group
Buckeye Forest Council
Californians for Western Wilderness
California Save Our Streams Council
Casco Baykeeper
Castle-Crown Wilderness Coalition
Center for Biological Diversity
Choqueyapu Riverkeeper
Citizens of Lee Environmental Action Network
Citizens Progressive Alliance
Coalition for Jobs and the Environment
Coastal Law Enforcement Action Network
Cold Mountain, Cold Rivers
Coloradans for Utah Wilderness
Colorado Plateau River Guides
Colorado White Water Association
Columbia Riverkeeper
Conservation Northwest
Coosa River Basin Initiative
Devil's Fork Trail Club
Dogwood Alliance
Earth Action Network
Ecology Center
Electors Concerned about Animas Water
Endangered Habitats League
Erie Canalkeeper
Flagstaff Activist Network
Forest Guardians
Forest Watch
Forests Forever
Foundation for Global Sustainability
Four Corners School of Outdoor Education
Free the Planet
Friends of Living Oregon Waters
Friends of the Animas River
Friends of Blackwater Canyon
Friends of the Earth
Friends of the Eel River
Friends of the Estuary at Morro Bay
Friends of Hurricane Creek
Friends of the Milwaukee River
Friends of the Nanticoke River
Friends of Yosemite Valley

Gifford Pinchot Task Force
Glen Canyon Institute
Goods From The Woods
Grand Canyon Private Boaters Association
Grand Riverkeeper
Great Egg Harbor Watershed Association
Great Old Broads for Wilderness
Greenaction for Health and Environmental Justice
Green Delaware
Green Party of Utah
Green Party of York County
Hells Canyon Preservation Council
Hudson Riverkeeper
Hurricane Creekkeeper
Indiana Forest Alliance
Inland Empire Waterkeeper
International Rivers Network
International Society for Preservations of the Tropical Rainforest
Johnson County Green Party
Jumping Frog Research Institute
Kern Valley River Council
Kettle Range Conservation Group
Land Institute
London Canalkeeper
Lone Tree Council
Los Alamos Study Group
Louisiana Bayoukeeper
Lower Neuse Riverkeeper
Maricopa Audubon
Milwaukee Riverkeeper
Montana River Action
Morava Riverkeeper
National Organization for Rivers
National Water Center
New Riverkeeper
New River Foundation
Northwest Rafters Association
Northwoods Wilderness Recovery
Neuse River Foundation
Ogeechee-Canoochee Riverkeeper
Orange County Coastkeeper
Oregon Natural Desert Association
Outdoor Adventure River Specialists
Outward Bound West
Patapsco Coastkeeper
Patrick Environmental Awareness Group

Puerto Rico Coastkeeper
Raritan Riverkeeper
Red Rock Forests
Restore: The North Woods
Ridgeline & Open Space Coalition
River Runners for Wilderness
Riverhawks
Rocky Mountain Peace and Justice Center
Russian Riverkeeper
Sacramento River Preservation Trust
Salt Creek Watershed Network
San Diego Coastkeeper
San Luis Obispo Coastkeeper
Santa Monica Baykeeper
Satilla Riverkeeper
Save the Illinois River
Siskiyou Project
Snake River Alliance
South Riverkeeper
South Yuba River Citizens League
Southern Appalachian Forest Coalition
Southern Utah Wilderness Alliance
Spirit of Sage Council
Swan View Coalition
Taking Responsibility for the Earth and Environment
Taxpayers for the Animas River
The Clinch Coalition
The River Project
Umpqua Watersheds
Upper Coosa Riverkeeper
Upper Neuse Riverkeeper
Ventura Coastkeeper
Virginia Forest Watch
Waterkeepers of Australia
West/Rhode Riverkeeper
Western Lake Erie Waterkeeper
Western Lands Project
Western Watersheds Project
Wetlands Action Network
Wild South
Wild Virginia
Wild Wilderness
Wilderness Watch
Wildlaw

LR in the News 07/26/05

Future of Colorado River subject of meeting

Utah environmental group seeks dismantling of Glen Canyon Dam, proposes pumping reserve water into aquifers

By HENRY BREAN LAS VEGAS REVIEW-JOURNAL

The Bureau of Reclamation will hold a public meeting in Henderson today on the future of the Colorado River, and a Utah environmental group plans to be there to call for an end to North America's second largest man-made reservoir.

Moab-based Living Rivers wants the federal government to tear down Glen Canyon Dam and allow Lake Powell to drain downstream, a move the group argues would save water and revitalize the Grand Canyon.

"We've got to do something because it's obvious the Colorado River doesn't have any more to give," said John Weisheit, Living Rivers conservation director.

But state and federal water officials insist the dam and the reservoir behind it are far too important to simply dismantle.

"The groups out there are free to have their own suggestions and their own opinions, but from the bureau's perspective, it is not an issue we have under consideration," said Doug Hendrix, spokesman for Reclamation's Upper Colorado Regional Office. "The intent of the reservoir is to provide long-term carry-over storage for Colorado River water users."

Lake Powell has served that role well in recent years, said Vince Alberta, spokesman for the Southern Nevada Water Authority.

"The value of Lake Powell has never been more significant than over the last six years, when the Colorado River has been dealing with the worst drought on record," Alberta said.

"Without Lake Powell, Lake Mead would have been pretty close to empty before this in-flow year," Hendrix said.

Today's meeting is scheduled for 10 a.m. to noon at the Henderson Convention Center on Water Street. The bureau will hold a second meeting from 10 a.m. to noon Thursday in Salt Lake City.

Reclamation officials are seeking public input as they prepare to consider new management strategies for Lake Mead and Lake Powell, where water levels have dropped in the face of drought and increased demand by water users.

Interior Secretary Gale Norton has called on the Lower Colorado River Basin states of Nevada, Arizona and California and the upper basin states of Colorado, New Mexico, Utah and Wyoming to adopt new management strategies for the lakes.

Norton has also directed the states to agree for the first time on rules for dividing a shortage on the river.

She wants both issues decided by the start of 2007, or the federal government will impose a solution of its own.

About 90 percent of Southern Nevada's drinking water comes from the Colorado River.

In a 24-page report titled "The One-Dam Solution," Living Waters argues that decommissioning Glen Canyon Dam is necessary to restore natural habitat along the Colorado and protect wildlife, recreation and cultural resources within the Grand Canyon.

The move also would save water, since about 6 percent the Colorado River's annual flow is lost to evaporation and seepage from Lake Powell, which straddles the Utah-Arizona border at the northeastern end of the Grand Canyon.

Instead of storing water in the giant, open-air reservoir, the Living Rivers report released this week recommends pumping the water into depleted groundwater aquifers along the Colorado River, where it could be stored with comparatively little evaporation.

According to the report, there is enough aquifer space in California and Arizona alone to store almost twice as much water as Lake Powell can hold when it is full.

But Alberta called the Living Rivers plan "cost prohibitive."

"The spike flows on the Colorado River would make it extremely difficult to make an artificial recharge system large enough to accommodate the volume of water over the run-off period," he said. "Lake Powell has risen more than 50 feet over last few weeks alone."

One way or another, Glen Canyon Dam will not last forever, Weisheit said. Unless something is done, silt carried by the river will build up at the base of the dam until it endangers the structure.

"This is going to happen anyway," Weisheit said of losing the dam. "Why are we putting this off?"

The Bureau of Reclamation will accept public input through Aug. 31 on how the Colorado River should be operated during low reservoir conditions.

Comments can be sent by fax to 702-293-8156, by e-mail to strategies@lc.usbr.gov, or by surface mail to Regional Director, Bureau of Reclamation, Lower Colorado Region, Attention: BCOO-1000, P.O. Box 61470, Boulder City, NV 89006-1470.

LR in the News 07/26/05

Draining Lake Powell not an option, federal water officials say

By KEN RITTER
ASSOCIATED PRESS

HENDERSON, Nev. (AP) - Decommissioning Glen Canyon Dam and draining Lake Powell is not an option for managing the Colorado River during years of drought, federal officials said Tuesday.

"Our direction from Congress has been, 'Don't study that,'" Terry Fulp, Bureau of Reclamation Lower Colorado area manager, said of a proposal by a Moab, Utah-based environmental advocacy group.

Millions of gallons of water lost to evaporation could be saved by removing the dam in Page, Ariz., the Living Rivers group said in a report outlined for bureau officials.

Water managers took public testimony Tuesday as part of Interior Secretary Gale Norton's command to establish rules to limit interstate squabbles while managing the river during shortages.

A 1922 agreement allocating Colorado River water does not specify how it should be shared during drought. Norton in May rejected a request by four states in the river's upper basin - Colorado, Utah, Wyoming and New Mexico - to reduce releases of water from drought-depleted Lake Powell to more quickly refill the reservoir.

The decision was seen as a victory for California, Nevada and Arizona - three lower basin states that rely on allocations from the downstream Lake Mead reservoir. But Norton made it clear she wanted the states to find a way to share the water without federal involvement.

"This boils down to how we deal with droughts in the future," said Ken Albright, an official with the Las Vegas-based Southern Nevada Water Authority who said he was speaking for the seven Colorado River basin states. "We'll do it, or they'll do it for us."

"Today we have no answers," Fulp said. "We're only trying to get questions and comments about where we're headed."

Another session is scheduled Thursday in Salt Lake City.

The information-gathering process may lead to one or more environmental studies before yielding a December 2007 report, Fulp said.

Nine people spoke Tuesday at the Henderson Convention Center. Some acknowledged the rapid growth of cities such as Denver, Salt Lake City, Albuquerque, Las Vegas and Phoenix was increasing pressure to rewrite river allocation rules drawn up decades ago to serve agricultural needs. Mexico also has a stake in Colorado River flow south of the border.

"You're basically going to be in permanent drought," said Michael Jackson, a lawyer representing a farm family in California's Imperial Valley. "There's not going to be water to fill those reservoirs because of demand."

David Weisheit and David Haskell, Living Rivers officials, said they accelerated the release of a report calling for the decommissioning of the Glen Canyon Dam to coincide with the Bureau of Reclamation review.

They contended that lakes Powell and Mead, the largest of the more than 40 reservoirs in the Colorado River basin, lose 1.3 million acre-feet of water a year to evaporation - or about 10 percent of the annual river flow. An acre-foot equals 325,851 gallons, enough to serve one or two households for one year.

Haskell said capturing water at upstream reservoirs or letting it seep into the ground to recharge underground aquifers would be more efficient.

Rapid silt buildup also could render the Glen Canyon Dam ineffective faster than builders projected, they said.

The dam, which they said contributes to ecological damage in the Grand Canyon downstream, was completed in 1963. Lake Powell, when full, covers 266 square miles, mostly in Utah.

"Somebody's got to be looking out for the future," Haskell said.

On the Net: U.S. Bureau of Reclamation: <http://www.usbr.gov>

Living Rivers: <http://www.livingrivers2.org>

LR in the News 07/30/05

Draining of Lake Powell urged

Group cites loss to evaporation

The Arizona Republic

By MARK THIESSEN
Associated Press Writer

SALT LAKE CITY (AP) - A Utah environmental group on Thursday renewed its call for Glen Canyon Dam to be decommissioned and Lake Powell drained to stop the massive yearly evaporation of stored Colorado River water, saying there is a better use for it in the water-starved West.

"We believe 800,000 feet of water could be available to the lower basin," said John Weisheit, with the Moab-based Living Rivers group. "We think that is a significant amount of water."

The group issued a 24-page report - titled the [One-Dam Solution](#) - this week ahead of two federal Bureau of Reclamation meetings seeking comment on plans to manage Lake Powell and Lake Mead during drought.

By having only Hoover Dam in Nevada capture water and using extensive underground storage, enough water could be saved to support 1.6 million households of four people each, Weisheit said at Thursday's meeting here.

When Weisheit spoke at a similar meeting Tuesday in Henderson, Nev., he was told the bureau has been directed by Congress not to study that.

"Living Rivers thinks it's highly undemocratic that we are not allowed to discuss and debate the study of the facility that uses public money," Weisheit said Thursday. "If Glen Canyon Dam is needed, the studies will prove that. If it is not, then that will be the case, too, and we should let science decide what is best for the resources of the Colorado River."

There was no debate Thursday as water managers only took testimony for review. More hearings may be held before the bureau's management report is issued in December 2007.

This week's meetings were part of Interior Secretary Gale Norton's command to establish rules to limit fights among states while managing the river during shortages. A 1922 agreement allocating Colorado River water does not specify how it should be shared during drought.

Norton in May rejected a request by four states in the river's upper basin - Colorado, Utah, Wyoming and New Mexico - to reduce releases of water from drought-depleted Lake Powell to more quickly refill the reservoir.

The decision was seen as a victory for California, Nevada and Arizona - three lower basin states that rely on allocations from the downstream Lake Mead reservoir. But Norton made it clear she wanted the states to find a way to share the water without federal involvement.

Nine people testified Thursday, some urging the government not to ignore the financial rewards from recreation and tourism at both lakes and nearby recreational areas.

Fourteen million visitors annually result in direct and indirect economic benefit to the economy, said Kitty Roberts, superintendent for the Glen Canyon National Recreation Area.

But five years of drought "has negatively affected recreation use and likely caused significant changes to the local and regional economies," she said.

The National Park Service has spent more than \$20 million over the past three years responding to the drought, with the money being used for things like closing or extending launch ramps, moving or adjusting docks.

She urged bureau officials to establish critical water levels on both lakes so recreation services won't have to be curtailed.

Steve Ward, president of Friends of Lake Powell, asked the bureau to consider adjusting water depending on conditions to stabilize the lake's level.

"More efficient reservoir operation would help prevent overflowing spills in the wet years and slow the drawdowns during severe droughts that can jeopardize hydroelectric power production," he said. ---

On the Net:

Bureau of Reclamation: <http://www.usbr.gov/>

Living Rivers: <http://www.livingrivers2.org/>

Glen Canyon National Recreation Area: <http://www.nps.gov/glca/>

Lake Mead National Recreation Area: <http://www.nps.gov/lame/>

Hoover Dam: <http://www.nps.gov/lame/>

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Regional News 08/25/05

Arizona braces for water war

\$1.5 million sought to fight Colorado River lawsuits

Shaun McKinnon
The Arizona Republic

Arizona has created a legal defense fund to protect its Colorado River allocation in the event a simmering dispute among other states flares into a regional water war.

The state hopes to raise at least \$1.5 million in the coming months to prepare for possible lawsuits, though officials admit costs could climb many times higher if the dispute spills into a courtroom.

At stake is Arizona's ability to grow. A worst-case loss in court could force the state to give up half of the water that flows through the Central Arizona Project Canal and leave it in reservoirs to benefit upstream users or satisfy a treaty with Mexico.

Most of that water is now reserved for cities in Maricopa, Pima and Pinal counties or set aside to settle claims with Indian tribes.

Representatives from all seven Colorado River states will meet today in San Diego to consider a plan that might solve some of the issues without legal action. The plan is aimed at wringing every possible drop from the river even if it means punching holes in clouds.

The states hope to submit their proposals to Interior Secretary Gale Norton next week as part of a larger effort to create a long-term drought plan for the Colorado. Drought and growth have pushed the river past its limits and renewed tensions among the states, whose bickering dates back decades.

Without a workable plan, "litigation is inevitable at some point," said Herb Guenther, director of the state Department of Water Resources. "We've been staring at it for a long time. But we're trying to avoid the head-on collision and see if we can't work together on these issues."

Guenther's agency ponied up the first \$200,000 for the defense fund, and the state will ask boards governing the CAP and Salt River Project to contribute similar amounts. Guenther said a fund-raising committee will then seek donations from others with a stake in the river, including cities and home builders.

The state has also retained a lawyer who specializes in water to help with legal research and planning.

The decision to begin raising money for legal action pushes Arizona further into a battle that it had largely avoided in recent years, though the state is certainly no stranger to river wars. Arizona vs. California, a landmark case that helped define the way the Colorado is managed, grew out of Arizona's refusal to ratify the original river compact.

"The Colorado River is extremely important to the state of Arizona," said John Sullivan, associate general manager of SRP's water group and a member of the fund-raising committee. "When other states begin to make noises about threatening Arizona's supply, I think the whole state needs to get involved."

The threat stems from arguments over how the river and its tributaries are divided among users. In states along the upper river, which include Colorado, Wyoming, New Mexico and Utah, water taken from tributaries is counted against the states' shares.

In states on the lower river - Arizona, Nevada and California - tributaries are not included in the accounting. That means Arizona, the primary beneficiary to the difference in rules, can use water from the Salt and Verde rivers, for example, and still take its full share of the Colorado.

Arizona won the tributary issue during negotiations over the original Colorado River compact, the set of laws and agreements that governs the river. But, in recent years, Colorado and other upper river states have argued that the lower river states have abused the rule and, as a result, take more than they should.

What may force the argument to the table is a plan by Nevada to divert water from the Virgin River to thirsty Las Vegas, which has exhausted its Colorado River allocation. The Virgin flows into the Colorado at Lake Mead.

Officials from Colorado and Wyoming protested the proposal, telling federal regulators it would rob the Colorado River of a significant amount of water. Those states say that, because the Virgin flows into the Colorado, any water taken from it should be counted against Nevada's share.

Arizona officials fear that, if the dispute over the Virgin River lands in court, the upper river states could demand that other states account for water taken from their tributaries. In addition, the upper river states could ask the court to force the lower river states to deliver all the water that Mexico gets from the Colorado, an obligation all seven states now share.

State officials believe as much as 750,000 acre-feet could be lost. Because the CAP holds the most junior rights to the river, the water would be taken from the canal, leaving it at half-strength. (An acre-foot covers an acre to the depth of 1 foot, or 325,851 gallons. It would meet the needs of a family of five for a year.)

CAP officials believe the seven states can forge an agreement and avoid court, but they acknowledge the risk.

"We all have something at risk when we litigate," said Sid Wilson, the CAP's general manager. "If we could work together on a program of management, we could all be winners for a good long while."

The plan under consideration today would focus on augmenting the river's flow, adding water by seeding clouds, removing non-native vegetation such as salt cedar, adding storage on the lower river and simply managing the water more efficiently.

Wilson said he is confident such an approach could add 1 million acre-feet of water or more per year, easing the pressure on the lower river states.

Pat Mulroy, general manager of the Southern Nevada Water Authority, said what is happening now could be "a lot of saber-rattling," but she said Nevada can't just do nothing.

"It would show a real failure on everyone's part if we end up in court," she said. "If we're pushed, we may not have a choice. Given what our resource picture is, we have no choice but to be dogged."

Colorado created its own legal fund earlier this year and staked out its position that the lower river states, Arizona in particular, have taken more than their share of Colorado River water. Officials there have softened their public stance and have pledged to work on a cooperative plan.

"We believe that we water professionals should be able to do a better job of managing the river than leaving it up to a judge or a court," said Scott Balcomb, Colorado's representative on the Upper Colorado River Commission. "Our thrust right now is to attempt to get some kind of a seven-states agreement in place"

"(Still), I don't blame Arizona for being concerned about the situation that is unfolding," he said.

"My boss was quoted in the Colorado papers indicating that if we needed to, we would have our own legal defense fund ready. Being ready to litigate, if that turns out to be the only option, is only prudent. None of us is gambling on an agreement."

LR in the News 08/29/05

Glen Canyon Dam set for flow test to revive habitat

New twist: Officials will reduce high-low water fluctuations in hopes of restoring the environment for native fish species

By Joe Baird
The Salt Lake Tribune

They will be slowing the flow at Glen Canyon Dam this week, the latest installment in a series of attempts to analyze and ultimately revive the habitat for endangered native fish species in the lower Colorado River.

Beginning Thursday and continuing through Saturday, the Bureau of Reclamation - which operates the dam - will start reducing Glen Canyon's high-low water fluctuations to roughly half of what they have been this month. The lower flows will continue for the following three weeks, then bureau officials will smooth the releases to a steady level before resuming the reduced fluctuations in October.

The flow adjustments are all part of a larger scheme by federal officials to restore the Colorado River to something closer to its natural habitat in the Grand Canyon, with the goal of reviving fish species such as the humpback chub. This week's flow test follows a Glen Canyon release last November in which flows were substantially increased in a bid

to wash sediments down the river to create the sandbars and backwaters that young native fish need to survive. This time around, bureau officials and scientists will be assessing water temperature changes and the food sources that come downstream in the course of the river fluctuations.

Water flowing naturally downstream warms during the summer, but the water released from Glen Canyon Dam is typically much colder because it comes from the deep recesses of Lake Powell. The new twist, according Dennis Kubly, manager of the bureau's adaptive management plan, is that because of the drought and the reservoir's depleted supply, the water released from Glen Canyon is currently warmer than usual - providing bureau analysts with an opportunity. "There is strong evidence that these fish will grow faster in warmer water than colder water," Kubly said.

"They'll be larger at the end of the year; they'll have a better chance of survival than the smaller fish."

But as has been the case with the bureau's other flow test experiments, this latest release is drawing flak from some environmental groups, who argue that the experiments have been a failure. "What they're trying to do is artificially create a natural river habitat with the dam, but that can't be done," said John Weisheit, conservation director of the Moab-based Living Rivers organization. "That 700-foot dam is trapping all the sediment in Lake Powell, and along with it all the nutrition - carbon, trees, driftwood - which creates food base for these fish."

Weisheit says the humpback chub has re-established itself in the Little Colorado River, which feeds into the Colorado. What the bureau is attempting to do, he says, is create a second stronghold - which is a worthy goal, in and of itself.

"But it's not working," he added, "because the sediment continues to be pushed downstream because of the normal fluctuating flows from power generation." Bureau manager Kubly says it is too early to begin making those kinds of assessments.

"People want to reach conclusions quickly," he said. "But sometimes they do it before the evidence comes out in the science."

Beginning Thursday, Glen Canyon Dam's August flows, which have ranged from 10,000 to 18,000 cubic feet per second (cfs), will be reduced to 6,500 to 9,000 cfs. Those daily fluctuations will be adjusted to a steady 8,000 cfs beginning Sept. 21, with the reduced high-low flows resuming from Oct. 8 through the end of the month.

Normal dam operations will resume on Nov. 1.

jbaird@sltrib.com

Regional News 09/11/05

The Colorado River system: Dams and drought

John W. Keys III
Salt Lake Tribune

Note: this opinion piece is longer available on the Salt Lake Tribune's web page.

The numbers are in and the winners are - the more than 25 million people who depend upon the Colorado River system for their daily water supply.

After serving the people of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming through the worst five-year drought in 100 years of record-keeping, the Colorado River system is recovering and recharging. In doing so, immediate needs and obligations will continue to be met while we regain storage for the next dry period.

My views on the Colorado River system are shaped by two equally important vantage points. I'm writing this from my desk in the Interior Department in Washington, D.C., where I am commissioner of the Bureau of Reclamation, the agency entrusted by the Interior Department to manage water in the West.

Equally, I also feel that I am writing from my back porch in Moab, Utah, where my home is. You see, I am also one of those 25 million people who keep a careful eye on the Colorado River as it rolls past our towns and farms.

All across the Colorado River Basin, the smaller water projects that Reclamation has constructed over the years refilled. As the drought persisted, those reservoirs were taxed to the maximum. Many were drawn down to near bottom. Without them, cities and farms alike would have been bone dry years ago.

Looking at Lake Powell behind Glen Canyon Dam, I really understand the foresight of those in Congress and past administrations who formulated the Colorado River Storage Project. They envisioned that a long-term drought would develop at a point in time when growing populations and water demands would run head-to-head with a drought-starved water supply.

Over the past five years, Lake Powell went down by two-thirds of its capacity, but in doing so it insured that Lake Mead behind Hoover Dam would stay viable. Without Lake Powell, there would have been no Lake Mead. Without the two dams, Arizona, California and Nevada and Mexican water users would have had serious troubles.

I can't overstate the importance of storing spring runoff. The Colorado River is one driven by winter snowfall, spring melt and high runoff, and then low summer and fall flows. Unlike the great rivers in the eastern states, it is not heavily influenced or served by summer rainfall. Here we must take what Mother Nature gives us in snowmelt, conserve it, and carefully release it throughout the rest of the year.

So, in a few words, why is Lake Powell so important? Why does it stand out from all the other storage on the Colorado River?

Lake Powell gives us the long-term storage capacity to ride out droughts and to deal with the increasing demands that come with the phenomenal economic growth in the Southwest. Naysayers who question Lake Powell's relevance somehow believe that because the Southwest will continue to grow, further taxing the water supplies, that becomes the reason to do away with Lake Powell.

The logic escapes me. We need to be stewards of our stored water, the Bureau of Reclamation working with the states. As I've said time and again, the keys to viability and survivability for the Southwest come in balancing growing demands for water, respecting state water laws and the treaty with Mexico, and stretching limited supplies through inevitable prolonged drought conditions.

We are doing that today and we will continue in generations to come.

When I think of Lake Powell, I really do think of Secretary Gale Norton's "4 C's" credo that guides the Department of the Interior. It goes like this: Consultation, cooperation, and communication - all in the service of conservation. We are truly attempting to consult, cooperate, and communicate to conserve the single greatest resource we have in the Colorado River Basin - our water supply.

John W. Keys III is commissioner of the U.S. Bureau of Reclamation.

[Living Rivers letter to Salt Lake Tribune](#)

LR Letter 09/12/05

Response to Commissioner John Keys' 9/11 Opinion

Editor,

It's appalling that in the wake of Hurricane Katrina, that Bureau of Reclamation Commissioner John Keys peruses the same public relations' strategy as FEMA Director Michael Brown.

In Keys' opinion piece ["The Colorado River system: Dams and drought"](#) he celebrates that people along the Colorado River are "winners" because reservoirs like Lake Powell kept water supplies flowing these past few years while the region experienced below average precipitation.

But just like FEMA's Brown, what Commissioner Keys continues to ignore are the findings of government scientists and Congressional investigators, who for nearly 25 years now have been warning that disaster is on the way.

- 1) That 11 percent more Colorado River water has been promised to the American people than the Colorado River has historically provided, leading to supply problems as states now edge toward using their full allocation.
- 2) That lower snow pack is likely to be the norm due to climate change, and that water managers should be planning for ongoing flow reductions of 18 percent over the next several decades.
- 3) That Lake Powell and Lake Mead lose to evaporation annually ten percent of the Colorado River's annual flow, whereas this water could be stored underground without such waste through the minimal use of Hoover Dam alone.
- 4) The unnecessary use of Lake Powell is causing the near collapse of the river ecosystem in Grand Canyon National Park.
- 5) That despite sediment forcing the closure of Lake Powell facilities and heading toward the dam, Keys has no plan for this looming safety problem.

But given how the Bush Administration is so fond of telling the truth, I guess we should not be surprised when Commissioner Keys' states "the logic escapes me" as to why we should be looking toward draining Lake Powell as a cornerstone of more efficient and environmentally sound means toward protecting scarce Colorado River water.

The party will soon be over on the Colorado River, but instead of too much water from Katrina, the people of the Colorado will find they don't have enough.

Who will be the winners then Commissioner Keys?

John Weisheit
Conservation Director
Living Rivers & Colorado Riverkeeper
Moab, Utah

["The Colorado River system: Dams and drought"](#), by John Keys Commissioner of the Bureau of Reclamation.

Salt Lake Tribune, Saturday, September 11, 2005

LR Press Release 09/12/05

Colorado River water users beware

Bureau of Reclamation Chief follows in FEMA's footsteps

While the public continues to wrestle with the Bush administration's disregard for the truth in acknowledging that a Katrina-like event would eventually strike New Orleans,

the Bureau of Reclamation Commissioner is denying nearly three decades of warnings that water shortages are imminent for Colorado River water users.

In his opinion piece, ["The Colorado River system: Dams and drought"](#) published in the Salt Lake Tribune on Sunday, Bureau of Reclamation Commissioner John Keys stated that despite several years of reduced flows, all is well again for the 25 million people reliant on Colorado River water.

"After serving the people of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming through the worst five-year drought in 100 years of record-keeping, the Colorado River system is recovering and recharging. In doing so, immediate needs and obligations will continue to be met while we regain storage for the next dry period," wrote Keys.

Such logic runs contrary to the advice of government scientist and Congressional researchers. Since 1979 there have been warnings that the Colorado River would fail on the supply-side because 11 percent more water has been allocated than the river can historically provide. Even more problematic is the Department of Energy research forecast that climate change will cause Colorado River flows to decline 18 percent by 2040.

"It's terrible what has happened on the Gulf Coast and while we are fully sensitive to all those affected by Katrina, there's another kind of lack of preparedness prevailing along the Colorado. But instead of too much water, there will be too little, " says John Weisheit, Conservation Director for the Utah-based Living Rivers & Colorado Riverkeeper.

"Science and common sense tell us that recent reductions in river flows were not some hundred-year aberration, as Commissioner Keys claims. But should instead be viewed as a stern warning that increased demand and decreased supply have taken root in the Colorado River watershed and we are unprepared for the repercussions," Weisheit adds.

The only attention the Bureau of Reclamation has given to Colorado River water shortages began in July—a [two-year study](#) on reoperating the Colorado River systems two largest reservoirs, Lake Powell behind Glen Canyon Dam and Lake Mead behind Hoover Dam, when low water levels occur.

In response to the proposed reoperation, Living Rivers and 85 other groups from across the country demanded that a much broader approach be taken. In their report "The One-Dam Solution" they highlighted how the Bureau must prepare for much lower flows over time, and be more efficient in how it stores scarce Colorado River water.

"Moving minimal water from one dam to the next will be of little value to those without water," continues Weisheit. "They must address the fundamental problem that there will no longer be enough water to go around, and that these dams themselves are part of the problem."

A key finding of "The One-Dam Solution" is how evaporation from these two reservoirs causes the loss of ten percent of the Colorado River's annual flow every year. By eliminating the use of Glen Canyon Dam and using Hoover Dam alone for capturing snowmelt, then routing water to more efficient underground storage, enough water for six million people could be saved.

Commissioner Keys ignores such evidence, stating in his opinion piece, "the logic escapes me," as to why one might consider removing Glen Canyon Dam from the system.

"Maybe because it's not needed and is destroying Grand Canyon's ecosystem downstream," concludes Weisheit. "But the real problem is so much bigger than this dam, and that like Katrina, the Administration is ignoring that soon Colorado River water users won't have the water Commissioner Keys has promised."

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Additional Information

["The Colorado River system: Dams and drought"](#), by John Keys Commissioner of the Bureau of Reclamation.

[Living Rivers letter to the Salt Lake Tribune](#)

[Keys tells more truth to CRWUA than to the people.](#) Read the remarks of John Keys to the Colorado Water Users Association at their last annual meeting.

LR Press Release, [The One-Dam Solution](#): Hoover Dam alone the solution for managing dwindling Colorado River water.

Bureau of Reclamation [program for reoperating Lake Powell and Lake Mead](#) under low water conditions.

LR Press Release 10/24/05

Grand Canyon Restoration Program, a Failing Grade Government to release scorecard

For immediate release

Contact: John Weisheit, 435-259-1063; Cell: 435-260-2590

PHOENIX - On the occasion of the tenth anniversary of the federal program established to reverse the ecological impacts of Glen Canyon Dam's operations on Grand Canyon's Colorado River corridor, government scientists will release an internal analysis of their progress.

"The State of the Colorado River Ecosystem in Grand Canyon" report will be presented and discussed at a three-day symposium which begins here on Tuesday.

"Their primary objective was to stop Grand Canyon's endangered native fish from going extinct and to help recover those species already lost, but after \$200 million spent, one more species has disappeared and another now hangs in the balance," says Living Rivers conservation director John Weisheit.

Living Rivers own assessment (below) of the Glen Canyon Dam Adaptive Management Program's 12 goals reveals that no progress is being made on eight. Two areas where progress can be claimed, hydropower production and preservation of non-native trout habitat, happen to be in conflict with the core objectives of native habitat restoration. The only other area of progress has been not to impinge on river recreation opportunities.

These program goals were rooted in recommendations of an Environmental Impact Statement (EIS) completed in 1995 to comply with the Grand Canyon Protection Act passed by Congress three years earlier. "All the past decade has taught us is that the findings and assumptions of the EIS were insufficient," adds John Weisheit. "The declining state of the ecosystem proves the program has been a failure and it's high time for a new EIS to be undertaken that reflects this new reality."

What Living Rivers and more than 200 other organizations have been calling for is the implementation of management strategies that will restore the natural processes that have been lost during the four decades since Glen Canyon Dam has been in operation, including:

- * A water temperature regime that fluctuates seasonally from near freezing to 80 degrees Fahrenheit, not the year-round dam releases of 47 degrees.
- * River flows that fluctuate seasonally from 3,000 to 100,000 CFS (cubic feet per second), not daily between 8,000 and 20,000 CFS.
- * The return of the sediment required to maintain sandbar habitat and supply nutrients to the food web.
- * The removal of non-native fish that inhabit the post-dam environment and compete with the native fish.

"This ten-year masquerade of a recovery program must come to an end," stresses Weisheit. "The habitat can no longer absorb this kind of help, and it's time to revert back to what nature intended by examining the benefits of decommissioning of Glen Canyon Dam."

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Living Rivers Scorecard

Ten-Year Assessment of Glen Canyon Dam Adaptive Management Program Goals

0=Failing; 1=Unacceptable; 2=No Effect; 3=Potential Progress; 4=Achieving Goal

1. Protect or improve the aquatic food base so that it will support viable populations of desired species at higher trophic levels.

An ongoing decline in composition, diversity and biomass of the native food base continues in the Colorado River, which will be modified further as low reservoir levels at Lake Powell change the downstream thermal regime which will result in additional chemical and biological changes to occur. (Score 0)

2. Maintain or attain viable populations of existing native fish, remove jeopardy from humpback chub and razorback sucker, and prevent adverse modification to their critical habitat.

Humpback Chub populations have declined 67 percent since the program began, and continues to be threatened with extinction. In November 2004 the AMP sponsored a beach rebuilding event in the Grand Canyon which resulted in documented significant losses to the remaining humpback chub populations. The razorback sucker is now confirmed to be extirpated from Grand Canyon. (Score 0)

3. Restore populations of extirpated species, as feasible and advisable.

There has been little effort, and no success, in establishing a second humpback chub population in the river's main stem as required by the program, nor has there been efforts to recover any extirpated species. The AMP focus appears to be concentrated primarily on the removal of trout which is a temporary Band-Aid as long as trout are allowed to remain above Lees Ferry. The AMP program primarily funds the continued monitoring of the demise of the species rather than focusing on specific actions that would support the recovery of the humpback chub. The US Fish and Wildlife Service has failed in its responsibility to recover and protect the listed fish species in the Grand Canyon. (Score 0)

4. Maintain a naturally reproducing population of rainbow trout above the Paria River, to the extent practicable and consistent with the maintenance of viable populations of native fish.

Trout populations have been preserved, but there has yet to be the establishment of viable populations of native fish which are prey to the trout, an appropriate balance, if indeed possible, has also yet to be achieved. The maintenance of the trout fishery above Lee's Ferry severely limits any potential action that can be taken to support the native fish species. (Score 2)

5. Maintain or attain viable populations of Kanab Ambersnail.

Attempts have been made to establish new wild populations of Kanab Ambersnails in three additional natural springs along the Colorado River. These sites are located above the historic high water mark, so that the new populations will be protected from the experimental scouring floods. (Score 3)

6. Protect or improve the biotic riparian and spring communities including threatened and endangered species and their critical habitat.

Marshes, riparian plant communities and sandy beaches are essential to maintain the diversity of wildlife, enhance visitor use and preserve cultural resources. Without sediment and nutrient replacement and effective exotic plant removal programs these resources will continue to degrade. Dam controlled releases and the lack of sediment input to the Grand Canyon ecosystem limits the extent of any protection or improvement effort. Again, the ongoing AMP program is oriented to the continued monitoring of the demise of the ecosystem. (Score 0)

7. Establish water temperature, quality, and flow dynamics to achieve the Adaptive Management Program ecosystem goals.

First proposed ten years ago, progress continues to be nothing more than talk in achieving temperature regimes or flow dynamics beneficial to native fish recovery. No actions have been taken to augment changes that are ongoing in the reservoir. Lack of action by the AMP to thoroughly evaluate changes in water chemistry, sediment supply and thermal regimes indicates that the program is more interested in maintaining the status quo than looking for solutions to the environmental problems below Glen Canyon Dam. (Score 0)

8. Maintain or attain levels of sediment storage within the main channel and along shorelines to achieve the adaptive management program ecosystem goals.

Despite several attempts to utilize specialized dam operating techniques to conserve sediment, such practices have proven not to achieve lasting results. Operations to periodically stir up the sediments in the Grand Canyon do not address the real problem of the lack of sediment supply. Without an aggressive approach to the management of sediment which includes the movement of sediment around Glen Canyon Dam, long-term solutions cannot be achieved. The proposal to augment the system with sediment from outside still continues to be nothing more than a ten-year discussion item. (Score 1)

9. Maintain or improve the quality of recreational experiences for users of the Colorado River ecosystem, within the framework of the adaptive management program ecosystem goals.

By in large, the "quality" of the recreational experience in the river corridor has not been unduly compromised by the program. However, this experience remains inconsistent and violates the basic precepts of the protection of the National Park and makes a travesty of the National Park Service Organic Act. The AMP program is keeping the status quo while allowing visitors to experience an ecosystems but violates the intent and purpose of the providing and environment that has been left 'unimpaired' for future generations. (Score 4)

10. Maintain power production capacity and energy generation, and increase where feasible and advisable, within the framework of the adaptive management program ecosystem goals.

Glen Canyon Dam power production has continued, and has at times has been modified to allow for scientific experimentation. However the intent of the AMP is to keep the power system functioning at all costs. Power production has been modified, but at times of year that are conducive to minimize power impacts instead of focusing on completing the studies during periods of the year that would show the most scientific value. Fulfilling this objective has significantly restricted options toward achieving the broader goal of ecosystem restoration. (Score 4)

11. Preserve, protect, manage and treat cultural resources for the inspiration and benefit of past, present and future generations.

Archeological resources along the river continue to be threatened by the lack of sediment to continuously rebuild and stabilize the banks. As a result, artifacts must be removed, as opposed to be protected in-situ as prescribed by historic preservation legislation. Native American tribes continue to have their programs reduced and their involvement limited to periodic river trips and occasional consultation. (Score 1)

12. Maintain a high quality monitoring, research, and adaptive management program.

The program has been plagued by staff turnover, the removal of staff and consultants whose findings may be disagreeable to water and power interests, and has abandoned the policy of obtaining peer review of their protocols and findings. Further the lack of following the intent of the National Resource Council recommendations and continuing the focus on monitoring and data management limit the intent and objectives and requirements of the Grand Canyon Protection Act. (Score 1)

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Additional information:

[Science Symposium program and location](http://www.gcmrc.gov/news_info/outreach/symposiums/2005/sym_2005.htm)

http://www.gcmrc.gov/news_info/outreach/symposiums/2005/sym_2005.htm

[Living Rivers letter asking for Supplemental Environmental Impact Study](http://www.livingrivers2.org/archives/article.cfm?NewsID=567)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=567>

LR in the News 10/27/05

Dam still injuring Grand Canyon

Geological Survey study: The restoration picture is not encouraging for the Colorado River ecosystem

By Joe Baird
The Salt Lake Tribune

Thirteen years of effort and millions of federal dollars have not been enough to stave off the deterioration of the Colorado River's ecosystem below Glen Canyon Dam, according to a new report released Wednesday.

In the most extensive assessment of river conditions in the Grand Canyon since the creation of the Grand Canyon Protection Act in 1992, the U.S. Geological Survey study says endangered native fish species are still struggling, while sandbars and backwaters that serve as habitat for the fish as well as anchors for vegetation, havens for cultural resources and campsites for human visitors continue to decrease.

The report, produced by the agency's Grand Canyon Monitoring and Research Center, stopped short of calling federal attempts to restore the river and its shorelines a failure. But it makes clear there is still a long way to go to bring the environment back to anything close to what it looked like before Glen Canyon Dam and Lake Powell were created some four decades ago.

"We've learned a helluva lot, but we've also learned is that this is really, really hard," said Jack Schmidt, an aquatic, watershed and earth resources professor at Utah State University, who attended a symposium in Phoenix unveiling the study. "It's a real challenge to adaptively manage the river [and restore habitat] while also focusing on producing electricity and providing water for California. It's just damn hard."

Others were more blunt. At least one environmental group labeled the report proof that efforts by the Bureau of Reclamation - which manages Glen Canyon Dam - to revive the Colorado River below the dam have been a flop.

"When you add up all the numbers, over \$200 million has been spent on this, and 13 years after all this money has been spent, they have absolutely nothing to show for it," said John Weisheit, conservation director of the Moab-based Living Rivers, which has called for the decommissioning of Glen Canyon Dam. "The Grand Canyon, in my opinion, is worse off. There's less fish. Less sand. Fewer archaeological resources. The dam has become more of a liability than an asset."

Attempts to reach Bureau of Reclamation officials for comment were unsuccessful Wednesday. Built in 1963, Glen Canyon Dam has provided water and power for the West, but also transformed the Colorado River below it from muddy and warm to clear and cold, and altered and moderated its natural flows. The long-term results have been a gradual disappearance of sandbars and backwaters throughout the canyon, as well as the decline of native fish species, such as the humpback chub, and the emergence of new, non-native fish such as rainbow trout.

The Geological Survey study focused on efforts by federal managers since the creation of the Grand Canyon Protection Act, and specifically the establishment of the Glen Canyon Dam Adoptive Management Program - an attempt to reintroduce beaches and other native fish habitat into the Grand Canyon's bottom. The focus of those efforts: a series of high-flow test experiments, the most recent last November, that were designed to push more sediment downstream.

The big picture is not encouraging. According to the report, sandbars "continue to erode," and new sand brought downstream by the test flows have not accumulated in the main channel. Likewise, the humpback chub's population has decreased between 30 percent and 60 percent. Now on the endangered species list, it is one of four native fish species that survive in the Colorado River below the dam out of the original eight. But there also have been positive signs. Warmer water coming out of Lake Powell - depleted because of the drought - combined with a program to eradicate non-native fish from the river has resulted in an increase in juvenile humpback chubs, though it's unclear now how many will make it to adulthood. And last November's flow test, which came following heavy October rains, succeeded in pushing more sediment and creating sandbars in the upper reaches of Marble Canyon, even though it was shorter in duration than previous flow tests.

"We saw a limited restoration scenario in an area that had been subject to significant erosion," said Ted Melis, executive director of the Grand Canyon Monitoring Center. "We didn't see a larger impact because of the limits in sand, but with more supply, we might have seen more restoration throughout the system. That's a real positive outcome."

All sides agree on one point: The sediment issue will have to be resolved - both because its need in the Grand Canyon, and because the buildup of sediment in Lake Powell will eventually threaten the reservoir. A sediment pipeline, or dredging Lake Powell, could be in the offing at some point.

Temperature controls at the dam could also become a fixture, if they are proven to enhance native fish populations without introducing new problems.

"It might be hard and it might be costly," said Schmidt, the USU professor. "In fact, it might be so costly that the public might decide that we shouldn't try. Maybe we should tell the public that the cost of providing water and power is the decline of the Grand Canyon and the public will accept that. But the public might also say the Grand Canyon is too important and we should spend whatever it takes."

Grand Canyon health report

- * The Grand Canyon ecosystem hasn't been repaired despite a long, costly effort.
- * The disappearance of sandbars and native fish declines haven't been reversed by experimental releases from Glen Canyon Dam.

LR in the News 10/28/05

Scientists still unsure of how to protect river in Grand Canyon

By the Associated Press

PHOENIX — Scientists say they still don't know how to protect the Colorado River in the Grand Canyon without disrupting water and power production upstream.

Despite a decade of trying, few attempts have succeeded in trying to mimic the natural conditions erased by construction of Glen Canyon Dam, which supplies water and electricity to millions of people.

Endangered fish continue to disappear, habitat erodes almost as fast as it is rebuilt and interloping fish and plants find new ways to thrive.

The river's health as it courses through the Grand Canyon is the focus of a 10-year-old program created after environmental studies uncovered deteriorating conditions caused by Glen Canyon Dam.

The giant structure cooled the river, stripped it of sediment and nutrients and tamed its seasonal flows, which helped keep wildlife habitat vital.

Scientists admit that reversing the damage from 40 years of unnatural river flows could take decades and cost hundreds of millions of dollars.

Living Rivers, a conservation group, claims the best solution is to decommission the dam and return the river to its historic flow all the way through the canyon.

“We're sacrificing the Grand Canyon for that dam,” said John Weisheit, Living Rivers' conservation director.

“We just don't need it.”

Glen Canyon Dam, completed in 1963, supplies power across the West and stores water that eventually serves users in Arizona, Nevada and California.

Other restoration efforts also are under way, including a \$600 million lower-Colorado habitat-conservation program adopted this year by Arizona, Nevada and California.

But Weisheit said the government should stop spending money on ideas that will never solve the entire problem.

“They've spent \$200 million and there's been no improvement,” he said. “Nature's been doing this for millions of years for free.”

LR in the News 10/28/05

Dam has hurt the Colorado

River study yields few positives

Shaun McKinnon for the The Arizona Republic

Oct. 28, 2005

After more than a dozen years of trying, scientists still don't know how to protect the Colorado River in the Grand Canyon without disrupting water and power production upstream.

Few attempts have succeeded in trying to mimic the natural conditions erased by construction of Glen Canyon Dam, which supplies water and electricity to millions of people. Endangered fish continue to disappear, habitat erodes almost as fast as it is rebuilt and interloping fish and plants find new ways to thrive.

Even faint signs of progress may be as much the work of nature as the ongoing experiments on the river, according to information presented at a science symposium this week in Tempe. An increase in the number of endangered humpback chub occurred at the same time drought conditions warmed the temperature of water released from Lake Powell, creating better surroundings for the tiny fish.

The river's health as it courses through the Grand Canyon is the focus of a 10-year-old program created after environmental studies uncovered deteriorating conditions caused by Glen Canyon Dam. The giant structure cooled the river, stripped it of sediment and nutrients and tamed its seasonal flows, which helped keep wildlife habitat vital.

Although scientists tried to find reasons for optimism, they admitted that reversing the damage from 40 years of unnatural river flows could take decades and cost hundreds of millions of dollars. Some of the work will never end, they said, and some of the damage will go unrepaired as a trade-off for the benefits from the dam.

A river conservation group produced its own report card on the restoration studies and pronounced the effort a failure. The government-led program missed the mark on eight of its original 12 goals and achieved progress on two - power production and non-native fish habitat - that clash with true resource protection, according to Living Rivers.

The best solution, the group argues, is to decommission Glen Canyon Dam and return the Colorado River to its historic flow all the way through the Grand Canyon, an idea already rejected emphatically by government and business leaders. "We're sacrificing the Grand Canyon for that dam," said John Weisheit, Living Rivers' conservation director. "We just don't need it."

Glen Canyon Dam supplies power across the West and stores water that eventually serves users in Arizona, Nevada and California. The U.S. Geological Survey's report assumes the dam will remain in operation and focuses on issues ranging from endangered fish and plants to lost recreational opportunities along the river and in the canyon.

"Not everything in the report says what we're doing is working," said Denny Fenn, director of the USGS Southwest Biological Science Center, one of the agencies involved in the long-term studies. "But we're making progress."

The sheer size of the problem accounts for the slow work, scientists said. Glen Canyon Dam, completed in 1963, permanently transformed the Colorado from a wild river that

fluctuated with the seasons to a carefully controlled waterway that ebbs and flows based on water and power demands.

After environmental studies identified the changes to the river ecosystem, federal officials created the adaptive management program to study the problems and look for solutions that can be integrated into the operations of the dam and the river. This week's report examined several key problems:

- Sediment and erosion.

Before the dam was built, the Colorado moved about 29 million tons of sand and sediment through the Grand Canyon each year. The constant flow rebuilt beaches and sandbars as others washed away. The dam captures almost all of the upstream sediment, leaving only what flows from tributaries like the Paria and Little Colorado River.

In an effort to rebuild beaches and mimic the fluctuations of the old river, scientists have tried twice to create artificial floods by releasing extra water from the dam for several days. A 1996 flood produced mixed results, but a smaller experiment last November was more promising.

"There were clear indications of restoration," said Ted Melis, acting chief of the Grand Canyon Monitoring and Research Center. The question is whether there is enough sediment to sustain artificial floods.

Fenn said the goal is to hand over the flood and sediment experiment to the U.S. Bureau of Reclamation, which would incorporate the high flows into the dam's regular operations.

- Endangered fish.

The cooler water provided a poor environment for native fish like the humpback chub and razorback sucker, which hasn't been seen since about 1992. But the river is now ideal for such non-native species as rainbow trout, which prospered and quickly turned into a chub predator, eating newborns.

Chub numbers have fallen by as much as 67 percent. Scientists don't think the fish will turn extinct, as several other native species have, but a Canadian researcher at the symposium predicted the long-term numbers will remain below the recovery goals.

To help the chub and other native fish, scientists have removed trout from stretches of the river, but recent events suggest that water temperature may have more to do with the chub's long-term survival. The drought lowered water levels at Lake Powell, which raised the temperature of the river downstream. In surveys this past summer, the number of newborn chub rose significantly, said Lew Coggins, a fishery biologist at the research center. That's no guarantee they'll survive until adulthood, he said, and the warm waters aren't a perfect solution.

"There are risks because the warm water could allow for more expansion of non-native fish, and that could be an even bigger threat," he said.

- Drought.

At least half the study period occurred during a serious drought on the Colorado, and that may have colored some of the findings.

In addition to making it difficult to tell whether management or nature contributed to the higher number of newborn chub, the drought also limited the amount of sediment and sand carried toward the Colorado by the tributary rivers, said Fenn of the USGS. That forced the agencies to delay some of the flood experiments.

"It's clear that nature always plays a role and drought can compound the results," he said. The study released this week won't end the adaptive management work, Fenn said.

Other efforts are also under way, including a \$600 million lower-Colorado habitat-conservation program adopted this year by Arizona, Nevada and California. Weisheit, of Living Rivers, said the government should stop spending money on ideas that will never solve the entire problem.

"They've spent \$200 million, and there's been no improvement," he said. "Nature's been doing this for millions of years for free."

Regional News 10/31/05

Experts worry about Colorado River estimates

By Associated Press October 31, 2005

GRAND JUNCTION, Colo. — Some Colorado River experts worry a new federal process aimed at figuring out how to operate Lake Mead and Lake Powell in times of drought is being overly generous in its assumptions of how much water is available.

They caution the overestimate could cause problems in the future, echoing the mistake the West's water honchos made in the early 1920s when they divided up the river's water during a time of plenty.

Years after the 1922 Colorado River Compact, the document that divided the water among seven western states, officials discovered the allocation was much higher than the river's historical flow. The result was a serious water deficit that left water lawyers in the 21st century to figure out the mess.

"They knew they were overdeveloping the system back then, and they left us to deal with it," said Jim Lochhead, an attorney in Glenwood Springs who represents a group of Colorado cities and water districts in system discussions.

Officials with the Colorado River Water Conservation District don't want to repeat the past mistake.

The U.S. Bureau of Reclamation is working on a series of models that analyze a number of scenarios for operating Lake Powell and Lake Mead in tandem, eventually calculating how much water should be released from Lake Powell during dry spells to satisfy users downstream.

Feds hope the process will be completed by 2007, with the goal of minimizing water shortages to the Lower Basin states of California, Arizona and Nevada. The Upper Basin states of Colorado, Wyoming, Utah and New Mexico also hope their water shortages will be minimal.

Eric Kuhn, general manager of the Colorado River Water Conservation District in Glenwood Springs, said the bureau's current modeling looks at the period from 1906 to 1995 to calculate the reservoir scenarios.

"The future may not look like the recent past," he said. "Using the entire 1906 to 1995 period understates the probabilities of shortage in today's current climate conditions."

Kuhn worries the bureau's hydrology could lead this round of Colorado River Compact negotiators down the same slippery slope their ancestors sent them hiking to, setting up even more problems for the future.

There's not enough worst-case scenario thinking, he said.

But the bottom line for Upper Basin states is that many of the operating scenarios put Lake Powell in the shallow end of the pool.

"A lot of options on the table right now benefit the Lower Basin, and most of them reduce water in Lake Powell," Kuhn said.

Some of the scenarios even bring water levels at the reservoir below minimum power pool, eliminating the ability to create hydropower at Glen Canyon Dam.

"It's one of the proposals on the table, but I don't know if it's serious," he said.

All seven basin states have agreed that strategies should be in place to delay the extent of water shortages to the Lower Basin during drought, but the Upper Basin doesn't want to increase its own risk in the process.

Hydropower, recreation on the popular Lake Powell and a host of side issues keep the process as complicated as ever.

As a result, discussions have become a tennis match of wish lists.

Scott Balcomb, the water attorney appointed by the governor to represent Colorado in the basin state discussions, said the basins were slowly working toward consensus.

"We're trying to process each other's issues, concerns and wishes," he said.

"Colorado wants to keep all of our water and learn to operate the system more efficiently."

The basin states have agreed to some vague ideas of how to minimize shortages on the system, pushing ideas such as conservation, tamarisk removal and the potential to exchange desalinated water into the Colorado River system.

But it's Nevada, a Lower Basin state, that has led the charge in generating wish lists, offering an array of unconventional ideas for solving its own water woes.

The state receives one of the smallest apportionments from the river, but Las Vegas, the main recipient of the water, has only enough water to continue its current rate of growth until 2013.

Pat Mulroy, Nevada's representative to the negotiations, has suggested diverting water from the Virgin and Muddy rivers east of Las Vegas to the city, but both rivers are tributaries to the Colorado River.

Colorado and the other Upper Basin states argue those rivers, and others like them in the Lower Basin, should be considered part of the Colorado River.

They contend that Lower Basin states are using the tributary water illegally when Upper Basin tributaries, such as the Gunnison River, already are calculated in Compact deliveries.

Colorado has threatened in the past to sue to bring tributary water in the Lower Basin into the Compact's jurisdiction.

Nevada presented the idea of diverting the Virgin and Muddy tributaries again during a meeting of the basin states in Denver on Friday.

"Nevada is pressing ahead on all of its options, including the Virgin and the Muddy," Balcomb said.

"They don't believe they have another choice."

Nevada did, however, back off a previous proposal to buy water from other states in the Upper Basin.

Utah has expressed an interest in the idea, but Colorado has remained vehemently opposed.

"Nevada knows that is one place we in Colorado will not go," Balcomb said.

"They know bringing up that concept again does not further any opportunities to truly discuss these new management scenarios."

For now, basin state representatives will continue to gather and peruse graph after graph of hydrological information, trying to come up with future reservoir operations from the Bureau's assumptions.

"It's a fairly complex process on a tight timetable," Lochhead said. "The issues are framed, but now is the hard part, talking about them."

Take Action 11/01/05

Comments needed to halt the operation of Glen Canyon Dam

Submit Comments by: Wednesday, November 30, 2005

The Bureau of Reclamation is accepting public comments on the reoperation of the nation's two largest reservoirs, Lake Powell and Lake Mead. Your voice is needed to demand that they examine the viability of permanently ceasing operations at Lake Powell and employing just one reservoir to capture and manage the bulk of Colorado River flows.

Join in calling for the [The One-Dam Solution](#) as outlined in Living Rivers' new report prepared for the reoperation public scoping process.

Let the Bureau of Reclamation know that:

1. No longer a need for a single-use dam at Glen Canyon It was not until the fall of 2004, more than 40 years after Glen Canyon Dam began impounding Lake Powell that Lake Powell water storage actually augmented water storage downstream. But with climate change already causing long-term flow reductions, and water consumption levels near the river's historic average flow and rising, it's unlikely that Lake Powell will fill again. The surplus water that filled it during 17 years the first time is no longer there to build a storage cushion. Even should surplus water accumulate, Lake Mead on its own could accommodate it.
2. It's time for more efficient storage With Lake Powell and Lake Mead losing to evaporation upwards of 17 percent of the water that flows into them, it's time that more efficient means be explored for storing this precious water. Vacant space in underground aquifers on, or accessible to, existing Colorado River infrastructure could accommodate more water than these two reservoirs combined—and with far greater efficiency. Upwards of 810,000 acre-feet of water annually—enough water for 1.6 million households of four people each—could be saved by eliminating Lake Powell and operating Lake Mead principally for distribution to groundwater recharge facilities.
3. Revive Grand Canyon Between Lake Powell and Lake Mead lies one of the world's most famous and geologically and ecologically unique river canyons, Grand Canyon National Park. The operation of both these reservoirs has impacted the Canyon, but Glen Canyon Dam has been far more devastating. Since its completion four of eight native fish have gone extinct and the dam has trapped the sediment necessary to maintain habitat and beaches for wildlife and recreation, as well as the stabilization of archeological sites.

4. Manage the sediment Sediment is a major unresolved problem threatening the long-term operations of Lake Powell and Lake Mead. Ultimately, sediment will have to be removed from one or both of these reservoirs. Removing sediment from Lake Mead rather than Lake Powell is the most feasible and least expensive likely alternative. While original estimates projected that sediment would not effect the safe operations of Glen Canyon Dam for another 60 years, scientists now warn that major problems could occur sooner.
5. Revise the Colorado River Compact The Colorado River Compact of 1922, which largely governs the discharge of flows from Lake Powell to Lake Mead, cannot meet its intended purpose of sharing Colorado River water equitably between the Upper and Lower Basin states. The Compact allocated 11 percent more water than the river has to give, and affords the Lower Basin 20 percent more water than the upper basin. With river flows expected to decline 18 percent by 2040, this inequity will worsen as the Upper Basin is required to deliver to the Lower Basin its full share regardless of declines in river flow.

All comments must be received by close of business (4:00 p.m. Mountain Daylight or Pacific Daylight Time) on Wednesday, November 30, 2005.

Comments can be mailed, faxed, or e-mailed to:

Regional Director
Bureau of Reclamation, Lower Colorado Region
Attention: BCOO-1000
P.O. Box 61470
Boulder City, Nevada 89006-1470

Fax (702) 293-8156
strategies@lc.usbr.gov

Regional Director
Bureau of Reclamation
Upper Colorado Region
Attention: UC-402
125 South State Street
Salt Lake City, Utah 84318-1147

Fax (801) 524-3858
strategies@uc.usbr.gov

For Additional Information:

[The One Dam Solution: Preliminary report by Living Rivers to the Bureau of Reclamation on proposed reoperation strategies for Glen Canyon and Hoover Dam under low water conditions.](#)

[Bureau of Reclamation web page with updates and additional information](#)

LR Press Release 11/08/05

Federal Government Notified of Intent to Sue

November 8, 2005

For immediate release

Contact:

John Weisheit, 435-259-1063; Cell: 435-260-2590

Dr. Robin Silver, 602-246-4170

Grand Canyon Fish v. Glen Canyon Dam

Living Rivers and the Center for Biological Diversity today notified the Bureau of Reclamation and Fish and Wildlife Service of their intent to sue over violations of the Endangered Species Act resulting in the demise of endangered native fish in Grand Canyon National Park.

For more than a decade the Bureau of Reclamation has been required to modify the operations of Glen Canyon Dam on the Colorado River to reverse the dam's downstream impacts on Grand Canyon's famed river ecosystem. However, as outlined in a letter sent to Department of Interior officials today, these efforts have failed.

"Since the Fish and Wildlife Service issued its Biological Opinion on the dam's operations in 1994, the Bureau of Reclamation's actions have merely made things worse," says Living Rivers Conservation Director John Weisheit. "One more fish species is effectively extinct in the Canyon, and another is on the verge."

Just eight native fish species once lived in Grand Canyon's desert river corridor, six of which could not survive anywhere else in the Colorado River. Now only four species remain, one of which, the Humpback Chub, has declined to just a few thousand fishes.

In 1992 Congress passed the Grand Canyon Protection Act to reverse this decline. Following the completion of an Environmental Impact Statement, three years later, the Glen Canyon Dam Adaptive Management Program was established to guide the Bureau of Reclamation in implementing recovery guidelines set forth by the Fish and Wildlife Service.

Now, some 13 years later, the United States Geological Survey has evaluated this program and has confirmed what many scientists have been saying for years, that recovery is not being achieved. Released on October 25, their 220 page "The State of the Colorado River Ecosystem in Grand Canyon" report states:

"...it is clear that the restrictions on dam operations since 1991 have not produced the hoped for restoration and maintenance of this endangered species

"Overall, about 15% - 20% of the adult humpback chub are dying each year. If this mortality rate and the dramatically reduced recruitment rate of young chub experienced since the early 1990s remain unchanged, there will be a decline in the adult population

of humpback chub from the present 3,000 - 5,000 fish to a level of 1,500 - 2,000 adult fish over the next 10 - 15 yr.

"...the MLFF [Modified Low Fluctuating Flow] operating alternative has not effectively mitigated the influence of regulation with respect to either the thermal and hydrologic changes or the fine-sediment supply limitation of the downstream ecosystem."

"It's outrageous that the public has invested more than \$200 million to help the Bureau of Reclamation restore the river habitat in Grand Canyon, and all they have to show for it is fewer fish." says Dr. Robin Silver, Board Chair of the Tucson-based Center for Biological Diversity. "It's time they re-tool their strategy before Grand Canyon's river ecosystem is lost forever."

The groups are demanding that in light of the mounting evidence of no progress, the Fish & Wildlife Service is compelled by law to immediately reinstate consultation and devise a new strategy to ensure recovery of Grand Canyon native fish, particularly the Humpback Chub. Key issues that must be addressed are:

- * Restoring a water temperature regime that once fluctuated seasonally from near freezing to 80 degrees Fahrenheit, but now is a constant 47 degrees year-round.
- * Restoring river flows that fluctuated seasonally from 3,000 to 100,000 CFS (cubic feet per second), but now can fluctuate daily from 8,000 to 20,000 CFS.
- * Restoring the sediment and nutrients that nourished Grand Canyon's aquatic habitat, 95 percent of which is now trapped by the dam annually.
- * Controlling non-native fish which have flourished in this new environment, competing with, and preying on, the native fish.

"The Colorado River through Grand Canyon is one of this planet's most precious gifts, but the Bureau of Reclamation remains hell-bent on destroying it," adds Weisheit. "This ecosystem may not survive much longer with that dam in operation, but we could certainly survive were that dam not there."

More than 200 groups from across the country now advocate the decommissioning of Glen Canyon Dam as the best alternative for restoring the river ecosystem in Grand Canyon National Park.

###

For More Information

[60-day notice letter](http://www.livingrivers2.org/pdfs/CBD_LR_Notice.pdf) [57k PDF File]

http://www.livingrivers2.org/pdfs/CBD_LR_Notice.pdf

[Biological Opinion: Glen Canyon Dam](http://www.livingrivers2.org/pdfs/BOgcd.pdf) [3700k PDF File]

<http://www.livingrivers2.org/pdfs/BOgcd.pdf>

USGS SCORE Report, released on October 25, 2005
[The State of Natural and Cultural Resources in the Colorado River Ecosystem](http://www.gcmrc.gov/products/score/2005/score.htm)
<http://www.gcmrc.gov/products/score/2005/score.htm>

LR Press Release, October 24, 2005
[Grand Canyon Restoration Program, a Failing Grade](http://www.livingrivers2.org/archives/article.cfm?NewsID=690)
<http://www.livingrivers2.org/archives/article.cfm?NewsID=690>

[Glen Canyon Dam Adaptive Management Program](http://www.usbr.gov/uc/rm/amp/index.html)
<http://www.usbr.gov/uc/rm/amp/index.html>

[Living Rivers](http://www.livingrivers2.org/)
<http://www.livingrivers2.org/>

[Center for Biological Diversity](http://www.biologicaldiversity.org/swcbd/)
<http://www.biologicaldiversity.org/swcbd/>

LR in the News 11/09/05

Enviro groups issue notice to sue over declining Grand Canyon ecosystem

April Reese, Land Letter Southwest reporter

Two weeks after scientists released a report critical of federal efforts to improve the flagging health of the Grand Canyon ecosystem downstream from Glen Canyon Dam, two environmental groups have filed notice that they plan to sue to force the agencies involved to reconsider their management approach.

Calling the Bureau of Reclamation and Fish and Wildlife Service's program for reversing the decline of the endangered humpback chub and other canyon resources a "failure," the Center for Biological Diversity and Living Rivers notified agency officials Tuesday they plan to file suit to nudge federal officials toward conducting a new analysis of how dam operations are affecting the fish. The groups also want BuRec to take a new look at how to operate the dam to reverse the decline of the chub, razorback sucker, bonytail and Colorado pikeminnow -- the four remaining native fish species of the eight that once inhabited the Grand Canyon.

The groups say new information presented in an Oct. 25 report from the U.S. Geological Survey requires the agencies to retool their management plan for the fish and other Grand Canyon resources.

The report found that the low fluctuating flow regime that federal water managers and biologists have been using for the past decade to help improve conditions for endangered fish the canyon is not working. About 15 percent to 20 percent of adult humpback chub are dying each year, while populations of non-native fish are on the rise. If that mortality rate continues, the adult humpback chub population will plummet

from current population levels of between 3,000 and 5,000 fish to between 1,500 and 2,000 fish over the next 10 to 15 years, the report says.

There is "evidence that dam operations during the last 10 years ... have not restored fine-sediment resources or native fish populations in Grand Canyon," the report states. Scientific information collected over the last decade contradicts the projections for habitat improvement outlined in a 1995 environmental impact statement for modified flows, the USGS scientists concluded (Greenwire, Oct. 25).

The construction of the dam in the early 1960s trapped sediment that once moved down the river, providing sandbars and pools important for fish in the Grand Canyon.

Under the Grand Canyon Protection Act of 2002, the federal government must protect downstream resources in the park from the effects of Glen Canyon Dam.

"New information reveals effects of 'adaptive management' and the [low fluctuating flows] operational scheme are harming the humpback chub, its critical habitat and the Grand Canyon in a manner and extent not previously considered," the groups wrote in their notice.

"The scientists have shown pretty compelling evidence that not enough is being done to save Grand Canyon," said John Weisheit, conservation director for Living Rivers.

"It's outrageous that the public has invested more than \$200 million to help the Bureau of Reclamation restore the river habitat in Grand Canyon, and all they have to show for it is fewer fish," added Robin Silver of the Center for Biological Diversity.

The groups argue that FWS's 1994 biological opinion on the effect of dam operations on endangered fish requires the agency to reassess those effects if new information -- such as the USGS report -- suggests it should do so.

Decommissioning Glen Canyon Dam is the only way to restore the Grand Canyon ecosystem and recover the fish, Weisheit said.

Sam Spiller, lower Colorado River coordinator for FWS, said he could not comment on the group's notice because of an agency policy that prevents employees from discussing pending litigation with the press. Reclamation officials also declined to comment.

Federal biologists and water managers have found some hope in the preliminary results of an experimental flood conducted in November of last year that they say appears to have resulted in some habitat improvements, but more high flow tests are necessary before recommending any changes in dam operations, agency officials said (Greenwire, Oct. 26).

Southwest reporter April Reese is based in Santa Fe, N.M.

[Living Rivers/Center for Biological Diversity Press Release](http://www.livingrivers2.org/archives/article.cfm?NewsID=696)
<http://www.livingrivers2.org/archives/article.cfm?NewsID=696>

LR Press Release 11/10/05

Profits to Trump Saving Grand Canyon Ecosystem, Recommends National Park Service

For immediate release

Contact: John Weisheit 435-259-1063

Cell: 435-260-2590

Despite decades of compelling scientific evidence concerning the deteriorating biological integrity of Grand Canyon Park, the National Park Service's Final Environmental Impact Statement released Thursday, concludes that virtually no changes should be made to its Colorado River management activities.

Cascading 250 miles from just below Glen Canyon Dam to Hoover Dam's Lake Mead, the Colorado River through Grand Canyon National Park is one of the world's most sought after river recreation adventures. This ecosystem is also one of the most threatened in the National Park system. The proposed Colorado River Management Plan is intended to guide new strategies for achieving the Park Service's dual missions of providing visitor access while preserving Grand Canyon's natural integrity for future generations.

"From dams to inflatable aircraft carriers, a journey through Grand Canyon now has nothing to do with Theodore Roosevelt's intentions when creating the Park 86 years ago," says Living Rivers conservation Director John Weisheit. "It's become a motorized, ecological funeral procession marketed as a six-day E-ticket Disneyland ride, and this new plan is doing nothing to change that."

Indeed, the plan emphasizes alterations in the allocations of visitor activity on the river with very little attention to managing the ecosystem. It's preferred alternative is designed to satisfy demands from the public boating sector without impacting the commercial. Another way of assessing this preferred alternative is: as the resource degrades, visitation increases.

"The plan says nothing about how the Park Service will meet it's obligation to recover the ecosystem that has seen half it's native fish species disappear, along with otters and muskrats, and it's entire aquatic food base devastated due to dams above and below," continues Weisheit. "It's all about preserving a \$30 million outfitting industry and \$110 million worth of hydropower, not the priceless ecosystem they are required by law to protect."

Although most of the land emanating from the banks off the Colorado River to the Grand Canyon's rim is designated Wilderness, thus subject to the most stringent federal ecological and human management practices, the new plan would not recommend the need the river itself to managed Wilderness in kind. Such designation has been fought

extensively by the Grand Canyon River Outfitters Association, a lobbying group for the Grand Canyon river companies.

The Plan also side steps issues pertaining to the impacts of Glen Canyon Dam, stating that the dam is outside its jurisdiction, and under the management of another Department of Interior agency, the Bureau of Reclamation. Such issues did not come into play ten years ago for Everglades National Park, which found its ecological integrity degraded by Army Corps of Engineers projects outside the Park. A \$10 billion restoration programs along the Kissimmee River which feeds the park is now well underway.

"The bottom line is that the current leadership in the Department of Interior considers Grand Canyon to be no different than an oil field or a coal mine, and could care less whether the Grand Canyon is there to be enjoyed by future generations," concludes Weisheit.

[National Park Service Final EIS for Colorado River Management Plan](http://www.nps.gov/grca/crmp/documents/index.htm)
<http://www.nps.gov/grca/crmp/documents/index.htm>

LR in the News 11/10/05

New plan should allow more people to tour Grand Canyon by boat

Associated Press Nov. 10, 2005 04:11 PM

More people would be able to tour the Grand Canyon by boat each year, but they'll go in smaller groups under final river management plans released Thursday by the National Park Service.

The plan for Colorado River use in the Grand Canyon would shift more travelers into the fall, winter and spring months, while cutting the number of daily summertime launches of motorized and non-motorized commercial rafts.

It trims the maximum number of passengers in groups by about 10, to 32 for both types of boats, but increases the number of private launches in the summer.

The result would be more tourists overall.

In the lower Colorado River from Diamond Creek to Lake Mead, the number of pontoon boat tours would go up, from 130 passengers daily to 480 each day. But jet boat tours would be banned entirely. Existing operations that use large jet boats to meet rafts above Lake Mead would still be allowed, however.

The final plan, technically a final environmental impact statement, comes after four years of study by a group of scientists, park service managers and other professionals, with input from tour operators, Indian tribes and members of the public.

Nearly 25,000 public responses were taken during the public comment periods, and at more than a dozen public meetings around the country from 2002 to 2004, said Jeffrey Cross, the project manager for the Colorado River Management Plan.

"We listened, we talked to people, they submitted information and we looked at it," said Cross. "We've tried to address the comments and concerns. That's the best that we can do. We will never satisfy everyone who wants to go down the Grand Canyon."

The plan could still be revised by the regional director of the park service, but that's not likely. Plans are to publish a final version in about two months, and have it in force by 2007.

It wasn't met with glowing reviews by environmental organizations.

John Weisheit, conservation director for the river restoration group Living Rivers, said the park service didn't even consider a wilderness designation that would have increased protections.

"I'm very, very disappointed but I'm not surprised," Weisheit said. "Even though their own surveys have indicated a strong preference for a wilderness designation, they don't do it because they don't want to upset the tour operators."

Meanwhile, the Hualapai Indian Tribe, which runs the lower river pontoon trips, disputed the government's legal ability to limit its operations.

"From our tribal perspective, there's a question of whether or not they have the jurisdiction to impose this on the tribe," said Charlie Vaughn, the tribe's chairman.

"There was no limitation on us in the lower gorge prior to this plan - and we don't feel we have increased to our capacity and there's no allowance for that in the plans.

The 2,300-member tribe's reservation spans 1 million acres bordered on the north by 108 miles of river.

The Hualapai had wanted to increase the number of daily pontoon boat passengers to about 1,000.

Superintendent Joe Alston of Grand Canyon National Park said the law is clear that the entire river is subject to federal government oversight.

"Our simple answer to this is it doesn't really matter where the Hualapai boundary is, Congress established where the Grand Canyon is - and it is the south side of the river," he said.

For adventurers trying to raft the river on their own, the biggest change will be in the system used to allocate the limited number of slots.

Currently, a waiting list system is used, but it is overloaded.

There are now about 7,000 people on the waiting list, 1,700 of whom have spent from 11 to 15 years in line. It's been frozen to new signups since 2003.

That system will be replaced with a lottery, Cross said. Those who has been waiting the longest will get preference during the first years of operation, but no guarantees of receiving a permit.

More trips will be moved to the wintertime as well, he said. Those trips are given more time, so that visitors can hunker down if needed and wait out stormy weather.

Despite that, the plan was a huge disappointment for some noncommercial users.

"We want it to be fairly allocated. Right now we've got concessionaires that can't fill their seats, and yet here we are with this huge pool of demand that's not going to be met," said Jo Johnson, co-director of River Runners for Wilderness, which advocates fair access and wilderness protection for the canyon. "This plan was our last best chance to get that."

River use had to be cut back during peak times for several reasons, Cross and Alston said. The biggest is the loss of beaches.

About half of the large beaches used for camping have been lost since the 1964 completion of the Glen Canyon dam cut off sediment flow, leading to crowding and competition for the best spots.

The other reason is driven by the intent to give visitors as true a "wilderness experience" as possible.

During peak months now, as many as 300 rafters can be stopped at well-known scenic spots at any one time, Cross said. By lowering the number of people per raft and cutting the number of daily tour departures, visitors will meet fewer people.

The director of the association representing tour operators said the park service appears to have done a good job balancing the competing interests of many users.

"The bottom line is we believe that one of the purposes of the plan was to reduce the amount of use happening at one time, to spread that use out over a broader period of time," said Mark Grisham, director of the Grand Canyon River Outfitters Association. "Our initial read of the plan is they've done a pretty decent job under a lot of competing demands."

On the Net:

Management plan: <http://www.nps.gov/grca/crmp/>

Grand Canyon National Park: <http://www.nps.gov/grca/>

Living Rivers: <http://www.livingrivers2.org/>

Grand Canyon River Outfitters Association: <http://www.gcroa.org/>

River Runners for Wilderness: <http://www.rrfw.org>

Regional News 11/17/05

Report sees decline of up to 30% by 2050, cites warming

Snowmelt may dwindle

By Jerd Smith, Rocky Mountain News
November 17, 2005

Colorado and other Western states dependent on snowmelt could see a 10 percent to 30 percent reduction in annual runoff by 2050 as the Earth's atmosphere warms, according to a report in the journal Nature.

Such a change would have severe consequences for water supplies in regions such as the seven-state Colorado River Basin and other parts of the world, including southern Europe and the Middle East, the report said.

Even a 10 percent reduction in the Colorado River's flows, for instance, would mean a drought-like existence for the historic stream, with annual flows equal to those of the recent five-year dry spell, said Andrew Gilmore, a hydrologic engineer for the Bureau of Reclamation in Salt Lake City.

During that time, flows averaged 10.1 million acre feet, well below the 98-year average of 15.1 million acre feet, Gilmore said.

Other parts of the world, such as eastern equatorial Africa and Eurasia, could see stream runoff increase as global temperatures rise, the report says.

The new research marks an expansion of what scientists have been able to determine to date about the effects of climate change.

Until now, much of the analysis done on the complex interrelationships between temperature and climate have indicated that winter snowpacks are likely to melt earlier, that more rain and less snow will fall, but that overall amounts of precipitation would stay about the same in the West.

But the new findings indicate that there will be a marked decrease in the total amount of water in streams in some regions, said Christopher Milly, an author of the Nature report and a research hydrologist for the United States Geological Survey in Princeton, N.J.

"It's taken us a while to tease out a way to look at this," Milly said. "But the results of this study will increase the degree of confidence that scientists put in water resource

projections. . . . We know there are certain areas of the Earth that are systematically projected to dry."

The precision is thanks largely to new international data collection and coordinated international modeling efforts. That work has resulted in much more reliable global and regional analyses.

Milly said it isn't entirely clear why runoff is shrinking in some regions, but he believes that one plausible explanation for its occurrence in the West is this: As the atmosphere warms above the ocean, it is able to hold more water.

As these warm ocean winds blow across the hot, semi-arid West, they warm even more, holding more water and ultimately carrying that water out of the region rather than allowing it to fall.

Those findings don't necessarily conflict with a recent report by Boulder climate researcher Gerald Meehl, who published a paper in September indicating that total annual precipitation in Colorado would change little over the next century.

But even a slight decrease in precipitation can trigger a much more dramatic decrease in runoff, Milly said.

Meehl said the new modeling being done is allowing scientists to connect more data and better data than before.

How similar data can be used in real life river-management tools isn't clear yet.

"It's one thing to say we think the climate is warming," said Rick Clayton, a hydrologic engineer for the U.S. Bureau of Reclamation. "It's another thing to say we think the Colorado River is drier. That's quite a leap."

Still, Clayton and Gilmore said that the bureau is searching for ways to include climate-change projections in their existing analysis to better understand how the river will respond to dramatically lower flows.

"We get asked this question all the time," Gilmore said. "And we need a better answer than we have."

smithj@RockyMountainNews.com or 303-892-5474

Regional News 12/07/05

Salt in Colorado River concerns USGS

Donna Gray Post Independent Staff

By the time they reach Mexico the waters of the Colorado River are so laden with salt as to be a danger to crops.

"About 9 million tons of salt passes Lees Ferry (on the Colorado River in Arizona) every year," said Paul Von Guerard, office chief of the U.S. Geologic Survey in Grand Junction.

Since the 1970s, the seven states through which the river flows have agreed to control that burden of salt as much as possible. The USGS monitors the salinity of the river, which has its source in Colorado.

Thursday, members of USGS in Grand Junction brought the Energy Advisory Board up to date on efforts to monitor salt in the Colorado reaches of the river.

The Colorado, as it flows through the state, picks up a significant amount of salt that is augmented as it is carried downstream, Von Guerard said.

"Salinity is a major water quality concern in the Colorado River," Von Guerard said.

Salt dumps into the river from a variety of sources, among them irrigation of agricultural lands, the Mancos shale geologic formation and the hot springs around Glenwood Springs, Von Guerard said.

About 47 percent of the salt in the river comes from natural sources such as hot springs and erosion of soil and the rest is from human actions. Salt causes about \$300 million in damage to crops, water pipes and hot water heaters in the lower Colorado River Basin in California and Nevada, as well as in Mexico, Von Guerard said.

While the survey has a number of monitoring stations along the river and its tributaries, there is a gap between Glenwood Springs and Grand Junction.

"We don't have a good handle on the discharge from Glenwood Springs," he said.

About 47 percent of the salt load that goes through Colorado passes the Cameo monitoring station on the west side of DeBeque Canyon just east of Grand Junction, Von Guerard said. But only 18 percent of that load comes from the river above Glenwood Springs, according to data from a station just upstream from the city. The rest of that salt comes from sources between Glenwood and Grand Junction, he said.

The USGS needs to monitor that load with at least one new monitoring station between Glenwood and Grand Junction, at a cost of \$25,000. Because of flattened funding in the last few years, USGS is seeking to find financial support from local towns and cities in that reach of the river to install a station, Von Guerard said.

"We are working with the (Colorado River Water Conservation District) on funding," he said. The district also suggested the USGS appeal to the energy companies operating in the county for financial support.

Alan Lambert, an Energy Advisory Board member and a Rifle city councilman, agreed salinity is a problem and municipalities need to push for minimum stream flows in the Colorado in order to protect their infrastructure.

"We have a salinity problem in the water treatment plants," he said.

LR in the News 12/11/05

Lake Powell still a glass half-empty

By Kim McGuire Denver Post Staff Writer

Flows into Lake Powell were slightly above average this year, but the giant reservoir in Utah remains far from full, officials with the Bureau of Reclamation say.

In 2005, flows into the reservoir were about 105 percent of average.

Even with that increase, Lake Powell is only about half- full, holding 12 million acre-feet of water.

One acre-foot of water is about 326,000 gallons.

"There were increases in both content and elevation in both Lake Powell and Lake Mead this year that were about the same in the water year 2003," said Rick Clayton, a hydrologist with the Bureau of Reclamation. "Another way to look at that is what we saw this year was the equivalent of rolling back one year of drought."

The drought of 2002 decimated Lake Powell, which acts like a water bank for the upper basin states of Colorado, Wyoming, New Mexico and Utah, releasing water to Lake Mead for distribution to the lower basin as required under the 1922 Colorado River Compact.

Flows in Lake Powell in 2002 were 25 percent of average - the lowest they had been since the completion of the Glen Canyon Dam in 1963.

Clayton declined to say how long he thought it would take for Lake Powell to refill.

"That would be speculation," he said. "But I think it's safe to say it's trending in the right direction."

Some Western environmental groups are skeptical about the chances of Lake Powell ever refilling again.

They say the insatiable thirst of booming cities in Arizona, California and Nevada will outweigh any gains in flow the reservoir may experience.

"When the demand equals the supply, it seems highly unlikely Lake Powell will fill again," said John Weisheit, conservation director for Living Rivers, a Moab- based

group that supports decommissioning the Glen Canyon Dam. "It might happen. But let's put it this way: It's more likely to be empty than full."

This summer Interior Secretary Gale Norton rejected a request by Colorado and other upper basin states to help refill the depleted reservoir by reducing outflows from Lake Powell.

The move disappointed officials in the upper basin states who wanted Norton to send a message to California, Nevada, and Arizona that she could curb releases in times of drought.

Staff writer Kim McGuire can be reached at 303-820-1240 or kmcguire@denverpost.com

LR Testimony 01/01/06

144 NGOs Support The One-Dam Solution

November 30, 2005
Mr. Bob Johnson
Regional Director
Bureau of Reclamation, Lower Colorado Region
Attention: BCOO-1000
P.O. Box 61470
Boulder City, NV 89006-1470

Mr. Rick Gold
Regional Director
Bureau of Reclamation, Upper Colorado Region
Attention: UC-402
125 South State Street
Salt Lake City, Utah 84318-1147

Dear Mr. Johnson & Mr. Gold,

Living Rivers, Colorado Riverkeeper, and the 144 undersigned organizations submit the following report, The One-Dam Solution, as scoping comments for the development of management strategies for operations at Lake Powell and Lake Mead, on the Colorado River, under low reservoir conditions.

With current demand for Colorado River water nearly at the river's historical annual flow of 13.5 million-acre feet (MAF) and rising, and government-sponsored scientists anticipating average annual flows to decline 18 percent by 2040, the prospect of ongoing low water conditions for Colorado River reservoirs is a near certainty. The average flow of 60 percent into the system for the past six years is firm evidence of this.

For more than 25-years, government scientists and administrators have warned that shortages would be occurring now. This action is the first to reexamine the flawed operational strategies that have been in place as far back as 1922 when the Colorado River Compact allocated 11 percent more water than the Colorado River has to give.

Reexamining these two reservoirs is critical, as they constitute more than two-thirds of the system's storage capacity, which with declining inflows and increased demand are proving excessive.

Meanwhile, these two reservoirs can cause the loss of upwards of ten percent of the river's average annual flow due to evaporation—valuable water for critical habitats and water users downstream.

Furthermore, the challenges facing the future operations of these reservoirs go beyond water allocation and storage inefficiencies. Sediment entering Lake Powell will eventually compromise Glen Canyon Dam's safety. Despite recent warnings that this could happen sooner than the 40-year-old estimate of 2060, there has been no comprehensive monitoring or analysis conducted to address this inevitable problem.

Lastly, despite more than \$200 million already spent, no gains have been made to restore the critical habitat for endangered species in Grand Canyon National Park impacted by Glen Canyon Dam's operations. The mandates of the Grand Canyon Protection Act and the Endangered Species Act in particular are being ignored to maintain Lake Powell even though it is proving to be both wasteful and unnecessary for water storage.

It is therefore critical that the Bureau of Reclamation broadly reexamine the operations of these facilities in accordance with preparing an Environmental Impact Statement to address the following:

- 1) Pursue transfers of Lake Powell and Lake Mead storage to groundwater aquifers.
- 2) Develop a sustainable sediment management program for Lake Powell and Lake Mead.
- 3) Determine the costs and benefits of decommissioning Glen Canyon Dam to restore natural flows through Glen and Grand Canyons.
- 4) Identify new water allocation guidelines to reflect the amount of water the Colorado River actually provides, how it should be distributed and what amounts are needed to protect critical habitats in Grand Canyon and elsewhere.

A water management crisis is looming on the Colorado River. The federal government, as Water Master, has the responsibility to help avert this. Most of the issues addressed in the attached report are not new, but continuing to ignore them will only worsen the impacts once the crisis arrives.

Thank you for the opportunity to submit these comments. We look forward to assisting the Bureau of Reclamation in developing this Environmental Impact Statement concerning the protection of water resources from the Colorado River in times of shortage.

Sincerely yours,

John Weisheit Conservation Director, Living Rivers Colorado Riverkeeper

Attachment: [The One-Dam Solution](#)

Submitted July 26, 2005 at Henderson, Nevada

On behalf of the following groups:

A Critical Decision
Alabama Environmental Council

Alaska Coalition
American Wildlands
Animas Riverkeeper
Appalachian Forest Coalition
Audubon Society of Greater Denver
Ballona Institute
Black Warrior Riverkeeper
Blackwater/Nottoway Riverkeeper
Bluewater Network
Boulder Regional Group
Buckeye Forest Council
Californians for Western Wilderness
California Save Our Streams Council
Casco Baykeeper
Castle-Crown Wilderness Coalition
Center for Biological Diversity
Choqueyapu Riverkeeper
Citizens of Lee Environmental Action Network
Citizens Progressive Alliance
Coalition for Jobs and the Environment
Coastal Law Enforcement Action Network
Cold Mountain, Cold Rivers
Coloradans for Utah Wilderness
Colorado Plateau River Guides
Colorado White Water Association
Columbia Riverkeeper
Conservation Northwest
Coosa River Basin Initiative
Devil's Fork Trail Club
Dogwood Alliance
Earth Action Network
Ecology Center
Electors Concerned about Animas Water
Endangered Habitats League
Erie Canalkeeper
Flagstaff Activist Network
Forest Guardians
Forest Watch
Forests Forever
Foundation for Global Sustainability
Four Corners School of Outdoor Education
Free the Planet
Friends of Living Oregon Waters
Friends of the Animas River
Friends of Blackwater Canyon
Friends of the Earth

Friends of the Eel River
Friends of the Estuary at Morro Bay
Friends of Hurricane Creek
Friends of the Milwaukee River
Friends of the Nanticoke River
Friends of Yosemite Valley
Gifford Pinchot Task Force
Glen Canyon Institute
Goods From The Woods
Grand Canyon Private Boaters Association
Grand Riverkeeper
Great Egg Harbor Watershed Association
Great Old Broads for Wilderness
Greenaction for Health and Environmental Justice
Green Delaware
Green Party of Utah
Green Party of York County
Hells Canyon Preservation Council
Hudson Riverkeeper
Hurricane Creekkeeper
Indiana Forest Alliance
Inland Empire Waterkeeper
International Rivers Network
International Society for Preservations of the Tropical Rainforest
Johnson County Green Party
Jumping Frog Research Institute
Kern Valley River Council
Kettle Range Conservation Group
Land Institute
London Canalkeeper
Lone Tree Council
Los Alamos Study Group
Louisiana Bayoukeeper
Lower Neuse Riverkeeper
Maricopa Audubon
Milwaukee Riverkeeper
Montana River Action
Morava Riverkeeper
National Organization for Rivers
National Water Center
New Riverkeeper
New River Foundation
Northwest Rafters Association
Northwoods Wilderness Recovery
Neuse River Foundation
Ogeechee-Canoochee Riverkeeper

Orange County Coastkeeper
Oregon Natural Desert Association
Outdoor Adventure River Specialists
Outward Bound West
Patapsco Coastkeeper
Patrick Environmental Awareness Group
Puerto Rico Coastkeeper
Raritan Riverkeeper
Red Rock Forests
Restore: The North Woods
Ridgeline & Open Space Coalition
River Runners for Wilderness
Riverhawks
Rocky Mountain Peace and Justice Center
Russian Riverkeeper
Sacramento River Preservation Trust
Salt Creek Watershed Network
San Diego Coastkeeper
San Luis Obispo Coastkeeper
Santa Monica Baykeeper
Satilla Riverkeeper
Save the Illinois River
Siskiyou Project
Snake River Alliance
South Riverkeeper
South Yuba River Citizens League
Southern Appalachian Forest Coalition
Southern Utah Wilderness Alliance
Spirit of Sage Council
Swan View Coalition
Taking Responsibility for the Earth and Environment
Taxpayers for the Animas River
The Clinch Coalition
The River Project
Umpqua Watersheds
Upper Coosa Riverkeeper
Upper Neuse Riverkeeper
Ventura Coastkeeper
Virginia Forest Watch
Waterkeepers of Australia
West/Rhode Riverkeeper
Western Lake Erie Waterkeeper
Western Lands Project
Western Watersheds Project
Wetlands Action Network
Wild South

LR in the News 02/16/06

Groups Sue Feds Over Colorado River Fish

By AMANDA LEE MYERS Associated Press Writer © 2006 The Associated Press

PHOENIX — Five environmental groups filed a lawsuit against the federal government Thursday, saying it has failed to protect endangered fish in the Colorado River.

Because of the failure of the Interior Department and its Bureau of Reclamation to provide a more natural environment in the river, the humpback chub, razorback sucker, Colorado pikeminnow and bonytail chub are in danger of extinction, the suit alleges.

The suit, filed in U.S. District Court in Arizona, contends the government is violating federal law by operating Glen Canyon Dam in a manner that fails to protect the features of Grand Canyon National Park and Glen Canyon National Recreation Area.

The dam straddles the Arizona-Utah border, backing up the Colorado River to form Lake Powell. The suit contends the dam releases water at unnatural temperatures, quantity, quality and frequency, and deprives the Grand Canyon of sediment and needed nutrients.

The lawsuit asks the court to order Interior Secretary Gale Norton and the Reclamation Bureau to consult with the U.S. Fish and Wildlife Service over the effects of dam operations, and ultimately, provide a "more natural flow and water temperature regime" and "adequate downstream nutrients and sediment."

The species in the most danger is the humpback chub, the adult population of which declines between 15 percent and 20 percent each year, according to a 2005 report by the U.S. Geological Survey.

Currently, there are between 3,000 and 5,000 in the Colorado River, but that number could decline sharply to between 1,500 and 2,000 in the next 10 to 15 years if nothing is done.

"Arizona's native fish are overwhelmingly imperiled," said Robin Silver, conservation chair for the Center for Biological Diversity, one of the plaintiffs.

For years, officials have studied how to regulate the temperature of water released from the dam, said Barry Wirth, spokesman for the Bureau of Reclamation's Upper Colorado region. But change takes time, he said.

"There's a lot of things that come into play," he said. "We know the technology works. It's just not an off-the-shelf thing."

Wirth said programs such as reducing predators and water flow strategies help the humpback chub and other species.

Neither Wirth nor agency spokeswoman Trudy Harlow in Washington would comment directly on the lawsuit. The suit was filed by the Center for Biological Diversity, Sierra Club, Glen Canyon Institute, Living Rivers and Arizona Wildlife Federation. It followed another legal battle last month between the federal government and two environmental groups, Grand Canyon Trust and Earthjustice.

In that case, U.S. District Judge Frederick Martone ruled the U.S. Fish and Wildlife Service recovery plan for the endangered fish was ineffective. He ordered a new plan to include more specific goals and a timeline for recovery.

Although the ruling was a victory for the environmental groups, a better recovery plan won't save the fish unless the government acts on it, Silver said.

"A recovery plan does not save species because they're never obeyed," he said. "It won't cause anything to happen." ____

[Link to Press Release](#)

LR Press Release 02/16/06

Conservation groups file suit to reverse harm to Grand Canyon's aquatic habitat

For Immediate Release: February 16, 2006

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David Wegner, Glen Canyon Institute 970-259-2510

Roxane George, Sierra Club-Grand Canyon Chapter, Flagstaff 928-774-6514

Sandy Bahr, Sierra Club-Grand Canyon Chapter, Phoenix 602-253-8633

Phoenix, AZ—The Center for Biological Diversity, Arizona Wildlife Federation, Living Rivers, Sierra Club – Grand Canyon Chapter, and Glen Canyon Institute file suit in U.S. District Court in Arizona today against Gale Norton, U.S. Department of the Interior, and the U.S. Bureau of Reclamation on behalf of the humpback chub and the Grand Canyon. For more than a decade the Bureau of Reclamation has been required to modify the operations of Glen Canyon Dam on the Colorado River to reverse the dam's

downstream impacts on Grand Canyon's priceless river ecosystem. These efforts have failed to produce results. The agencies are in violation of the Grand Canyon Protection Act, the Endangered Species Act and the National Environmental Policy Act.

"The agencies have neglected their responsibilities to this incredible place. Arizona's native fish are overwhelmingly imperiled, and only four of eight native fish species continue to exist in the Grand Canyon. The humpback chub's decline is just another example of the federal government's complete disregard for native wildlife and the irreplaceable habitat they represent," said Robin Silver, Board Chair of the Center for Biological Diversity.

In 1992, Congress passed the Grand Canyon Protection Act to reverse the demise of the canyon and the decline of endangered native fish species such as the humpback chub. Following the completion of an Environmental Impact Statement (EIS) three years later, the Glen Canyon Dam Adaptive Management Program was established to guide the Bureau of Reclamation in implementing recovery guidelines set forth by the U.S. Fish and Wildlife Service (USFWS). The unsuccessful "Modified Low Fluctuating Flow Alternative" (MLFF) is the operational scheme enacted in the Adaptive Management Program which called for released flood flow events with the hope of improving habitat and restoring native fish populations.

"To date, the negative impacts of Glen Canyon Dam continue to lead to the continual decline of the humpback chub. Clearly the Adaptive Management program, as being implemented by the federal government, is not working," said David Wegner, Glen Canyon Institute.

"The Grand Canyon Chapter has long worked to protect the Grand Canyon and the Colorado River, plus the species which rely on this important system," said Sandy Bahr, Conservation Outreach Director, Sierra Club – Grand Canyon Chapter. "We have supported efforts to remove non-native fish species and previous efforts to operate the dam in such a manner as to promote recovery of the fishes and to rebuild the beaches which are also being decimated by the operation of the dam. Clearly, the federal government needs to make some changes to protect our native fishes and to protect the recreation that relies on the Canyon's beaches."

In October 2005, the U.S. Geological Survey released its evaluation of this program in a 220-page report, "The State of the Colorado River Ecosystem in Grand Canyon." This report confirmed what many scientists have been saying for years: that recovery of the humpback chub is not being achieved. According to the report, "...it is clear that the restrictions on dam operations since 1991 have not produced the hoped for restoration and maintenance of this endangered species."

"Since the Fish and Wildlife Service issued its Biological Opinion on the dam's operations in 1994, the Bureau of Reclamation's actions have merely made things worse," said Living Rivers Conservation Director John Weisheit. "One more fish species is effectively extinct in the Canyon, and another is on the verge."

Despite the ongoing detrimental effects of Glen Canyon Dam on the humpback chub, razorback sucker, Colorado pikeminnow and bonytail chub, and the failure of the Adaptive Management Program to address those impacts, the agencies have not reinitiated consultation with USFWS and prepared a supplemental EIS as required by law.

The groups' suit aims to protect the native fish and aquatic habitat of the Grand Canyon and Colorado River by stopping the ongoing destruction caused by the current operations of Glen Canyon Dam. The suit does not seek to decommission the dam. Matt Kenna, Western Environmental Law Center in Colorado, represents the organizations.

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For More Information

[Complaint February 2006](#) [57k PDF File]

<http://www.livingrivers.org/pdfs/ComplaintFeb2006.pdf>

[60-day notice letter](#) [57k PDF File]

http://www.livingrivers.org/pdfs/CBD_LR_Notice.pdf

[Biological Opinion: Glen Canyon Dam](#) [3700k PDF File]

<http://www.livingrivers.org/pdfs/BOgcd.pdf>

USGS SCORE Report, released on October 25, 2005

[The State of Natural and Cultural Resources in the Colorado River Ecosystem](#)

<http://www.gcmrc.gov/products/score/2005/score.htm>

LR Press Release, October 24, 2005

[Grand Canyon Restoration Program, a Failing Grade](#)

<http://www.livingrivers.org/archives/article.cfm?NewsID=690>

[Letter from Living Rivers and others for Supplemental EIS](#)

<http://www.livingrivers.org/archives/article.cfm?NewsID=567>

[200 groups support the Supplemental EIS](#)

<http://www.savegrandcanyon.org>

[Glen Canyon Dam Adaptive Management Program](#)

<http://www.usbr.gov/uc/rm/amp/index.html>

[Living Rivers](#)

<http://www.livingrivers2.org/>

Living Rivers is a non-profit organization dedicated to the restoration of the natural hydrological and ecological processes within the Colorado watershed to protect native species and their habitats.

[Center for Biological Diversity](#)

<http://www.biologicaldiversity.org/swcbd/>

The Center for Biological Diversity is a non-profit conservation organization with over 18,000 members dedicated to the protection of imperiled species and their habitats.

[Arizona Wildlife Federation](http://www.azwildlife.org/)

<http://www.azwildlife.org/>

The Arizona Wildlife Federation is Arizona's oldest conservation organization, founded in 1923 by Arizona hunters and anglers to protect and conserve Arizona's wildlife resources.

[Sierra Club Grand Canyon Chapter](http://arizona.sierraclub.org/)

<http://arizona.sierraclub.org/>

The Sierra Club is the nation's oldest and largest grassroots conservation organization with more than 13,000 members in Arizona.

[Glen Canyon Institute](http://www.glencanyon.org/)

<http://www.glencanyon.org/>

The Glen Canyon Institute is a non-profit conservation organization with over 1,500 members dedicated to restoring Glen Canyon and the protection of the natural and biological living systems of the Colorado River and its tributaries.

[Western Environmental Law Center](http://www.westernlaw.org/)

<http://www.westernlaw.org/>

The Western Environmental Law Center is a non-profit public interest environmental law firm that works to protect and restore Western wildlands and advocates for a healthy environment on behalf of communities throughout the West.

LR in the News 02/17/06

Lawsuit targets Arizona dam

Says native fish near extinction

Shaun McKinnon for The Arizona Republic Feb. 17, 2006 12:00 AM

Five environmental groups on Thursday accused the Interior Department of failing to protect native fish in the Grand Canyon and asked a federal court to order changes in how water flows into the Colorado River from Glen Canyon Dam.

Their lawsuit, filed in U.S. District Court in Phoenix, stopped short of demanding that the government decommission the dam, a drastic solution some activists say is the only way to restore the river's ecosystem.

Instead, the groups want the court to enforce an existing plan that calls for operating the dam in a way that will help the fish and other species downstream. The government has ignored that plan, the lawsuit alleges, and allowed some fish species to slide nearer to extinction. advertisement The suit could disrupt other attempts to control the river's flow

from Glen Canyon Dam, most notably the ongoing drought talks among the seven states that draw water from the Colorado. That plan could clash with some of the measures prescribed to help the native fish, whose populations have declined in the 40 years since the dam was built.

The groups want the courts to declare the Interior Department in violation of the Endangered Species Act and force the agency to conduct new environmental studies that would lead to changes in the dam's operations. The suit specifically says the groups are not seeking an injunction to stop or alter the flow of water from the dam.

In denouncing the government's efforts so far, the groups cite a plan released last year by the U.S. Geological Survey, which found little progress in species recovery or habitat restoration after experiments designed to mimic the river's pre-dam flows. That report noted trouble for at least four native species: the humpback chub, the razorback sucker, the Colorado pikeminnow and the bonytail chub.

"We waited patiently while they did their studies," said Robin Silver, board chairman for the Center for Biological Diversity, one of the groups that signed on to the suit. "It shouldn't be this way. The lawsuit should be unnecessary. But those agencies are not motivated to do what's necessary to make sure we get these species to survive."

Federal officials had not seen the full complaint Thursday, but it is likely to trigger a negative response from water managers in the seven Colorado River states, said Sid Wilson, general manager of the Central Arizona Project, which delivers water from the river to Phoenix and Tucson.

"If the environmental groups continue to push, you're going to have the seven states and the federal agencies and, frankly, the political officials from the seven states pretty united on all this," Wilson said. Because the states are working on their own plan to control flows from Glen Canyon Dam, any competing scheme could complicate work on the drought plan. Wilson said he has heard anecdotal evidence in recent months that some native fish populations are growing again, in part because of government-sponsored programs to remove non-native fish, such as trout, that feed on baby chubs.

"This suit is like anything else," he said. "If you want to discredit things, you can find them."

The complaint asks the court to force the Interior Department to revise an environmental impact statement written more than a decade ago after studies found evidence that the dam was harming the Colorado River ecosystem along the length of the Grand Canyon.

With the dam in place, the water that flowed into the Grand Canyon was cooler and clearer, creating conditions that are not friendly to the native fish. The dam also blocked seasonal floods and other fluctuations in the river's flow, which helped maintain beaches and other natural habitat in the canyon.

In 1992, Congress ordered the Interior Department to regulate the dam's flows in a way that would help restore the habitat and protect the native species. Two years later, the U.S. Fish and Wildlife Service found that the humpback chub and razorback sucker

were in jeopardy of extinction, triggering an adaptive management plan aimed at improving conditions.

One of the plan's most visible elements was a series of artificial floods designed to rebuild beaches. The first try in 1996 produced disappointing results, and later attempts were only slightly more successful. Future floods could be hampered by agreements among the seven states on how and when water is released.

"Their actions have merely made things worse," said John Weisheit, conservation director for the group Living Rivers. "One more fish species is effectively extinct in the Canyon and another is on the verge."

Weisheit's group has helped lead the charge to decommission Glen Canyon Dam and drain Lake Powell, restoring the river's natural flow through the Grand Canyon. That proposal has been widely discredited by water providers and federal agencies.

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[Additional information and press release](#)

River News 03/14/06

Rivers: a drying shame

We have used our engineering skills to harness the Earth's water systems. Now we are paying the price.

By Geoffrey Lean for The Independent (UK) March 12, 2006

The delta of the great Colorado River - where once it swept into the Gulf of California - used to be the most wonder-filled wetland in the whole North American continent. Some 400 species of plants and animals - including jaguars, beaver and the world's smallest dolphin- thronged its 3,000 square miles of wetlands, lagoons and tidal pools. The local people made a good living fishing its teeming waters. Now it has become a forbidding desert of salt flats and giant heaps of dead clamshells. The fishing boats have been long since beached; the destitute people have to seek what work they can in wheat fields and tortilla factories far away.

The reason for the transformation is not hard to find. Not a drop of the mighty river which once carved the Grand Canyon now flows through the delta to the sea. It has all been used upstream - to slake the thirst of cities such as Tucson, Arizona, feed fountains in Las Vegas, green golf courses and irrigate farmland. Such water as remains in the delta has flowed in from the sea.

It is much the same story in that other great river of the American south-west, the Rio Grande. This does not merely fail to reach the sea: it disappears for much of its length.

The atlases tell us it is one of the 20 longest rivers in the world, but in reality it stops some 800 miles inland at El Paso, Texas, which takes all its water. For the next 200 miles or so there is just a dribble of sewage in its old river bed, and even this often dries up in summer. Local people call it "the forgotten river". The dry channel does not come alive again until a relatively healthy tributary, the River Conchos, joins it from Mexico. For the rest of its length, as it forms the boundary between the two nations, it should, in justice, be called the Conchos, not the Rio Grande. But even this is quickly used up, mainly to irrigate farmland, and often fails to make it through to the Gulf of Mexico.

It is much the same story right across the world. China's Yellow River, the fifth longest in the world is in trouble at both ends. Its source in the Tibetan plateau is drying up - and for most of the past 35 years it has failed to reach the sea all year round.

Similarly, despite the words of the spiritual, the River Jordan is far from "deep and wide". In practice it ends at the Sea of Galilee, where Israeli engineers have blocked the outflow and piped the water to irrigate fields and supply Jerusalem and Tel Aviv.

Such water as flows down the Jordan valley again comes from a tributary, the River Yarmuk. But it cannot really do the job. In biblical times the valley carried a billion cubic metres of water every year; now it has to make do with less than a tenth of that. The ugly truth is that the river - sacred to Christians, Jews and Muslims - is now mainly made up of diluted sewage.

It is the same for river after famous river. The lower reaches of the Nile used to carry 32 billion cubic metres of water a year; now they are down to two billion. The Indus in Pakistan - "Asia's Nile" - similarly has lost 90 per cent of its water in the last 60 years. Australia's Murray River fails to reach the sea every other year.

Even in Europe, Germany's River Elbe has run so dry that it frequently becomes impassable to barge traffic for months at a time - and three years ago river traffic almost completely stopped on the Rhine. In Britain the Environment Agency regularly sounds the alarm about our chalk rivers and streams - which gave birth to the sport of fly-fishing. Dozens of them dry up every summer, and 40 of the 160 in the country are officially under threat.

The writer Fred Pearce, who has published a groundbreaking book on the crisis of the world's rivers, says: "The maps in an atlas no longer accord with reality. The old geography lessons about how rivers emerged from mountains, gathered water from tributaries and finally disgorged their bloated flows into the oceans are now fiction."

The UN-backed World Commission on Water for the 21st Century reported: "More than one half of the world's major rivers are being seriously depleted and polluted".

There are two main culprits; abstraction of water for rivers - usually after damming them - and global warming.

The world has, on average, built two giant dams a day, every day, for the past 50 years. Now 45,000 of them span the world's rivers. Every one of the world's 20 longest rivers is encumbered by them.

In many ways it all began on the Colorado, 70 years ago, with the Hoover Dam, the great symbol of Franklin Roosevelt's New Deal. Today, the dams intercept more than a third of the world's freshwater as it flows towards the sea and at any one time are holding back 15 per cent of it.

The UN's triennial World Water Development Report, published for a international conference in Mexico City this week, cautions that damming has "hugely changed the natural order of rivers worldwide." It goes on: "Humanity has embarked on a huge ecological engineering project with little or no preconception - or indeed full present knowledge - of the consequences. We have sought to redesign and impose a new order on natural planetary systems, built over aeons of time."

Dams waste massive amounts of water. In hot, dry regions, they lose about 10 per cent of their reservoirs to evaporation every year: much more is lost in irrigation. Global warming is making things even worse. The source of the Yellow River is drying out as glaciers retreat. And a great drought in the southwestern United States - so intense that even cacti are wilting - is exacerbating the crisis of the Colorado and the Rio Grande.

It is even endangering relatively healthy rivers. The Amazon, relatively unencumbered by great dams, was hit by the worst drought on record last year: water levels fell by 10 metres and boats were stranded. And salmon are endangered in Alaska's Yukon River because its waters are too warm.

This will only get worse as the world goes on heating up, making the desert delta of the Colorado just a foretaste of the rivers of the future.

RIVER REPORT

Amazon

Length: 4,000 miles

Famous as: Source of some of world's richest habitats

Problems: Depleted by a record drought last year. Widespread deforestation

Verdict: Largely undammed and rescuable

Yellow River

Length: 2,900 miles

Famous as: Carries most silt

Problems: Source is drying out and river now usually fails to reach the sea

Verdict: Attempts at rescue. Task immense

Jordan

Length: 104 miles

Famous as: Holy river

Problems: Effectively ends below the Sea of Galilee. Site where Jesus was baptised now a pool of sewage

Verdict: Hardly exists, damage seems terminal

Rio Grande

Length: 1,900 miles

Famous as: Border river
Problems: Now two rivers, split by 250-mile dry section
Verdict: Over-exploited

LR in the News 03/23/06

Plan for Grand Canyon use gets final approval

March 24, 2006 USA Today

PHOENIX (AP) - More people will be able to raft down the Colorado River each year, but visitors will be spread out over a longer period of time and will be forced to travel in smaller groups, according to a new plan the National Park Service formally adopted Thursday.

More rafters will be shifted to fall, winter and spring months while the number of daily summertime launches of both motorized and non-motorized commercial rafts will decrease.

The result will be more tourists overall.

The new plan also eliminates the current waiting list for those who want to raft the river in non-commercial boats, replacing it with a lottery system.

More than 7,000 trip leaders are on the waiting list, said Jeffrey Cross, project manager for the plan. Many people have been waiting to go on trips for more than a decade, he said.

"Their lives often changed," Cross said. "They had babies, they moved, they changed jobs."

The long wait resulted in a cancellation rate between 30 and 50 percent, Cross said.

In the next six weeks, the 600 people who have waited the longest will be assigned dates spread throughout the next five years. After that, those on the waiting list can combine their waits with the waits of friends, allowing the longest 600 of those waits to be assigned dates.

After that, everyone else will be in the computerized lottery. The first drawing will be in August and will take up the rest of the available 2007 dates.

Those who have already been assigned trips for the summers of 2006 and 2007 will not be affected, said Steve Sullivan, who manages the waiting list.

"We heard pretty strongly from members of the public," Sullivan said. "A waiting list was not working for the people."

Additionally, the number of non-commercial trips allowed annually will double by 2007, allowing 500 trips a year, up from 240, Cross said.

The lower Colorado River, from Diamond Creek to Lake Mead, will see pontoon boat tours go up, allowing up to 480 passenger per day, up from between 130 and 188 passengers, depending on the time of year.

Members of the Hualapai American Indian tribe, which runs the lower river tours, had requested allowing nearly 1,000 passengers.

The plan bans jet boat tours entirely, but commercial operators that use the craft to meet rafts above Lake Mead would still be allowed.

Additionally, the maximum number of passengers on commercial boats will be trimmed by 10 to 32.

The approval of the final plan comes after four years of study by a group of scientists, Park Service managers and other professionals, with input from tour operators, Indian tribes and members of the public. It will be in place for the next 10 years, but alterations can be made if necessary.

The plan is being met with wide support, including the Grand Canyon River Outfitters Association and the Grand Canyon Private Boaters Association, two difficult-to-please groups, Sullivan said.

"That's kind of amazing," he said. "Three years ago, I would have said that would be unlikely. It's a pretty major accomplishment."

But not everyone is pleased.

"We're pretty disappointed," said Owen Lammers, director of Living Rivers, a river restoration group. "It's completely shortsighted and completely negligent in terms of the Park Service mission. They're failing. They're completely derelict in their duties."

Lammers said the plan should have addressed the environmental affects of the Glen Canyon Dam on the Colorado River and banned motorized boats altogether because "they're not necessary at all."

"They spent how many millions of dollars on this when the end result is a lottery system instead of a waiting list?" Lammers said. "It would be OK if they labeled it a human resources plan. It's not a river management plan at all. The public is just being completely misled by the Park Service."

Cross said there are non-motorized boats on the river, as well, and that the Park Service is just trying to meet the demands of the public.

ON THE NET: Management plan: www.nps.gov/grca/crmp/

Grand Canyon National Park: www.nps.gov/grca/

Living Rivers: www.livingrivers2.org/

LR Press Release 03/28/06

Groups Sue to Protect the Grand Canyon

Coalition effort to improve management of the Colorado River\

For Immediate Release: Tuesday, March 28, 2006

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(Denver) A coalition of groups has announced their lawsuit (not a 60-day notice) challenging last Thursday's National Park Service decision to continue to allow commercial motorized rafting tours and helicopter passenger exchanges through Grand Canyon National Park. Since Grand Canyon's recommendation for formal wilderness designation three decades ago, the Park has neglected to remove motorized tour boats and helicopters, that, by the Park's own admission, do not conform to legal wilderness standards.

The groups, Rock the Earth, River Runners for Wilderness, Living Rivers and Wilderness Watch, are defending this crown jewel of the National Park system and every visitor's right to a pristine wilderness experience in the backcountry and on the river. The coalition is represented by Julia Olson of Wild Earth Advocates and Matthew Bishop of the Western Environmental Law Center.

"After consulting with a number of partners and citizen groups, we feel that the recent park service ruling fails to properly fulfill the National Park Service mandate that the Colorado River through Grand Canyon must be managed as wilderness," states Rock The Earth Executive Director Marc Ross, "We're fighting to make sure the National Park

Service does the duty all Americans entrust them with: protecting this beloved natural treasure.”

In addition to the Park Service’s failure to remove motorized tour boats and helicopters in a qualifying wilderness area, the agency’s decision to perpetuate the inequitable allocation of river running permits is also at issue. Currently, commercial tours receive priority over public opportunities for do-it-yourself rafting and kayaking in the summer.

“The distribution of use is so skewed that public river runners have little or no chance of ever gaining a permit through the proposed lottery. It is scandalous discrimination against those choosing to do their own trips while tourists can buy their way onto a high-priced tour almost immediately,” notes Jo Johnson, Co-director of River Runners for Wilderness.

A third concern of the group is the Park Service’s failure to properly address and mitigate degradation of the Grand Canyon’s ecosystem by human use and the ongoing depredations of Glen Canyon Dam, including the lack of planning for lower river flows caused by the continuing drought.

“Dangerous national precedents for the commercialization and privatization of public lands and wilderness areas are at stake here,” said Julia Olson, lead attorney. “We hope they finally address these vital concerns now that we’ve filed notice.”

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For more information:

[Western Environmental Law Center](#)

[River Runners for Wilderness](#)

[Rock The Earth](#)

[Wilderness Watch](#)

[Living Rivers](#)

[Complaint](#) [164k PDF File]

[Grand Canyon National Park's Colorado River Management Plan](#)

Regional News 03/29/06

Arizona goes on 'red' alert over drought

Shaun McKinnon for The Arizona Republic

Arizona turned red with extreme drought Tuesday after one of the driest winters on record left the state's high country draped with too much brown and not enough white.

The official drought monitor was moved from "severe" to "extreme" based on nearly non-existent snowpack and brittle soil and vegetation conditions. The recent rain and snow had little effect on a drought that is now entering its 11th year.

The new status won't trigger rationing or any other restrictions, but it comes with a lengthening list of things to do for state agencies and local government officials. Unless the governor declares an emergency, only those local officials can limit Arizonans' water use.

A map issued by the state drought-monitoring group Tuesday shows all but three counties colored bright red, indicating extreme drought. Mohave, La Paz and Yuma counties stayed at "severe."

This is the first time the state has used the drought monitor. If conditions worsen, the red could turn even darker, indicating the top category of "exceptional" drought.

Regional News 03/30/06

Groups sue over plan for Grand Canyon's river corridor

Land Letter on Thursday, March 30, 2006

April Reese for Land Letter Western reporter

Days after the National Park Service issued the final management plan for Grand Canyon National Park's river corridor, two environmental groups have filed suit seeking changes to the controversial plan.

The Colorado River Management Plan, which was codified in a record of decision issued March 23, is aimed at balancing public access to the 227-mile river corridor in the park with the protection of the canyon's natural resources. Thousands of rafters and kayakers ply the river's waters each year.

The 277-mile corridor of the Colorado River in the Grand Canyon is a popular destination for rafting enthusiasts.

But environmental groups and private river runners say the new plan favors commercial outfitters over private boaters.

Even though the new plan gives private boaters more access to the river overall, it relegates them largely to the off-season while allowing commercial, motorized trips in the popular spring and summer months. It also requires private boaters to complete their trips faster, giving them less time on the river, said Tom Martin, co-director of River Runners for Wilderness.

"It is scandalous discrimination against those choosing to do their own trips while tourists can buy their way onto a high-priced tour almost immediately," said Jo Johnson, co-director of River Runners for Wilderness.

"Dangerous national precedents for the commercialization and privatization of public lands and wilderness areas are at stake here," added Julia Olson, an attorney who is representing the groups in the case. "We hope they finally address these vital concerns now that we've filed notice."

Environmental groups also fear that the plan could hurt the river corridor's chances of being designated as wilderness, since it does not ban motorized boats. A long-standing Park Service directive requires the agency to manage the river to preserve its wilderness characteristics.

However, Linda Jalbert, a planner for Grand Canyon National Park, noted that allowing motorized rafting does not preclude the area from qualifying for wilderness designation. A provision in the Wilderness Act makes an exception for existing motorized use. The park recommended the river for wilderness designation in 1980, but Interior officials have not carried that request to Congress, Jalbert said. Under the plan -- itself a result of a lawsuit filed by environmentalists in 2002 over management of the popular canyon -- motorized and non-motorized use would be split into two periods, and river traffic would increase by about 2,200 boaters per year.

Motorized boating would be allowed during the main tourist season, from April 1 through Sept. 15, with non-motorized use primarily between September and March. Currently, the park allows boating nine months out of the year, and about 70 percent of permits go to commercial outfitters, with the rest going to private boaters. Under the park's new plan, the number of commercial trips would stay about the same, while access for private, noncommercial boaters would increase.

Overall, the new system would allow about 24,700 people on the river, up from 22,500 (Land Letter, Nov. 17, 2005).

The document also attempts to address the much-maligned permit system for non-commercial, private boaters, who currently must wait as long as a decade for a permit to float through the canyon. The park will now use a weighted lottery, where winners would be chosen each year for the following year's permits. Those who have waited longer for a river trip would be given more chances in the lottery.

Mike Denoyer, president of Grand Canyon Expeditions, said he believes the plan is fair to all concerned.

"They've made a very cooperative effort to make trips available to both the commercial and non-commercial sector," he said.

While the new plan will increase river traffic overall, it distributes launches more evenly throughout the year, lessening pressure on the river's resources and reducing crowding, Jalbert said.

"We were able to accomplish this balance by spreading the use out on a daily, weekly and even a seasonal basis," she said.

For instance, under the existing plan, up to nine trips could float down the river on a summer day, but the new plan allows only five to six trips per day in summer while increasing the number of allowable trips in the off-season, Jalbert said.

But critics said the plan does little to address beach erosion, degradation of cultural sites and other effects of those trips.

"Basically, instead of treating it as a wilderness resource, they're treating it like a water highway," said Sandy Bahr, conservation director for the Sierra Club's Grand Canyon chapter. "We think there will continue to be more damage to the vegetation, the beaches, and the cultural resources."

The Sierra Club has not yet decided whether to join the lawsuit, she added.

Western reporter April Reese is based in Santa Fe, N.M.

LR in the News 03/30/06

Conservationists sue to keep motors out of Canyon

By CYNDY COLE Sun Staff Reporter

Four environmental and river rafting groups are suing the National Park Service in an attempt to stop helicopter flights and motorized rafting in the Grand Canyon.

They want the park designated as wilderness and a recent decision that doubled river use for private boaters overhauled. It's the first lawsuit since the early 1980s to attack motorized rafting in the Grand Canyon, something the Park Service itself had recommended ending in the 1970s and '80s.

Motorized rafts and helicopters in the canyon have long been a target for some because of the noise they create. The Park Service itself decided repeatedly that motorized rafting was not in the best interest of the canyon's beaches, fish or visitors, the groups said in their lawsuit.

"We feel like we're going to battle on behalf of all American citizens. They deserve to have the Grand Canyon designated as wilderness," said Jo Johnson, co-director of River Runners for Wilderness.

But maybe extra federal protections for the canyon are a moot point.

Motorized rafting could be allowed even if the Grand Canyon and Colorado River were designated as wilderness, Park Service documents state.

Living Rivers, Rock the Earth and Wilderness Watch are the other plaintiffs. They say the Park Service failed to prove motorized commercial boating is necessary as required by law, failed to fairly distribute boating permits on the river and didn't analyze whether increasing boating by about 2,000 rafters annually will harm the ecosystem.

Of the 24,657 people to be allowed down the Colorado River next year under a new plan to reallocate time on the river, a third will be noncommercial boaters.

That's twice as many as previously allowed but still not enough, the plaintiffs said.

Between 40 percent and 60 percent of all trips on the Grand Canyon are motorized, giving time-starved customers a way to get down the river in a week instead of two, said Mark Grisham, director of the Grand Canyon River Outfitters Association, which represents commercial interests.

"If there weren't motorized trips, the majority of Americans would be deprived of the opportunity to see the Grand Canyon by river," Grisham said.

The groups suing have also argued that helicopter use to transport rafters in and out of the canyon should be illegal.

"The park believes that the final environmental impact statement and the record of decision represent a good balance of the many competing interests and we believe that the court will affirm our decision," Grand Canyon spokeswoman Maureen Oltrogge said.

Sen. Orrin Hatch, R-Utah, attached a rider to a 1981 bill that would block any federal funds from being used to support removal of motorized boats from Grand Canyon, even if they were only used for drawing up planning documents.

The Park Service reversed course on its mission to phase out motorized boating following Hatch's move and hasn't attempted again since.

A proposal to designate most of the Grand Canyon as wilderness was put forth by Grand Canyon managers in 1993 and has never been transmitted to Congress or any president since, as would be required, according to the Colorado River Management Plan.

The lawsuit is not expected to hold up river trips or permit lotteries for upcoming river trips, as the plaintiffs are not seeking an injunction.

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Regional News 04/02/06

National Geographic: Drought Drains Lake Powell--Uncovering the Glory of Glen Canyon

National Geographic on April, 2006

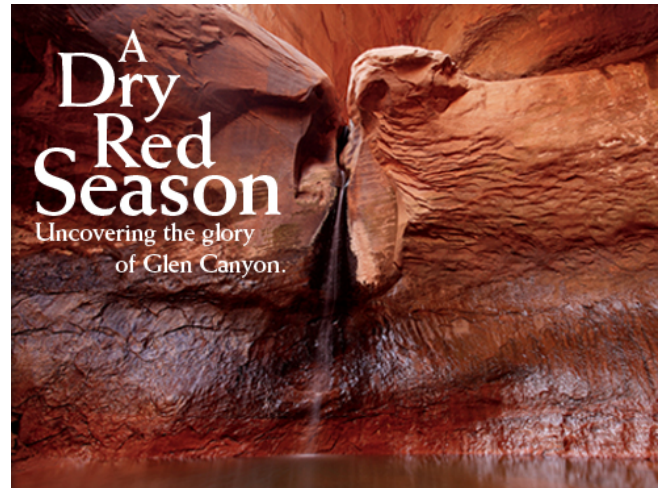
By Daniel Glick and photographs by Michael Melford

Excerpt

"Today, the fall of the lake has driven a rising debate about its future. Many scientists think Western droughts will intensify as the Earth's climate warms. Water will become even more precious-and reservoirs, which lose vast amounts through evaporation, will seem intolerably wasteful. Better, say many environmentalists, to exploit new technologies for storing water underground, decommission the dam, and let Lake Powell once again be Glen Canyon."

A DRY RED SEASON

A year ago Lake Powell reached its lowest level since Jimi Hendrix played Woodstock and Neil Armstrong made his giant leap onto the moon. A sustained drought had sucked out two-thirds of its water, exposing 140 vertical feet of once drowned cliffs. The dry spell temporarily turned the great reservoir back into a red-rock maze called Glen Canyon, stirring hopes that terrain whose grandeur rivals any on Earth may one day be revealed for good.



It also resurrected Tom McCourt's childhood.

McCourt holds forth on a newly exposed rock outcrop near the shrunken lake and reminisces about what was here 40 years ago: two small settlements flanking a vast floodplain cleaved by the Colorado River's milk-chocolate waters and guarded by fortress cliffs. His grandparents lived on this east side, in the town of White Canyon, before it was slowly inundated by the reservoir.

As a kid, he'd come regularly to visit, and he recalls the country as harsh and bountiful. "My grandfather told me it got so hot down here that the ravens left contrails because their feathers were smoking," McCourt says, a storyteller's glint in his eye. "The soil was so rich we couldn't grow watermelons, because the vines would grow so fast they'd drag the melons across the garden and wear them out before they could ripen."

On this early spring day, visitors representing three generations of two families with ties to White Canyon gather and bear witness to its unveiling. The water hasn't dropped enough to reveal the old landing strip or the site of McCourt's grandparents' house, but it's fallen more than enough to stir personal and collective memories.

McCourt's entourage includes his cousin Janis York, who lived here with her parents until she was five. York shyly approaches, moved to tears by swirling childhood memories. She used to sit on a hill behind her grandparents' house and pretend she was queen of the land. "There were rocks that sparkled," she recalls bits of glittering fool's gold. I used to call them my little jewels." After her family left and the waters rose, she says, I was brokenhearted."

York gazes out over the canyon and the years. "This is the heart of the whole world," she says. I remember telling my jewels I'd be back some day."

After Glen Canyon Dam closed its gates on the Colorado River near Page, Arizona, in 1963, the river's cargo of snowmelt and spring rain, gathered from much of the mountain West, hit the dam's concrete stopper and began to back up. The rising waters slowly transformed the lower reaches of the intricate, thousand-hued Glen Canyon into a monolithic blue-green reservoir, the country's second largest after Lake Mead, farther down the Colorado.

Aided by Lake Powell's aqueous bounty, Little League fields sprouted in Las Vegas, subdivisions multiplied in Los Angeles, golf courses carpeted Phoenix. As the reservoir waters rose, Glen Canyon drowned. This remote heart of the Colorado Plateau, dubbed "the place no one knew" in photographer Eliot Porter's ode to this lost landscape, gurgled underwater.

In unknown Glen Canyon's stead emerged the enormously popular Glen Canyon National Recreation Area-which quickly became a mecca for millions of houseboaters, water-skiers, and striped bass fishermen taking advantage of this watery miracle in the desert.

Then came the sustained drought that ushered in the 21st century, one of the region's periodic dry spells. For five years clouds yielded little moisture, even as the West continued to drink greedily. The Colorado River, lifeblood for seven states, dwindled. Lake Mead and Lake Powell, the river's massive catch basins, shriveled. No amount of hydro-engineering, cloud seeding, flow regulating, or other manipulation could change a simple fact: Not enough water was falling from the sky to keep the West's reservoirs full. Not with the increasing number of straws sucking upstream water to irrigate alfalfa fields, fill swimming pools, and sprinkle suburban bluegrass expanses.

Lake Powell's loss was and is Glen Canyon's unmistakable gain. People who were lucky enough to get a glimpse of Glen Canyon when they were young flocked to see it again, as if offered the chance to visit, after 40 years, a first love who had abruptly moved away. People who had only known the canyon through photos and descriptions-by John Wesley Powell, Wallace Stegner, Katie Lee, Eliot Porter, David Brower, and Edward Abbey-hurried for a first look.

The ancient Navajo sandstone itself shook off the water as easily as a dog emerging from a swimming pool. At an average rate of an inch a day, a lost sculpture garden of rock resurfaced, miraculously intact.

The uncovered slickrock sandstone told its astounding life story: of Sahara-size sand dunes marching across the landscape 190 million years ago; of three-toed dinosaurs that left tracks in damp spots between the dunes; of deep burial that slowly squeezed sand and mud into rock; of epic uplifts and tectonic shifts; of water and wind that carved slot canyons hundreds of feet deep.

Layers of human history saw the light again too: thousand-year-old petroglyph panels and cave dwellings of the Anasazi; artifacts from Navajo settlements; inscriptions left by 19th-century Mormon pioneers; equipment from uranium miners' camps of the 1950s; sunken boats and even a lost airplane of more recent vintage.

Desert varnishes, mineral-rich dust transformed by microbes and moisture, soon streaked the canyon walls. Vermilion, rust, beige, taupe, slate, maroon, cocoa, coffee, pale orange, and peach, they began painting over the lake-bleached bathtub ring left by high water. Streams rippled anew in the side canyons that branch out like arteries from the main stem of the Colorado to distribute lifemaidenhair ferns and coyote willow, soft-stem bulrushes and golden sedges in this arid land.

There was little soul-searching when Congress voted to euthanize this hidden world back in 1956, when Ike was President, the country poised to pave interstates coast-to-coast, and Sputnik was but a year away. Today, the fall of the lake has driven a rising debate about its future. Many scientists think Western droughts will intensify as the Earth's climate warms. Water will become even more precious-and reservoirs, which lose vast amounts through evaporation, will seem intolerably wasteful. Better, say many environmentalists, to exploit new technologies for storing water underground, decommission the dam, and let Lake Powell once again be Glen Canyon.

There's little chance of that for now. Lake Powell, however diminished, plays too important a role in the West's water supply, and its removal would mean rewriting complex water laws at a time of massive population growth. But even though slightly above-average runoff in the spring of 2005 raised the lake 53 feet from that year's historic lows, managers expect it to drop again, to perhaps 108 feet below full pool by this month. Another sustained dry spell would push the lake to new lows. And in the very long run, nature will defeat the dam. Over the centuries, Lake Powell will ultimately fill up with silt.

Let me get a little less disoriented here," says Bill Wolverton as he scrambles up a slickrock tower to gaze into Twilight Canyon. Wolverton, 57, has roamed this Glen Canyon backcountry for a quarter century, first as a furloughed railroad worker with time on his hands and a love of the desert, and for the past 18 years as a seasonal backcountry ranger and an ardent advocate for the canyon. On his days off he walks me up and down a half dozen remote canyons, observing what the reservoir wrought and the drought incrementally reversed.

In the lower reaches of each canyon, by the lake, we sink into giant pillows of sediment, deposited over the decades since high water flooded the canyon and stripped the banks of life. Wolverton calls this vegetation-free carpet of stinking mud the "death zone." At

one point I am in it up to my knees and elbows when solid-looking ground turns out to be quicksand.

Here gnarled gray hundred-year-old cottonwood branches beckon like skeletal hands from the mud. Detritus from boating trips—an anchor, the handle from a water-ski towrope, a swim fin rests forlorn in the sandbars. Fishing line trails from broken rods tangled in driftwood.

The reservoir's drop of 140 feet, stretched over the gentle gradient of a side canyon, can mean that two or three miles of terrain have been slowly unveiled over the past six years. By last spring more than 100 square miles of canyons had seen air for the first time in decades. We slither up one of Twilight Canyon's tributaries, a magnificent narrow slot that requires gymnastic moves to explore. Seeing it for the first time delights Wolverton, and he doesn't hide his desire that the waters keep receding. "It's knowing that places this special are underwater that makes me want the reservoir gone," he says.

The farther we hike from Lake Powell, the more signs of life reappear. Less than half a mile from the water, frontier willow colonies and tiny reeds clothe the banks, along with a host of invasive species. Tamarisk, tumbleweeds, and cheatgrass, all aliens, have seized an unnatural advantage, battling with the natives for the new territory. Farther upstream, spring floods since the lake receded have blasted a channel into the sediment, uncovering the bedrock and exposing swirling patterns on the sandstone canvas.

A mile or so up from the reservoir's edge, the canyon feels like it is breathing again. The descending plaintive warble of canyon wrens, which Wolverton describes as the "call you can hardly forget," echoes off salmon-hued walls. Sixfoot cottonwood saplings with fresh, electric green leaves sprout in the shadow of drowned, hulking snags. Cattails, horsetails, and black willows are revegetating the stream banks. On benches above the streambed, yellow and pink blooms of prickly pear cactus herald the spring. Gardens of monkey flower and cave primrose take tenuous hold in aired-out alcoves wet from seeps. Gambel oaks and box elders cluster above the high-water mark. We are struck by wafts of desert flower perfume, of sage aroma awakened by the sun, of moist sand and earthy oak and fleshy cottonwood bark.

"This dam won't work forever," Wolverton says, and he shows me why. We hike to the confluence of Coyote Creek and the Escalante River, a tributary of the Colorado. Where the clear water washing down Coyote Gulch meets the pea green water of the Escalante, we stare at a steady underwater parade of pebbles, sand, and silt moving downstream. "Budding a dam across sediment-laden rivers is like driving your car without ever changing the oil filter" he says. Sooner or later the marching sediment will have its day. "There's the answer right there," he says, pointing to the gravel on the march. "It's inexorable. This is the land of erosion."

Perhaps it all comes down to this place: a waterfall in a most unlikely location, a hidden cavern of mystical proportions aptly called Cathedral in the Desert. I arrive here alone by boat, following a sinewy side canyon, new desert varnish on its steep walls and the

chalky white bathtub ring nearly gone. The water is green, deep, still. The walls close in, the canyon narrows. Rounding one last turn, I eye a beach, cut the motor, and glide silently to shore.

Ahead, the canyon walls curve, rising hundreds of feet above me, overhanging to form a giant cavern, once drowned by Lake Powell. The waterfall drops 50 feet, bounding, bouncing, pulsing. It has left a splash of dark green on the wall. Water was at work here long before the dam and the reservoir, wearing a notch in the rock that now guides the stream the way a halved section of bamboo pipe funnels water in a Japanese garden. The cascade sounds eerily like the low murmur of a room full of people. Three hundred feet above, an opening frames a boomerang-shaped sliver of sky.

As I write this, the waters have risen again and put the waterfall at least temporarily back in the bottle. Somewhere, though, a canyon wren still warbles its haunting song. The warm desert wind rushes over the slickrock. Pebbles march toward the sea. And Glen Canyon abides.

End

Red Rock Country: Download the glories of Glen Canyon to your desktop view a photo gallery with pointers from photographer Michael Melford, and get travel tips [at ngm.com/0604](http://at.ngm.com/0604).

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LR in the News 04/02/06

Lake Powell may never be full again

New accord means it won't go so low,
nor reach full pool in future

By Joe Baird for The Salt Lake Tribune

The white band on the cliffs of Lake Powell shows a drop in the water level in March 2004. (Paul Fraughton/Tribune file photo)



After six years of drought and a drop to water elevation levels not seen in decades, Lake Powell began refilling last year. And it will continue to rise this spring and summer, owing to a second consecutive year of close-to-normal snowmelt in the upper Colorado River Basin.

For those who recreate on the huge reservoir that sprawls across the Utah-Arizona border, this comes as happy news. Powell dropped to a record-low elevation of 3,555 feet just over a year ago - about 33 percent of capacity - and is forecast to reach 3,622 feet this summer when the runoff reaches its peak in July. That's a jump of nearly 70 feet, and to about half of what the reservoir can hold. But for those who long for the day when Lake Powell will be replenished to the brim - about 3,700 feet - the wait could be a long one.

A nearly finalized agreement between the seven Colorado River Basin states regarding future management of the river calls for the joint, coordinated operation of Lake Powell in the upper basin and its sister reservoir, Lake Mead, downstream in the lower basin. The thrust of the idea is to ensure, as much as possible, that neither reservoir suffers at the expense of the other during future dry periods. The upside: Federal and state water officials believe that, barring a hydrological catastrophe, such a coordinated approach will prevent Powell from draining to the depths it reached during the drought. On the other hand, the deal - which probably will be incorporated into an ongoing federal environmental study of drought conditions on the Colorado River - will in most years prevent Powell from refilling to its historical high-water mark.

"This agreement really puts a cap on the reservoir unless we have some gangbuster [water] years," says Jack Schmidt, an aquatic, watershed and earth resources professor at Utah State University who specializes in Colorado River issues.

Water officials don't like the word "cap," but acknowledge that a less-than-full Powell will become the rule and a filled reservoir the exception under the new agreement.

"The first thing you have to remember is that reservoirs aren't meant to be full all the time," says Larry Anderson, the just-retired director of Utah's Division of Water Resources. "The second thing is, the upper basin still hasn't developed all of its water. As it does, there will be a greater drain on the reservoir.

"But now," he adds, "as we jointly manage these reservoirs, we won't run into the problem of one being too high and one being too low. That will protect the water users first and foremost, and recreation and hydropower."

Lake Powell is a hugely popular regional tourist destination, the Glen Canyon National Recreation Area drawing nearly 2 million visitors annually, largely for boating among the parts of the redrock canyons that rise above the water. The drowning of Glen Canyon, however, has been the long lament of American wilderness advocates who say the dam was not needed for water storage and who mourn the loss of one of the most beautiful and spectacular river canyons on Earth.

Under the terms of the recent agreement, when Powell's water level is up and Mead's is low, upper basin officials will have the discretion to release extra water to the lower basin, beyond the annual 8.23 million acre-feet they are committed to provide. Conversely, lower basin users will accept less than that amount if Mead is up and Powell is low.

Anderson says that extensive computer modeling established that 3,570 feet was Powell's baseline elevation for maintaining recreation opportunities - which translates into a huge chunk of the economy for southern Utah and northern Arizona.

Under the new management criteria, Bureau of Reclamation officials expect that Powell's median elevation will hover between 3,630 and 3,640 feet over the next decade. That's still 60 to 70 feet below the reservoir's full line, but still plenty of water for boaters to launch their craft and for marinas to operate.

"In the past few years, during the drought, we made a lot of effort to ensure the public had access to the reservoir," says Kevin Schneider, management assistant for Glen Canyon National Recreation Area. "We extended the launch ramps and made sure the [navigation] buoys were in the right places. The reservoir is designed to go up and down. Our management is also designed to adapt. Regardless of what the elevation is, the public will have the opportunity to enjoy the park."

Not everybody agrees with such optimistic assessments. Environmental groups clamoring for the decommissioning of Glen Canyon Dam and draining of Lake Powell say federal and state officials are ignoring long-term historical trends - at their peril.

"They're concentrating on a historic record based upon the 20th century. But those who study tree rings call it the wettest century in 1,200 years," says Jon Weisheit, conservation director of the Moab-based Living Rivers organization. "What we've lived through has been an anomaly. The whole thing is based on bad science, and this new agreement just basically maintains the status quo. They're ignoring the good work that's being done by climatologists, something they could use and benefit from."

Richard Ingebretsen, founder of the Glen Canyon Institute, a group that advocates draining Lake Powell to uncover the lost Glen Canyon, said that at the Bureau of Reclamation's projected median elevations, many of the side canyons, including much of the Escalante River, will be above water.

"A lot of the side canyons in the upper stretches will be out of water," he said. "Almost all of Cataract Canyon."

Ingebretsen agrees it is inevitable that upper basin states will develop more of their Colorado River allotment - Utah's planned Lake Powell pipeline being a prime example. But in addition, he predicts that lower basin states will want to buy more water and said that projections show as much as a 30 percent reduction in the flow of the river because of global warming.

"Lake Powell is going to go lower and lower," said Ingebretsen.

At the other end of the spectrum are those who believe not only will the new agreement stabilize Lake Powell's water levels, it will eventually top out again - and sooner rather than later.

"The seven basin states have modeled the heck out of this. With good hydrology, with a series of good water years, I think Powell will fill up again in the future," says Don Ostler

of the Upper Colorado River Commission. "But the bottom line is, this deal will allow Powell to fare better during the droughts."

And that, USU professor Schmidt says, is the central point of the proposed joint operations of the two reservoirs.

"The important thing that the public needs to understand is that the elevations of Lake Powell are only partially determined by nature and droughts," he says. "They will be determined most fundamentally by human decisions."

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LR in the News 04/04/06

Park plan makes Grand Canyon river tours easier to get

USA Today

PHOENIX (AP) — More people will be able to raft the Colorado River through the Grand Canyon each year, but they will be spread out over more of the year and will travel in smaller groups, under a new management plan adopted by the National Park Service.

More rafters will be shifted to fall, winter and spring months while the number of daily summertime launches of both motorized and non-motorized commercial rafts will decrease.

The result will be more tourists overall.

The new plan also eliminates the existing waiting list for those who want to raft the river in non-commercial boats, replacing it with a lottery system.

More than 7,000 trip leaders are on the waiting list, said Jeffrey Cross, project manager for the plan. Many people have been waiting for more than a decade, he said, but the cancellation rate when their names finally reached the top was between 30% and 50%.

"Their lives often changed," Cross said. "They had babies, they moved, they changed jobs."

In the next six weeks, the 600 people who have waited the longest will be assigned dates spread over the next five years. After that, another 600 applicants will get assigned dates based primarily on how long they have waited.

But then, everyone else will be in the computerized lottery. The first drawing will be in August of this year and will take up the rest of the available 2007 dates.

Those who have already been assigned trips for the summers of 2006 and 2007 will not be affected, said Steve Sullivan, who manages the waiting list.

Additionally, the number of non-commercial trips allowed annually will double by 2007, allowing 500 trips a year, up from 240, Cross said.

The lower Colorado River, from Diamond Creek to Lake Mead, will see pontoon boat tours go up, allowing up to 480 passenger per day, up from between 130 and 188 passengers, depending on the time of year.

The plan bans jet boat tours entirely, but commercial operators that use the craft to meet rafts above Lake Mead would still be allowed.

The plan is supported by the Grand Canyon River Outfitters Association and the Grand Canyon Private Boaters Association. But the plan is being criticized by Living Rivers, a river restoration group, which feels motorized boats should have been banned entirely.

Regional News 04/27/06

Climate change may shrink supply, hike demand in Denver

By Jerd Smith, Rocky Mountain News April 27, 2006

Denver Water could see its customers' thirst for water rise dramatically and its supplies shrink if Colorado's temperatures rise an average of 2 degrees, a scenario that is possible as climate change occurs, the agency says.

"The combination of lost supply and higher demand is a worst-case scenario worth worrying about," said Tom Gougeon, a Denver Water Board member.

Gougeon's comments came during a board briefing Wednesday on the agency's long-term water supply plans.

As part of that work, the agency analyzed the effect of various climate-change scenarios, both on its water supply and on how much water customers would need to maintain healthy landscapes in a warmer environment.

According to Denver Water's analysis, its supplies, derived largely from mountain snowmelt, could drop 12 percent or 45,000 acre feet, as customer demand rises 6 percent, or 23,000 acre feet each year.

That would be under a "moderate" climate change scenario in which temperatures rose 2 degrees.

An acre foot equals nearly 326,000 gallons, or about enough water to serve up to two urban households annually.

Denver Water, which serves about 1.2 million metro-area customers, is Colorado's largest municipal water utility.

The agency derives about half of its annual water supply from the headwaters of the Colorado River and the rest from the South Platte River.

A study by the United States Geological Survey published late last year indicates that higher temperatures could reduce the Colorado River's flows 10 percent or more and that could jeopardize Denver's share of the river.

One of the key issues the board is examining is how large a water reserve it should maintain.

The agency's system generates just over 325,000 acre feet of water annually. It maintains a reserve of 30,000 acre feet.

The reserve is designed to help the agency survive a multi-year drought or to cope with a major breakdown in its water supply system.

Now, climate change is being factored into the agency's reserve calculations.

"We don't know what's going to happen," said George Beardsley, another board member.

"But we don't have the luxury of waiting to find out."

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River News 05/16/06

Ruling Favors Rivers Over Power Dams

The Supreme Court says states may protect the waterways by requiring a steady flow at hydroelectric plants, which tend to harness it.

By David G. Savage, Times Staff Writer on May 16, 2006

WASHINGTON — The Supreme Court sided with the environment over electric power Monday, ruling that state regulators may require a steady flow of water over power dams to benefit fish and kayakers.

The unanimous decision holds that states may protect the health of their rivers, even though hydroelectric dams are regulated exclusively by the federal government.

The dispute arose over five small dams on the Presumpscot River in Maine, but the court's decision affects an estimated 1,500 power dams in 45 states. They include scores of dams on the Sacramento, Klamath and San Joaquin rivers in California.

Separately, the court agreed to take up an appeal from environmentalists who are seeking to enforce stricter clean-air rules against aging coal power plants. The justices said they would hear the clean-air case in the fall.

The ruling on rivers and dams resolved a clear conflict in the law. The Federal Power Act says hydro-power dams are to be regulated by federal authorities with the aim of producing electricity. But the Clean Water Act says those who "discharge" anything into a state's navigable waters must obtain a permit from the state.

Until recently, state officials believed they were entitled to protect their rivers by regulating the flow of water over and through dams.

But last year, the privately owned SD Warren Co., which produces hydroelectric power in Maine, won the Supreme Court's review of its argument that water flowing in and out of a dam is not a discharge.

Had the company prevailed, states would have lost their legal authority to protect their rivers and ensure a steady flow of water. Not surprisingly, officials of the power plants said that during dry seasons, they were more interested in holding back water so they could be assured of a steady flow over their generators to maintain power production.

In its opinion, the Supreme Court looked to the dictionary to decide the meaning of the word "discharge."

"When it applies to water, 'discharge' commonly means a 'flowing or issuing out,' " said Justice David H. Souter, citing Webster's New International Dictionary. Other judges and regulators have agreed with "our understanding of the everyday sense of term," he added.

Therefore, since water flowing over a dam is discharged back into the river, a state may regulate the operation of the dam, the court concluded in *SD Warren Co. vs. Maine*.

"This is a victory for rivers, for clean water and most of all for good common sense," said Rebecca Wodder, president of the environmental group American Rivers.

But environmentalists are anxiously watching two other Clean Water Act cases that are pending before the Supreme Court. Both from Michigan, they will determine whether federal regulators can continue to protect inland wetlands and small streams from development or pollution.

Private-property activists say the Clean Water Act protects only rivers and lakes where boats can float, not wetlands that are far inland. Decisions in those cases are due by late June.

Bush administration lawyers joined all three Clean Water Act cases on the side of the environmentalists.

The clean-air case to be heard in the fall, however, concerns a move by the Bush administration to relax a strict anti-pollution rule set by the Clinton administration.

Under that rule, aging power plants that expanded or modified their facilities were required to adopt modern anti-pollution controls in the process. This issue has drawn much attention in the states of the Northeast, including New York, which are downwind of coal-powered plants in Ohio and West Virginia.

The Duke Energy Corp. in North Carolina challenged the Clinton-era rules and won a ruling from the U.S. 4th Circuit Court of Appeals concluding that the Environmental Protection Agency had exceeded its authority in requiring such modifications.

In a separate lawsuit, several Northeastern states are challenging the Bush administration's move to relax the same rules.

Taking up the cause of clean-air advocates, lawyers for the nonprofit group Environmental Defense appealed to the high court. They argued it was the 4th Circuit Court that exceeded its authority.

The ruling will have a broad impact, environmentalists say.

"Over 160 million Americans, more than half of the country, live in communities out of compliance with the nation's health standards, and today the Supreme Court took a big step toward aiding those communities in their efforts to restore healthy air," Vickie Patton, an Environmental Defense lawyer, said on Monday.

Regional News 05/29/06

UA tree-ring study could affect use of Colo. river water

By Eric Swedlund for Arizona Daily Star, Tucson, Arizona

A new UA study uses tree-ring data to reconstruct Colorado River flows over the past 500 years. The study could have a significant impact on water use in the West and further emphasizes the need for flexibility in managing the resources, according to scientists and policy experts who study the Colorado River basin. The study found several periods of more severe and longer-lasting drought than the region has experienced in the past century. The findings provide further indications that the data used for the 1922 Colorado River Compact overestimated the Colorado's average water flow, with water allocations to the seven Western states that share the river based on one of the wettest periods in the past 500 years.

"The long-term perspective provided by tree-ring reconstructions points to a looming conflict between water demand and supply in the upper Colorado River basin," the study said.

Updating the University of Arizona's groundbreaking 1976 study of tree rings in the Colorado basin, the new work reconstructed the river flows back four centuries before the gauge record and found eight periods of drought of equal or greater severity to the

most recent drought, roughly from 1999 to 2004, said Dave Meko, one of the study's authors.

"The other issue on the droughts is the tree-ring records show periods of dry conditions that lasted longer than the observed record," said Meko, an associate research professor of dendrochronology.

The 1922 Colorado River Compact between Arizona, California, Colorado, Nevada, New Mexico, Wyoming and Utah determined how much of the Colorado River water each state would get, dividing them between upper- and lower-basin states. The Boulder Canyon Project Act of 1928 ratified the compact and apportioned the lower basin's 7.5 million acre-foot annual share of the water. Arizona's share is 2.8 million acre feet, enough to meet the needs of 5.6 million four-person families for a year.

"For a long time, many of the states in the basin have assumed that just the historical gauge record is adequate for modeling purposes," said Brad Udall, managing director of the Western Water Assessment, which partially funded the study. "It's not adequate. We need to consider hydrological stresses on the system commonly like what we have just seen and expect those things are quite frequent."

The study, a collaboration between the University of Arizona's Laboratory of Tree-Ring Research, the National Oceanic and Atmospheric Administration, the U.S. Geological Survey and the University of Colorado, is published in this month's issue of *Water Resources Research*.

While the new reconstructions estimate the average water flow at 14.6 million acre-feet, compared to the 1976 study's estimate of 13.5 million acre-feet, the longer historical average remains below the 15.2 million acre-feet recorded by stream gauges from 1906 to 1995.

The researchers compared tree-ring widths from 1906 to 1995 with the stream flows recorded by gauges along the river as a way to calibrate the tree rings, then applied the statistical comparison to the tree rings dating back to the late 1400s.

The core samples used in the study were taken from about 1,200 trees in 60 areas throughout the Colorado River basin. The update of the 1976 study gives more precise results, filling in gaps to provide a more accurate picture overall of the Colorado region, Meko said.

The new work had 40 more years of tree-ring data to build a more accurate statistical model from comparisons to the gauge records, plus expanded tree-ring site coverage of the basin for a more reliable sample.

The study zeroed in on a drought period of about 20 years in the late 1500s, a much longer drought cycle than contained in the gauge records of last century. "There were much bigger swings in the reconstructed flows at some periods of the record than at others," Meko said. "We don't know if we're going to move into a really long-lasting dry period or if it may go back to more rapid switching back and forth between wet and dry periods."

The researchers are trying to reconstruct the water flows even further back into the past by expanding the tree-ring data to include core samples from dead trees, preserved pieces of trunks and standing snags known as remnant wood, Meko said.

The reconstruction has reached the limit of living trees, but using the evidence from remnant wood, researchers can see growth patterns about 200 years further into the past. The wood, however, is more difficult to find and will yield a spottier record.

"I think this paleo record is a good point to start to talk about stresses on the river greater than we've seen in the past," said Udall of the Western Water Assessment, a joint climate assessment venture between the University of Colorado and the National Oceanic and Atmospheric Administration.

"To date our reservoirs have been big enough to allow us to deal with these periods of time when we haven't had enough," he said. "There will come a time in the future that will not be true."

The West has to be prepared to modify its water use, shorting some things to allow more valuable uses to continue at times of drought, Udall said.

"There's a lot you can do actually," Udall said. "The true gauge of our future success in water management is how flexibly we design our water institutions." Fernando Molina, conservation program manager for Tucson Water, said he hadn't seen the study but that long-range planning is crucial to the agency.

Tucson Water uses about half its allocation from the Central Arizona Project, a 336-mile long system that brings Colorado River water to Pima, Maricopa and Pinal counties.

"On the user end, if we start look at shortages on the Colorado, if there's any cutbacks on there, we need to be prepared to deal with that," he said.

Tucson Water stresses conservation programming, Molina said, as well as looking into long-range supply alternatives including using groundwater from other areas, negotiating deals for a greater share of Colorado water and potentially using effluent as a potable supply.

Contact reporter Eric Swedlund at 573-4115 or at eswedlund@azstarnet.com.

LR Press Release 06/02/06

60-day notice filed to protect endangered species in Grand Canyon

Mitigation Mayhem in Grand Canyon's River Corridor
Stocking Fish Upstream, Shocking Them Downstream

For immediate release on Friday, June 2, 2006

Contact:

Living Rivers, John Weisheit: 435-259-1063

Center for Biological Diversity, Robin Silver: 602-246-4170

In an effort to resuscitate a long-deteriorating, artificial sport fishery below Glen Canyon Dam, Arizona Game and Fish is planning to stock non-native rainbow trout in the Colorado River just above its entrance into Grand Canyon National Park.

Seventy-five miles downstream from Glen Canyon Dam, the US Department of Interior has for three years been removing trout because these introduced fish prey on the larvae and young juveniles of the humpback chub, a native fish species whose numbers have dropped to potentially unrecoverable levels and is protected by the Endangered Species Act.

At a cost of \$800,000 annually, this trout removal process involves using electroshock to stun the fish, netting them by the boatload, then grinding them up for use as fertilizer.

"There are plenty of places where trout exist in their native habitat, and that are far more accessible to the average angler than below Glen Canyon Dam, that's not the case with the humpback chub," says Living Rivers Conservation Director John Weisheit. "If more aggressive action is not taken to protect them, the humpback chub will soon be the fifth of Grand Canyon's original eight native fish species to go extinct since Glen Canyon Dam's operations began in 1963."

Thirty years ago the artificial environment below Glen Canyon Dam supported one of the most famous blue-ribbon sport fisheries in the country. But with changes in dam operations the population shifted from one dominated by a thriving population of very large fish to a population of moderate-sized trout, little difference from what could be caught in thousands of streams around the country. As a result, angler interest declined considerably, especially as access to the fishery requires the use of powerboats.

With the advent of the recent drought the rainbow trout populations has been declining considerably due to rising water temperatures, lower oxygen content and lack of basic nutrients to support their food requirements. Fishing guides are reporting a 50 percent decline in business over the past five years, a further acceleration of the decline in angler activity that had already been underway since the mid 1980s.

"Putting in more fish when there's no food will merely force them to swim downstream to survive, potentially exacerbating the problems for the humpback chub," adds Weisheit. "There are so few fishing guides left anymore, and as they are the only ones who get people to the trout, why not just spread the restocking money among them as a direct subsidy, and focus on protecting the native fish that belong there."

The National Park Service, which itself once stocked trout in Grand Canyon tributary streams, has abandon this practice altogether, and has even erected weirs in an attempt to impede trout populations from spawning in these tributary streams. Additionally, more than \$200 million has been spent over the past 14 years by the Department of Interior to mitigate the impacts of Glen Canyon Dam's operations on

Grand Canyon's river ecosystem following the passage of the 1992 Grand Canyon Protection Act.

"It's unfortunate for the ecology of the Grand Canyon state that Arizona Game and Fish must prioritize efforts to prop-up a declining, artificial fishery over the preservation of endangered native fish," concludes Weisheit. "It's also unfortunate that the federal government, responsible for protecting the humpback chub, appears equally hamstrung in addressing this obvious contradiction in management objectives."

The Center for Biological Diversity and Living Rivers filed a 60-day notice today to stop this contradiction to the federal mandate of conserving the endangered fish species of Grand Canyon National Park.

For more information:

[60-day notice to Arizona Game and Fish: Exotic trout reintroduction jeopardizes endangered fish species of Grand Canyon National Park](http://www.livingrivers2.org/pdfs/agfd60day.pdf)

<http://www.livingrivers2.org/pdfs/agfd60day.pdf>

[Arizona Game and Fish: Lee's Ferry Trout Evaluation](http://www.usbr.gov/uc/rm/amp/twg/mtgs/06jan25/Attach_07b.pdf)

http://www.usbr.gov/uc/rm/amp/twg/mtgs/06jan25/Attach_07b.pdf

[Lee's Ferry Fishing Guides: Letter to Adaptive Management Program](http://www.usbr.gov/uc/rm/amp/twg/mtgs/06jan25/Attach_07a.pdf)

http://www.usbr.gov/uc/rm/amp/twg/mtgs/06jan25/Attach_07a.pdf

[Grand Canyon Monitoring and Research Center: Trout removal overview](http://www.gcmrc.gov/files/pdf/removal_overview.pdf)

http://www.gcmrc.gov/files/pdf/removal_overview.pdf

[Grand Canyon National Park: Management plan to reduce trout population](http://www.nps.gov/grca/compliance/pdf/Scoping-fishltr.pdf)

<http://www.nps.gov/grca/compliance/pdf/Scoping-fishltr.pdf>

[Fly Rod and Reel, April 2003: Role Reversal On The Colorado, a different twist on clearing out aliens to save a native fish](http://www.flyrodreel.com/index.php/page/blog/?p=184)

<http://www.flyrodreel.com/index.php/page/blog/?p=184>

Regional News 06/03/06

Salt in the Colorado River

Are your dishes spotted? Your toilet choked? Your water heater dying a premature death?

Blame salt: City exploring ways to rid our water of destructive mineral

B. POOLE for The Tucson Citizen

We're getting more than water from the Colorado River.

We're also getting 100,000 tons of salts every year, most of it calcium carbonate - the cause of lime buildup. Like a silent plague, the salt creeps into our homes through faucets, washing machines and dishwashers and comes to rest where you have likely dealt with it.

That white film on your sink? Salt. The white spots on your clean dishes? Salt. The knocking sound in your water heater? The ring in your toilet bowl?

It's all salt, and it's costing us plenty. Salt from the Colorado River - about 9 million tons per year - causes an estimated \$300 million in damage annually in southwestern states, said Kib Jacobson, manager of a Bureau of Reclamation program aimed at keeping salt out of the river.

Most of that damage is in agriculture, but cities face their own problems. Over the past five years, Tucson Water helped fund a central Arizona salt study, because the salt content of our water is rising, said Karen La Martina, a Tucson Water management analyst.

"The things that they are beginning to explore and the things that they are experiencing now could be our future," La Martina said.

The study, due out this summer, recommends strategies Arizona cities can use to rid our water of salt. Salt assault

Maricopa, Pinal and Pima counties accumulate 1.75 million tons of salt per year from the Colorado, Salt and Verde rivers. Southern Arizona's share will rise to about 200,000 tons when the city ramps up to full use of its Central Arizona Project water allocation over the next few years, according to a draft report of the Central Arizona Salinity Study.

The Colorado River gets much of its salt when farmers irrigate crops and the water washes into the river through underground calcium deposits. The Salt River sends sodium salt - the kind in your salt shaker - to Phoenix from springs in the White Mountains, said Thomas Poulson, the Bureau of Reclamation's manager of the study.

"Originally those salts would have been carried out to the ocean," he said.

Tucson and Phoenix also import sodium through tens of thousands of water softeners, which keep calcium salt from clogging appliances but dump sodium salt into sewers. In Phoenix, 26 percent of the salts in wastewater is from home water softeners, the study found.

Sewers get another dose from household cleaners and cooling tower backwash.

Salt, which is in Tucson groundwater, though in much lower levels than Colorado River water, is a familiar nightmare for homeowners.

We spend money avoiding it with bottled water, filters and water softeners. It forces us to buy extra cleaners (which are less effective because of the hard water). Salt buildup from landscape watering can eventually poison soil. Salt cuts the life of coffee makers, dishwashers, showerheads, faucets, sinks and swamp coolers.

Water heaters are especially vulnerable because heat causes calcium to build up faster, said Kevin Cummings, owner of Cummings Plumbing, 1050 S. Park Ave.

When you turn on a water heater, the white, rock-hard calcium carbonate starts collecting on every surface in the tank. After a year, electric heating elements are usually coated, and after two or three they burn out. The buildup eventually cuts capacity, Cummings said.

"We've seen them half full," he said.

After five years, most electric water heaters here have hit retirement age, often because of reduced capacity.

"In other parts of the country they last 10 or 15 years," he said.

Gas water heaters last more than 10 years on average because they have no heating elements. In a gas heater, the calcium can't settle in the bottom, because the water there is boiling. Bouncing chunks of calcium eventually develop, creating a knocking sound that hints it's time for a new heater, Cummings said.

Calcium can also destroy the internal parts of toilets and clog jets around the inside of the bowl. If your toilet flushes slowly, poking a wire coat hanger into each jet can get it flowing properly again, he said.

Tankless water heaters and filters can help, but tankless heaters cost three times the \$500 to \$600 price of a traditional heater, and whole-house filters start at about \$2,800. In addition, tankless heaters generally require new gas or electric lines, which can add another \$500 to \$1,000. The costs outweigh the benefits for most of us, Cummings said.

"I wouldn't recommend those for the average homeowner," he said.

Cummings also doesn't recommend water softeners because of the salt they add to sewers. The answers

The most cost-effective way to deal with salt is to prevent it from getting into water, the salinity study says.

Since 1973, the Colorado River Basin Salinity Control Program, a collaboration among federal agencies, Colorado River states and farming interests, has been keeping salt out of the Colorado through improved irrigation, crop management and diversion of salty groundwater.

Though the program keeps an estimated 1 million tons of salt out of the river annually, it needs more money, the study says.

The program this year got about \$30 million through the Bureaus of Reclamation and Land Management and the Department of Agriculture. The request for next year is to add \$13 million, Jacobson said.

Blocking salt before it gets into the river costs about \$30 per ton of salt blocked. Salt removal can cost more than 20 times that. The salt-prevention program is a bargain, considering the \$112 in damage caused by each ton of salt, Jacobson said.

"This is one of many answers. Right now it's the cheapest answer," he said.

Public awareness campaigns, another suggestion in the study, can reduce salt in sewers by educating the public on water softener settings or offering rebates for high-efficiency softeners. Specifics would have to be created for each community, based on circumstances, the study says.

The study also urges cities and water providers to research reverse osmosis (see related story), or pushing water through membranes to screen out minerals. The current technology is costly and wastes about 20 percent of the water, the report says.

"The water loss is the real key for places like the Southwest, where we just don't have the source water," Poulson said.

Tucson Water recommends that the city not desalinate drinking water. Because we blend groundwater at an average of 280 parts per million dissolved solids with water from the CAP canal, which has 650 ppm dissolved solids, our drinking water will eventually stabilize between those levels without treatment.

But growth is increasing the amount of salt we dump in sewers, and salinity rises again by about half during treatment at wastewater plants. Tucson will eventually have to desalinate wastewater if we intend to turn it into drinking water, which Tucson Water recommends we do in coming decades, La Martina said.

LR in the News 06/07/06

Activists fight trout stocking at Lees Ferry

By CYNDY COLE, Sun Staff Reporter

Although rainbow trout are down by at least half at Lees Ferry, two environmental groups are planning to sue Arizona Game and Fish to prevent proposed stocking at the world-renowned fishery.

Utah's Living Rivers and the Center for Biological Diversity of Tucson have given notice they will sue on behalf of declining populations of native humpback chub and three other endangered fish under the Endangered Species Act if Game and Fish adds more rainbow trout, believed to prey on native fish downstream.

Game and Fish wants to stock tagged, mostly sterile trout for catching at Lees Ferry and to track them to see whether they make it 60 miles downriver to prey on chub and other native fish. Rainbow trout populations are about 50,000 less than normal.

Experimenting with a population of 4,500 or 5,000 chub by adding predators is too dangerous and shouldn't be considered before studies are conducted in public, Center for Biological Diversity's Robin Silver said.

Three of eight fish species native to the river have already been exterminated, U.S.G.S. studies have found.

But there may be two problems with the environmental groups' arguments.

First, chub populations might not be declining. They might have actually made a turnaround in the last three years because of warmer water or trout-removal operations, according to U.S.G.S. research.

Although the chub population was slated to decrease from a range of 3,000 to 5,000 to around 1,500 or 2,000 in the coming decade, the population is now up around 4,500 or 5,000, more recent research from the Grand Canyon Monitoring and Research Center shows.

"It looks like the humpback chub population is no longer on a straight projection down, but is stabilizing," said Matthew Andersen, biology program manager at the Grand Canyon Monitoring and Research Center.

Second, there is no direct evidence that the rainbow trout eat chub, according to U.S.G.S. and Game and Fish.

But biologists do believe rainbow trout compete with chub in other ways, such as eating their food, according to data from the Fish and Wildlife Service and other scientific papers.

It's the brown trout populating Bright Angel Creek and the Colorado River -- which Game and Fish doesn't stock -- that have certainly been found to eat chub, including some fish caught with chub in their mouths.

Experimenting with a population of 4,500 or 5,000 chub by adding predators is too dangerous and shouldn't be considered before studies are conducted in public, Center for Biological Diversity's Robin Silver said.

Game and Fish last stocked Lees Ferry in 1998. More recently, the same agency has been killing mostly rainbow trout by the thousands 60 miles downstream where the humpback chub live.

"It's a ludicrous program. On one hand you're trying to remove trout in the Grand Canyon and electrofishing them out ... and on the other hand you're adding them near the dam," said Dave Foster of Marble Canyon Outfitters at Lees Ferry.

Some anglers are concerned the trout population won't bounce back without human intervention.

"It's bad. It's really bad. People that I know from Flagstaff, they don't fish up there anymore. They know there's hardly any fish up there," said Mark Steffen, who

represents the Federation of Flyfishers/Northern Arizona Flycasters and makes fishing poles in Flagstaff.

Yet commercial fishing Web sites still sometimes boast that the fishing is legendary these days, Steffen concedes.

That's because commercial fisherman with powerful boats and deep knowledge of the river aren't having as hard a time as the private boaters, he said.

There are supposed to be 100,000 rainbow trout 2 years old or older between Lees Ferry and the Glen Canyon Dam, according to management plans for the river, Game and Fish fisheries branch chief manager Larry Riley said.

The actual population is half of that or less now, he said, and rainbows haven't been reproducing much in the past three years.

Both trends are attributed to a November 2004, flood experiment, higher-than-average water temperatures and low oxygen absorption into the water.

There's also a tiny New Zealand snail that can reproduce quickly without a mate that has made it into the river. The snail competes with the trout for food, Andersen said.

Ultimately, the trout question becomes a divisive issue on the Colorado River, Andersen said.

On one side, anglers say the industry at Lees Ferry is an economic engine for northern Arizona and one of the state's best fishing areas.

But others, including some anglers, seem to support propagating the remaining native fish that live in the Grand Canyon.

It would be possible to put trout into the river on one end and kill any that make it 60 miles downstream, Andersen said.

"At this time, in 2006, it might be possible to strike a balance," he said.

Cyndy Cole can be reached at ccole@azdailysun.com or at 913-8607.

[Link to the Living Rivers press release](#)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=718>

LETTER TO THE EDITOR

In regard to article "Activists fight trout stocking at Lees Ferry" by Cyndy Cole:

The reporter is correct that the population of humpback chub seems to have stabilized after a long period of decline. However, it is illogical and incorrect to assume that this means rainbow trout are not a threat, or that the abundance and distribution of humpback meet the agencies objectives for this endangered fish population.

When agencies behave more like bean counters and not as ecologists, it suggests that all they are really interested in is avoiding lawsuits over dubious compliance actions and not about the true measure of actual recovery for our endangered creatures.

The agencies are not correct that there is no evidence that rainbows eat humpback. A 1997 peer-reviewed research paper (Marsh, et al.) describes rainbow predation on humpback chub. Several studies have also documented trout predation on threatened native fish, such as speckled dace and bluehead sucker. In January 2003, the mechanical removal crew caught a rainbow with a flannelmouth sucker in its mouth. http://www.usgs.gov/newsroom/article_pf.asp?ID=200

The agencies assert that the real problem is brown trout predation on humpback chub. Although an individual brown trout is more likely to include fish in its diet than an individual rainbow trout, there are so many more rainbow trout that they exert a higher overall impact on humpback chub. Estimates suggest that prior to recent trout removal near the Little Colorado River confluence, there were about 35 times more rainbow trout than brown trout.

Perpetuating the convenient fiction that rainbows do not emigrate from Glen Canyon and prey on humpback chub is not helpful to the commons. Suggesting the stocking of rainbows at Lee's Ferry and then killing those that emigrate to the mouth of the Little Colorado River, is neither logical nor fiscally responsible. This strategy would undoubtedly cause a negative impact to humpback chub and other native fish. Under National Park Service policy, management for native and endangered species has precedence over recreation. Secondly, the cost of continuous trout removal would be astronomically high.

We strongly suggest an Environmental Impact Statement be conducted to develop and analyze the management alternatives.

John Weisheit
Living Rivers
Conservation Director

Regional News 06/16/06

Below-normal flows projected for Colorado River

June 16, 2006 at 17:51:19 PDT ASSOCIATED PRESS

LAS VEGAS (AP) - Light snow falls and an early, warm spring have federal officials predicting below-normal flows into the Colorado River this year.

"We didn't get quite as much snow as we'd hoped, and it got very warm, very quickly in the upper basin, so snow melted very rapidly," said Terry Fulp of Bureau of

Reclamation, the agency that oversees management of the river. "That means we lost more water to evaporation and seeping into the ground."

Fulp presented the projections Friday at the first of three meetings in which representatives from state water agencies and power, tribal and environmental interests compile an annual Colorado River operating plan to be submitted to the Interior Department in September.

Fulp said the National Weather Service is projecting runoff from the snow melt at 72 percent of normal levels in the April to July period. Forecasts for the "water year" of October to September call for similar levels.

The numbers are down from last year, when water levels rose after five years of record drought and flows came in above normal. Officials caution one good year doesn't end a drought.

"My answer when people ask, 'Is the drought over?' is 'We still don't know,'" Fulp said. "We had a better year last year, but then again we've had a sub par year this year. We don't know where we are in the drought sequence."

Fulp said the projected levels will not likely force changes in the river's management plan because there is still enough water in storage. The system is at 59 percent of capacity, and is expected to fall to 58 percent by the end of September.

Officials predicted a slight increase in the water level at Lake Powell by the end of the water year and slight decreases for the system's other major reservoir, Lake Mead. Lake Powell is projected to be 52 percent full in September, Lake Mead is forecast at 54 percent capacity.

LR in the News 07/19/06

Parties agreed on river plan lawsuit process

<http://www.grandcanyonnews.com/main.asp?SectionID=7&SubSectionID=7&ArticleID=6170>

By Jackie Brown

Grand Canyon News Editor

Parties in a lawsuit challenging portions of the Colorado River Management Plan came to an agreement last week on how the case will proceed.

In a meeting last week, both sides agreed to conduct the case in two phases – one to determine the merits of allegations that NPS violated the law in its development of the CRMP, and a remedy phase to discuss relief if plaintiffs prevail. The civil suit was filed last March after the CRMP was finalized. In it, the plaintiffs – River Runners for

Wilderness, Rock the Earth, Wilderness Watch and Living Rivers – say that officials violated several laws when developing the plan, including the National Environmental Policy Act, National Park Service Organic Act and the National Park Service Concessions Management Improvement Act.

Defendants named in the suit are Superintendent Joe Alston, NPS Director Fran Mainella, former Secretary of the Interior Gayle Norton and the U.S. Department of the Interior. It is being heard by David G. Campbell, U.S. district court judge for the District of Arizona.

According to attorney Julia Olson, plaintiffs are challenging the CRMP on several grounds. One is that by allowing motor boat and helicopter use in a proposed wilderness area, it violates NPS policy.

"The coalition is seeking to require the National Park Service to fulfill the park's mandate that the Colorado River through Grand Canyon be managed as wilderness," Olson said.

Also, the plaintiffs charge that the Park Service did not comply with the law in how it determined appropriate amounts of commercial use and that it gives concessioners preferential treatment.

"The amounts of use allocated to commercial purposes is not necessary," Olson said. "The wait to go on a Colorado River trip is much longer if you choose to do a non-commercial trip."

They also maintain that the process of determining long-term impacts was flawed and failed to properly address impacts from human use, ongoing drought and from Glen Canyon Dam.

She said the case will likely go forward by early next year. "Things are moving forward," she said. "There won't be a decision until next spring or early summer."

The Grand Canyon River Outfitters Trade Association has requested to legally intervene on the side of the defendants in the litigation. Judge Campbell will review this request. Olson said that the Havasupai tribe was also considering joining as an intervenor on the plaintiff's side, "but their issues are slightly different than ours."

According to Park Public Affairs Officer Maureen Oltrogge, the Park Service will not comment on ongoing litigation.

LR in the News 08/10/06

Grand Canyon humpback chub population 'stabilizing,' USGS says

April Reese, Land Letter Western reporter

The Grand Canyon's long-suffering population of humpback chub appears to be stabilizing, according to new findings from federal scientists.

According to data released by the U.S. Geological Survey last week, the canyon's adult humpback chub population increased to 5,000 fish between 2001 and 2005, up from about 3,500 in 2002. Scientists also found more juvenile and newly hatched fish in 2005, suggesting that the fish are successfully reproducing, according to the report.

"The possible stabilization of adult fish numbers is exciting news for the recovery effort because it means that conditions exist in Grand Canyon that allow young fish to reach reproductive age," said Matthew Andersen, supervisory biologist with the survey's Southwest Biological Science Center.

"Before the upswing, the Grand Canyon population was steadily declining, with adult fish dying at a rate of 15 to 20 percent a year," Anderson said. Young fish were not surviving in great enough numbers to replace the dying adult fish.

Fish biologists are hoping the new findings suggest the fish, which was listed as endangered in 1967 under a precursor to the Endangered Species Act, can be recovered despite the ecological changes wrought by Glen Canyon Dam upstream.

Sam Spiller, Lower Colorado River coordinator for the Fish and Wildlife Service's Southwest region, called the findings "exciting," adding that he is hopeful the new data will attract greater attention -- and support -- to recovery efforts.

Several factors may have contributed to the population increase, according to USGS. Drought has helped warm the waters of the Colorado, which have been too cold in most parts of the river for the chub to successfully reproduce since the dam was built. In 2005, water temperatures in the Colorado River near the confluence with the Little Colorado River reached almost 61 degrees -- the warmest the river has been since the reservoir filled behind the dam in 1980.

Efforts to remove large numbers of non-native fish, such as rainbow and brown trout, which compete with the chub for food and prey on their young, may also have helped the fish. And a 2000 experiment in which dam operators released steady flows of 8,000 cubic feet per second during the summer, with two high flow releases to enhance habitat, also likely had a beneficial effect on the population, USGS concluded.

The endangered humpback chub, which once numbered in the tens of thousands and thrived throughout the Colorado River Basin, now occupies only the lower basin, primarily in a small area within Grand Canyon National Park near the confluence of the Little Colorado River and the mainstem river.

Nikolai Ramsey of Grand Canyon Trust said that while the new numbers are encouraging, the fish have a long way to go before they can be considered a healthy population.

"We're pleased to see this bump up, but they haven't stabilized," Ramsey said. "Five thousand fish is insufficient for recovery. The best available science suggests that at least 10,000 fish are needed for recovery."

FWS is completing new recovery goals for the chub, the result of a successful court challenge by the Grand Canyon Trust (Land Letter, Feb. 2). Previous recovery goals called for establishing a minimum viable population at 2,100 fish, which Ramsey called "ludicrous."

And it remains to be seen whether the population will continue to grow, particularly when -- and if -- the drought breaks, added John Weisheit, conservation director for Living Rivers.

"You would like to think it's because of our management actions, but it's because of the drought," Weisheit said. "Mother Nature helped save the fish."

Weisheit is hoping the findings will convince the Adaptive Management Working Group, the stakeholder group that helps decide how to operate the dam to meet objectives for both hydropower and park resources, to recommend a flow regime more like the 2000 experiment. A report released in 2004 by the technical arm of the group concluded that the flow plan advocated by the Bureau of Reclamation, which calls for daily fluctuations in flow, has been a "failure" (Greenwire, July 26, 2004).

Western reporter April Reese is based in Santa Fe, N.M.

Regional News 08/14/06

Power generation tied to supplies of water

By Cyndy Cole

Arizona Daily Sun (Flagstaff); Tucson, Arizona | Published: 08.14.2006

As interstate disputes over the Colorado River and other water fights loom large in future years, power-supply problems promise to be twice the headache.

People are moving into arid Arizona and Nevada quickly enough to make them the fastest-growing states in the nation. The demand for power across the Southwest is expected to roughly double by 2025.

And that power is coming, by and large, from electricity producers across the West that rely on water.

That's 650 million gallons of water per day for power generation, said Gary Deason of Northern Arizona University's Center for Sustainable Environments. NAU, in Flagstaff, hosted a recent summit on sustainability, where the people charged with providing water and power across the nation looked toward the future, trying to solve problems they'll share.

Among them was Mike Hightower of Sandia National Laboratories, a group that studies threats to the nation's water and power supplies for Congress.

While 70 percent of the water in the West goes to irrigation for farming, electricity generation is also still largely water-related, Hightower said.

Add climate change, drought, population booms in arid areas, microclimates that keep cities such as Phoenix hot and more energy spent pumping water from deeper in aquifers, and you have a "potential train wreck," Hightower said.

Speakers at the conference focused on big-picture solutions.

Biofuels can't save the day en masse, Hightower said, because of the amount of water needed to irrigate the vast cropland that would be required.

Hydroelectric power can be a problem during drought.

Hydrogen power requires substantial water availability. And desalination of seawater requires a lot of power.

"The issues of water availability are not just a Western issue," Hightower said. "They're becoming a national issue."

The solutions, in his view, might involve placing power generation next to water-treatment facilities and giving special tax credits or other incentives to water-efficient renewable forms of energy that don't use water, such as wind power.

LR Press Release 09/01/06

Scientists reveal a higher discharge and frequency of extreme floods along the Colorado River

Utah's uranium waste pile is at risk while funding for removal stalls in Congress

For immediate release on September 1, 2006

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In an effort to better understand the impacts from extreme floods on the infrastructure and water resources of the Colorado River corridor, Living Rivers, supported by a grant from the Citizens' Monitoring and Technical Assessment Fund, commissioned two flood studies in Utah near the town of Moab.

Two critical issues were examined:

- 1) River migration adjacent to the second largest uranium waste pile in the United States
- 2) The magnitude and frequency of large floods along the Colorado River

These investigations were performed by two professors of geology from the University of Arizona: John C. Dohrenwend and Noam Greenbaum. Victor Baker, a pioneer in the field of flood research, reviewed their findings.

The report on river migration by Dohrenwend emphasized how previously contracted investigations by the Department of Energy (DOE) failed to provide reasonable assurances that this radioactive waste pile in Utah was safe from probable maximum floods within the next 1,000 years, a reclamation standard the DOE is required to fulfill under Environmental Protection Agency regulations.

Dohrenwend also announced to the DOE that a paleoflood study would help to remove the uncertainty, and that a professional investigation would be conducted. Paleoflood studies are detailed examinations of flood sediments and organic deposits--the remnants of huge floods that once tumbled down the Colorado River before modern-day instruments began to measure stream flow. This was to be the first study of its kind for the Colorado River upstream of Arizona.

The results of the paleoflood study were completed in June 2006 by Greenbaum, who provided physical evidence to support a conclusion that floods occurring at 100- and 500-year intervals in the Colorado River Basin are not yet properly understood.

It is generally accepted by resource managers that a 100-year flood on the Colorado River has a peak discharge of about 100,000 cubic feet per second (cfs), and that a 500-year flood has a peak discharge of about 120,000 cfs. The limit of a maximum flood is considered to have a peak discharge of 300,000 cfs and occurs around intervals of 10,000 years.

Greenbaum's preliminary findings indicate that these conventional flood estimates are vastly underestimated by a factor of five times. His data shows that over the past 2000 years, at least 20 floods have matched or exceeded the 500-year estimate, and that five probable maximum floods have also occurred in the same time period. Greenbaum also discovered the possibility that two floods may have exceeded 350,000 cfs.

Says Greenbaum, "This study shows that catastrophic floods can occur with much greater frequency than originally speculated, and such floods could happen, quite frankly, sooner as opposed to later."

"Such floods are induced by springtime storms that drop warm rain on mountainous snow packs," added Victor Baker from Tucson.

The scientists recommend additional investigation be undertaken to better understand the potential for severe flooding along the Colorado River above Glen Canyon Dam.

"These preliminary results of high magnitude floods occurring at greater frequencies spotlight future vulnerabilities for the entire Colorado River watershed," says John Weisheit, conservation director of Living Rivers. "This paleoflood study provides useful information for all resource managers of the Colorado River, so that they can take action to reduce the hazards associated with catastrophic floods."

The findings of Dohrenwend and Greenbaum are contained in the recently published report by Living Rivers, *The Moab Mill Project: A technical report towards reclaiming uranium mill tailings along the Colorado River in Grand County, Utah*.

The 36-page color report (with additional photos and drawings) is available for download at:

[Document: Moab Mill Project](#) [4m PDF File]

[Cover Letter: Moab Mill Project](#) [PDF File]

[Brochure: Moab Mill Project](#) [PDF File]

[Poster \(17 x 22\): Moab Mill Project](#) [1.5m PDF File]

[Times-Independent newspaper clippings: Moab Mill Project](#) [7m PDF File]

Printed copies are also available from:

Living Rivers
PO Box 466
Moab, UT 84532

Supplemental information

Two years ago it seemed likely that the uranium waste pile (the former Atlas Corporation uranium processing facility) along the Colorado River near Moab, Utah, would remain in place with nothing to protect it from large flood events other than a veneer of clay and large rocks.

Instead, the Department of Energy (DOE), the agency designated by Congress in 2000 to reclaim the site and remediate the groundwater, issued a Record of Decision in 2005 announcing that the pile would be moved 30 miles to the north and out of harm's way.

The Colorado River supplies water for metropolitan areas such as Phoenix, Las Vegas, Los Angeles, and San Diego, as well as much of the region's agricultural industry. Other river resources at risk of radioactive contamination include the riverine ecosystems of national parks, such as Grand Canyon and Canyonlands.

On July 17, at a public meeting in Moab, it was disclosed that DOE's funding cycle for the next five-years will be insufficient to remove the pile as scheduled. Instead, DOE documents reveal that continuing site remediation and incremental preparatory work is

anticipated, until which time a committed appropriation for removal by Congress is approved.

Since taking over responsibility of the pile in October of 2001, the DOE and the project contractors have expended in excess of \$23.5 million at the end of the first quarter for year 2006. For the next five years, it is projected they will spend about \$136 million, with no financial guarantee that the next five-year cycle will mean the actual removal of the pile.

[Department of Energy: Moab Project](http://gj.em.doe.gov/moab/)

<http://gj.em.doe.gov/moab/>

[City of Moab and Grand County Council](http://www.moabtailings.org)

<http://www.moabtailings.org>

Regional News 09/04/06

St. George Pipeline OpEds

EDITORIALS BY: LA TIMES, NY TIMES, SALT LAKE TRIBUNE, and BOSTON GLOBE
LA TIMES

How the West Was Sold

Auctioning off government land and giving the money to communities robs the federal treasury and could waste natural resources.

July 31, 2006

NOT EVERY IOTA OF FEDERALLY owned land is an environmental treasure crying out for protection. Some portions would be better sold for private development. That's especially true within the vast Western holdings of the Bureau of Land Management.

The federal government owns about two-thirds of the land in Utah and more than 80% of Nevada, a product of Western states' history - they were federal territories before they were states. Some isolated communities, surrounded by these protected swaths of unused land, cannot respond to the pressures of growth because they have nowhere left to grow.

Selling off chunks of fenced-off land makes sense. But new proposals to auction BLM property near these towns come with a troubling twist: The money, which could easily run into the billions, wouldn't go to the Treasury to pay down the deficit or otherwise benefit U.S. taxpayers. Instead, a hefty portion would be directed to the communities to build local projects, such as water lines, roads and schools. The rest would be used for federal programs, but only near where the land was sold.

Using federal lands as a piggybank for local projects is a waste of national resources, and as a result might earmark hundreds of millions in federal funds for what won't be the most worthy or urgent public projects. Worse, it gives local communities a strong incentive to pressure the federal government to sell land that might otherwise be preserved for good reason. How about that new highway you've been wanting but haven't been able to afford? Just get the feds to sell off some nearby land and give you the proceeds.

The run on national resources for local profit started with legislation forcing the BLM to sell land around Las Vegas and give the money to Sin City and the state of Nevada. The latest target is Washington County, Utah, near Zion National Park. County officials there lust after 25,000 acres of BLM land, in part so that the popular area can expand, but also to help pay for a \$500-million water project they have in mind. They are supported by Utah congressmen from both parties.

President Bush was stymied last year when he rightly tried to direct more of the \$4 billion from the Vegas sale to the Treasury. As The Times' Julie Cart reported last month, Western legislators are now lining up with similar proposals for Idaho and New Mexico.

There's nothing wrong with the federal government helping long-pressed areas build public projects. But converting federal resources into local windfalls, at the expense of taxpayers nationwide, is a way to squander money while carving up protected land.

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NY TIMES

True Wilderness, and False

Published: September 4, 2006

Under the radar, Congress has been quietly adding to the nation's inventory of protected wilderness. In three bills approved by both houses and signed by President Bush, the 109th Congress has awarded wilderness designation to 11,000 acres of canyonland and desert in New Mexico, 10,000 acres of rain forest in Puerto Rico and 100,000 acres in the Cedar Mountains of Utah.

Four more wilderness bills have cleared one house or the other, and when approved will add an additional 750,000 acres of wilderness in California, Idaho, Oregon and Washington. More such bills are waiting in the Congressional wings.

The Wilderness Act of 1964 prohibits all commercial activity — roads, buildings, logging, drilling — in areas designated as wilderness, the highest level of protection given to any public lands, including the national parks. Congress has designated roughly 106 million acres as permanent wilderness, more than half of it in Alaska.

Measured against this number, the latest designations may seem like small change. Yet they reflect rare moments of bipartisan cooperation at a time when Congress seems polarized on just about everything, not least conservation issues. They also reflect well on local groups that have worked long and hard to find common ground between

environmentalists and commercial interests. And while Mr. Bush seems as determined as ever to open up chunks of the public estate to commerce, especially for oil and gas drilling, like other presidents before him he finds it impossible to resist grass-roots ideas that have been so thoroughly debated in advance.

This is not to say that all wilderness bills are free of low motives and commercial intent. One particularly distasteful example is a bill introduced by Senator Robert Bennett and Representative Jim Matheson of Utah. It would sell off 40 square miles of federal land to private developers in Washington County, the fifth-fastest-growing county in the country and already something of a monument to suburban sprawl and strip development. In exchange, it offers wilderness protection to about 220,000 acres.

Wilderness bills often involve land swaps — small amounts of land for commercial purposes in exchange for lots more permanent wilderness — and the Utah deal would seem to fit the pattern. It doesn't. First, about half the proposed wilderness is already protected. Second, some of the proceeds would go not for local conservation projects but for off-road vehicle trails and, most alarming, for a 120-mile pipeline to draw water from Lake Powell, which is already stressed by undisciplined development. Third, there has been little public input. Finally, there appears to be plenty of private land available to satisfy Washington County's insatiable needs.

This is, in short, a raid on national resources aimed at helping private developers. It is the worst sort of Congressional earmarking. And it gives true wilderness bills a reputation they do not deserve.

###

SALT LAKE TRIBUNE

Bigger pants: Washington County bill is on backwards

You are honest enough with yourself to note that you are gaining weight. You can start to eat more wisely and get some exercise. Or you can buy a bigger pair of pants. The Washington County Growth and Conservation Act is a bigger pair of pants.

The bill introduced by Utah's Sen. Bob Bennett and Rep. Jim Matheson is represented as an overdue way of managing the colossal growth of St. George and the surrounding area. But, despite some reasonable provisions that set up planning and preservation activities affecting both the urbanizing areas and nearby Zion National Park, the guts of the bill are just bad news.

It is simply - no, astoundingly - unwise to begin what will be a complicated and controversial planning process by giving the Bureau of Land Management, which holds title to large swaths of southern Utah, direction to sell as much as 24,300 acres of federal land.

Some 4,300 acres of that land have already been identified, in a process that even some environmentalists accept, as land that isn't worthy of federal protection. But the other 20,000 acres is no more than a figure pulled out of the air and imagined as some

kind of a relief valve for the urbanization that is already swallowing up most of the privately owned land in and around St. George.

There's a grain of sense in that. It is entirely possible that some land now in private hands should and could be preserved, either as park land or for agricultural use, just as some federal land could become homes, shops and golf courses. The net effect could be positive for all concerned.

Or it could be seen as a final word - an act of Congress, by gum - that 24,000 acres is going to be released for development - common sense and environmental responsibility be hanged.

Unless the Vision Dixie smart-development program is allowed to work its difficult magic first, and concludes with binding guidelines, such a land rush would be the logical outcome of this bill's passage.

Bennett and Matheson are hoping the bill can be passed this year, probably as a rider on some bigger piece of legislation. Bennett certainly has the clout and the skill to insinuate it into some other act while no one is looking. He will claim that he is doing his constituents a favor.

He wouldn't be. This bill should wait.

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BOSTON GLOBE
A ruinous land rush
August 16, 2006

NEAR THE majestic canyons of Zion National Park in southern Utah is the fifth-fastest-growing county in the United States, a monument to suburban sprawl and strip development. To help Washington County grow even faster, one of Utah's senators, Republican Robert Bennett, is sponsoring a bill that would sell off a parcel of federal land almost as large as the city of Boston to developers. Some of the proceeds would go not for conservation but to such local projects as an off-road-vehicle trail and a water pipeline.

The bill has set off alarm bells all over the West for the worrisome example it sets. Because Utah was originally a territory, the federal government owns about two-thirds of it, and the Bureau of Land Management periodically sells off properties. The money from the sale is supposed to be spent on conservation projects in the affected state. Instead, this bill encourages the wasteful use of land.

It specifically earmarks money for an off-road-vehicle trail, which would destroy fragile desert habitat, and for a portion of the cost of a \$500 million, 120-mile pipeline to draw water from Lake Powell in Arizona. Getting a straw into Lake Powell would spur further growth in Washington County, a center for resorts and retirement homes.

A spokesman for Bennett points to a similar federal land sale in Nevada as a precedent for this kind of allocation of land-sale funds. Conservationists say the Utah proposal is worse than the Nevada one because the proceeds would directly benefit local government, giving local officials a strong incentive to push for the sale of lands that would be better left under the protection of the federal government.

Critics also say there was too little opportunity in Washington County or elsewhere in Utah to debate the legislation. Officials held two open houses with poster boards and draft maps and comment sheets for the public to fill out, but many of those who attended complained they did not have the chance that a genuine public hearing would provide to discuss the bill's pros and cons with its government supporters.

The Bennett bill follows an attempt by the Bush administration to sell off national forest lands to raise money for rural schools and to sell Bureau of Land Management land to reduce the federal deficit. That proposal set off overwhelming bipartisan opposition and was dropped earlier this year. The public properly recoils when it sees its birthright put on the auction block to offset the government's profligate fiscal policies or to advance private development projects. If the Senate does not reject the Bennett bill, it invites a proliferation of proposals in the West to use land sales to finance not conservation but the despoliation of the public's land.

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[More information](#)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=732>

[GROUPS CALL FOR MORATORIUM ON DESTRUCTIVE PUBLIC LAND BILLS \(pdf file\)](#)

<http://www.westernlands.org/assets/9-12-06-Moratorium.pdf>

LR Press Release 09/05/06

New Environmental Study on Grand Canyon's Native Fishes and Habitat — Impacts of Glen Canyon Dam

Center for Biological Diversity
Living Rivers/Colorado Riverkeeper
Arizona Wildlife Federation
Sierra Club – Grand Canyon Chapter
Glen Canyon Institute
Western Environmental Law Center
For Immediate Release: September 5, 2006

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Phoenix—The U.S. Bureau of Reclamation will conduct further environmental studies on the impacts of Glen Canyon Dam on endangered fish of the Colorado River according to a recent settlement agreement. The agreement specifies that the Bureau, in consultation with the U.S. Fish and Wildlife Service, will prepare a supplemental environmental impact statement by October 15, 2008.

The Center for Biological Diversity, Arizona Wildlife Federation, Living Rivers, Sierra Club – Grand Canyon Chapter, and Glen Canyon Institute filed suit in U.S. District Court in Arizona earlier this year against the Bureau of Reclamation on behalf of the Humpback Chub and the Grand Canyon. The groups charged the Bureau with violations of the Grand Canyon Protection Act, the Endangered Species Act and the National Environmental Policy Act.

In the settlement recorded by the Court on September 1, the Bureau agreed to assess the impacts of current and modified operations of Glen Canyon Dam on the Humpback Chub, Bonytail Chub, Razorback Sucker, and Colorado Pikeminnow—all native fishes to the Colorado River.

“We’re pleased that the agencies will be conducting the studies without a protracted lawsuit. Arizona’s native fish are overwhelmingly imperiled, and only four of eight native fish species continue to exist in the Grand Canyon. The Humpback Chub will fail to recover and likely go extinct if action isn’t taken to reverse the degradation posed by Glen Canyon Dam,” said Robin Silver, Board Chair of the Center for Biological Diversity.

For more than a decade the Bureau of Reclamation has been required to modify the operations of Glen Canyon Dam on the Colorado River to reverse the dam’s downstream impacts on Grand Canyon’s priceless river ecosystem. These efforts have failed to produce results.

In 1992, Congress passed the Grand Canyon Protection Act to reverse the demise of the canyon and the decline of endangered native fish species. Following the completion of an Environmental Impact Statement (EIS) three years later, the Glen Canyon Dam Adaptive Management Program was established to guide the Bureau of Reclamation in implementing recovery guidelines set forth by the U.S. Fish and Wildlife Service (USFWS).

The unsuccessful “Modified Low Fluctuating Flow Alternative” (MLFF) is the operational scheme enacted in the Adaptive Management Program which called for released flood flow events with the hope of improving habitat and restoring native fish populations.

“To date, the negative impacts of Glen Canyon Dam continue to jeopardize the Humpback Chub. Clearly the Adaptive Management program, as being implemented by the federal government, is not working,” said David Wegner, Glen Canyon Institute.

“The Grand Canyon Chapter has long worked to protect the Grand Canyon and the Colorado River, plus the species which rely on this important system,” said Sandy Bahr,

Conservation Outreach Director, Sierra Club – Grand Canyon Chapter. “We have supported efforts to remove non-native fish species and previous efforts to operate the dam in such a manner as to promote recovery of the fishes and to rebuild the beaches which are also being decimated by the operation of the dam. Clearly, the federal government needs to make some changes to protect our native fishes and to protect the recreation that relies on the Canyon’s beaches.”

In October 2005, the U.S. Geological Survey released its evaluation of this program in a 220-page report, “The State of the Colorado River Ecosystem in Grand Canyon.” This report confirmed what many scientists have been saying for years: that recovery of the humpback chub is not being achieved. According to the report, "...it is clear that the restrictions on dam operations since 1991 have not produced the hoped for restoration and maintenance of this endangered species..."

"It is past time for a new assessment on the dam's operations. At least now the issue will be reopened for public review," said Living Rivers Conservation Director John Weisheit. "The hope is that the Humpback Chub can be rescued from imminent extinction and that the ongoing destruction caused by the current operations of Glen Canyon Dam on the Grand Canyon and Colorado River will be stopped."

Matt Kenna, Western Environmental Law Center in Colorado, represents the organizations.

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[Settlement of September 2006](http://www.livingrivers2.org/Legal/CBD/CBDvDOI%20Settlement.pdf)

<http://www.livingrivers2.org/Legal/CBD/CBDvDOI%20Settlement.pdf>

[Complaint of February 2006](http://www.livingrivers2.org/pdfs/ComplaintFeb2006.pdf)

<http://www.livingrivers2.org/pdfs/ComplaintFeb2006.pdf>

[60-day notice of 2005](http://www.livingrivers2.org/pdfs/CBD_LR_Notice.pdf)

http://www.livingrivers2.org/pdfs/CBD_LR_Notice.pdf

[Biological Opinion: Glen Canyon Dam](http://www.livingrivers2.org/pdfs/BOgcd.pdf)

<http://www.livingrivers2.org/pdfs/BOgcd.pdf>

[USGS SCORE Report, released on October 25, 2005](http://www.gcmrc.gov/products/score/2005/score.htm)

The State of Natural and Cultural Resources in the Colorado River Ecosystem <http://www.gcmrc.gov/products/score/2005/score.htm>

[LR Press Release, October 24, 2005](http://www.livingrivers2.org/archives/article.cfm?NewsID=690)

Grand Canyon Restoration Program, a Failing Grade
<http://www.livingrivers2.org/archives/article.cfm?NewsID=690>

[Glen Canyon Dam Adaptive Management Program](http://www.usbr.gov/uc/rm/amp/index.html)

<http://www.usbr.gov/uc/rm/amp/index.html>

Regional News 09/19/06

Droughts and reservoirs: Finding storage space underground

Press Release: Geological Society of America
Longmont, Colorado and Conference of September 19-20, 2006

"Managing Drought and Water Scarcity in Vulnerable Environments: Creating a Roadmap for Change in the United States"

Droughts and reservoirs: Finding storage space underground

Odd as it sounds, in some places the smartest way to safeguard the water supply is to let it drain out of the reservoirs and soak into the ground. That's what been discovered in local water shortages in Kansas, Oklahoma, and New Mexico – all of which could be microcosms of water shortage issues looming throughout the Western U.S.

In these three cases – Cedar Bluff Reservoir (Hays, KS), Optima Lake, (Guymon, OK), and Storrie Lake (Las Vegas, NM) – water losses from evaporation are so high that they can accelerate water supply emergencies for farms and cities, explains Tom Brikowski, a professor of hydrology at the University of Texas at Dallas. Brikowski and Wayland Anderson, a Denver engineer, are presenting their work at the Geological Society of America conference on Managing Drought and Water Scarcity in Vulnerable Environments: Creating a Roadmap for Change. The meeting takes place 18-20 September at the Radisson Hotel and Conference Center in Longmont, Colorado.

In the case of the City of Hays, the trouble starts 20 miles upstream at the Cedar Bluff Reservoir. Because of changes in farming practices, the reservoir gets only half the inflowing water it did when built in 1949. It now loses 75 percent of its inflowing water to evaporation. As a result, water losses most years now equal or exceed inflows. Reservoir releases were cut in 1979.

"You get to the point where you can't afford to lose that much water," said Brikowski, "and your only other alternative is to store it underground."

But how do you do that? In the case of Hays, nature had already provided for underground storage in the form of the Smoky Hill River aquifer. The aquifer has provided half the city's water supply for decades. Since the building of the Cedar Bluff reservoir, however, stream flow on top of it has dropped by 50 percent. That stream water recharged the wells, which, in turn, kept alive the town of Hays, Brikowski explains.

At the behest of the City of Hays, Brikowski and Anderson created a detailed three-dimensional model of the sandy, gravelly ("alluvial") ground beneath the Smokey Hill River. Anderson analyzed the water balance of the reservoir. Next they simulated what had happened to the dropping water table, how much groundwater the aquifer could store, and how long a drought it could endure.

"It's a clear case that the shut off of water (by the reservoir) limited how much water Hays could pump," said Brikowski. It also showed that by releasing water from that same reservoir they could kill two birds with one stone: recharge the aquifer and reduce the evaporation loss rate. According to Brikowski, "It was pretty hard to argue with the conclusion."

They also found that by releasing reservoir water to recharge the Smoky Hill River aquifer, users could survive even the worst recorded drought with full production from municipal wells.

"I think the City as a whole was quite happy," said Brikowski. By getting a better understanding of their water, the city can now avert seasonal water emergencies and no longer have to consider building hundreds of miles of pipeline to get water from other river basins.

This story could replay in other places as well – especially where reservoirs are getting less inflow due to changing water uses or climate change.

There's the city of Las Vegas, NM, only months away from evacuations this year after lack of snow over the winter left streams dry. It was only the annual monsoon season that saved them this year, said Brikowski. The water crisis is becoming an almost annual event as winter snow packs shrink and melt sooner each spring, probably as a consequence of global warming.

"More efficient storage, perhaps in alluvial aquifers, represents the only real hope for a solution," Brikowski said.

The same may eventually be the case for most of California, which relies heavily on the melting of snow pack high in the Sierra Nevada to feed streams and rivers through the summer. Global warming is expected to raise the snowline on those mountains and has already pushed spring earlier in the year. This means there is generally less snowmelt and it may not last the whole summer.

The Optima Reservoir of the Oklahoma Panhandle is an extreme example. A dry lake, it loses 100 percent of its inflowing water to evaporation. Converting to subsurface storage may be the only way to store water.

"It's not that in any of these places they've done anything wrong," Brikowski said. Rather, situations change and water management has to keep up to avoid supply problems. Underground storage, he said, is something to add to the water management toolbox.

[See: Report by Living Rivers called The One Dam Solution](http://www.livingrivers2.org/archives/article.cfm?NewsID=688)
<http://www.livingrivers2.org/archives/article.cfm?NewsID=688>

Regional News 09/20/06

Scientists have grim drought forecast for West

Expert says some could be worse than Dust Bowl

By Jim Erickson, Rocky Mountain News on September 20, 2006

LONGMONT - Future Western droughts could last an average of 12 years, spanning half of the region and severely reducing Colorado River flows that supply millions of people, according to climate projections from a Boulder scientist.

Eighteen of the world's most powerful computer climate models were used in the study, presented Tuesday by Martin Hoerling, of the National Oceanic and Atmospheric Administration.

Hoerling said he was startled by his own findings. But he cautioned that his results are preliminary and have not been published in a peer-reviewed scientific journal.

"The numbers are pretty striking," he said Tuesday at a drought conference sponsored by the Geological Society of America. "Climate change is moving us in the direction of a perpetual state that is of the Dust Bowl type."

The models forecast a temperature increase of 5.4 degrees Fahrenheit by 2060 in the interior West, largely because of the buildup of heat-trapping gases emitted by fossil-fuel combustion.

But little or no precipitation increase is foreseen in the West. The result: Increased evaporation and drier soils, leading to more severe and frequent droughts, Hoerling said.

How severe? Some droughts could be 25 percent worse than the 1930s Dust Bowl, Hoerling said.

How frequent? On average, half of the interior West will suffer from severe drought each year, he said.

But several other scientists said that Hoerling's projections should be taken with several grains of salt, even though previous studies have concluded that more frequent and severe droughts are likely in a warming West.

"Past studies have shown smaller changes, not on the order of what Marty is showing," said Brad Udall, director of the Western Water Assessment at the University of Colorado.

"The (climate) models have a lot of problems," Udall said. "They get a lot of things right, and they're really good at the global level. But they're not so good when you try to step them down into the regional level."

Hoerling found that the Upper Colorado River Basin is likely to take the hardest hit from an increase in drought severity and frequency.

Currently, 13.5 million acre feet of Colorado River water are consumed each year. About 9 million acre feet are used by the Lower Colorado River Basin states: Arizona, California and Nevada. About 4.5 million acre feet go to the upper basin states: Colorado, Utah, Wyoming and New Mexico.

The dividing line between the two basins is at Lees Ferry, near the Utah-Arizona border, just below Lake Powell.

Hoerling's computer simulations show that the flow at Lees Ferry could drop to 6 million acre feet by 2050, creating huge problems for water managers trying to meet obligations to the Lower Colorado River Basin.

"The decrease in runoff at Lees Ferry is pretty dramatic," said Connie Woodhouse, NOAA paleoclimatologist. "If he's right, we're going to have to rethink how we use water in this area."

But Woodhouse cautioned that other studies of future Colorado River runoff are in the works, and that preliminary results from one of them show "not as sharp a decrease" in runoff as Hoerling found.

Denver Museum of Nature & Science geologist Bob Reynolds echoed Udall's concerns about the uncertainties of climate models. But he said he was alarmed by Hoerling's findings.

"It's something to be concerned about, but it's not something to be scared of," he said. "We're going to have to adapt our survival strategies to coping with less water."

Last year in the journal *Nature*, a team led by U.S. Geological Survey hydrologist Christopher Milly used 12 state-of-the-art climate models to study global-warming associated reductions in river runoff worldwide.

Milly and his colleagues found that by 2050, drier conditions could lead to a 10 to 20 percent drop in runoff from rivers in the U.S. West.

Milly said Tuesday that his results appear to jibe with Hoerling's findings.

"I think those drought numbers that he's giving you are probably realistic numbers," Milly said in a telephone interview. "What he's saying does not seem far-fetched."

NOAA researcher Jon Eischeid collaborated with Hoerling on the study.

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[See: Report by Christopher Milly](#)

Drought becoming norm, experts say

Sept. 30, 2006 12:00 AM

By Shaun McKinnon for THE ARIZONA REPUBLIC

Everything you think you know about water in the West is about to change.

Scratch that. It's changing now.

The drought that's squeezing Arizona and the Colorado River? It could be the new normal. The warming temperatures that seem to start earlier and linger later? A shift in climate that already has stolen runoff in some parts of the Northwest. advertisement

Scientists met in Colorado last week for a conference on drought and water scarcity and there was no missing the theme of change in their messages, swathed as they were at times in dense, geologic research papers.

" . . . the natural snow pack reservoir is getting smaller and smaller," said Richard Palmer, who teaches water resource management at the University of Washington.

"In the winter of 2005, we had the smallest snow pack on record. That's a real wake-up call for us that something is changing."

An Australian scientist urged Americans to treat drought as constant rather than an emergency: In her country, "drought is no longer considered a disaster," said Linda Botterill, who teaches at the Australian National University in Canberra. "We have one of the most variable climates on earth. We really don't have a 'normal' climate. Therefore it's absurd to treat every drought as an emergency."

Changing ideas about climate and rain and water are nothing new in the arid West. It hasn't been that long ago - the middle of the 19th century - that respected leaders subscribed to a theory called "rain follows the plow." The theory gained prominence as homesteaders began moving into the Great Plains and the edge of the West and found that they couldn't rely on rain to water their crops.

Leaders of the time, fearful of the economic effects of a stalled expansion, convinced farmers that if they would only plow their fields and plant crops, the rain would follow. They found scientists who swore that plowing field would release moisture into the air and create rain; some even suggested the vibrations from all the building and digging and tromping around would drum up storms.

The whole scheme is widely blamed for early dry farming failures.

As late as the early 1900s, leaders of the seven Colorado River states apportioned water based on what turned out to be some of the wettest years in centuries. The river is now overallocated.

Botterill and others say we should consider drought the baseline condition here and the wet years part of the dramatic variability in climate.

"Drought is always out there," said Donald Wilhite of the National Drought Mitigation Center in Lincoln, Neb. "It's always affecting some part of the country." Reacting to droughts is far more expensive than planning for them, he said. Climate change and growth will only worsen our plight if we don't shift our thinking.

In other words, the drought we're surviving now in Arizona might flatten us in 30 or 40 years, when climate change has cut into runoff and our population has doubled again.

Evidence is accumulating that warming temperatures will affect mountain snows in the West, reducing runoff into reservoirs. Several studies suggest the Colorado River could shrink by 30 percent or more over the next half-century.

Warmer conditions eat away on several fronts: Less snow falls, resulting in less runoff. Rain falls at the wrong times of year, when reservoirs can't contain it. Warmer temperatures increase demand for water sooner in the season, tightening the supply further.

In studies of the Seattle and Portland areas, the UW's Palmer estimated that the amount of water available in the high-demand months will decrease 6 percent a year, 24 percent by 2040. Some of the water that arrives as rain in the winter will seep into the aquifers for pumping later, but it changes the equation in an area so reliant on runoff.

Reach McKinnon at shaun.mckinnon@arizonarepublic.com; read his water blog Tuesdays and Thursdays at mckinnonblog.azcentral.com

Regional News 09/27/06

Efforts may help get more water from Colo. River

Shaun McKinnon for The Arizona Republic

The Colorado River will undergo a series of experiments in the coming year aimed at squeezing from it even more water to meet the growing demands of Arizona and six other Western states.

Among the experiments, most of them intended to reduce wasted water: a three-month test of the Yuma desalination plant, expansion of a pilot program that pays farmers not to plant crops and construction of a small reservoir near the river's end to catch unused water before it reaches Mexico.

The U.S. Bureau of Reclamation, which oversees the lower Colorado, outlined the programs in the river's annual operating plan, a document that includes water-supply estimates along with management strategies. A draft version was presented to representatives from the seven river states last week. It takes effect Sunday.

The experiments won't free up much water right away, nor will they end disputes among the seven states about how to deal with drought. But officials believe the ideas could

help avoid future water shortages and help the states find ways to better manage the overworked river.

For Arizona, which relies on the Colorado for more than one-third of its water supply, any saved water could help protect it from losses if a river shortage is declared. Under the river's governing laws, Arizona must give up as much as half of its allocation before any other state is affected, part of a deal struck to win approval of the Central Arizona Project canal.

Key proposals in the plan:

- Restart the Yuma Desalting Plant. The bureau would run the mothballed plant at 10 percent capacity for about 90 days, then evaluate it as a way to cut losses from agricultural runoff. The test also would examine ways to lessen environmental damage from the plant's operation.
- Build a reservoir. The bureau will work with several water agencies to start construction next year on a small reservoir about 25 miles west of Yuma in California along the All American Canal. The reservoir could prevent the loss of as much as 26 billion gallons of water a year.
- Pay farmers not to farm. The bureau will contribute money to a program started by a California water agency that pays farmers near Blythe, Calif., to leave land fallow. The unused irrigation water remains stored in Lake Mead, available for later use.

"Some of these things will be a big part of the future," said Larry Dozier, deputy general manager of the CAP, which delivers Colorado River water to Phoenix and Tucson.

"What we're seeing this year are just start-up programs, but if you don't start, you won't finish."

The proposals, whose total costs have not yet been released, are mostly aimed at more efficiently operating the river from Lake Mead to the Mexican border. A study several years ago found that the United States was losing 500,000 acre-feet or more in some years to waste and flawed delivery procedures. The water flowed into Mexico, which used it without counting it against its share of the river.

An acre-foot is 325,851 gallons, enough to serve a family of five for a year.

Changes to the system have reduced the losses in recent years, but as much as 100,000 acre-feet still flows into Mexico annually. That translates into a 1-foot drop in water levels at Lake Mead, the giant reservoir that stores water for Arizona, Nevada and California. Lake Mead's level is important because it is used to determine whether there is a shortage on the river.

Desalination restart

Arizona views restarting the Yuma desalter as a critical step in averting shortages. The desalter was built in the early 1990s to remove salt from agricultural runoff as it enters

Mexico, but it was operated for only a few months before it was shut down, in part because high flows on the river diluted the salt content naturally.

Restarting it, even just to run tests, marks an important step for Arizona, Dozier said. The test run will fit into plans developed more than a year ago to operate the desalter without damaging the Cienega de Santa Clara, a wetland south of Yuma that survives on farm runoff from Arizona.

"It's not very much, a minimal amount of water, but it's significant in that it will let us test the system," he said. The CAP has agreed to help fund an \$80,000 water-monitoring program during the test run to see how the wetland is affected.

Running the desalter full time would cost tens of millions of dollars, but the bureau agreed to run the test as part of a broader water-savings plan.

"We do think there are some benefits to do a test, to better understand how it might work," said Jayne Harkins, deputy director of the bureau's Lower Colorado Region. "We haven't run it in a long time, so the test will let us study what it's going to take to replace that water that's lost."

New reservoir savings

Another significant source of lost water has been the changing needs and conditions among the hundreds of farmers who take water from the river.

When a farmer or irrigation district orders water, it is released from Lake Mead and takes several days to reach diversion points downstream. In the meantime, rainy weather might mean the farmer doesn't need the water after all, but because it has already been released, it flows into Mexico.

To solve that problem, the bureau will back a plan to build a small reservoir west of Yuma along the All American Canal, which moves water from the river to the Imperial and Coachella valleys of California. The reservoir will hold only about 8,000 acre-feet of water - by contrast, Lake Mead can store 28 million acre-feet - but the water won't stay more than a few days. It will be put back in the system when it's needed.

The reservoir, scheduled for completion in 2009, would benefit all the states on the river, said Tom Carr, assistant director of the Arizona Department of Water Resources. The water saved will stay in Lake Mead, raising overall storage.

Under a plan endorsed by the states, Nevada offered to pay for construction of the reservoir, Carr said. If that happens, Nevada will earn access to extra shares of the saved water.

Farming for water

Arizona won't participate in the farm-fallowing programs in the coming year, Carr said. The Metropolitan Water District of Southern California, which serves Los Angeles and surrounding cities, will continue paying farmers near Blythe to leave some ground unplanted. The water saved will remain in Lake Mead.

As part of next year's pilot program, the bureau will contribute money to the program and will seek other water users for future following projects. Water stored in federally funded programs will be used on behalf of all users.

The seven basin states also are working with an independent consultant to find other ways of conserving water or adding it to the river. The Southern Nevada Water Authority paid for the \$750,000 study, which is expected to yield a list of ideas soon.

Arizona, California and Nevada will contribute money this winter to boost cloud seeding along the upper Colorado.

The states also are working on a long-term drought plan. Their first set of ideas is under review by the Interior Department, which will issue a draft proposal at the end of the year and choose a plan in 2007. The plan is expected to change the way Lake Mead and Lake Powell, on the Arizona-Utah line, operate and will spell out more specifically how water shortages will affect the river's 25 million users.

LR Press Release 10/13/06

CRSP 50th anniversary: no cause for celebration

For Immediate Release:

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On the occasion of the the 50th anniversary of the Colorado River Storage Project Act (CRSP) next Thursday, the Bureau of Reclamation will host a private celebration at Glen Canyon Dam.

Wrought with technical, economic and environmental controversy from the start, the massive reservoirs authorized by the CRSP have now entered a new era of conflict as increased water demand and climate change induced flow reductions have reinforced 50-year old arguments that these projects are not sustainable.

The scheme's cornerstone and nation's second largest reservoir, Lake Powell behind Glen Canyon Dam, now sits at less than 50 percent full. The Department of Energy forecasts that it and its companion projects upstream will soon not be able to guarantee delivery of the full allocation of water to the states of California, Arizona and Nevada.

"Instead of a celebrating, the Bureau of Reclamation should be performing a wake for the pending funerals of the communities that will run out of water once these reservoirs bottom out and the rivers run dry," said John Weisheit of Living Rivers. "Its time to develop a new project, the Colorado River Survival Project."

Climate specialists warned Reclamation ten years ago (the aftermath of the 1989-92 drought) of the consequences that climate change would have on the supply of the Colorado River, but the message went unheeded. In 2000, as the worst drought to hit

the system began to take hold, they were instead putting the finish touches on a management plan now known as "Surplus Criteria."

It was not until 2002 that Reclamation began to publicly recognize the potential for scarcity, but instead of developing a solid plan to prudently conserve, it's "2025 Plan" focused more on public relations and plans for water desalinization. Not until last year did it take it's first baby steps to actually address reduced water flows though the implementation of what they call "Shortage Criteria."

"But these plans may, at best, only ensure supplies through a small drought. They cannot guarantee survival through the severe and prolonged droughts that all of us are about to face," adds Weisheit, "We are not talking about the daily weather forecast here. This is a situation about a changing climate of warmer temperatures that is going to hang around for a very long time."

The climate professionals have been successfully modeling Colorado River flow based on the warming trends of the atmosphere and the oceans. Their peer-reviewed reports say the consequences of global warming include a lengthening of the growing season, increasing surface water evaporation, drier soils, and, most importantly, it will rain more than it will snow--the snow that reservoirs need to refill when it melts each spring.

"The CRSP is a water project that was never needed. It is apparent that all it does right now is waste water and money, degrade the water quality, and destroy the national park values of Grand Canyon. The first step to survive the water scarcity situation we now face is to decommission the dam that was never needed in the first place--Glen Canyon Dam," concludes Weisheit.

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For more information:

[The report for "Surplus Criteria" by Living Rivers and called The One-Dam Solution:](http://www.livingrivers2.org/archives/article.cfm?NewsID=688)
<http://www.livingrivers2.org/archives/article.cfm?NewsID=688>

[Bureau of Reclamation web page for "Shortage Criteria::](http://www.usbr.gov/lc/region/programs/strategies.html)
<http://www.usbr.gov/lc/region/programs/strategies.html>

[The Colorado River Project Storage Act:](http://www.usbr.gov/lc/region/pao/pdfiles/crspuc.pdf) [PDF File]
<http://www.usbr.gov/lc/region/pao/pdfiles/crspuc.pdf>

[Excerpt of congressional testimony opposing the CRSP:](http://www.livingrivers2.org/pdfs/LRlibrary/ColoradoRiverBoard1954.pdf) [PDF File]
<http://www.livingrivers2.org/pdfs/LRlibrary/ColoradoRiverBoard1954.pdf>

[Western Area Power Administration article about drought impacts to hydropower:](http://www.wapa.gov/newsroom/cct/2004/may28/26no112.htm)
<http://www.wapa.gov/newsroom/cct/2004/may28/26no112.htm>

[Western Area Power Administration to Upper Colorado River Commission: Letter concerning drought and hydropower revenues](http://www.livingrivers2.org/pdfs/LRlibrary/warren2004.pdf)
<http://www.livingrivers2.org/pdfs/LRlibrary/warren2004.pdf>

LR in the News 10/16/06

Glen Canyon still a lightning rod

By Nancy Perkins for Deseret Morning News

Fifty years after the first explosive blast signaled the beginning of construction on Glen Canyon Dam and its mission to store and manage millions of gallons of water from the Colorado River, critics of the massive federal project are calling for its demise while other experts say it's vital to the West's water-storage system.

"Glen Canyon Dam is a boondoggle," said Richard Ingebretsen, president of the Glen Canyon Institute in Salt Lake City. "It has wreaked havoc on the ecosystem of a beautiful river. Of all the dams that are useless, this place, Glen Canyon Dam, is the worst."

On Thursday, the Bureau of Reclamation will host a 50th anniversary celebration of the Colorado River Storage Act of 1956 at Glen Canyon Dam. The act also authorized the construction of Flaming Gorge Dam. Mark Limbaugh, assistant secretary of water and science for the Department of the Interior, is scheduled to speak at the invitation-only event.

Dennis Strong, director of the Utah Department of Water Resources, said Glen Canyon Dam is fulfilling its purpose, not only as a critical piece of the West's vast water storage program but in its role as a hydroelectric power plant producing electricity for nearly 6 million customers.

"There will always be a conflict between those who think we should let water run down the river and those who think we should manage it as a resource," Strong said. "Glen Canyon Dam and Lake Powell have functioned exactly as they were designed to do. They have allowed the upper Colorado basin states to deliver water to the lower basin states and fulfill their contract."

In 1956, Congress passed the Colorado River Storage Project Act, or CRSP, which authorized the initial construction of four large dams and reservoirs, including Glen Canyon Dam and Flaming Gorge Dam on the Green River tributary, to help tame and store 34-million acre-feet of water from the turbulent Colorado River.

Seven states — Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming — and Mexico all claim various complicated legal water rights in the Colorado River.

At the time of its passage, the act generated controversy because of its massive scope. Environmentalists argued the giant reservoirs would waste water through evaporation and seepage, and that the salt content in the water would rise. Sediment that normally flowed unimpeded down the Colorado River, they argued, would eventually clog the system and ruin the comprehensive system of dams, reservoirs, spillways and other measures taken along the length of the river.

"Now that 50 years have passed since the arguments were first made, the warnings have turned into fulfilling prophecies," said John Weisheit, conservation director of Living Rivers in Moab. "Instead of celebrating, the Bureau of Reclamation should be performing a wake for the pending funerals of communities that will run out of water once these reservoirs bottom out and the rivers run dry. It's time to develop a new project, the Colorado River Survival Project."

Don Ostler, executive director of the Upper Colorado River Commission in Salt Lake City, takes exception, saying CRSP projects such as Lake Powell have proven their worth.

"The construction of Glen Canyon Dam and other CRSP projects by the Bureau of Reclamation have been a lifesaver already for the people who use this water because of the recent drought," said Ostler. "I say we're not finished with the drought, either, with six out of the last seven years of precipitation below normal."

Even though both Lake Powell and Lake Mead, located further downstream near Las Vegas, are currently less than 50 percent full, the two reservoirs are meeting their obligations, he noted.

"If we didn't have Lake Powell, Lake Mead would have been empty by now," Ostler said. "We could not have supported the needs of the people without these two reservoirs. They are critically important and will become much more important in the future."

Lake Powell first reached capacity in 1980 and has had its ups and downs since then, although it was considered to be at its full capacity in 1999. Several states, including Utah, have initiated conservation measures aimed at curbing water use at every level.

"I'm darn proud of what Utah has done in reacting to a campaign of wise water use," Strong said. "I know we've been aided by the drought; that's certainly speeded up conservation. Six years later, we have a 13 percent reduction statewide in water use, and that's pretty amazing."

The challenge for water managers, Strong said, is to learn how to improve on the systems that are now in place.

"Society's needs change and as we learn more, we need to make adjustments," he said, adding one of the biggest challenges could be changing the attitude most people have when it comes to water conservation.

"As I look out my window here in Salt Lake City I can see green trees around the Capitol and barren mountains in the distance," he said. "We have an ethic in this state of being green. Conservation is going to have to play a larger role."

Add to that the alarm sounded by scientists around the world that global warming is shifting the Earth's climate, and the astounding population surge in cities throughout the west and "water wars" are bound to occur, Ingebretsen said.

"When are we going to stop building these megacities in the Mohave Desert?" he asked. "The Colorado Plateau is an extremely fragile ecosystem and my big plea to developers and the Bureau of Reclamation is to consider the animals, plants, reptiles and other creatures that live here. Somehow we've got to teach people that we cannot grow at the expense of other species."

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[LR Press Release and additional information](#)

Basin river projects saluted

Dignitaries gather to mark 50th anniversary of the Colorado River Storage Project Act

By Mark Havnes for The Salt Lake Tribune

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GLEN CANYON DAM - Gazing into Glen Canyon back in 1858, Army Lt. Joseph Ives predicted the river-sliced gorge and surrounding red-rock desert would be a "profitless locality . . . forever undisturbed and unvisited."

Wrong.

Instead, Glen Canyon Dam and its sister dams along the Upper Colorado River Basin have pumped nearly \$4 billion into the economy. They quench the water needs of 25 million people and generate 4.1 billion kilowatt hours of electricity annually. And visitors? Try more than 2 million a year at Lake Powell alone.

On Thursday, dignitaries gathered at Glen Canyon Dam - 710 feet above the Colorado River just south of the Utah line in northern Arizona - to mark the 50th anniversary of the Colorado River Storage Project Act, which gave birth to the dam and three others.

"It was an engineering marvel," Utah Lt. Gov. Gary Herbert told the crowd amid heavy security. "From a Utah perspective, we are an arid state, averaging 13 inches of rain a year. We know the challenge from our pioneer heritage that dictated they make the desert bloom like a rose. Their vision literally made it blossom."

Herbert urged current stewards to show the "same kind of vision" to ensure that today's quality of life continues tomorrow.

Not everyone is celebrating. The dams swallowed up scenic wonders and ignited an environmental uproar that echoes to this day.

John Weisheit, conservation director of Moab-based Living Rivers, said officials are miscalculating the true nature of the 1922 Colorado River Compact - which allowed for the storage and distribution in seven Western states of water in the Colorado River Basin - by elevating hydropower production above the original intention of providing clean, healthy water for people and the environment.

"It [hydropower] became the funding mechanism for the dams," Weisheit said from Moab.

He maintains that instead of farmers paying for the dams, as originally planned, the government changed the law so it could go into the power business. Now, rather than paying back the U.S. Treasury, the money is being tapped to mitigate problems caused by the dams.

"It's not about water anymore, it's about keeping it ticking," Weisheit said. "They've stretched water supplies to the limit. It [the water] is too salty and is being wasted in reservoirs because of evaporation.

"They should rename the Colorado River Storage [Project] Act the Colorado River Survival Project."

The four dams - Flaming Gorge on the Green River in eastern Utah, Glen Canyon on the Colorado River in northern Arizona, Navajo Dam on the San Juan River in New Mexico and the Wayne N. Aspinall Dam on the Gunnison River in west-central Colorado - together store 30.6 million acre-feet of water and help irrigate 2 million acres of farmland.

"It's hard to think these days they knew when they put the Colorado River Compact together, the impact they would have on the economic development in the upper states," said Mark Limbaugh, assistant secretary of the interior.

Rick Gold, regional director of the Upper Colorado Basin, told the crowd the dams allow for long-term storage so allocations can be met for compact states.

"The system is a gift to us all in this part of the world."

mhavnes@sltrib.com --- * JOE BAIRD contributed to this story * Paved the way for the construction of four dams on the Upper Colorado River Basin, Glen Canyon Dam being the largest. * Cost \$760 million, with \$145 million going toward construction of Glen Canyon Dam. * Provides an average of 30.6 million acre-feet of water. * Irrigates 2 million acres of farmland. * Meets water needs of 25 million people. * Generates 4.1 billion kilowatt hours of electricity a year.

The 1956 Colorado River Storage Project Act Source: U.S. Bureau of Reclamation

As Utah and Nevada fight over water, some worry the West will turn into a new dustbowl

By Ted McDonough for Salt Lake City Weekly

To get to Snake Valley in Utah's west desert, find a road less traveled and drive west. Then keep on driving. Past the last paved road, past swirling cyclones of dust, past the once vast Sevier Lake drained dry by farms of the earliest settlers and now usually marked by 200 square miles of white salt.

Keep driving past the point where dust coats your teeth and eyes, past any sign of human habitation to the very west end of the state. There, smack on the border with Nevada and seemingly rising out of nowhere, you'll find some of the highest peaks in Utah—the Deep Creek Mountains—and the Snake Valley stretched out below.

The Deep Creeks are 12,000-foot-high collectors of water, and home to seven creeks that flow year round, giving the mountains their name. Isolated since the Pony Express stopped passing through in the 1860s, the Snake Valley is thought by some to be one of few places left to search for the liquid gold needed to satisfy the thirst of the West's growing population. It's also here that Las Vegas is digging for water.

It's on the Nevada side of the mountains that Las Vegas is planning hundreds of wells and a 285-mile-long pipeline that will move the Deep Creeks' water to Las Vegas. A total of 200,000 acre-feet of water—that's 65 billion gallons—would be shipped from rural Nevada to Las Vegas each year under the plan. Nine of the wells are planned just five miles from the Utah border in a valley straddling the Utah-Nevada line. Las Vegas' water officials have targeted the Snake Valley to produce up to 50,000 acre-feet of water per year, pumping water into Nevada that would otherwise flow into Utah's Great Basin. Not all of those 50,000 acre-feet would have flowed into Utah. Nevertheless, those who populate one of the sparsest corners of Utah warn that such a massive transfer of water will cause irreparable environmental damage.

The vast valley floor appears deserted, but if you know where to look, you can find a handful of ranchers determined not to let Vegas have its way. They are few, but a tough bunch.

George Douglass moved his family to the base of a Deep Creek canyon on the Utah side 30 years ago. At the time, he thought civilization was about collapse and wanted to live where he could concentrate on becoming self-sufficient.

"It hasn't collapsed yet, so I'm really disappointed," Douglass says with a chuckle. "I'll tell you what, my two daughters never let me live that down." Douglass' wife Ronnie thinks Vegas will be disappointed if it goes looking for water in this part of the desert. After seven years of drought, the family no longer grows crops. George must travel to make a living. Ironically, he's currently working in Cedar City, drilling wells for that fast-growing town.

Ronnie spends her days petitioning Utah's congressman and state water officials.

She said she fears removing any water from the valley will ruin the already tenuous existence of Snake Valley's ranchers and the unique animals and plants that call the area home. The Douglass ranch is home to wild Mustang, pronghorn antelope and the Bonneville cutthroat trout, a species that was near extinction until the Douglasses created a fish hatchery on their ranch preserving the native fish.

The small trickle of water that flows on their property feeds not alfalfa but a series of small fish breeding ponds that are primarily responsible for repopulating east slope Deep Creek streams with Utah's state fish thought extinct just 40 years ago.

Like George Douglass, many of the ranchers of Utah's west desert would prefer to be left alone. But trouble keeps invading their solitude. In the late 1970s, they fought plans to put the MX Missile on their valley floor.

Their new fight may be as difficult. It pits them against Las Vegas developers and against Harry Reid, Nevada's powerful U.S. senator. Reid has close ties to Sin City developers but also strong pull with Utah's politicians. They will need the Senate minority leader's help if the Beehive State's own plans for massive water projects are to become reality. It's Sen. Reid who holds many of the cards, by way of his various committee memberships at the federal level, to water that would enrich Utah's St. George area, and some worry Utah can't afford to anger him by opposing the Las Vegas pipeline.

The Las Vegas pipeline is just one of a series of massive Western water projects planned on a scale not seen since Lake Powell and Lake Mead were created to tame the Colorado River. Utah's plans include a pipeline to bring Lake Powell water to St. George, the nation's fastest-growing metropolitan area. A second project on Utah's books would take water from the Bear River to feed the growing thirst of the Wasatch Front, portions of which are projected by state water officials to run short of water at mid-century. Private speculators are even getting in on the act. One Colorado investor, Aaron Million, has proposed a pipeline from the Flaming Gorge reservoir to Denver.

With the Colorado River no longer able to keep up with water demands of Western states, everyone is getting desperate. Some proposed solutions sound like science fiction. Las Vegas has funded studies to determine if the Pacific Ocean could be made drinkable by removing its salt. Then, the thinking goes, California wouldn't need its share of Colorado River water, which could instead be sent to Nevada. But any such massive ocean desalinization programs are decades into the future.

And as Western states gear up for huge water projects, scientists warn increasingly that they are digging for fool's gold. The water, some say, simply isn't there. And squeezing the last drops out of the turnip could cause unprecedented environmental disasters, from the dust bowl Douglass fears to the environmental devastation of one of the Western Hemisphere's most important breeding grounds for migrating birds—the Great Salt Lake.

Environmentalists warn the West is undergoing a massive conversion of public land to private homes too rapidly to foresee the consequences. This summer, 80 environmental organizations called for a moratorium on Western land privatization laws moving through Congress.

Janine Blaeloch, with the Seattle-based Western Lands Project, heads the opposition, noting that both the Nevada and Utah pipeline proposals have been helped along by federal legislation she criticizes as giveaways of public land to private development.

Utah Sen. Bob Bennett and Rep. Scott Matheson are sponsoring a law that would sell off 24,000 acres of land for private development around St. George while setting aside rights of way for water from the Lake Powell pipeline. Similarly, a Nevada land privatization bill sponsored by Sen. Reid gave free rights of way over federal land for the pipes to bring Snake Valley water to Las Vegas. Sen. Reid's connections to the pipeline are personal. The project was redesigned in January so water could be shipped not just to Las Vegas, but also to a vast dry area one-hour northeast of the city known as Coyote Springs. There, casino lobbyist Harvey Whittemore—a heavy donor to Reid's campaigns who also employs one of Reid's sons as his personal lawyer—is planning a development described as one of the largest since the founding of Vegas itself: 159,000 homes and 16 golf courses on 43,000 acres of what's now bone-dry ground.

A second Reid son sits on the board of the Southern Nevada Water Authority, the Las Vegas water supplier proposing the pipeline project. Proponents of the federal land-trading bills deny it, but Blaeloch predicts much of the cash raised by selling off public lands will end up funding the massive water projects.

"Growth is putting so much pressure on public lands, there really is a huge impetus to privatize more land to make way for retirement communities, second homes and the normal population," she said. "And this incredible growth is in the West, where you have a huge amount of pressure on water supplies and not a whole lot of forethought on whether the water is going to be there to supply the development that is occurring." Blaeloch lumps proposed development of St. George and Las Vegas into the same basket as "unsustainable." Which means, quite simply, that if huge amounts of water must be shipped to develop land, maybe it shouldn't be developed at all.

"If you have to build 450 miles of pipeline to bring water to your community, there's a problem there."

Snake Valley rancher Cecil Garland puts it another way. "We ain't got water for Las Vegas," he says.

The 79-year-old Garland was one of the leaders in the campaign against the MX. Now he's determined to fight the Las Vegas pipeline. He lives in what was once the post office of the tiny Utah town of Callao, settled as a stop in the Pony Express route. His wife is the town schoolteacher.

Garland moved to Callao 30 years ago following a stint in Las Vegas where he claims to have dealt cards to Bugsy Siegel, the mobster often credited with the idea of a building

a wide-open city in Nevada's desert. Seventy percent of the Snake Valley is located in Utah, Garland notes, and Utah ranchers have historically used most of the area's water.

"If they build the pipeline, they'll get the water," said Garland. "They've got enough money to buy the ranches, the farms, everything else."

Where springs once bubbled from the surface of his ranch, today there are dry scars, the result, Garland says, of pumping by him and his neighbors during times of drought. Some climate scientists say the drought conditions Garland complains of might now be a permanent feature of the West.

Marty Hoerling, meteorologist with the National Oceanic and Atmospheric Administration's Earth System Research Laboratory in Boulder, Colo., recently examined temperature data collected by the world's climate scientists for a new assessment of climate change due out next year. His analysis focusing on Utah and Colorado, predicts a 5-degree rise in temperatures by 2050, perhaps as early as 2020. That means less snow pack, the area's primary means of storing water, and more evaporation. For the Colorado River, Hoerling predicts the change will mean a decrease in annual river flow to 10 million acre-feet, barely enough to meet current demand of California, Arizona and Nevada.

Years of drought have already robbed the Colorado River of much of its water. When the river was divided between Western states, it was thought to have a yearly flow of more than 16 million acre-feet. The flow in the last decade has measured about 13 million acre-feet. That level just matches current demand, Hoerling noted. "If flow is to decline because of climate change, it will move below current demand, let alone any growth in demand for water that some states have in mind," he said. The Southern Nevada Water Authority claims there is a lot of unclaimed water deep beneath the valleys on either side of the Deep Creek Mountains. The authority says it won't pump more than will be replaced each year by mountain runoff.

"There have been lots of claims that [Las Vegas] just wants the water, and they are going to take it. That's not at all how we are going about doing this," said Scott Huntley, water authority spokesman. "Our plan is based on the idea of doing this in a sustainable manner."

Garland has his doubts. "This was once a huge Ice Age lake," he said, noting scars left by the ancient Lake Bonneville on surrounding hills. "What makes them think it will recharge?"

Scientists with the Utah Geological Survey are busily trying to determine recharge rates for area underground aquifers but say too little is known about area geology to say for sure how water flows in the Snake Valley. And the Las Vegas pipeline project is moving through the permitting process ahead of ongoing federal studies aimed at determining how much water is available. Stefan Kirby with Utah Geological Survey agrees with the Southern Nevada Water Authority that there is significant water under the Snake Valley but said the water might not replace itself if taken out. The water now being pumped from deep wells may have been put down in prehistoric times, he said. And it's possible

the area's complex rock structure now carries mountain runoff sideways miles away before going to ground.

Kirby is performing Carbon-14 dating—the same process used to date dinosaur bones—on samples of water taken from area wells to determine how much of the water rolling off of the Deep Creeks actually makes it into the deepest underground aquifers. What Utah scientists believe they do know is that Nevada's wells will be placed precisely at the point where water from mountain creeks slips underground and makes its way into Utah. A 2005 Utah Geological Survey study found water currently flows from Nevada into Utah and predicted the Las Vegas pipeline would cause well levels in Utah to drop more than 100 feet, possibly drying up springs 30 miles into Utah. In a worst-case scenario, Nevada's pumping could cause water flow in the entire Great Basin to reverse direction. Instead of flowing from Nevada into Utah, water would be sucked from Utah into Nevada. Garland worries that reversal could suck brackish water near the Salt Flats onto his land, destroying forever its ability to be cultivated.

Utah ranchers plan to ask Utah's Legislature in January for \$1 million to fund test wells to monitor ground-water levels. They also want Utah to demand that Las Vegas switch off the pumps if those wells turn up signs that Utah's water is being impacted.

Responding to those calls, the Legislature's Natural Resources Agriculture and Environment Committee this summer passed a resolution asking Utah water officials to hold off signing the Snake Valley water agreement with Nevada until studies of area groundwater have been completed. Committee members hope to have the full Legislature pass the resolution in January—if, that is, it isn't too late.

Utah and Nevada water officials are on track to complete the Snake Valley water agreement by the first of next year. Utah's director of Natural Resources Mike Styler said he wants an agreement in place soon to protect Utah ranchers. He said the agreement he's negotiating calls for monitoring and other safeguards ranchers want.

All this hand-wringing may be in vain, Styler said. As part of negotiations, Utah and Nevada water officials estimated how much of the valley's water is already being used. The answer, Styler said, appears to be all of it.

"The amount of water available is so limited I think it will be marginal for southern Nevada to put a pipeline in [to Snake Valley]," he said. "One thing we've always said is any water right that belongs to Utah or could be used by Utah, we're not going to give up."

Ranchers point out they aren't the only ones using water in the west desert. On Dean Baker's ranch at the south end of Snake Valley, Baker points to a hole in the ground where a spring used to be. Animals, probably coyote, have dug a hole to reach the water now several feet underground, he said.

Today, without springs, the hundreds of antelope that range Baker's property drink from his irrigation ditches to quench their thirst.

Gandy Spring, a short drive from Baker's ranch, is home to the "least chub," a tiny prehistoric fish left behind in shallow pools when Lake Bonneville receded at the end of the Ice Age that is found almost nowhere else. Fish Spring National Wildlife Refuge and Great Basin National Park are also located in the area.

Don Duff, the man who in the mid-1970s discovered surviving populations of Bonneville cutthroat trout in two high Deep Creek streams and worked with the Douglass family to restore the fish, worries Las Vegas' pipeline could ruin his life's work. Overpumping of ground water, he notes, has been known to cause mountain streams to dry up.

"We can't have expanded growth without impacts in the environment," said Duff, a retired Forest Service aquatic ecologist who runs the Trout Unlimited chapter in Baker, Nev. "Once there are impacts shown, you've already lost. How do you shut the pumps down to a multibillion-dollar project? You can't pump water back into the basin."

Utah environmentalists share similar fears about their state's pending water projects. The Utah Rivers Council recently released a report asking Utah water officials to examine alternatives to developing water from the Bear River, noting the Bear provides 60 percent of the surface water to the Great Salt Lake. The lake and the river delta around it, including the Bear River Migratory Bird Refuge, are recognized as one of the most important refuges in the Western Hemisphere for migrating birds. Utah water officials say water would be taken only during high winter runoff, but the Rivers Council complains the lake is so shallow that small changes in water can have dramatic effects.

The Las Vegas pipeline project also could impact lake levels. Water flowing out from the Snake Valley is thought to contribute around 10,000 acre-feet per year to the Great Salt Lake.

Standing at the edge of his property where years of drought have killed even the tenacious plants that hold the desert together, Garland picks up a fistful of fine sand, then lets it fall through his fingers. Two years ago, before the worst of the recent drought abated, Garland said he witnessed clouds of dust 500 feet in the air. He predicted the result of Las Vegas pumping will be clouds thousands of feet high moving to Salt Lake City.

Garland isn't a man who shies from exaggeration. If the Las Vegas pipeline isn't stopped, he predicts the land will become, "New Orleans in reverse." But his vision of a new dust bowl isn't that far fetched. It happened before, not too far away, in California's Owens Valley, a one-time farming community at the base of the Sierra Nevada Mountains.

At Garland's invitation, attorney Greg James, the former water department director for Inyo County in Owens Valley, visited Callao this summer to speak to visiting lawmakers from Utah and Nevada. James told of Los Angeles raids on Owens Valley water beginning at the turn of the century and expanding through the 1970s. First the springs went dry. By the mid-1920s, the valley's entire river had gone to Los Angeles. Then a lake dried up.

By the time James got to Inyo County, Los Angeles had purchased all of the valley's farms and ranches for water rights, and Owens Valley had become the world's largest source of dust. The Clean Air Act eventually gave James some leverage to force Los Angeles to begin repairing the damage. Still, after decades of lawsuits, Owens Valley has managed to get back only about half the water.

"The lesson from L.A. is they came to the valley saying, 'Don't worry. It's very safe. We are going to take a little bit of water,'" James said. "But as the city continued to grow, they couldn't stop."

World News 10/30/06

Global Warming Could Devastate Economy

BY THOMAS WAGNER FOR ASSOCIATED PRESS LONDON (AP)

[Stern Report](#)

[Stern Report Executive Summary](#) [1m PDF File]

Unchecked global warming will devastate the world economy on the scale of the world wars and the Great Depression, a British government report said Monday, as the country launched a bid to convince doubters that environmentalism and economic growth can coincide.

Britain hired former Vice President Al Gore, who has emerged as a powerful environmental spokesman since his defeat in the 2000 presidential election, to advise the government on climate change - a clear indication of Prime Minister Tony Blair's dissatisfaction with current U.S. policy.

Blair, President Bush's top ally in the Iraq war, said unabated climate change would eventually cost the world between 5 percent and 20 percent of global gross domestic product each year. He called for "bold and decisive action" to cut carbon emissions and stem the worst of the temperature rise.

"It is not in doubt that, if the science is right, the consequences for our planet are literally disastrous," he said. "This disaster is not set to happen in some science fiction future many years ahead, but in our lifetime."

The report emphasized that global warming can only be fought with the cooperation of major countries such as the United States and China, and represents a huge contrast to the Bush administration's wait-and-see global warming policies.

Sir Nicholas Stern, the senior government economist who wrote the report, said that acting now to cut greenhouse gas emissions would cost about 1 percent of global GDP each year. He recommended a "low-carbon global economy" through measures including taxation, regulation of greenhouse gas emissions and carbon trading.

"That is manageable," he said. "We can grow and be green."

Bush kept America - by far the biggest emitter of carbon dioxide and other gases blamed for global warming - out of the Kyoto international treaty to reduce greenhouse gases, saying the pact would harm the U.S. economy. The international agreement was reached in Kyoto, Japan, in 1997 and expires in 2012.

Blair made his displeasure with U.S. environmental policy clear when he signed an agreement this year with California Gov. Arnold Schwarzenegger to develop new technologies to combat the problem. The measure imposed the first emissions cap in the United States on utilities, refineries and manufacturing plants in a bid to curb the gases that scientists blame for warming the Earth.

The prime minister and the report also said that no matter what Britain, the United States and Japan do, the battle against global warming cannot succeed without deciding when and how to control the greenhouse gas emissions by such fast-industrializing giants as China and India.

Stern's 700-page report said evidence showed "that ignoring climate change will eventually damage economic growth."

"Our actions over the coming decades could create risks of major disruption to economic and social activity, later in this century and in the next, on a scale similar to those associated with the great wars and the economic depression of the first half of the 20th century," he said.

The report said at current trends average global temperatures will rise by 3.6 to 5.4 degrees within the next 50 years or so, and the earth will experience several degrees more of warming if emissions continue to grow.

It said such warming could have effects such as melting glaciers, rising sea levels, declining crop yields, drinking water shortages, higher death tolls from malnutrition and heat stress, and widespread outbreaks of malaria and dengue fever. Developing countries often would be the hardest hit.

The report acknowledged that its predictions regarding GDP relied on sparse data about high temperatures and developing countries, and placed monetary values on human health and the environment, "which is conceptually, ethically and empirically very difficult."

Treasury Chief Gordon Brown, who is expected to replace Blair as prime minister next year, said Britain would lead the international effort against climate change, establishing "an economy that is both pro-growth and pro-green." He called for Europe to cut its carbon emissions by 30 percent by 2020 and 60 percent by 2050 - and Blair's government on Monday said it would propose a British law to that effect.

Under the 1997 Kyoto accord, 35 industrialized nations committed to reducing emissions by an average 5 percent below 1990 levels by 2012.

But Britain is one of only a handful of industrialized nations whose greenhouse gas emissions have fallen in the last decade and a half, the United Nations said Monday.

The U.N. said Germany's emissions dropped 17 percent between 1990 and 2004, Britain's by 14 percent and France's by almost 1 percent.

Overall, there was a 2.4 percent rise in emissions by 41 industrialized nations from 2000 to 2004, mostly because former Soviet-bloc countries, whose emissions declined in their economic downturn of the 1990s, increased emissions during the recent four-year period by 4.1 percent.

The British government is considering new "green taxes" on cheap airline flights, fuel and high-emission vehicles.

Regional News 10/31/06

States to begin augmentation study to prepare for water scarcity

Excerpt: "The Colorado River Basin States are currently collaborating on a system-wide study examining augmentation options, such as desalination, weather modification and other emerging technologies."

Press Release

Source: Southern Nevada Water Authority

Interior Secretary Kempthorne, Colorado River Water
Users Discuss Drought Management

Tuesday October 31

LAS VEGAS, Oct. 31 /PRNewswire/ -- Secretary of the Interior Dirk Kempthorne met yesterday (Oct. 30) with representatives from the seven states that share the Colorado River's flows to discuss water management issues related to the drought-plagued river.

"The key issue for this river system, as it is for many other river systems around the West, is the competition and demand for a limited resource, and the need to find solutions to this demand that will meet both current and future needs," Kempthorne told the representatives. "This is a tough job, and I look forward to working with you to find consensus solutions to these issues."

Among the items discussed were shortage sharing arrangements associated with persistent Colorado River drought conditions and potential options for augmenting the river system's flows. The Colorado River Basin States are currently collaborating on a system-wide study examining augmentation options, such as desalination, weather modification and other emerging technologies. The results of the study are scheduled for release next summer. An Environmental Impact Statement related to managing the river system is also being developed.

Representatives from the Colorado River Basin States expressed that Kempthorne's visit underscored his commitment to working proactively and collaboratively on difficult Colorado River issues such as shortage management. The meeting was productive and set a positive tone for the critical times ahead.

This was Kempthorne's first opportunity to meet collectively with officials from the Colorado River Basin States. The Secretary, who was appointed in May 2006, recently made an aerial tour of the Colorado River. Attending the meeting were representatives of all seven Basin States: Wyoming, Colorado, Utah and New Mexico (Upper Basin); and Arizona, California and Nevada (Lower Basin). Interior Assistant Secretary for Water and Science Mark Limbaugh, Bureau of Reclamation Commissioner Bob Johnson, Upper Colorado Regional Director Rick Gold and Lower Colorado Acting Regional Director Jayne Harkins rounded out the Interior team.

Contacts: Kip White, Bureau of Reclamation (202) 513-0684 Scott Huntley, Southern Nevada Water Authority (702) 258-7258

[Additional information from the consulting firm of Black and Veatch](http://www.bv.com/news_3_publications/reports_3_studies/report_1.aspx)

http://www.bv.com/news_3_publications/reports_3_studies/report_1.aspx

LR Testimony 11/01/06

The Moab Mill Project: A Technical Report Towards Reclaiming Uranium Mill Tailings

[This report](#) about the Department of Energy's (DOE) reclamation of uranium waste along the Colorado River, is a project supported by a grant from the [Citizens' Monitoring and Technical Assessment Fund](#).



The report includes two studies related to the behavior of the Colorado River in the vicinity of the Moab where DOE is carrying out the remediation of the former Atlas Corporation Uranium Mill, pursuant to federal law.

The first study, by Dr. John C. Dohrenwend, is "A Review: Department of Energy's Assessment of Potential Flood Hazards at the Moab Project Site (Atlas Tailings Pile)," January 2005.

The second, by Dr. Noam Greenbaum, is "Paleofloods in the Upper Colorado River near Moab, Utah," May 2006.

The first report was submitted to the DOE as comment on the Draft Environmental Impact Statement for Remediation of the Moab Uranium Mill Tailings. Dr. Dohrenwend's review was one of the studies relating to the potential long-term impact of the Colorado River should the estimated 16-million tons of uranium mill tailings be left on site.

It was one of the studies that the DOE took into consideration when the Record of Decision determined that the Moab Mill tailings should be moved from the floodplain of the Colorado River to a site at Crescent Junction, 30 miles north.

The second report is the result of a paleoflood study carried out upstream of the Moab site. The study, based on fieldwork carried out in the summer of 2005, brings forth a whole new set of data related to the flood behavior of the Colorado River within the past several thousand years.

Most significantly, the study provides new information that alters previous determinations of the flood discharge rates for the 100-year and 500-year floods and the probable maximum flood (PMF).

This new data must be considered and further investigations initiated.

Additional copies of this report can be obtained by contacting:

John Weisheit
john@livingrivers.org
435-259-1063

Sarah M. Fields
sarahmfields@earthlink.net
435-259-4734

Living Rivers
PO Box 466
Moab, UT 84532

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Additional Information:

[Living Rivers press release](http://www.livingrivers2.org/archives/article.cfm?NewsID=730)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=730>

[Cover Letter: Moab Mill Project](#) [PDF File]

[Brochure: Moab Mill Project](#) [PDF File]

[Poster \(17 x 22\): Moab Mill Project](#) [1.5m PDF File]

[Times-Independent newspaper clippings: Moab Mill Project](#) [7m PDF File]

[Department of Energy: Moab Project](http://gj.em.doe.gov/moab/)

<http://gj.em.doe.gov/moab/>

Regional News 11/03/06

Reclamation announces new EIS for Glen Canyon Dam

First posted on November 3, 2006

The Bureau of Reclamation today announced it will begin to develop an Environmental Impact Statement (EIS) on the implementation of a Long-Term Experimental Plan (LTEP) for operational activities at Glen Canyon Dam and other management actions on the Colorado River.

This EIS is in response to a settlement agreement in the 9th District Court by the plaintiffs: Center for Biological Diversity, Living Rivers, Sierra Club Grand Canyon Chapter, Glen Canyon Institute and the Arizona Wildlife Federation.

In that agreement, Reclamation committed to further NEPA and Endangered Species Act compliance activities, in concert with the Adaptive Management Program, which began in 1996 following the completion of the first EIS, which began in 1989.

The development of the present EIS continues the efforts of the Adaptive Management Program and created to protect the resources of Grand Canyon National Park below Glen Canyon Dam.

A component of that program has been the work of the Adaptive Management Working Group (AMWG) and the Technical Working Group (TWG) through adaptive management and scientific experimentation.

The AMWG provides the Secretary of the Interior with recommendations on the development and review of science-related work and changes to management practices.

Since its inception in 1996, the AMWG and the TWG have been working to develop long-term planning and monitoring through structured experimentation related to operations of the dam (flow) and other management actions (non-flow).

The EIS on the Long-Term Experimental Plan will rely on the extensive scientific studies that have been undertaken by the U.S. Geological Survey's Grand Canyon Monitoring and Research Center (GCMRC).

The AMWG will inform Reclamation of options for a long-term experimental plan during the EIS process and will also have the opportunity to recommend other experiments related to the plan.

The public has the opportunity to provide oral and written comments to Reclamation on options and experiments until the last day of February 2007.

The AMWG will hold a public meeting December 5, 2006, in Phoenix, Ariz., at the Fiesta Inn at 2100 S. Priest Drive, Tempe, Arizona.

The Bureau of Reclamation will hold two public meetings:

January 4, 2007 at Phoenix, Arizona, Embassy Suites Phoenix Airport at 44th Street (Cholla room), 1515 North 44th Street. Meeting time: 6:00 p.m. - 8:00 p.m.

January 5, 2007: Salt Lake City, Utah, Hilton Salt Lake City Center, (Salon 1), 255 South West Temple. Meeting time: 6:00 p.m. - 8:00 p.m.

These meetings will provide an opportunity for public input on the Long-Term Experimental Plan. An agenda for the meeting, including projected times for the discussion of this action, has been posted on the Upper Colorado Region's web page at www.usbr.gov/uc. Click on the Adaptive Management Program listing for details.

The Department of Interior anticipates publishing a draft EIS in the spring of 2008.

THE COMMENT PERIOD ENDS FEBRUARY 28, 2007

Regional Director, Bureau of Reclamation
Upper Colorado Region, Attention: UC-402
125 South State Street
Salt Lake City, Utah 84138- 1147

Faxogram at 801-524-3858
E-mail at GCDExpPlan@uc.usbr.gov

Contact:
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Phone: 801-524-3715
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Website: <http://www.usbr.gov/uc/rm/gcdltep/index.html>

[Additional Information](#)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=753>

Regional News 12/12/06

Stegner Center 12th Annual Symposium: The Colorado River

Location: University of Utah / S.J. Quinney College of Law / Sutherland Moot Courtroom

Date: Friday Mar 2, 2007 (7:00 AM) to Saturday Mar 3, 2007 (5:00 PM)

Contact: 801.585.3440 [Link to the Stegner Center](#)

The Wallace Stegner Center's 12th annual symposium will explore issues of Colorado River management, focusing on the seven-state Colorado River Compact and other aspects of the "Law of the River," the complex set of laws, treaties, cases, regulations, and other documents that govern use and management of the Colorado River. The fundamental question to be explored in this two-day symposium is whether the 1922 Compact is resilient enough to meet the environmental needs and to withstand the hydrological, climatic, economic, and other real-world changes of the next century, or whether significant changes to the compact or other laws are necessary.

The Stegner Center will be joined by policy analysts, water users, scientists, economists, political leaders, environmental advocates, and others to consider whether the Colorado River Compact needs to be refashioned. Critical issues include how Colorado River water might be re-allocated among the Upper and Lower Basin states, Native American tribes, Mexico, and instream environmental uses, and what effect this might have on the ecological health of the river as well as surrounding communities and other users of Colorado River resources.

The goal for this year's symposium is to promote understanding of the cultural and historical forces that shaped the Colorado River Compact and how the realities of the New West, including the urbanization of the region, population growth, environmental damage, and increased water demands, along with a changing environmental ethic, might suggest a need to reconsider something as fundamental as the 1922 Colorado River Compact.

The symposium will feature the following speakers:

Robert Adler, Associate Dean for Academic Affairs and James I. Farr Chair in Law and Professor of Law, University of Utah S.J. Quinney College of Law

Niklas Christensen, Water Resource Engineer, Herrera Environmental Consultants

Steven E. Clyde, Shareholder and Managing Director of Clyde Snow Sessions & Swenson, P.C.

Karl W. Flessa, Professor of Geosciences, University of Arizona

Justice Gregory J. Hobbs, Jr., Colorado Supreme Court David H. Getches, Dean and Raphael J. Moses Professor of Natural Resources Law, University of Colorado School of Law

Richard J. Ingebretsen, MD, PhD, Professor, University of Utah Department of Physics and Clinical Instructor of Medicine, University of Utah School of Medicine

Robert W. (Bob) Johnson, Commissioner of the Bureau of Reclamation (invited)

Patty Limerick, Faculty Director and Chair of the Board, Center of the American West

Pat Mulroy, General Manager, Southern Nevada Water Authority

Don A. Ostler, Executive Director, Upper Colorado River Commission

Jennifer Pitt, Senior Resource Analyst, Environmental Defense

John (Jack) C. Schmidt, Professor, Department of Watershed Sciences, Utah State University

Tom Till, Nature Photographer and Author; Fellow of the North American Nature Photography Association

Susan M. Williams, Owner/Partner, Williams & Works, P.A.

David S. "Sid" Wilson, Jr., General Manager, Central Arizona Project

Connie A. Woodhouse, Associate Professor in Geography and Regional Development, University of Arizona

J. Francisco Zamora-Arroyo, Project Manager, Colorado River Delta, Sonoran Institute

Jerry Zimmerman, Executive Director, Colorado River Board of California

The Stegner Center will begin accepting registrations in January 2007. Registration fees are \$110 if received by February 16; \$140 if received on February 17 or later. Seniors and university and college faculty and staff are \$65 if received by February 16; \$90 if received on February 17 or later. Students are \$50 if received by February 16; \$75 if received on February 17 or later. Continental breakfast and lunch is included. Thirteen CLE credits are available for \$15.

Please contact the Stegner Center at 801-585-3440 or

[Link to the Stegner Center](http://www.law.utah.edu/stegner/)

<http://www.law.utah.edu/stegner/>

Principal funding by the R. Harold Burton Foundation and Chevron. Additional support provided by the Cultural Vision Fund and The Nature Conservancy in Utah.

LR Press Release 01/05/07

Federal study launched to mislead the public into supporting failed efforts to recover endangered species

January 5, 2006

For Immediate Release:

Contact: John Weisheit 435-259-1063

Cell: 435-260-2590

Grand Canyon Cover Up

Federal study launched to mislead the public into supporting failed efforts to recover endangered species

(Phoenix, AZ) While native species continue to decline within one of the world's most famous river corridors, federal officials are soliciting public comments for remedies without acknowledging the problem, nor their intent to continue with the same failed strategies exacerbating the losses.

"The main problem in Grand Canyon is the loss of endangered species due to failure to operate Glen Canyon Dam according to the mandate of the Grand Canyon Protection Act," says John Weisheit, from Living Rivers. "Yet now that an out-of-court settlement has forced this new study on the operations of the dam, the public is not being informed of these impacts, nor that Grand Canyon is the principle victim of their mismanagement policies."

The launch of this new Environmental Impact Statement (EIS) comes after more than three decades of studies and experimentation, Congressional interventions, and millions of taxpayer dollars invested principally to reverse the decline of endangered species in Grand Canyon National Park.

The most egregious errors have come over the past ten years during the implementation of an extensive adaptive management and research program. Annual program reports repeatedly show that these efforts have not been sufficient to improve a single threatened natural or cultural resource.

Under adaptive management, one more fish species has gone extinct, the razorback sucker, and another, the humpback chub, has dwindled to just a few thousand fish. Additionally, Native American archeological sites that were to be protected, have either suffered further damage, or required emergency stabilization.

Despite this lack of progress, Bureau of Reclamation briefing materials introducing this new EIS, ignore any mention of endangered species, archeology or, with one minor exception, the Grand Canyon itself.

"If the Bureau won't honestly describe the problem, how can the public have faith that they are seriously interested in developing a solution," adds Weisheit. "The ten-year experimental plan they intend to develop demonstrates that nothing has changed and the Bureau of Reclamation remains intent on administering to the slow demise of the Grand Canyon."

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[Additional information](http://www.livingrivers2.org/archives/article.cfm?NewsID=744)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=744>

[Reclamation web page about Glen Canyon Dam Long-Term Experimental Plan EIS](http://www.usbr.gov/uc/rm/gcdltep/index.html)

<http://www.usbr.gov/uc/rm/gcdltep/index.html>

LR in the News 01/14/07

Fight brewing over endangered fish

By GARY HARMON

The Daily Sentinel Sunday

The federal government is spending millions of dollars in Colorado to save endangered fish that, according to one organization, it's allowing to dwindle in the Grand Canyon.

The U.S. Bureau of Reclamation is embarking on a two-year process of putting together an environmental impact statement for a long-term experimental plan for operation of Glen Canyon Dam.

That study, said a Moab, Utah-based organization, Living Rivers, is a "cover-up" launched to mislead the public into supporting failed efforts to recover endangered species.

It is, actually, said Reclamation official Dennis Kubly, the beginning of an effort to balance management of Glen Canyon Dam with the needs of people and other species.

The idea, Kubly said, is to balance the operations of the dam with a multitude of needs, including the requirements of Colorado and other Upper Colorado River Basin states to deliver set amounts of water to the lower-basin states, the need for electrical generation, and the scenic needs of the Grand Canyon, as well as those of its fish.

"There are big stakes here," Kubly said. "Let's take the time to do it right and hopefully we won't have to do it over."

Reclamation, however, has a clear mission under the Endangered Species Act and the Grand Canyon Protection Act, said John Weisheit of Living Rivers.

The launch of the environmental impact statement follows three decades of studies and experimentation, Congressional interventions and millions of taxpayer dollars invested

principally to reverse the decline of endangered species in Grand Canyon National Park, Weisheit said.

Under the adaptive-management program used by Reclamation, the razorback sucker has become extinct in the canyon, and another, the humpback chub, has dwindled to just a few thousand fish.

"We're thinking the razorback never had very high numbers in the Grand Canyon," Kubly said, and the population of the "primary fish of interest," the humpback chub, has stabilized at about 5,000 adults after a decline.

"We hope we're turning the corner and getting some things right here," said Kubly, chief of the adaptive management group of Reclamation's Upper Colorado regional office in Salt Lake City.

The razorback and humpback, as well as the Colorado pikeminnow and bonytail chub, are the species targeted for recovery in the management of the Colorado River and its tributaries through Colorado, including the Grand Valley, and Utah.

Weisheit said the agency has ignored any mention of endangered species and archeology.

"Their attitude is that it's more important to make electricity to pay for the cost of the dams" than to meet the requirements of the law, Weisheit said.

The agency, however, needs time to experiment, Kubly said.

Reclamation hopes to complete its process by the end of 2008, then begin an estimated 10-year experimental flow program.

Take Action 01/18/07

Stop Congressional Ban on Studying the Decommissioning of Glen Canyon Dam

Every year, since 1998, there has been a section of the Department of Interior Appropriations' bill forbidding any study of decommissioning Glen Canyon Dam on the Colorado River. Your help is needed now to get this ban lifted.

The region's climate change is illustrating how irrelevant Lake Powell reservoir is for water storage, and the dam's mounting impacts on Grand Canyon's Colorado River ecosystem are becoming more devastating.

Congress is poised to take-up this legislation again and your help is needed now to ensure that federal studies on the future of Glen Canyon Dam can proceed unencumbered.

PLEASE CALL AND WRITE your representatives in Congress

Urge them to support an amendment to the Interior Appropriations Bill, to negate the language that bans the use of federal funds to study the decommissioning of Glen Canyon Dam.

POINT OUT THAT:

- Climatic changes in the Colorado River watershed reinforce the need for evaluating more efficient water storage options. The 24 million acre-feet that Lake Powell has stored for the present drought came with a cost of 40 million acre-feet of Colorado River water lost to evaporation and seepage since Glen Canyon Dam was built. This is valuable water that could be used by the environment and communities in the states of Arizona, Nevada, California and Mexico. We need to explore other ways to store water and create energy. Storing this same water in underground aquifers, a strategy proliferating across the southwest, has a 99 percent recovery rate. Glen Canyon Dam is wasting valuable water. It's time to evaluate the dam's decommissioning so this water can be efficiently managed.
- The dam blocks the flow of the Colorado River killing Grand Canyon National Park's famed river ecosystem below the dam. This damage continues despite more than \$200 million invested in federal efforts to alter Glen Canyon Dam operations in an attempt to comply with the 1992 Grand Canyon Protection Act. Studies must be allowed to evaluate the dam's decommissioning as a principle option for saving the Grand Canyon.

Sediment accumulation in the reservoir is steadily reducing the storage capacity and will eventually lead to failure of the dam, spillway erosion and collapse. The cost of managing this sediment must be addressed.

TO CONTACT YOUR REPRESENTATIVE For your REPRESENTATIVE'S specific contact information: phone, fax, address and email you can call the Capitol Switchboard (202) 225-1904 or go to the [House on-line look-up page](#).

TO CONTACT YOUR SENATOR For your senator's specific contact information: phone, fax, address and email you can call the Capitol Switchboard (202) 224-3121 or go to the [Senate's on-line look-up page](#).

Also send copies to:
Secretary Dirk Kempthorne
U.S. Department of the Interior
1849 C. Street NW
Washington, DC 20240
Phone: (202) 208-7351
Fax: (202) 208 6956
Email: exsec@ios.doi.gov
Or visit the [Department of the Interior's contact page](#)

THE LANGUAGE WHICH SHOULD BE OMITTED from the upcoming Interior Appropriations Bill.

No funds appropriated for the Department of the Interior by this Act or any other Act shall be used to study or implement any plan to drain Lake Powell or to reduce the water level of the lake below the range of water levels required for the operation of the Glen Canyon Dam.

SAMPLE LETTER

Dear Representative xxx
Dear Senator xxx

Please support eliminating, from the Interior Appropriations Bill, the ban to study Glen Canyon Dam decommissioning.

Please support an amendment to negate this ban so that the government can seek the best solutions for conserving precious Colorado River water and restoring critical river habitat in Grand Canyon National Park as called for in the Grand Canyon Protection Act.

The present drought situation reveals that Lake Powell reservoir is not the most efficient means for storing surplus Colorado River water. This drought is also coinciding with mounting evidence that the department of Interior's decade-long program to mitigate the impacts of Glen Canyon Dam on the resources within Grand Canyon National Park has been a failure. To aid in developing sound water use policy in the Colorado watershed, its critical that Congress allow the re-examination of how and if Glen Canyon Dam should remain operational.

Save Water for the Colorado's Future

Diverting water and storing it in underground aquifers represents the foundation for efficient Colorado River water storage, and should be vigorously pursued. It has become clear that above ground reservoir storage in the hot, arid desert is wasting vast amounts of precious water to evaporation. In addition the porous sandstone absorbs a lot of water that is not retrievable. We need to utilize underground storage in the places already proven feasible. Underground water banking programs can achieve up to 99 percent efficiency as compared to the 38 percent experienced with Lake Powell.

Assure Grand Canyon's Recovery

Since the 1992 passage of the Grand Canyon Protection Act more than \$200 million has been spent on mitigation efforts, but it isn't working. Glen Canyon Dam continues to devastate Grand Canyon's ecosystem.

The failure of this program to meet the goals of the Act was documented in the 2002 Bureau of Reclamation Report to Congress: Operations of Glen Canyon Dam Pursuant to the Grand Canyon Protection Act of 1992. More recent results of scientific studies

evaluating the Adaptive Management Plan have been even more disappointing. A review of their efforts to recover the endangered humpback Chub revealed that the Chub are spiraling toward extinction, declining by an average of 14 percent each year. We've already lost four of the eight fish species in Grand Canyon's river corridor and otters, muskrats, reptiles, insects and plants. It is critical that we now seek mechanisms that will actually comply with the Grand Canyon Protection Act.

Sediment Problems

Sediment accumulation in the reservoir is steadily reducing storage capacity and will eventually lead to failure of the dam, spillway erosion and collapse. In fact a high flow event occurring via monsoon or rapid snow melt could cause dam failure and disaster by moving the now high and dry exposed sediment, and the sediment in tributaries and depositing all of it at the face of the dam.

The cost of managing this sediment has not been addressed, nor have the effects of the absence of sediment in the Grand Canyon ecosystem been thoroughly analyzed. This too needs to be understood as we look toward a sustainable path for Arizona's water management.

As with the 84th Congress which allowed the creativity to design what was then felt optimal for Colorado River water management, so too must the 110th Congress allow federal water resource planners the same flexibility in guiding the Colorado's future. The public is ill served by banning analysis that could vastly improve both water storage efficiency on the Colorado, and a restored Grand Canyon river ecosystem.

Sincerely,
Your name and address

References and Additional Information 01/18/07

GLEN CANYON DAM AND ADAPTIVE MANAGMENT PROGRAM

LIVING RIVERS

- [Living Rivers Press Release on the lawsuit settlement](http://www.livingrivers2.org/archives/article.cfm?NewsID=731)
<http://www.livingrivers2.org/archives/article.cfm?NewsID=731>
- [Letter by Living Rivers \(March 2004\) to initiate a supplemental EIS on operations of Glen Canyon Dam](http://www.livingrivers2.org/archives/article.cfm?NewsID=567)
<http://www.livingrivers2.org/archives/article.cfm?NewsID=567>
- [Letter by Living Rivers \(April 2004\) for initiating EIS on Temperature Control Device](http://www.livingrivers2.org/archives/article.cfm?NewsID=234)
<http://www.livingrivers2.org/archives/article.cfm?NewsID=234>
- [Letter by Living Rivers \(January 2002\) about the Strategic Plan of the Adaptive Management Program](http://www.livingrivers2.org/archives/article.cfm?NewsID=578)
<http://www.livingrivers2.org/archives/article.cfm?NewsID=578>

BUREAU OF RECLAMATION

- [Full Press Release by Bureau of Reclamation](http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=14441)
<http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=14441>
- [Reclamation web page about Glen Canyon Dam Long-Term Experimental Plan EIS](http://www.usbr.gov/uc/rm/gcdltep/index.html)
<http://www.usbr.gov/uc/rm/gcdltep/index.html>
- [Federal Notice](http://www.usbr.gov/uc/rm/gcdltep/fedreg/NOI-NOPublicAMWGMTg110606.pdf) [1m PDF File]
<http://www.usbr.gov/uc/rm/gcdltep/fedreg/NOI-NOPublicAMWGMTg110606.pdf>
- [Reclamation web page on Temperature Control Device](http://www.usbr.gov/uc/rm/amp/tcd/index.html)
<http://www.usbr.gov/uc/rm/amp/tcd/index.html>
- [Final EIS: Glen Canyon Dam](http://www.usbr.gov/uc/envdocs/eis/gc/gcdOpsFEIS.html)
<http://www.usbr.gov/uc/envdocs/eis/gc/gcdOpsFEIS.html>
- [Record of Decision](http://www.livingrivers2.org/pdfs/LRlibrary/gcdrod.pdf)
<http://www.livingrivers2.org/pdfs/LRlibrary/gcdrod.pdf>
- ["Sufficient Progress Reports" to the US Fish and Wildlife Service](http://www.livingrivers2.org/pdfs/LRlibrary/sufprogbortofws.pdf)
<http://www.livingrivers2.org/pdfs/LRlibrary/sufprogbortofws.pdf>
- ["Sufficient Progress Reports" from USFWS to Reclamation](http://www.livingrivers2.org/pdfs/LRlibrary/sufprogfwstobor.pdf)
<http://www.livingrivers2.org/pdfs/LRlibrary/sufprogfwstobor.pdf>
- [Report to Congress: Operations of Glen Canyon Dam](http://www.usbr.gov/uc/library/envdocs/reports/crs/pdfs/RptCongress03feb21.pdf)
<http://www.usbr.gov/uc/library/envdocs/reports/crs/pdfs/RptCongress03feb21.pdf>
- [Grand Canyon Protection Act](http://www.livingrivers2.org/pdfs/gcpa.pdf)
<http://www.livingrivers2.org/pdfs/gcpa.pdf>

ADAPTIVE MANAGEMENT PROGRAM (AMP)

- [AMP Web Page](http://www.usbr.gov/uc/rm/amp/index.html)
<http://www.usbr.gov/uc/rm/amp/index.html>
- [Discussion of the flow and non-flow options from the AMP](http://www.usbr.gov/uc/rm/amp/amwg/mtgs/06dec05/ExpOptions_06nov17.pdf)
http://www.usbr.gov/uc/rm/amp/amwg/mtgs/06dec05/ExpOptions_06nov17.pdf
- [AMP presentation on Sediment Augmentation Device](http://www.usbr.gov/uc/rm/amp/twg/mtgs/06jan25/Attach_04.pdf)
http://www.usbr.gov/uc/rm/amp/twg/mtgs/06jan25/Attach_04.pdf
- [Strategic Plan of the Adaptive Management Program](http://www.livingrivers2.org/pdfs/AMPstrategicPlan.pdf)
<http://www.livingrivers2.org/pdfs/AMPstrategicPlan.pdf>
- [Memo from Department of Interior](http://www.usbr.gov/uc/rm/amp/twg/mtgs/06nov08/ML_Memo_06nov01.pdf) [1m PDF File]
http://www.usbr.gov/uc/rm/amp/twg/mtgs/06nov08/ML_Memo_06nov01.pdf

NATIONAL ACADEMY OF SCIENCES

- [National Academy of Sciences: Review of the Adaptive Management Program 1999](http://www.livingrivers2.org/pdfs/Downstream_NAS_GCDAMP.pdf)
http://www.livingrivers2.org/pdfs/Downstream_NAS_GCDAMP.pdf
- [National Academy of Sciences: Review of the 1993 Draft Long-Term Monitoring Plan](http://www.livingrivers2.org/pdfs/GCDLong-TermPlanReview.pdf)
<http://www.livingrivers2.org/pdfs/GCDLong-TermPlanReview.pdf>
- [National Academy of Sciences: Colorado River Ecology and Dam Management \(1990\)](http://www.livingrivers2.org/pdfs/ColoradoRiverEcology1990NAS.pdf)
<http://www.livingrivers2.org/pdfs/ColoradoRiverEcology1990NAS.pdf>

GRAND CANYON MONITORING AND RESEARCH CENTER

- [USGS SCORE Report, released on October 25, 2005](http://www.gcmrc.gov/products/score/2005/score.htm)
The State of Natural and Cultural Resources in the Colorado River Ecosystem
<http://www.gcmrc.gov/products/score/2005/score.htm>
- [Guidelines of Grand Canyon Monitoring and Research Center](http://www.livingrivers2.org/pdfs/GCMRCguidelines.pdf)
<http://www.livingrivers2.org/pdfs/GCMRCguidelines.pdf>

US FISH AND WILDLIFE SERVICE

- [Biological Opinion: Glen Canyon Dam](http://www.livingrivers2.org/pdfs/BOgcd.pdf)
<http://www.livingrivers2.org/pdfs/BOgcd.pdf>
- ["Sufficient Progress Reports" from USFWS to Reclamation](http://www.livingrivers2.org/pdfs/LRlibrary/sufprogfwstobor.pdf)
<http://www.livingrivers2.org/pdfs/LRlibrary/sufprogfwstobor.pdf>
- ["Sufficient Progress Reports" to the US Fish and Wildlife Service](http://www.livingrivers2.org/pdfs/LRlibrary/sufprogbortofws.pdf)
<http://www.livingrivers2.org/pdfs/LRlibrary/sufprogbortofws.pdf>

GOVERNMENT ACCOUNTABILITY OFFICE

- [Review of Glen Canyon Dam EIS by Government Accountability Office](http://www.gao.gov/archive/1997/rc97012.pdf)
<http://www.gao.gov/archive/1997/rc97012.pdf>

Take Action 01/19/07

Save Grand Canyon from Glen Canyon Dam

New Environmental Impact Study Underway on Glen Canyon Dam Operations

Comments needed to demand that Bureau of Reclamation focus on actions for endangered species recovery in Grand Canyon National Park, not more experimentation for the



preservation of Glen Canyon Dam.

Submit by: Tuesday, February 28, 2007

In an attempt to comply with a settlement agreement reached last September between environmental groups and the Department of Interior, the Bureau of Reclamation has begun the scoping process for an Environmental Impact Statement on the operations of Glen Canyon Dam called the Long-Term Experimental Plan.

As presently conceived, this EIS will deliver nothing more than a continuation of studying Grand Canyon to death.

Your voice is needed to expose this fallacy and redirect the EIS away from experimentation aimed at preserving the operations of Glen Canyon Dam, and toward the principle objective of restoring and preserving Grand Canyon's unique river ecosystem.

[VIEW SAMPLE LETTER](#)

Submit comments to:

Mr. Rick Gold
Regional Director, Bureau of Reclamation
Upper Colorado Region
Attn: UC-402
125 South State Street
Salt Lake City, Utah 84138-1147

Fax: (801) 524-3858

[Click To Send E-mail](#)

E-mail: GCDExpPlan@uc.usbr.gov



[AUTOMATICALLY SUBMIT E-mail comments now!](#)

Background

For more than four decades the world-renowned Colorado River ecosystem in Grand Canyon National Park has been [deteriorating due to the upstream operations of the 700-foot-high Glen Canyon Dam](#). Beaches, endangered native fish and archeological sites have all disappeared as cold, nutrient-depleted water is released at the whims of dam operators on a daily basis, replacing the gradual seasonal fluctuations consistent with the Colorado River's natural hydrology.

Within ten years of the dam's completion, strong public outcry forced the Bureau of Reclamation (BoR) to begin exploring mechanisms to alter Glen Canyon Dam's operations to reverse its detrimental effects on Grand Canyon National Park. Despite hundreds of millions of dollars invested, major studies completed, and new laws enacted by Congress, BoR has continued to drag its feet citing an ongoing need for more studies. As a result, the damage persists.

One more endangered fish has become extinct in Grand Canyon, another has seen its population decline to just a few thousand, while non-native fish now flourish in the artificial environment created by the dam. In total, four of eight native fish species have gone extinct, otters and muskrats have disappeared, and the riparian ecology has been dramatically altered--from the river's native food web to the proliferation of non-native plants throughout the canyon.

Only through the public intervention yet again, has BoR been forced to re-examine the operations of Glen Canyon Dam due to its lack of compliance with federal environmental laws. But this exercise is already shaping-up to be nothing more than a continuation of the stall and divert tactics in BoR's ongoing effort to study the dam's impacts until there's nothing left of Grand Canyon's native riverine environment to protect.

There already exists an abundance of scientific understanding regarding how dam operations must change if Grand Canyon's river ecosystem is to be protected, much of it stemming from the first Glen Canyon Dam Environmental Impact Statement completed in 1995. The problem is that these recommendations are not being followed by the stakeholder group put in charge of implementing these regulations, The Glen Canyon Dam Adaptive Management Program.

Dominated by water and power interests, this group of advisors to the Secretary of the Interior has continuously sidestepped its directives as outlined in the 1995 EIS. They have failed to develop a recovery plan for the endangered razorback sucker or a second population of the endangered humpback chub. They have failed to augment the water temperature or to restore sediment. And despite ongoing declines in native fish, they have failed to implement river flows consistent with the river's natural hydrograph as also called for.

Additionally, this long-term experimental operating plan, which is to be the subject of this EIS represents the pieces of another failed effort by the AMP that was supposed to be completed two years ago.

The problem is not knowing what to do-the problem is actually doing it. The lack of commitment to the scientific mandate has lead many quality researchers to abandon the program. Others who have endeavored to remain, but challenged the AMP's lack of commitment to its mandate have seen their recommendations suppressed, and their contracts cancelled.

This direction of this EIS initiative itself is further evidence of these misplaced priorities. The ingredients for the restoration of the Colorado River through Grand Canyon must be evaluated independently of interests in Glen Canyon Dam operations, not the other way around. Furthermore, as has already been illustrated by Living Rivers and others, there are numerous arguments for evaluating the decommissioning the dam entirely, beyond those benefits which would accrue to Grand Canyon's river ecosystem.

It is therefore mandatory that independent scientific and economic guidance be employed to advise policy makers on the recovery and preservation strategy for the Colorado River corridor in Grand Canyon National Park, and no longer the AMP.

There are many alternatives to meeting the theoretical water storage and energy benefits provided by Glen Canyon Dam, there are however no substitute for the recovery and protection of Grand Canyon's unique riverine ecosystem.

[Additional information about Glen Canyon Dam and the Adaptive Management Program](http://www.livingrivers2.org/archives/article.cfm?NewsID=753)
<http://www.livingrivers2.org/archives/article.cfm?NewsID=753>

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Sample scoping comments' letter to Bureau of Reclamation for its EIS on the Long Term Experimental Plan for the Future Operations of Glen Canyon Dam

Submit on or before Tuesday, February 28, 2007

To send via email: GCDExpPlan@uc.usbr.gov To send via fax: (801) 524-3858

Mr. Rick Gold
Regional Director, Bureau of Reclamation
Upper Colorado Region
Attn: UC-402
125 South State Street
Salt Lake City, Utah 84138-1147



Dear Mr. Gold,

Thank you for the opportunity to submit the following scoping comments for the Environmental Impact Statement on the Long-term Operations for the Future Operation's of Glen Canyon Dam. The river ecosystem in Grand Canyon National Park has suffered immensely over the past forty years due to the operations of Glen Canyon Dam, and it's vital that a fresh look at the problem be undertaken. I have concerns, however, that the EIS as envisioned is destined to fail in this regard unless a number of critical issues are addressed.

First, I would like to express my tremendous dismay with the Department of Interior's mishandling of the recovery efforts in Grand Canyon National Park over the past 40 years, and that the information presented so far by the Bureau of Reclamation indicates that this EIS promises more of the same.

While new plans for ongoing investigation and experimentation can be beneficial, they are useless amidst a backdrop where the commitment to implement those plans is virtually non-existent. We've already experienced this with the completion of the first EIS twelve years ago, and there's nothing outlined in the purpose and need for this EIS process to indicate things will be any different once this process concludes. For this

exercise to yield any meaningful outcome, the EIS process must be reconceived incorporating the following:

1. Restructuring the focus of the EIS on the recovery.

The principal objective should not be the long-term operation of Glen Canyon Dam, but the ingredients necessary to bring about the recovery and preservation of endangered species within the Colorado River corridor of Grand Canyon National Park. While such objectives may not be mutually exclusive, this has yet to be proven, and as such, one should precede the other. The focus must first address the ingredients necessary to restore the natural process to Grand Canyon's river ecosystem, and secondly how, and at what costs, can the Glen Canyon Dam/Lake Powell reservoir system be operated in order to achieve this. The restoration ingredients must include:

- The return of river flows consistent with the Colorado River's natural discharge into Grand Canyon.
- The re-establishment of a water temperature regime consistent with seasonal temperature variations of the Colorado River in Grand Canyon.
- The re-establishment of sediment inputs into Grand Canyon consistent with the amount that would be received in a dam-free environment.
- The elimination of non-native species, which have taken hold in the artificial riverine environment created by Glen Canyon Dam operations.

2. Evaluate the Decommissioning of Glen Canyon Dam.

The no-dam alternative must be evaluated as one means of achieving the restoration of the natural process necessary for the recovery and preservation of endangered species in Grand Canyon's river corridor. The no-dam alternative provides a valuable base line from which to evaluate other operational alternatives. Additionally, in light of the climate and human induced changes affecting flows into Lake Powell, and thus the viability of the dam to meet perceived water supply and hydroelectric benefits, BoR has additional incentive to examine a decommissioning or no-dam alternative consistent with the Council on Environmental Quality guidelines.

3. Replace the Working Groups of the Adaptive Management Program.

Despite being given specific instructions twelve years ago as outlined in the 1995 EIS on Glen Canyon Dam operations, the Glen Canyon Dam Adaptive Management Program (AMP) has failed to deliver in almost every aspect, causing Grand Canyon's river ecosystem to endure further damage. Many of AMP's failings were spelled out in the United State's Geological Survey's SCORE Report of October 2005. It was precisely these failings that have compelled BoR to undertake this new EIS process as part of its settlement agreement with environmental groups last year. Absent any structural changes to the AMP, any recommendations coming out of this EIS process will be of little value, as there are no mechanisms to ensure they won't be ignored as were those from the EIS twelve years ago.

Dominated by water supply and hydroelectric power interests, it's not surprising that the AMP has been intransigent toward addressing the true needs for endangered species recovery in Grand Canyon. Scientific, not political and commercial interests, should be the sole advisors to the Secretary of Interior on how Grand Canyon's river ecosystem should be studied, monitored and managed consistent with the recovery objectives.

Therefore, the AMP should be replaced by an open source and independent body of research and advisory scientists, where the monitoring and research data are consistently and thoroughly peer-reviewed prior to formulating any recommendations to the Secretary of Interior.

We're closing in on 50 years of ecological destruction in Grand Canyon National Park due to the operations of Glen Canyon Dam. For much of this time the public has been asking that this be remedied. We continue to lose valuable time and species as the BoR procrastinates and resists the public's mandate to put the resource first. While there are plenty of substitutes to achieve the benefits Glen Canyon Dam may provide, there will never be another Grand Canyon. It's time for the BoR to stop thwarting the public's interest to protect it.

Sincerely,

Regional News 02/16/07

Dams could contribute to climate change

Photo caption: A "mud volcano" emitting methane and hydrogen sulfide gases through the exposed reservoir sediment of Lake Powell in Cataract Canyon and Narrow Canyon above Hite Marina.



LOS ANGELES, Feb. 16 (UPI) -- Dams may contribute to global warming instead of being the clean energy source many have long thought, the Los Angeles Times reported Friday.

Greenhouse gases are emitted during construction and when the land behind a dam is flooded and vegetation rots, causing carbon dioxide and methane gas to be released, the report said. Additional emissions result as the dams operate, including when water is released and a pressure drop frees gases locked within it.

"If these are going to be built as a response to climate change, you at least need to convene some people to study the effect it will have," Danny Cullenward, a research associate at the Program on Energy and Sustainable Development at Stanford University, told the Times. "The facts are in that it's not a zero-impact source from an emissions standpoint."

Cullenward said methane from reservoirs alone could boost global inventories 20 percent.

"When you look at this on a global level, this actually is a really, really massive impact," he told the newspaper. "I would say, right now, this is totally under the radar."

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Regional News 02/21/07

Colorado River Basin Water Management: Evaluating and Adjusting to Hydroclimatic Variability

From the National Academy of Sciences

Contacts: Bill Kearney, Director of Media Relations Michelle Strikowsky, Media Relations Assistant Office of News and Public Information

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FOR IMMEDIATE RELEASE

Tree-Ring Data Reveal Greater Variations in Colorado River Flows Than Previously Assumed

Extended Droughts Are Recurrent, May Become More Severe Because of Higher Temps

[Download Report](#)

LAS VEGAS -- Tree-ring based reconstructions of the Colorado River's flow over hundreds of years show that average annual flows vary more than previously assumed and that extended droughts are not uncommon, says a new report from the National Research Council. Future droughts may be longer and more severe because of a regional warming trend that shows no signs of dissipating, the report adds. It also states that a preponderance of evidence suggests that rising temperatures will reduce the river's flow and water supplies. Coping with water shortages is becoming more difficult because of rapid population growth, and technology and conservation will not provide a panacea for dealing with limited water supplies in the long run, the report warns.

The Colorado River basin covers 240,000 square miles and extends over seven states and a portion of northwestern Mexico. The river's annual average flow of roughly 15 million acre-feet of water is used by tens of millions of Americans for drinking and other



household uses, agriculture, landscape irrigation, hydroelectric power, and rafting and other recreational activities. The river also is home to diverse ecological habitats and is central to hundreds of miles of beautiful vistas that it carved out over millions of years, including the Grand Canyon.

Exceptionally dry conditions in much of the Colorado River basin in recent years, along with new streamflow reconstructions based on tree-ring data, prompted the Research Council to convene a committee to examine how hydroclimatic trends might affect the river's future flows.

For many years, understanding of the river's flow was based primarily on records from stream gages. But the tree-ring data is transforming that understanding by demonstrating that the river occasionally shifts into decades-long periods in which average flows are lower, or higher, than the 15 million acre-feet average of the gaged record. In particular, the tree-ring reconstructions show that the years 1905-1920 were exceptionally wet, which is significant because the Colorado River Compact that governs the allocation of water between upper and lower basin states was signed in 1922, when it was assumed that annual average river flow was closer to 16.4 million acre-feet. Tree-ring data also indicate that extended droughts are a recurrent feature of the basin's climate.

The tree-ring reconstructions, coupled with temperature trends and projections, suggest that extended droughts will recur and may be more severe than recent droughts, the report says. Many different climate models point to a warmer future for the Colorado River region, the committee noted, although projections of future precipitation are more uncertain. Significant warming in the region over the past few decades is shifting the peak spring snowmelt to earlier in the year and contributing to increases in water demands, especially during the summer, the committee found. Warmer temperatures also result in more water being lost to evaporation.

The committee also looked at how a steadily rising population and related increases in water demand will affect Colorado River water management. The population across the western United States has grown rapidly in recent decades. Arizona saw a roughly 40 percent rise in population since 1990, for instance, while Colorado's population grew by 30 percent in the same period. Despite some successful water conservation efforts, urban water use in the region has increased significantly along with the expanding population. For example, water consumption in Clark County, Nevada, which includes Las Vegas, doubled between 1985 and 2000.

Increasing urban demands for water are often met through sales, leases, or transfers of water rights from agricultural users. Although 80 percent of available water in the West is devoted to agriculture, this allocation is finite, the committee warned, and water transfer agreements will be limited in their ability to satisfy growing, long-term demand. In addition, such agreements may be inhibited by their potential effects on third parties, such as downstream farmers or ecosystems. Technology and conservation measures are useful and necessary for stretching existing water supplies, the committee

acknowledged, but any gains in water supply will be eventually absorbed by the growing population.

The combination of limited water supplies, rapidly increasing populations, warmer regional temperatures, and the specter of recurrent drought point to a future in which the potential for conflict among existing and prospective new water users will prove endemic, the report concludes. This will inevitably lead to increasingly costly, controversial, and unavoidable trade-offs among water managers, policymakers, and their constituents.

It was therefore a welcome development when the seven Colorado River basin states presented preliminary proposals for managing water shortages in a letter last February to the U.S. secretary of the interior, the committee said. Such interstate cooperation will prove increasingly valuable, and likely essential, in coping with future droughts and water demands. Likewise, a commitment to two-way communication between scientists and water managers will be critical. In addition, the federal government should ensure that the U.S. Geological Survey has the resources to maintain and expand the Colorado River gaging system, which collects streamflow measurements essential for sound water-management decisions.

Many water managers in western states and cities have developed innovative programs and policies for extending limited urban water supplies, but there have been few attempts to synthesize the results from these efforts across the region, the committee noted. And despite advances in understanding of the basin's hydrology and climate, knowledge is lacking on other important topics, such as the environmental effects of water transfers and how best to forecast water demand. The committee noted that urban water demands are far more prominent today than in earlier eras when the compact and other agreements, treaties, and laws governing the river were forged.

The committee called for a collaborative, comprehensive basinwide study of urban water practices and pressing issues in water supply and demand, which should be used as a basis for action-oriented water planning. The collaboration involved in preparing such a report could also promote better communication among federal agencies, states, and municipalities. The proposed study could be conducted by the Colorado basin states, federal agencies, universities in the region, or some combination thereof. The basin states should work with Congress on a strategy to commission and fund the study.

The Research Council study was sponsored by the National Academies, U.S. Bureau of Reclamation, California Department of Water Resources, Metropolitan Water District of Southern California, and the Southern Nevada Water Authority. The National Academies is made up of the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council. They are private, nonprofit institutions that provide science, technology, and health policy advice under a congressional charter. The National Research Council is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering. A

committee roster follows.

Copies of Colorado River Basin Water Management: Evaluating and Adjusting to Hydroclimatic Variability will be available from the National Academies Press; tel. 202-334-3313 or 1-800-624-6242 or on the Internet at <http://www.nap.edu>. Reporters may obtain a pre-publication copy from the Office of News and Public Information (contacts listed above).

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This news release and report are available at <http://national-academies.org>

NATIONAL RESEARCH COUNCIL
Division on Earth and Life Studies
Water Science and Technology Board

Committee on Scientific Bases of Colorado River Basin Water Management

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Regional News 02/22/07

Necessity of new reservoirs debated

Some say climate trends argue against building more dams

News source: NOAA

By Deborah Frazier, Rocky Mountain News

February 22, 2007

Climate change may mean less water in Colorado rivers and streams, but experts can't agree on whether building more reservoirs is a wise investment or a waste of billions.

A series of recently released studies on climate change in the West predict more drought, warmer weather and greater water loss because of evaporation.

"The future doesn't portend a new abundance of nature's water. Rather, nature will be taking more water than it's now delivering," said Martin Hoerling, of the National Center for Atmospheric Research in Boulder.

Hoerling's research focused on the Southwest and the Colorado River, which originates in the Rocky Mountain snowfields.

Denver, Aurora, Colorado Springs, Fort Collins and other cities tap the Colorado River in western Colorado and move about 500,000 acre-feet to reservoirs that serve the Front Range.

An acre-foot, 325,800 gallons, supplies one to four families for a year depending on lawn size and landscaping.

Hoerling and other weather researchers said that climate trends argue against building more reservoirs that rely on the Colorado River. "If you add reservoirs, you are not going to fill them," he said.

The Colorado River serves seven states - Colorado, Wyoming, New Mexico and Utah in the upper basin and Arizona, California and Nevada in the lower basin.

When the 1922 Colorado River Compact divided the water among the states, the annual flow was estimated at 15 million acre-feet.

Hoerling said that the recent annual flows are about 13 million acre-feet, but by 2050, climate change may drop that to about 10 million acre-feet - less than what is currently used by all of the states. That could mean there would be no extra water to store in Colorado, which hasn't claimed it's full share of the river, he said.

"You can build all the reservoirs you want, but there are no existing surplus flows to fill them," he said.

That's not the conclusion that Chips Barry, manager of Denver Water, draws from the studies. Denver Water supplies 1.2 million homes in Denver and the suburbs. "It's a powerful argument for building more storage," Barry said. "More storage is one of the ways to adapt to climate change."

Barry said the climate studies also found a trend toward episodic periods of heavy precipitation with earlier and heavier runoff seasons.

"When you have a highly variable precipitation pattern, you store as much water as possible in times of plenty," he said. "That's the lesson of the West. You need more storage for the swings."

That doesn't mean a revival of the big dam building era that started in the 1960s after the devastating droughts of the 1950s.

Barry said that the best dam sites - mountain canyons - already have reservoirs. Environmental issues, political conflicts and costs make new reservoir construction difficult, he said.

That includes a reservoir that Denver Water wants to build near Wolcott in Eagle County. Denver Water owns enough water rights to fill a new reservoir, but a federal mediator is trying to resolve conflicts with western Colorado interests who want to keep the water there.

Despite the opposition, Barry said that Denver Water will pursue the project. The reservoir's size hasn't been determined, he said. "I can't afford to wait to fix global warming," Barry said. "And, you can't conserve your way out of global warming."

Neil Grigg, a civil engineering professor at Colorado State University and a water resources consultant, said that smaller projects may be the future.

Blue Mesa Reservoir near Gunnison is the state's largest storage project, at 940,000 acre-feet. Denver's Dillon Reservoir holds 252,000 acre-feet.

"If you built a large project and climate change diminished the water supply, it would never fill," Grigg said. "You'd have a failure."

Smaller reservoirs store up to 200,000 acre-feet, he said.

Large reservoirs at lower and warmer elevations also lose more water to evaporation - up to 30 percent of the stored supply in the southwest, officials said.

Grigg and others said that projects with smaller reservoirs that capture water from several river systems will be the most effective.

The Northern Colorado Water Conservancy District, which serves Fort Collins, Greeley and other towns in Larimer, Weld and Boulder counties, is studying several new storage projects.

"As we look at the forecasts for less runoff and most of it coming down all at once, we think we need to grab it as fast as we can," said Brian Werner, the district's spokesman.

The district is studying a 500,000 acre-feet reservoir near Maybell in northwestern Colorado to capture the Yampa River flows, he said. The Yampa River flows into the Colorado River, so the project would claim part of the state's share of the river.

The project could bring water to the South Platte, where farmers have had irrigation wells shut off, and to the south metro suburbs, Werner said.

The climate change projections make the project, estimated at up to \$4 billion, more attractive, Werner said. "While the drier years will get drier, those few wet years will be wetter. In those high years, you need the largest vessel possible," he said.

Chuck Howe, an economics professor at the University of Colorado who specializes in water supply, agreed. "The runoff will come earlier and faster and you'll want to catch it," he said.

But Howe added a warning. "There are places where additional storage ought to be considered, but one has to consider whether they will fill."

Nolan Doesken, the state's climatologist, said that the recent studies have shifted the discussion from whether there was climate change to "what do we do about climate change?"

"We know we are grateful for the water-storage projects we have now, but will new ones be cost effective? I have no idea," he said.

"That decision is the greatest challenge for the combination of science and policy that our part of the country has seen in a long time."

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Regional News 02/26/07

Scientists fear shortages could hit Colorado River earlier

Associated Press

Feb. 26, 2007 07:59 AM

TUCSON - Scientists and public officials fear water from the Colorado River will run short more quickly than previously predicted because of booming population growth and drought.

There's a 10 percent chance of shortages in four to five years, and a 25 percent chance the river will run short between 2020 and 2025, according to two prominent water officials in Arizona.

"I have no doubt that within the next five to 10 years, we will be in a shortage," said David Modeer, Tucson Water's director and a member of the three-county board that manages the Central Arizona Project, which diverts water from the Colorado River to Arizona.

"It does not look good," Modeer said.

Larry Dozier, general manager of the Central Arizona Project, said when the shortages happen, they would not reduce water deliveries to cities.

Rather, he said it would primarily affect non-American Indian farms that are lower on the pecking order for getting water from the Central Arizona Project.

But Dozier said the pain from shortages should be eased, if not eliminated, because the state has been buying excess Central Arizona Project water and storing it in the ground for the past decade.

Originally, scientists who conducted a 1995 federal study predicted states would lose no more than 3 percent of their river supplies even in the worst drought year.

Instead, in the time since the study, Lake Powell and Lake Mead carried less water than had been predicted for the worst possible drought, users took more water than expected, and the river's flow was weaker than expected.

Ben Harding, an engineer and one of the authors of the 1995 study, said the Colorado River's woes are a "system drought," caused by the huge scale of the Colorado's reservoir system that 25 million people rely on for water, and by population growth that has come to rely on it.

"The bigger the reservoirs that you build, the bigger the system you build, the more sensitive it becomes to droughts (and) the longer it takes to recover," Harding said. "You have a bigger hole to fill."

Harding said the study's authors assumed the worst-case drought would be a very rare event and probably many years off and that the high cost of pumping water 300 miles uphill to Tucson from the Colorado would reduce the demand for the project's water.

"The current drought, however, has caught water managers unprepared," Harding wrote.

LR Letter 02/28/07

LR Letter to Secretary Kempthorne: LTEP EIS

[Living Rivers Press Release on LTEP EIS](#)
[Download letter](#) [350k PDF File]

February 28, 2007

Honorable Dirk Kempthorne
Department of the Interior
1849 C Street, N.W.
Washington DC 20240

Sent Via Fax: 202-208-6950

Re: Environmental Impact Statement for the Long-Term Experiment Plan for the future operations of Glen Canyon Dam

Dear Secretary Kempthorne,

Living Rivers & Colorado Riverkeeper, and the Center for Biological Diversity request your immediate intervention into the Bureau of Reclamation's (Reclamation) Environmental Impact Statement for the Long-Term Experiment Plan for the future operations of Glen Canyon Dam (LTEP EIS).

While this National Environmental Policy Act (NEPA) process on Glen Canyon Dam's operations is long overdue, we fear that absent some significant retooling, Interior's approach to this EIS will only bring further damage to critical habitat and archeological sites within the Colorado River corridor of Grand Canyon National Park and Glen Canyon National Recreation Area.

As presently conceived this EIS does not sufficiently focus on the fundamental objective of recovering downstream resources. Nor does it appear this EIS will address the longstanding stumbling blocks to the successful implementation of any preferred recovery alternative, which to this day continue to thwart valuable recommendations made in the past.

For more than three decades the public has been demanding that Reclamation aggressively respond to the devastating impacts Glen Canyon Dam's operations have brought to Glen, Marble and Grand canyons. This EIS itself is the result of the continuation of these efforts: part of the settlement agreement between the Center for Biological Diversity, et al., and yourself, is to address Reclamation's demonstrated lack of progress in achieving compliance with numerous federal environmental and resource management laws and statutes associated with Glen Canyon Dam's operations.

Our organizations had hoped that this agreement would have compelled Reclamation to finally address these matters through a comprehensive EIS process committed to recovery. However, it is clear from the scoping process underway to date, that Reclamation's interests lie more with going through the motions of compliance with the settlement agreement, and not resolving the issues underlying it.

With the exception of accumulating additional evidence to substantiate further litigation, as it now stands, this EIS will be yet another waste of the public's resources in support of Reclamation's ongoing failure to implement an actual recovery plan for this critical piece of the world's natural heritage being destroyed by the operations of Glen Canyon Dam.

We therefore request that you instruct Reclamation to restructure this EIS process in accordance with the recommendations below. This EIS process should then be re-launched to allow the public to be properly informed of the issues being addressed, and inviting them to contribute to something truly meaningful.

1. Accurately Represent the Baseline Issues

Reclamation must accurately articulate the severity of the issues at stake with this EIS to enable the public to adequately respond. This must include describing the nearly complete loss of the natural and cultural resources in Grand Canyon's Colorado River corridor as a result of the operations of Glen Canyon Dam, and Reclamation's failed efforts to comply with federal mandates to rectify them. This is the background and baseline situation that forced the initiation of a new EIS process, thus must be presented to the public for the NEPA process to be credible. Reclamation's omissions not only mislead the public about the issues in which they are being asked to comment, but help to reinforce a proposed action which only appears rational when viewed through such tainted lenses.

Although the impacts on Grand Canyon National Park are the sole impetus, and thus intent for this EIS, one is hard pressed to develop any grasp of these issues through Reclamation's materials. Reclamation also appears to actively avoid mentioning Grand Canyon whenever possible, preferring instead the term—"downstream resources."

This is far from a trivial matter. At best, it illustrates an ongoing pattern by Reclamation to shield the public from knowing the true impacts of Glen Canyon Dam, and at worst, reveals a fundamental disconnect within Reclamation and Interior as a whole—as to what the real issues are, and how they should be addressed.

The superlatives associated with Grand Canyon are extensive. As such, Grand Canyon is one of Interior's most featured national parks. The ecology of its river corridor, too, was once unparalleled, as was acknowledged by your predecessor, Secretary Norton:

"The native fish community in the Colorado River in Grand Canyon was once one of the most unique in the world, supporting eight species that occurred nowhere else. Of the eight native fish species, three (Colorado pikeminnow, roundtail chub, and bonytail chub) have been extirpated from Glen and Grand Canyons; one – listed as endangered (razorback sucker) – has not been observed in the system since 1991; one (humpback chub) is listed as endangered; one (flannelmouth sucker) is a candidate for listing; and the remaining two (bluehead sucker and speckled dace) appear to be doing reasonably well in the Grand Canyon although much remains to be learned about their ecology and population dynamics." (2002 Report to Congress, page 23.)

Glen Canyon Dam's role in this demise of the Canyon's native fish is unquestioned. Be it the release of water of unnatural temperature, quantity, quality, and frequency; depriving Grand Canyon of sediment and nutrients needed for natural beaches and wildlife habitat; or so severely altering the aquatic ecology of the Colorado River allowing nonnative species to displace native species. Glen Canyon Dam has become a death sentence for the main artery that nourishes Grand Canyon National Park.

Such impacts clearly run contrary to the National Park Service Organic Act which compels Interior “to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same by such means as will leave them unimpaired for the enjoyment of future generations.” The dam’s operations also run afoul of the Endangered Species Act of 1973. This is precisely why, in 1992, Congress passed the Grand Canyon Protection Act (GCPA) and forced Reclamation to complete its first EIS on Glen Canyon Dam’s operations (1995), and established a monitoring and research program with a specific mandate that Reclamation alter dam operations to reverse this decline and work to recover all native fish species in Grand Canyon National Park.

But ten years after the GCPA was passed, Secretary Norton reported to Congress that Reclamation’s efforts have failed to stem the population decline of the principle species it was mandated to protect:

“The first population estimate of humpback chub in the Grand Canyon suggests that in 1982 there were 7,000 to 8,000 humpback chub larger than 200 millimeters. Approximately ten years later, in 1992, it was estimated that there were approximately 4,000 to 5,000 humpback chub larger than 150 millimeters. In 2001, there were approximately 2,000 to 3,000 humpback chub larger than 150 millimeters. While there is some question over the accuracy of the absolute numbers, there is little question that the population of humpback chub in the Grand Canyon has declined over time. The decline in the abundance of fish larger than 150 millimeters appears to be the result of a sustained decline in recruitment beginning in 1992.” (2002 Report to Congress, page 25.)

The failure of Reclamation’s recovery efforts were further documented three years later by the United States Geological Survey’s “State of the Colorado River Ecosystem in Grand Canyon” (SCORE Report) of October 2005.

“Overall, about 15%–20% of the adult humpback chub are dying each year. If this mortality rate and the dramatically reduced recruitment rate of young chub experienced since the early 1990s remain unchanged, there will be a decline in the adult population of humpback chub from the present 3,000–5,000 fish to a level of 1,500–2,000 adult fish over the next 10–15 years.” (Page 45.)

“[D]am operations during the last 10 years under the preferred alternative of the MLFF have not restored fine-sediment resources or native fish populations in Grand Canyon, both of which are resources of significant importance to the program.” (Page 208.)

“At the same time, nonnative fish have increased in both diversity and abundance. The reasons for the decline of native fish are commonly cited to include dramatic changes in the thermal, sediment, and hydrologic regimes of the river because of the construction and operation of numerous dams in the basin, the introduction of nonnative predatory and competitive fishes, and the introduction of diseases and parasites.” (Page 208.)

“[I]t is clear that the restrictions on dam operations since 1991 have not produced the hoped-for restoration and maintenance of this endangered species. During the MLFF,

basin hydrology has varied from drought to wet conditions and then back to drought conditions. Through these conditions, the decline of the humpback chub has continued. This trend leads to questions about whether daily, monthly, or even annual patterns of dam operation alone are relevant to native fish recruitment or whether changes in the sediment and thermal regimes of the river imposed by regulation have had the greatest influence on native fishes. Further, the issue of nonnative fishes and their potential to limit recruitment of native fish through predation and competition (although highly suspected by scientists as a significant factor) remains unresolved in Grand Canyon." (P. 208.)

"[T]he relatively stable habitat conditions created under the MLFF during protracted drought conditions, coupled with a coarsening of substrate in the river channel, appear to have greatly favored rainbow trout (*Oncorhynchus mykiss*), particularly in the Lee's Ferry reach, as reflected in their increasing numbers during the last decade." (Page 214.)

"Research and monitoring have conclusively demonstrated a net loss of fine sediment from the Colorado River ecosystem under the MLFF. Closure of Glen Canyon Dam eliminated about 84% of the sand that historically entered Grand Canyon." (Page 214.)

It's now been 15 years since the GCPA was passed, and Reclamation's dam operations have made no gains in recovering a single fish species in Grand Canyon. They have only reinforced what federal scientists already had told them: that without efforts to restore natural flows, water temperature gradients and sediment transport through Grand Canyon, there is no reason to believe that recovery can occur.

Despite the compelling evidence of poor performance, you yourself stated in December 2006, that the Glen Canyon Dam Adaptive Management Program (AMP) "is a cutting edge solution that provides an effective framework and process for integrating dam operations, downstream resource protection and management, and monitoring and research. We also are able to better safeguard natural resources and improve recreational opportunities at Glen Canyon National Recreation Area and Grand Canyon National Park."

The outreach materials also use the phrase "significant progress" when describing the AMP. However, when it comes to actually achieving what the principle objective of recovering endangered species, none of this is true. The public needs to know what the true state of play is in Grand Canyon, what cultural and ecological resources that have been lost due to the operations of Glen Canyon Dam and asked if they want to see it completely destroyed through continued implementation of activities such as those contemplated by the Long-Term Experimental Plan. If the public feels such losses are acceptable then end this fabled recovery exercise altogether. If not, then Interior must become serious about implementing an EIS that will achieve that result.

2. Accurately Assess the Failed History

A. Faulty Flows

Your positive spin on the AMP notwithstanding, the fact that this EIS process is underway at all is indicative that there must be problems with the program. As such, the EIS process must first conduct an independent audit to analyze how the performance of the AMP measures with the expectations of the GCPA and the AMP's charter and strategic plan.

One of the most critical aspects of the Grand Canyon Protection Act was to modify flows from Glen Canyon Dam to improve habitat conditions for native fish. Since the Act was passed, however, both Reclamation and the AMP have demonstrated resistance to implementing the flows and other recommendations from the US Fish and Wildlife Service (FWS) to achieve this objective. Even with a demonstrated reduction in native fish populations, Reclamation and AMP have been unwilling to implement a flow regime reflecting the river's natural hydrology, known as Seasonally Adjusted Steady Flows (SASF).

"It is my biological opinion that the proposed operation of Glen Canyon Dam according to operating and other criteria of the MLFF, as described in the Draft EIS and further modified by Reclamation's June 17, 1994, memorandum, is likely to jeopardize the continued existence of the humpback chub and razorback sucker and is likely to destroy or adversely modify designated critical habitat." (Biological Opinion, page 3.)

"Operate Glen Canyon Dam according to operating and other criteria of the SASF alternative. Draft EIS Elements common to all alternatives, habitat and maintenance flows, and elements two through seven of the Reasonable and Prudent Alternative would be part of this recommendation. The SASF has been analyzed as completely as any other alternative in the Draft EIS and would not require any additional analysis." (Biological Opinion, page 42.)

Reclamation defended its position to ignore this recommendation in its 1996 Record of Decision on the Final Glen Canyon Dam EIS stating:

"...the benefits from the Seasonally Adjusted Steady Flow Alternative were uncertain given the improvement in habitat conditions for nonnative fish this alternative would provide. Seasonally adjusted steady flows also would create conditions significantly different from those under which the current aquatic ecosystem has developed in the last 30 years and would adversely affect hydropower to a greater extent than the other two alternatives. The Modified Low Fluctuating Flow (MLFF) could substantially improve the aquatic food base and benefit native and nonnative fish. The potential exists for a minor increase in the native fish population." (1996 Record of Decision, Appendix G-12.)

The principle objective of most recovery strategies is to attempt to restore native habitat conditions, in this case stream flow, for the affected species. It was precisely the conditions of the previous three decades that had brought about this decline, yet Reclamation felt compelled to preserve as many of the unnatural conditions it created during this blip in history, as opposed to initiate flows more consistent with those of the previous three million years during which these species evolved.

While Reclamation argued that it wished to be cautious and not aggressively stress the system, they had already taken a significant step in altering Glen Canyon Dam's operating regime with the MLFF preferred alternative. The modifications to the hourly up and down ramping of river flows into Grand Canyon to meet the demands of the Western Area Power Administration (WAPA) had already somewhat altered the unnatural conditions of the past 30 years. What Reclamation and WAPA were not willing to do was support further flow restriction that would compromise hydroelectric revenue streams by an estimated 25 percent should the SASF be implemented as the preferred alternative.

While the Biological Opinion noted that during periods of high water, elements of MLFF may be appropriate to the extent they were consistent with the natural hydrograph, it was unambiguous regarding what to do during low water years, as has been experienced in the Colorado River for the past seven years.

"A program of experimental flows will be carried out to include high steady flows in the spring and low steady flows in summer and fall during low water years (releases of approximately 8.23 maf) to verify an effective flow regime and to quantify, to the extent possible, effects on endangered and native fish. Studies of high steady flows in the spring may include studies of habitat building and habitat maintenance flows. Research design and hypotheses to be tested will be based on a flow pattern that resembles the natural hydrograph, as described for those seasons in the SASF." (Biological Opinion, page 35.)

"If sufficient progress and good faith effort is occurring towards initiating experimental flows, implementation of experimental flows may occur later in 1997. If the Service believes there is not sufficient progress, Glen Canyon Dam would be operated as SASF flows during spring through fall (April to October) beginning in 1998." (Biological Opinion, page 32.)

In the last two FWS responses to Reclamation regarding sufficient progress on achieving this specific element of the Reasonable and Prudent Alternative (RPA) contained within the Biological Opinion, FWS clearly stated that progress was not being achieved.

"This element has not seen sufficient progress. Other than the controlled BHBF in 1996, there have been minimum efforts to develop experimental flows for native fishes. (Review of Sufficient Progress, May 27, 1999, page 3.)

"This element has not seen sufficient progress. We agree with your assessment that the delay in developing this element is largely attributable to the to the program being part of the adaptive management process, where multiple objectives, research and work assignments compete for time and attention of AMWG members. However, given the documented decline of humpback chub in Grand Canyon, additional delays in developing a program of experimental flows for native fish should not occur. (Review of Sufficient Progress, June 13, 2002, page 3.)

In light of this lack of sufficient progress, and the fact that flows have not exceeded 8.23 MAF since 2000, the RPA further states that "...Glen Canyon Dam would be operated as SASF flows during spring through fall (April to October) beginning in 1998." (Biological Opinion, page 35.)

Further support for the urgency to embark on steady flows came in 2002 from Grand Canyon Monitoring and Research Center's (GCMRC) principle aquatic ecology partners:

"Descending hydrographs of spring and fall are the best periods for the growth of the aquatic food base. We recommend a decade of the SASF alternative, with spring beach building flows as the climate permits and unlimited hydropower ramping within 10% of the predicted seasonal mean. We feel these flows in combination with alien fish suppression and thermal modification of GCD could make Grand Canyon a sanctuary for native fishes of the Colorado River basin." (Benenati, et al., 2002, page 10.)

The frustration of FWS and others is far from surprising since there has been only one low and steady flow test carried out, that in the summer of 2000. Worse still, now seven years later, the analysis of this test has yet to be completed. This is very discouraging, as it has been 11 years since the first experimental test flow took place, and it was the 2000 experiment that demonstrated that humpback chub populations "may have benefited from substantial in-stream warming." (USGS Press Release, August 3, 2006.)

The 1996 test of a Beach/Habitat Building Flow (BHBF) at 45,000 cubic feet per second (cfs) was conducted with much fanfare, and is still highly promoted by Reclamation as a major accomplishment. However, as was reported five years ago by the American Geophysical Union concerning the experimental releases from Glen Canyon Dam to conserve sediment, "Work conducted since the 1996 controlled flood has shown that the multi-year accumulation hypothesis on which the EIS was based is false..." (Eos, American Geophysical Union, v. 83, no. 25, page 237.)

The winter fluctuating trout suppression flows of 2004 and 2005 were a hastily conceived action in response to new information about declining humpback chub estimates. As pointed out by Korman et al., June 2005, these experimental flows were proven to be ineffective and have been discontinued. Surprisingly, these flows have now been included as one of the four alternatives for the LTEP EIS submitted by AMP in December 2006. Constrained releases in the fall of 2004 and 2005 were used to test the conservation of sediment (6,500 to 9,000 cfs). This has proved useful to understand that sediment can be retained during low flows, but the experiment has not provided any direct evidence of habitat benefits to endangered fish.

In November 2004 a BHBF similar to what was undertaken in 1996 was carried out at 42,000 cfs to coincide with sediment inputs from the Paria River. This experiment was considered more successful than the 1996 BHBF experiment in distributing marginal amounts of sand, but still in insufficient quantities to have any lasting effect on critical habitat conditions. Moreover, the subsequent trout suppression flows removed any sediment gains that may have occurred.

Overall, AMP's flow experimentations have been ineffective and imbalanced, with most of the focus on failed efforts to conserve sediment. With the exception of a few months in the summer of 2000, Reclamation and AMP have ignored the principle directive by FWS to carry out steady flow experiments at various times throughout the year

To this day, when it is clear that some significant alteration of this failed flow regime must be implemented, there remains virtually no support from Reclamation or AMP to embrace establishing a flow regime consistent with the river's natural hydrology as was called for by the FWS 12 years ago.

In the AMP's "Assessment of the Estimated Effects of Four Experimental Options on Resources Below Glen Canyon Dam" (the alternatives submitted as scoping comments for this EIS on the Long-Term Experimental Plan), two of the four options would allow even less restrictions on dam operations than the current MLFF baseline. The other two would make only modest changes to the current practice, with just Option B mentioning the SASF alternative, and to be implemented for just one two-year period, and not beginning until August 2011.

B. Failure to Implement Selective Withdrawal

The 1994 Biological Opinion and the 1996 Record of Decision both stressed the need to implement a mechanism to warm the water released from Glen Canyon Dam (selective withdrawal or temperature control device). The water's constant 46 degrees (F) temperature is too cold for native fish, which evolved with an annual temperature gradient from near freezing in winter months to up to 80 degrees (F) in the summer.

In 1998 the AMP initiated environmental review for proposed modifications to Glen Canyon Dam's intake towers that would allow for selective withdrawal, but this was suspended without sufficient explanation. Parties concerned with the impacts warmer water may have on the nonnative trout fishery, as well as the project's overall costs, were seen as impeding the process. Public pressure and the continued decline of humpback chub numbers forced the NEPA process to be started anew in 2003. But here, too, the process became bogged down as cost concerns were again raised.

The situation which compelled selective withdrawal to be a core component of the AMP's strategic plan is only more serious now, but Reclamation and AMP have refused to complete the evaluation, much less get a temperature control device installed. The likelihood that such a capital investment would be required, and that warmer water may impact the trout population was known to both Reclamation and FWS when they included this common element in the ROD and RPA respectively, thus such concerns should not have impeded the implementation.

"Temperature modification has been identified as central issue to be resolved in order to develop a mainstem spawning population of HBC. ... Reclamation has been working diligently to accelerate the technical and administrative process necessary for construction of the selective withdrawal structure. ... Funding will be requested as a separate appropriation through the Federal budget process under Section 8 of the

Colorado River Storage Project Act.” (Reclamation Response to FWS Biological Opinion, April, 6, 1995, page 4.)

Only as a result of the recent settlement agreement is the temperature control device now slated to have its environmental review completed as part of the LTEP EIS.

C. Failure to Establish a Second Population of Humpback Chub

The RPA instructs Reclamation to establish a second population of humpback chub in the main stem Colorado River below Glen Canyon Dam, or in one of Grand Canyon’s tributaries. Obviously the habitat of the main stem provides the most diversity and is the logical choice. This habitat is wide and abundant throughout Marble and Grand Canyon, and much preferable to a small and isolated tributary stream.

No protocols have been fully developed for locating an appropriate site on the tributary streams for a second population. For example, the habitat conditions required, water quality, consultation with the Havasupai Nation (Havasupai Creek), and/or how modifications to the habitat will be implemented to achieve suitable habitat conditions. Nor have any studies been fully completed, or are past due, on the genetic differences between those near the Little Colorado River and other aggregations, as specifically requested by FWS.

D. Lack of Little Colorado River Management Plan

As the AMP has yet to recover habitat conditions in the main stem Colorado to allow for humpback chub to spawn, the Little Colorado River (LCR) remains their sole spawning habitat. As such, the RPA instructed Reclamation to develop a management plan for the Little Colorado River. While Reclamation claims the LCR lies outside its jurisdiction, this does not mean, as FWS has explained, that Reclamation could not have been instrumental within a 12-year period to ensure a plan is put in place.

E. Lack of Progress on a Management Plan for the Razorback Sucker

The Grand Canyon reach of the Colorado River was designated as critical habitat for the razorback sucker before 1995. FWS instructed Reclamation in the RPA to assist in developing a management plan to re-establish habitat to support viable populations in Grand Canyon National Park. While a workshop has been conducted, it did not, as FWS stated, provide sufficient information to aid in the development of a plan and Reclamation has not been responsive to helping to identify recovery sites that provide spawning, nursery areas, floodplain, temperature and other aspects for restoration potential.

The directives set forth by the Grand Canyon Protection Act, the ROD and the RPA were clear, as were those set out in the AMP’s charter and strategic plan, but Reclamation and the AMP refuses to work to meet even these basic benchmarks, much less exhibit the forward thinking and pro-active leadership to bring about resource recovery in Grand Canyon. How can the public expect that such resistance will be any less apparent in future management plans for operations at Glen Canyon Dam?

3. Failure of the AMP Administration and Science

A. Address the Lack of Appropriate Leadership

The ROD called for the establishment of the AMP as a stakeholder group to advise the Secretary of the Interior on implementation of Grand Canyon programs. Known as the Adaptive Management Working Group (AMWG), this group is dominated by representatives of the seven basin states, hydropower marketers and consumers, along with environmental and recreation interests. These representatives have no legal responsibility, but have been given de-facto decision-making authority for determining the fate of Grand Canyon's River ecosystem. While promoted as an all-inclusive mechanism to ensure everyone interested in Grand Canyon's recovery have their say, this big tent strategy has proven to be nothing more than a convenient buffer to defend Interior against critics who challenge the lack of progress on mitigating the impacts of Glen Canyon Dam.

As exemplified by AMWG's unwillingness to comply with RPA programs, the decline in humpback chub, the extirpation of the razorback sucker, continued loss of essential sediment, and accelerated degradation of archeological sites, the AMWG has clearly failed. After 12 years of squandering public funds at the expense of Grand Canyon's river ecosystem, AMWG's proposed action for the LTEP only further illustrates that the group is more focused on self-preservation than in the resource it is supposed to protect.

This EIS is the result of interventions by parties outside AMP, due to the AMP's lack of commitment to undertake their responsibilities as defined by their strategic plan, charter or the Grand Canyon Protection Act. There is no need for most of these "stakeholders" to have a seat at the decision-making table. The management process for the river corridor in Grand Canyon is guided by federal laws that are not in need of a stakeholder group's interpretation or obfuscation.

The primary interest in the preservation of cultural and natural resources downstream of Glen Canyon Dam resides with the National Park Service, the Fish and Wildlife Service, and the Tribes. Reclamation should have no role in the decision-making as it relates to GCPA compliance. This should have been quite evident as early as 1995 when Reclamation clearly stated it was not interested in recovery of endangered species, only removal from jeopardy.

"By definition, the elements of an RPA describe an alternative action, which will avoid the likelihood of jeopardy, as opposed to actions to achieve recovery. The elements of the RPA seem to be focused on recovery. ... Recovery actions should be included in the Opinion only as a conservation recommendation." (Reclamation Response to FWS Biological Opinion, April, 6, 1995, pages 2-3.)

"We fully recognize our responsibility under Section 7 of the ESA to not only avoid action which will result in jeopardy to listed species, but a Federal agency we are also directed to utilize resources in furtherance of the ESA through carrying out programs for

conservation of endangered species.” (Reclamation Response to FWS Biological Opinion, April, 6, 1995, page 3.)

This statement is farcical. Were it true:

- The Biological Opinion it refers to would have been completed several years earlier, as Reclamation would not have dragged its feet on completing the original EIS, which commenced in 1989. No, only as a result to an act of Congress, the GCPA itself mandating completion of the EIS, did Reclamation finally, “recognize its responsibility under Section 7 of the ESA.”
- Reclamation would not have been quibbling with FWS over if and where such recovery objectives should be contained in an FWS Biological Opinion, or later arguing about subsequent recommendations in FWS’s response to Reclamation’s insufficient progress to the RPA. No, Reclamation would be embracing FWS advice on how recovery can best be achieved.
- No settlement agreement mandating yet another EIS would have been required to resolve Reclamation’s continued failure to comply with Section 7 of the ESA, and no letter such as this would have had to be written outlining the obvious deficiencies with Reclamation’s recognition of its responsibilities under the ESA and GCPA.

It is long past due for Interior to remove Reclamation of any role relating to how Glen Canyon Dam will be operated to ensure compliance with the GCPA. You must immediately direct NPS and FWS to be Interior’s primary voices cooperating with scientists in advising you as to how Reclamation must operate Glen Canyon Dam, as the GCPA states, “[T]o protect, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established, including, but not limited to natural and cultural resources and visitor use.”

Reclamation and all as other parties are free to intervene as allowable by law, but they should no longer be utilized to create an unnecessary ad hoc group that has a proven track record of ineffectiveness and obstructionism.

B. Cease to Support the Competing Objectives

Since the time of drafting the first EIS for Glen Canyon Dam, completed in 1996, there have been two distinct forces working against recovery of native fish in Grand Canyon: hydropower generation and nonnative fish protection. Nowhere in the Grand Canyon Protection Act is there any direct or indirect reference to these interests, yet they have become a major force nonetheless. Both have representatives in the AMWG, and of the 12 goals in the AMP Strategic Plan, two accommodate these interests directly:

- Maintain power production capacity and energy generation, and increase where feasible and advisable, within the framework of the Adaptive Management ecosystem goals.

- Maintain a naturally reproducing population of rainbow trout above the Paria River, to the extent practicable and consistent with the maintenance of viable populations of native fish.

As noted above, one of Reclamation's primary rationales for adopting the MLFF was to preserve hydropower benefits that would have been lost had Reclamation followed the SASF recommendations of FWS. Nearly every issue affecting dam operations within the AMP program is heavily debated and influenced by hydropower interests. Whether it be a Beach/Habitat Building Flow (BHBF), that causes more water to pass through the dam in excess of what the generators can accommodate, or running low flows in the summer months far below what hydropower interests would prefer, hydropower interest represent a major stumbling block to independent scientific experimentation necessary to allow for species recovery in Grand Canyon National Park.

Efforts to find balanced flow regimes that benefits both endangered fish species and hydropower are irrational as the science shows clearly that steady-state water flows are more beneficial to native fish, whereas they compromise hydropower revenues. Additionally, as the primary source for AMP funding is to come from hydropower revenues, having these interests in the decision-making process regarding recovery management choices, adds further to this conflict of interest.

The Grand Canyon Protection Act clearly recognized that to achieve its objective of mitigating Glen Canyon Dam's impacts to achieve habitat restoration for endangered species, hydropower production and revenue losses would likely be incurred. Section 1809 of the Act, "Replacement Power," deals solely with this issue.

"...shall identify economically and technically feasible methods of replacing any power generation that is lost through adoption of long-term operational criteria for Glen Canyon Dam as required by Section 1804 of this title. The Secretary shall present a report of the findings, and implementing draft legislation, if necessary, not later than two years after adoption of long-term operating criteria. The Secretary shall include an investigation of the feasibility of adjusting operations at Hoover Dam to replace all or part of such lost generation. The Secretary shall include an investigation of the modifications or additions to the transmission system that may be required to acquire and deliver replacement power." (Grand Canyon Protection Act, page 5.)

Furthermore, while the GCPA makes specific references to preserving flows to meet water delivery allocations, it makes no such reference as regards to power generation. Therefore, the only responsibility power interests should have is to undertake their own necessary planning for power sales and distribution, based on mitigation strategies necessary to achieve compliance with the Act. They should have no role in determining how, when or if any such strategies are implemented.

The same holds true for the protection of nonnative fish. The AMP wants to protect rainbow trout populations in one section of the river, while it has spent upwards of \$800,000 annually to remove them downstream.

It is known that cold-water and warm-water nonnative fish, such as rainbow trout and catfish, predate on juvenile humpback chub. (Marsh and Douglas, 1997; Gorman, et al. 2005.) Other studies have documented trout predation on threatened native fish, such as speckled dace and bluehead sucker. In January 2003, GCMRC's mechanical trout removal crew caught a rainbow trout with a flannelmouth sucker in its mouth (USGS press release of 3/4/2003).

While some assert that the real problem is brown trout predation on humpback chub, since an individual brown trout is more likely to include fish in its diet than an individual rainbow trout, the higher concentration of rainbows over brown trout causes rainbow trout to exert a higher overall impact on humpback chub. Estimates suggest that prior to recent trout removal near the Little Colorado River confluence, there were about 39 times more rainbow trout than brown trout. (SCORE Report, page 48.)

The National Park Service, which itself once stocked trout in Grand Canyon tributary streams, has abandon this practice altogether, and has even erected weirs in an attempt to impede trout populations from spawning in these tributary streams.

As has been demonstrated during the recent drought, the warmer water, combined with low levels of dissolved oxygen, from Glen Canyon Dam releases have contributed significantly to reducing rainbow trout populations above the Paria River, so much so that Arizona Game and Fish had contemplated a restocking program prior to threatened litigation. Putting in more fish when there's no food will merely force them to migrate downstream to survive, potentially exacerbating the problems for the humpback chub.

Attempting to preserve this nonnative trout fishery stands in direct conflict with a principle requirement of the AMP: to implement the selective withdrawal program to increase the water temperature being discharged from the dam. Nonnatives have thrived in the cooler waters, while the natives continue to decline.

Such counterproductive objectives and stakeholders must be removed from the AMP process.

C. Address the Lack of Scientific Rigor A central component of the original AMP design was the development and administration of an independent, peer-reviewed science program. This program would carry out unbiased scientifically credible studies to inform the AMP's decision-making process. A small science staff (less than 12) was to administer the program through the competitive bidding process and to award research contracts to the most competent bidder. Both the bidding process and final reports were to be peer-reviewed to assure quality and non-biased reporting.

The GCMRC, the science management component of the AMP, is now operating much differently than established in the original guidelines set for this administrative component of the USGS. The science staff is very large and most programs are being done in-house with no independent peer-review.

Prior to the EIS the Glen Canyon Dam Environmental Studies program was seriously criticized by the National Research Council (NRC) for this same failure to meet

accepted methods to assure scientific credibility. An independent review of the current AMP science program would reveal a loss of integrity and standing when the original model was abandoned in favor of what currently exists today in the GCMRC.

At a time when the Grand Canyon is about to lose another native fish species, the AMP has cut back on scientific work, seemingly at the request of the Western Area Power Administration, whose hydropower revenues are used to fund the science. The research for the 2000 Low, Summer Steady Flow (LSSF) represents one of the most blatant examples of how the AMP science program has been affected. First, the experiment was fast tracked, with limited opportunity for outside input or competitive bidding for the monitoring. Pre-experiment flow data was not compiled and therefore the design of the experiment may not have been properly formulated. Scientists did not start collecting data on the river until after the first spike flow occurred. Although the design of the experiment was released for the competition, the one proposed by the contractor was not accepted. Also, this experimental flow was originally proposed to benefit native fish with relatively low, steady flows in accordance with the Biological Opinion, but the final experiment allowed for less than the recommended time.

The 1995 EIS assumed that experimentation and recovery efforts would be achieved with firm attention paid to proper scientific protocol and management of public funds toward endangered species recovery in Grand Canyon National Park. This is not occurring. In fact the opposite is true. The AMP has enacted budget reductions and caps without supplemental funds to adequately maintain and preferably improve monitoring and research in Grand Canyon National Park. Finally, AMP is not providing adequate management leadership while the USGS/GCMRC is not contributing credible independent data required by the mandates prescribed by the ROD, RPA and subsequent charters and guidelines.

It's unfortunate that the same weakness observed by the National Research Council in 1999, are still as relevant today: "The adaptive management chapters of the strategic plans suffer from the following weaknesses: (1) lack of clarity of the Center's roles within the Adaptive Management Program; (2) inadequate discussion of competing goals and "visions;" (3) lack of clearly-defined linkages between adaptive management, ecosystem management, and social learning; (4) disparate management objectives and information needs; (5) inadequate definition of the core adaptive management experiment; (6) insufficient contingency planning; (7) insufficient decision analysis; and (8) uneven progress toward independent program review." (Downstream: Adaptive Management of Glen Canyon Dam and the Colorado River Ecosystem, National Science Council, page 59.)

The AMP has run amuck with no clear leadership or direction. It's not that its mission has been unclear, but its structure is functionally incapable of achieving it.

Unless these shortcomings are addressed, revising its work plan through a new EIS will only exacerbate, not resolve, these problems. To that end, the AMP must discard AMWG and put in place an advice and decision-making apparatus based primarily on scientific principles. A wholly independent scientific body should be commissioned, that

works with the Park Service, FWS and Tribes to achieve the goals of the Grand Canyon Protection Act. Reclamation must no longer play any leadership or advisory role, in the AMP process, merely furnish any necessary information, and follow through on implementing operational changes at Glen Canyon Dam.

4. Must Revise the Proposed Action

Reclamation states that the, "Adoption of a Long-Term Experimental Plan is needed to ensure a continued, structured application of adaptive management in such a manner as to protect, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation were established." (Federal Register Notice of 12/12/2006.)

Given that no significant progress has been made, and neither Reclamation nor the AMP has demonstrated the willingness to carry out the structured application of adaptive management that has already been put before them, along with known contradictions and decision-making impediments, why would such a process be continued?

It should be noted that the LTEP being conceived through this EIS process itself is the result of the failure of the AMP to complete its assigned tasks. This plan was launched in 2004, with the goal of finalizing the plan in 2005. It was not to be taken on by Reclamation as a convenient mechanism under which to attempt to comply with the conditions of the 2006 settlement agreement.

Reclamation's proposal to undertake the LTEP only further illustrates its inability to address the totality of issues that Reclamation's policies are having on Grand Canyon National Park. While some experimentation may indeed need to continue, experimentation is merely a tool, and should not be an objective in and of itself. It is precisely such reasoning that has lead to the downward spiral of resources in Grand Canyon. So long as experimentation continues, Reclamation has felt that it has been fulfilling its duty to the public, although throughout this time the natural and cultural integrity of Grand Canyon's river corridor has only worsened.

The EIS's stated objective must be to develop alternatives that will bring about the preservation and recovery of the natural and cultural resources of the Colorado River corridor through Grand Canyon National Park and Glen Canyon National Recreation Area. To what extent Glen Canyon Dam's continued operations impedes or compliments this objective can then be evaluated through the standard practice of identifying the alternatives.

Further experimentation may or may not be warranted, but if so they should represent components of alternatives to achieve specific resource recovery and preservation objectives, not the objective of the EIS itself. Moreover, how and if the current elements and structure of the AMP are to be "continued" must be subject to the same principle: they must demonstrate how their continuation will help realize the successful implementation of the alternative, when history has proven otherwise.

5. Issues to be Addressed in the EIS

A. Reformulate the AMP's decision-making structure

To avoid repeating the past failings of the AMP, the EIS must contain an independent review of the AMP's progress to date in fulfilling its charter, strategic plan, the elements of the ROD and the RPA. This should include evaluating all experimentation to determine what baseline knowledge currently exists, and gaps if any need to be filled. All current and former GCMRC employees and consultants should be surveyed to determine their views on the efficiency and rigor of the experimentation to date and the leadership and follow through by GCMRC and the AMWG with regard to scientific findings. The review must address the issue of competing objectives, such as hydropower generation and exotic trout preservation, which have influenced management actions. How well the current AMP has addressed the 1999 National Research Council findings in Downstream: Adaptive Management of Glen Canyon Dam and the Colorado River Ecosystem should also be addressed.

These findings should be used in developing the framework for a new AMP decision-making structure to replace the AMWG comprised solely on those agencies with primary jurisdiction over the management of those downstream cultural and natural resources in Glen Canyon National Recreation Area and Grand Canyon National Park. The findings should also be used to establish a wholly independent GCMRC outside of the DOI to militate against agency bias in the quest for the best science to guide resource protection.

B. Consider climate variability and change

At an increasing rate, federal scientists are warning that DOI should prepare for flow reductions on the Colorado River in upwards of 10 to 40 percent as we continue through this century. The DOI must partner with National Oceanic and Atmospheric Administration to ensure the most up-to-date climate modeling is applied in evaluating each alternative's flexibility to climate variability. Particular attention must be given to evaluating alternatives against scenarios where Lake Powell reservoir has not only reached dead pool, but remains at dead pool over multiple years.

C. Identify appropriate timeframe

Based on the findings of the independent review, the EIS team should determine over what time frame, if any, the alternatives contained within this EIS should be implemented. Some proposals offered already for a ten-year timeframe are arbitrary, and are based on no scientific rationale as to whether or not certain outcomes may or may not be determined within such a period. The development of alternatives should focus first on determining what are the inputs necessary to achieve restoration and recovery, and then determine the appropriate timeline for delivery and evaluation.

D. Focus on native fish recovery

The EIS must identify specific baseline objectives for nonnative fish suppression, sediment and nutrient concentration, temperature gradients and flow characteristics that

are believed to stimulate recovery of critical habitat for Grand Canyon native fish. It must then evaluate how each alternative will achieve these objectives for the humpback chub population in the Little Colorado River, the establishment of a second humpback chub population downstream of Glen Canyon Dam, the establishment of razorback sucker habitat, and lastly, habitat for reintroduced bonytail chub, roundtail chub and Colorado pikeminnow.

E. Provide for flows that mimic the natural hydrograph

Flow decisions should be evaluated in accordance with how well they mimic the natural hydrograph. This is the principle behind the recommendations from FWS in their 1994 Biological Opinion, but has yet to be embraced by the AMP. As a result, all of AMP's flow recommendations should be rejected as none ensure that seasonally adjusted steady flows will be initiated any time soon. Steady flows will improve the productivity of the aquatic food base at higher trophic levels, and create the greatest opportunity for establishing a second population for the humpback chub, and create habitat for the razorback sucker as called for in the RPA and the Strategic Plan.

F. Address sediment augmentation

Much of AMP's focus has been on marginal to failing efforts to push small amounts of sediment and organic debris around Grand Canyon, while providing no demonstrated benefits for the habitat conditions of endangered fish. There is an urgent need for sediment and nutrients to be introduced back into the mainstem. The prospect of mechanical sediment augmentation, which would place Lake Powell sediment, carbon and other nutrients into the Colorado River below Glen Canyon Dam, has been discussed by AMP, but not acted upon. Implementing an immediate plan for sediment augmentation must be addressed by this EIS.

G. Recommend temperature control device for selective withdrawal

The EIS must recommend the installation of temperature control devices onto Glen Canyon Dam's intake structures. This project is already eight years behind schedule, despite being a top priority in both the ROD and RPA. Recent discussions have suggested that an alternative is being evaluated to construct devices on only two of the eight intakes. This would allow for only minimal changes to the temperature of the water, and will likely prove to have little value for experimental or habitat recovery purposes. Reclamation modeling also shows that the increase of temperature from a two-unit TCD is too modest, and insufficient for sustaining warm temperatures over time. The EIS must recommend that all eight penstocks be retrofitted at one time to maximize experimental flexibility, and thus the potential for achieving a positive result for native fish recovery.

H. Remove nonnative fish

The EIS should evaluate any and all reasonable mechanisms for nonnative fish suppression as necessary to improve habitat conditions for native fish. The EIS should

recommend that all stocking of nonnative trout cease below Glen Canyon Dam and that dam operations not be modified in any way to intentionally benefit nonnative fish habitat.

I. Address potential water quality impacts

With the probability of Lake Powell's conservation pool being exhausted during the timeframe of the proposed action, the potential for significant changes in the chemistry and quality of water flowing into Grand Canyon cannot be ignored. Anaerobic bacteria, hydrogen sulfide, and supersaline and metal-rich sediments are just some of the existing substances that could find their way through the dam's bypass tubes. The EIS must evaluate what these impacts might be, and how they would be mitigated.

For example, Reclamation was compelled to deal with low dissolved oxygen levels from the turbines at Glen Canyon Dam last winter. A plume of oxygen-depleted water reached the penstocks at the dam. The oxygen was depleted by decaying organic matter, because the Colorado and San Juan rivers are eroding into the exposed sediment deposits of Lake Powell due to the drawdown of the reservoir. The US Supreme Court has decided (*S.D. Warren v Maine*) that threats to water quality are the responsibility of the dam operators to mitigate. The EIS should also address the operational and safety impacts of coarse sediments flowing through Glen Canyon dam during low reservoir levels.

J. Establish sediment distribution to protect archeological resources

Archeological resources along the river continue to be threatened by the lack of sediment. The terraces of sediment that host hundreds of the cultural sites continue to slough off and move towards the river. As a result, artifacts must be removed, as opposed to being protected in-situ as prescribed by historic preservation legislation.

The EIS should mandate that a comprehensive cultural site degradation abatement program be established throughout the entire river corridor in accordance with NPS standards. To the extent high flows are implemented, they should be in a range that greatly exceeds 45,000 cfs, in order to provide the greatest opportunity for distribution of sediment to the affected archeology sites.

Many of the sites now suffering the greatest impacts due to erosion are those above the 120,000 cfs terrace, thus flows of this magnitude must also be accommodated.

Providing infill for the arroyos in the high benches of the river would be a great asset to the preservation of cultural sites. The benefits of sediment augmentation should also be examined to improve archeological resource stabilization.

K. Consider dam decommissioning

The most effective way to protect and restore the culture resources in Glen Canyon National Recreation Area and Grand Canyon National Park is to return all the natural processes which allowed these resources to evolve. The most effective way to achieve this is to decommission Glen Canyon Dam. As such, the decommissioning alternative must be evaluated.

L. Identify program funding sources

At current reservoir levels, it is possible that power generation, and thus CRSP and AMP revenue streams could be brought to a standstill by the time this EIS is completed. Two more years of flows at 50 percent of normal would lower Lake Powell to the point where power production is no longer possible. The potential for power revenue streams for AMP activities and research could be affected during the timeframe for the proposed action, thus the EIS must address how this may affect each of the alternatives. It must also address how funding will be made available for large capital expenses, such as selective withdrawal or sediment augmentation.

M. Establish a scientific baseline and conceptual modeling

There are currently no control sites for AMP experiments. In the book, *Downstream: Adaptive Management of Glen Canyon Dam and the Colorado River Ecosystem*, the National Research Council (National Academy of Sciences) has recommended that Cataract Canyon above Lake Powell would serve this purpose, but there has been no action on the part of the AMP or GCMRC to seize this opportunity. The EIS must mandate that establishing such controls be a top priority in further experimentation.

The EIS must also mandate the completion and implement a conceptual ecosystem modeling plan.

N. Complete a management plan for the Little Colorado River

Reclamation must ensure the development of a management plan for the Little Colorado River. This plan specifically should address a hazardous material component to protect humpback chub against toxic chemical spills. With the sole remaining Grand Canyon humpback chub population concentrated at the mouth of the Little Colorado River, they are particularly vulnerable to extinction should any water contamination accident or other stochastic event occur in this tributary. A chemical spill occurred at Lake Havasu last year affected the water of the reservoir.

Increasing the range of the critical habitat designation in the Little Colorado River should also be explored to further promote translocation programs for the humpback chub up this tributary.

CONCLUSION

The importance of an Adaptive Management Program to ensuring the future health and vitality of the globally significant Grand Canyon ecosystem cannot be overstated. However, growing evidence demonstrates not only an ongoing decline in many key indicators, but an inability of Reclamation and AMP to manage the recovery tasks asked of them. Without major changes in how this program is operated, the public should prepare itself for the ongoing declines in the cultural and natural resource base of Colorado River below Glen Canyon Dam.

The launching of a new EIS process on Glen Canyon Dam operations affords an excellent opportunity to deliver to reverse this trend. Unfortunately, the Long-Term

Experimental Plan proposed action illustrates that Reclamation is not yet serious about seizing this opportunity, but merely going through the motions in an effort to comply with the settlement agreement.

Grand Canyon National Park, and all those who cherish it, deserve better. The future of Grand Canyon is at a critical decision point. We hope you, as its principle steward, will take the corrective actions outlined above so that a truly valuable EIS process can get underway, and the Colorado River ecosystem through Grand Canyon can finally get on the road to recovery.

Sincerely yours,

John Weisheit, Conservation Director
Living Rivers & Colorado Riverkeeper

Michelle Harrington, Rivers Program Director
Center for Biological Diversity

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Bibliography:

Benenati, Emma P, Joseph P. Shannon, G. Allen Haden, Kristin Straka, and Dean W. Blinn, 2002. Monitoring and Research: The Aquatic Food Base in the Colorado River, Arizona during 1991-2001.

Department of Interior, 2002. Report to Congress: Operations of Glen Canyon Pursuant to the Grand Canyon Protection Act of 1992, Water Years 1999-2001.

Department of the Interior, Bureau of Reclamation, Upper Colorado Region. Review of Sufficient Progress in Implementation of the Elements of the Reasonable and Prudent Alternative from the December 21, 1994, Biological Opinion on the Operations of Glen Canyon Dam. Mar., 1997; Dec., 1997; Feb. 1999; May 2002; May 2004; Sept., 2004.

Department of Interior, Bureau of Reclamation, 1996. Record of Decision: Operation of Glen Canyon Dam, Final Impact Statement.

Department of the Interior, U.S. Fish and Wildlife Service, Ecological Services, 1994. Final Biological Opinion: Operation of Glen Canyon Dam as the Modified Low Fluctuating Flow Alternative of the Final Environmental Impact Statement, Operations of Glen Canyon Dam.

Department of the Interior, U.S. Fish and Wildlife Service. Review of Sufficient Progress in Implementation of the Elements of the Reasonable and Prudent Alternative from the December 21, 1994, Biological Opinion on the Operations of Glen Canyon Dam. Apr., 1997; June, 1997; May, 1999; June, 2002.

Department of the Interior, U.S. Geological Survey. Press Release, 3/4/2003. "Endangered Humpback Chub Population in Grand Canyon Stabilizing." <http://www.usgs.gov/newsroom/article.asp?ID=1533>

Department of the Interior, U.S. Geological Survey. Press Release, 8/03/03. "Fishing for Success in the Grand Canyon." <http://www.usgs.gov/newsroom/article.asp?ID=200>

Gloss, Steven P., Jeffrey E. Lovich, and Theodore S. Melis, 2005. The State of the Colorado River Ecosystem in Grand Canyon: A Report of the Grand Canyon Monitoring and Research Center, 1991-2004. U.S. Geological Survey, Circular 1282.

Gorman, O. T., et al. 2005. Distribution and abundance of native and non-native fishes of the Colorado River ecosystem in Grand Canyon, Arizona. Proceedings of two symposia. Restoring native fish to the lower Colorado River: interactions of native and non-native fishes.

Marsh, P. C., and M. E. Douglas. 1997. Predation by introduced fishes on endangered humpback chub and other native species in the Little Colorado River, Arizona. Transactions of the American Fisheries Society 126:343-346.

National Academy of Sciences, Commission on Geosciences, Environment and Resources, 1999. Downstream: Adaptive Management of Glen Canyon Dam and the Colorado River Ecosystem.

Rubin D.M., D.J. Topping, J.C. Schmidt, J. Hazel, M. Kaplinski, T.S. Melis, 2002. Recent Sediment Studies Refute Glen Canyon Dam Hypothesis. EOS, American Geophysical Union, v. 83, no. 25, p. 273, 277-278.

Supreme Court of the United States, October Term, 2005. S. D. Warren Co. v. Maine Board Of Environmental Protection, et al.

U.S. Congress. Reclamation Projects Authorization And Adjustment Act of 1992. Cited As The "Grand Canyon Protection Act of 1992". Sec. 1802.

LR Press Release 02/28/07

Giving up on Grand Canyon! Groups Demand Interior Department Revamp Approach

For Immediate Release: February 28, 2007

Contact: John Weisheit, Living Rivers, (435) 259-1063, (435) 260-2590 (cell)
Michelle Harrington, Center for Biological Diversity, (602) 628-9909

MOAB, Utah— In a 21-page letter sent today to Interior Secretary Dirk Kempthorne, conservation groups Living Rivers/Colorado Riverkeeper and the Center for Biological Diversity demanded that the Secretary revise his plan to support a failing Colorado River restoration project in Grand Canyon National Park.

A 12-year-old program that was established to mitigate the impacts of Glen Canyon Dam, upstream of Grand Canyon National Park, is undergoing environmental review for a new set of experiments. The groups charge that continuing activities under the current

framework would be a death sentence for the remaining native species trying to survive the extensive ecological changes the dam's operations have brought to Grand Canyon.

"If their approach doesn't change, the end result will be more of the same," says John Weisheit, of Living Rivers. "Study after study clearly illustrates the current program is a disaster."

Citing findings from the National Research Council, U.S. Fish and Wildlife Service, U.S. Geological Survey and former Interior Secretary Gale Norton, the groups outline how the Glen Canyon Dam Adaptive Management Program has failed in its mission to reverse the decline of cultural and natural resources in Grand Canyon National Park as directed by the 1992 Grand Canyon Protection Act.

- Habitat conditions for endangered native fish like the humpback chub have not been improved, so its numbers have declined since the program began. Plans to reintroduce other endangered species lost to Glen Canyon Dam's operations have stalled.
- Requirements of the Fish and Wildlife Service to operate the dam more consistently with the river's natural water levels and rates of flow are repeatedly ignored .
- Hydroelectric-power interests override conservation objectives and hamstringing progress .
- Recommendations by scientists are ignored and critical studies, such as the 2000 low summer steady flow experiment, are left incomplete .

The main problem, the groups point out, is not how to mitigate the dam's impacts to allow Grand Canyon's recovery to begin, but the deeply flawed decision-making structure that impedes sound science from fulfilling the objectives of the Grand Canyon Protection Act.

"Glen Canyon Dam has caused the nearly complete loss of the natural and cultural resources in Grand Canyon's Colorado River corridor ," says Michelle Harrington with the Center for Biological Diversity. "The Adaptive Management Working Group has failed in its work and needs to be cut off."

Prior to Glen Canyon Dam, the Colorado River in the Grand Canyon supported one of the most unique fish communities in the world — eight species that existed together nowhere else on earth. Four are already gone, one has not been seen since 1992, and another, the humpback chub, has declined to the brink of extinction with just a few thousand fish.

This Environmental Impact Statement process was launched as part of a settlement reached in September 2006 between the Center for Biological Diversity, Living Rivers, Glen Canyon Institute, Sierra Club and Arizona Wildlife Federation, and the Department of Interior to address the worsening habitat conditions for endangered native fish in Grand Canyon.

“We chose to settle the lawsuit with the understanding that the environmental review would comprehensively address immediate recovery needs for endangered species in light of the documented failings of the Adaptive Management Program, but it appears Interior had no such intention,” adds Harrington.

The groups have asked Secretary Kempthorne to abandon the Environmental Impact Statement’s focus from a hastily conceived set of experimental options prepared by the Adaptive Management Working Group to a broad examination of the Adaptive Management Program process to date. They urge removal of the Bureau of Reclamation as an adviser on Grand Canyon issues, establishment of a truly independent scientific research and advisory mechanism to ensure ecological integrity, and a thorough examination of all options available to improve habitat conditions, including decommissioning Glen Canyon Dam.

“It’s time to stop pretending that this program can work,” concludes Weisheit. “Let’s either agree that the public does not care about Grand Canyon National Park’s unique river ecosystem, and spend these so-called conservation resources elsewhere, or get serious about reviving them as Congress mandated through the Grand Canyon Protection Act.”

[Living Rivers](#) is a nonprofit organization dedicated to the restoration of the natural hydrological and ecological processes within the Colorado watershed to protect native species and their habitats.

[The Center for Biological Diversity](#) is a nonprofit conservation organization with over 32,000 members dedicated to the protection of imperiled species and their habitats.

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Additional Information:

[Letter to Interior Secretary Kempthorne from Living Rivers and Center for Biological Diversity](#)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=759>

[Information about the Environmental Impact Statement for Long-Term Experimental Plan on the operations of Glen Canyon Dam and its impacts on Grand Canyon National Park](#)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=753>

Regional News 03/01/07

Shortage Criteria: Reclamation announces publication of DEIS and public meetings

Public Hearings Scheduled in Nevada, Arizona and Utah

The Interior Department's Bureau of Reclamation today released for public review and comment a Draft Environmental Impact Statement (EIS) on proposed interim guidelines for managing the Colorado River Storage System under drought and low reservoir conditions.

When approved the guidelines would be used for determining shortages in the Lower Colorado Basin and coordinating operations for Lake Powell and Lake Mead reservoirs.

As part of its efforts to seek public input on the draft EIS, Reclamation has scheduled three public hearings to receive written or oral comments.

Meeting dates, times and locations are:

- Tuesday, April 3, 2007 – 6 p.m. to 9 p.m.
Henderson Convention Center, Sierra Room
200 South Water Street
Henderson, Nevada
- Wednesday, April 4, 2007 – 6 p.m. to 9 p.m.
Phoenix Airport Marriott, Buckhorn Room
1101 North 44th Street
Phoenix, Arizona
- Thursday, April 5, 2007 – 6 p.m. to 9 p.m.
Hilton Salt Lake City Center, Canyon Room A & B
255 South West Temple
Salt Lake City, Utah

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Additional Information:

[The One-Dam Solution by Living Rivers](http://www.livingrivers2.org/pdfs/TheOne-DamSolution.pdf)

<http://www.livingrivers2.org/pdfs/TheOne-DamSolution.pdf>

[Link to Draft Environmental Impact Statement](http://www.usbr.gov/lc/region/programs/strategies/draftEIS/index.html)

<http://www.usbr.gov/lc/region/programs/strategies/draftEIS/index.html>

[Link to Executive Summary](http://www.usbr.gov/lc/region/programs/strategies/draftEIS/ExecSumm.pdf)

<http://www.usbr.gov/lc/region/programs/strategies/draftEIS/ExecSumm.pdf>

[Reclamation's web page on Shortage Criteria](http://www.usbr.gov/lc/region/programs/strategies.html)

<http://www.usbr.gov/lc/region/programs/strategies.html>

LR in the News 03/08/07

New experimental plan for Glen Canyon Dam operations likely to fall short, critics say

April Reese, Land Letter Western reporter

The Bureau of Reclamation is putting together a long-awaited, revised plan to experiment with various flow regimes and other efforts to restore the Grand Canyon ecosystem downstream from Glen Canyon Dam. However, environmental groups that previously filed suit to force the agency to craft the new plan say preliminary environmental impact statement documents indicate that the agency is not committed to fully recovering the canyon's resources.

The groups, Living Rivers and the Center for Biological Diversity, say that there is really nothing new in the bureau's latest proposal, and that it fails to acknowledge the shortcomings of the current flow management program. In a 21-page letter sent to Interior Secretary Dirk Kempthorne last week, the groups urged Interior to reassess its approach.

"As presently conceived, this EIS does not sufficiently focus on the fundamental objective of recovering downstream resources," the groups wrote.

The groups cited drafts of an environmental scoping report that is expected to be released later this month.

According to the Bureau of Reclamation's scoping announcement for the EIS, issued last November, the proposed plan would lay out a "structured, long-term program of experimentation" that could include altering dam operations, modifying intake structures in the dam, and removing non-native fish species below the dam.

For the past 11 years, Reclamation has been working under a dam operations plan from 1996 but is required under the Grand Canyon Protection Act to make sure operations are adequately protecting Grand Canyon resources. Under the 1996 plan, Reclamation has been operating the dam to create "modified low fluctuating flows," an approach that environmentalists and some scientists have criticized as insufficient to protect endangered fish and other downstream resources.

The agency, under the guidance of the Glen Canyon Adaptive Management Program, which involves various agencies and stakeholders and aims to assess the effects of dam operations and propose any necessary adjustments, have conducted several experiments over the past 10 years, including a "low steady flow" in the summer of 2000, a "beach habitat building flow" in 2004, the translocation of humpback chub and the removal of non-native fish.

In a recent lawsuit, CBD, Living Rivers, the Glen Canyon Institute and the Sierra Club argued that the program's efforts were not recovering endangered humpback chub and that the program was in violation of the Endangered Species Act.

The new EIS is the result of a settlement between the groups and the Department of Interior.

Reclamation plans to heavily weigh recommendations from the Adaptive Management Program, which includes an inter-agency team of scientists and managers.

The program has proposed four experimental options to include in the document, including one that calls for "seasonally adjusted steady flows" for increasingly longer periods over several years, two others that would allow for wider fluctuating annual flows, which would benefit hydropower, and another calls for a combination of steady flows in late summer and early fall and wider fluctuating flows during the rest of the year.

Bad habits repeated?

Michelle Harrington of the CBD's Phoenix office said that the groups settled the lawsuit with the understanding that the new environmental review would address the immediate recovery needs of the humpback chub and other endangered species and would result in some changes to the adaptive management program. "It appears that Interior had no such intention," she said.

"There's a habit that's being repeated here, which is 10 years of not complying with the Grand Canyon Protection Act," added John Weisheit, conservation director for Living Rivers.

The groups want to see Interior undertake a broad analysis of the effectiveness of the program's efforts to date and make any changes necessary.

"It's time to stop pretending that this program can work," said Weisheit, who has advocated decommissioning or breaching Glen Canyon Dam.

While the dam, built in the 1960s, allows for water storage in Lake Powell and for power generation, it has also altered the river ecosystem downstream, regulating flows that once raged and wimpered, cooling water temperatures and removing sediment that endangered fish once depended on to hide from predators.

A report issued in 2005 by the Grand Canyon Research and Monitoring Center, overseen by the U.S. Geological Survey, concluded that the canyon's resources had not made progress toward recovery under the modified low fluctuating flow regime (MLFF).

"MLFF is what we've been running since 1996 and the 2005 report basically says every resource has declined," said Nikolai Ramsey of Grand Canyon Trust, who serves on the Adaptive Management Work Group and helped craft the steady flow option in the group's recommendations. "It doesn't work."

While Reclamation has been experimenting with varied water release levels to try to help restore downstream resources, the agency has only once undertaken the kind of nature-mimicking experimental flow recommended by the U.S. Fish and Wildlife Service, in the summer of 2000, the groups say. And the results of that experiment still have not been adequately studied, they contend.

Fish population improvement seen According to data released by the U.S. Geological Survey in August, the canyon's adult humpback chub population increased to 5,000 fish between 2001 and 2005, up from about 3,500 in 2002. Scientists also found more juvenile and newly hatched fish in 2005, suggesting that the fish are successfully reproducing, according to the report. But Ramsey said as many as 10,000 fish are needed to reach recovery (Land Letter, Aug. 10, 2006).

Sam Spiller, a FWS biologist who represents the agency on the Glen Canyon Dam Adaptive Management Work Group, said option C, which FWS and the National Park Service helped develop, would help recover the chub while also providing for power needs. That option calls for revisiting dam operations if humpback chub numbers fall below a certain threshold.

Efforts to maintain the endangered humpback chub include a decade of experimenting with water flows on the Colorado River. Photo courtesy of FWS. "We're in a real vulnerable mode right now with chub," Spiller said. While the population has stabilized, reservoir levels in Lake Powell are still low, and it is unclear what long-term effect that will have on the fish, he explained. A shrunken Lake Powell releases warmer water downstream, which Spiller says may be partly responsible for the recent boost in chub numbers, but warmer temperatures may also benefit catfish and other predatory non-natives. "We want warm water, but we know there are questions that come with it," Spiller said.

Spiller added that the option that calls for seasonally adjusted flows, which was proposed by the Grand Canyon Trust, would "definitely" help the fish, but may not meet hydropower needs.

Just how much consideration Reclamation needs to give to hydropower interests remains a major point of contention among stakeholders in the basin. The Grand Canyon Protection Act directs water managers to protect the resources downstream from the dam, but in a way that complies with the Colorado River Compact and other laws governing the "allocation, appropriation, development, and exportation of the waters of the Colorado River Basin."

Environmental groups say Reclamation gives too much weight to hydropower in managing the dam, while the agency contends it is one of several interests it must consider.

"[The agency] says nothing in the act says it should disturb water allocation, but it doesn't say anything about hydropower," Ramsey said.

But Randy Peterson, manager of Reclamation's environmental resources division, said the agency has to consider all of the uses on the river, including hydropower.

"Hydropower is one of the resources that we would evaluate the impacts on from any of the alternatives," he said. "The list is long."

Peterson added that while Reclamation plans to evaluate the work group's four options, it has not yet completed its analysis of all of the scoping comments it has received, and the actual alternatives proposed in the forthcoming draft EIS could be very different.

Peterson emphasized that the purpose of the new plan is not to completely overhaul dam operations. "It is an experiment," he said. "It's not a wholesale revision of previous decisions. It's trying to find answers to important scientific questions." The agency hopes to have the answers to those questions by the end of the experiment, which will likely span seven to 10 years, Peterson said.

Reclamation's scoping report, which will include an analysis of public comments, is due this month, with the draft EIS expected in April 2008. A final document is scheduled for release in October 2008, and Reclamation hopes to begin the experimental flows in 2009, Peterson said.

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[Living Rivers Press Release](http://www.livingrivers2.org/archives/article.cfm?NewsID=760)

<http://www.livingrivers2.org/archives/article.cfm?NewsID=760>

LR Testimony 04/04/07

Public Meeting on Reclamation Shortage Criteria DEIS, Phoenix, Arizona

Models are only as valuable as the inputs they receive. While the sophistication and effort put into these projections are unprecedented and well appreciated, the model's inputs, however, fail to provide the public with the results necessary from which to make an informed decision as to merits of any of the proposed alternatives.

Garbage in garbage out as they say, but this garbage is so well masked that people of the Colorado River Basin are being asked to put the rubber stamp on a Katrina in the making. Those levees did not hold, and neither will the assumptions painted on what otherwise is probably a valuable model.

Scientists have been in agreement for decades that Colorado River flows of the past century were among the wettest in 1,200 years. Scientists are also in agreement that the Colorado River Basin has warmed upwards of two degrees during this period and the trend is expected to continue, compromising streamflows to upwards of 20 percent in the next 50 years.

We're now in the longest drought in recorded history. Things are changing all over the basin, but not at the Bureau of Reclamation. The results produced by their inflated inputs are based recorded historical streamflow, that while useful, in and of themselves must not alone be used to gauge future runoff.

Failing to account for a more long-term historical view of streamflows coupled with the climate change we are already experiencing is tremendously misleading to the public when developing shortage strategies.

But most importantly, we must begin to accept the reality of climate change. A ten percent reduction on long-term flow estimates show an annual deficit right now of 1.1 maf rising to 2.8 maf by 2060. Anyone will notice how the reservoirs are dropping. Adjust this to 20 percent, as an increasing number of scientists are recommending, and we're looking at a 2.6 maf deficit now and nearly 4 maf in 50 years.

We're at ground zero tonight: Phoenix, Chandler, Tucson, are not going to be protected by token changes in reservoir operations or even its ground water banking. Arizona is first in line for cuts, and there is no plan for how the state will survive if the rosy inputs put into this model evaporate away as Lake's Powell and Mead drop lower and lower.

The public is quite fortunate the National Research Council has completed its recent Colorado River report at this time. It reiterates the warnings that have yet found their way into the assumptions used by this model. We certainly hope this changes and the Final EIS will present a more realistic view of what the future may hold.

And the public would also benefit from a more comprehensive presentation of what the real benefits are to these minimal dam operational changes it is being asked to support. Chart 4.3-26 and 27 illustrate that a significant amount of water savings, at least in terms of increased levels for Lake Mead, occur not because of new operating plans that are the focus of these documents, but the result of anticipated, but as yet mostly undetermined, water conservation activities.

It's already clear in looking at the plotted data presented that at the 50th percentile, the net volume of stored water in Lake's Powell and Mead is greater under the No Action alternative than what the Basin States hope to implement. Reclamation must present a comparable analysis of strictly the reservoir operation component of the Basin States Alternative, not volumes of studies and charts based on undefined activities that may be exaggerating these limited benefits.

There is no question that the objective of this DEIS is critical, or that valuable work has not gone into developing the model, but the public is anxiously awaiting some assurances that the water managers they rely on will develop a real strategy to guide us through what looks to be a very parched future ahead.

Unfortunately, Reclamation is still hoping history repeats itself, and high flows will bail us out as demand continues to grow and temperature continues to rise. But we're already at the end of what the river has historically provided. There's no water left and climate change is taking what's there back. It's time for Reclamation to admit this, and get on with the real task ahead: developing a solution for managing a system headed for failure.

Regional News 04/06/07

Permanent drought predicted for Southwest

Study says global warming threatens to create a Dust Bowl-like period. Water politics could also get heated.

By Alan Zarembo and Bettina Boxall
LA Times Staff Writers

The driest periods of the last century — the Dust Bowl of the 1930s and the droughts of the 1950s — may become the norm in the Southwest United States within decades because of global warming, according to a study released Thursday.

The research suggests that the transformation may already be underway. Much of the region has been in a severe drought since 2000, which the study's analysis of computer climate models shows as the beginning of a long dry period.

The study, published online in the journal *Science*, predicted a permanent drought by 2050 throughout the Southwest — one of the fastest-growing regions in the nation.

<http://www.riversimulator.org/Resources/ClimateDocs/2007Seager.pdf>

The data tell "a story which is pretty darn scary and very strong," said Jonathan Overpeck, a climate researcher at the University of Arizona who was not involved in the study.

Richard Seager, a research scientist at Lamont-Doherty Earth Observatory at Columbia University and the lead author of the study, said the changes would force an adjustment to the social and economic order from Colorado to California.

"There are going to be some tough decisions on how to allocate water," he said. "Is it going to be the cities, or is it going to be agriculture?"

Seager said the projections, based on 19 computer models, showed a surprising level of agreement. "There is only one model that does not have a drying trend," he said.

Philip Mote, an atmospheric scientist at the University of Washington who was not involved in the study, added, "There is a convergence of the models that is very strong and very worrisome."

The future effect of global warming is the subject of a United Nations report to be released today in Brussels, the second of four installments being unveiled this year.

The first report from the Intergovernmental Panel on Climate Change was released in February. It declared that global warming had become a "runaway train" and that human activities were "very likely" to blame.

The landmark report helped shift the long and rancorous political debate over climate change from whether man-made warming was real to what could be done about it.

The mechanics and patterns of drought in the Southwest have been the focus of increased scrutiny in recent years.

During the last period of significant, prolonged drought — the Medieval Climate Optimum from about the years 900 to 1300 — the region experienced dry periods that lasted as long as 20 years, scientists say.

Drought research has largely focused on the workings of air currents that arise from variations in sea-surface temperature in the Pacific Ocean known as El Niño and La Niña.

The most significant in terms of drought is La Niña. During La Niña years, precipitation belts shift north, parching the Southwest.

The latest study investigated the possibility of a broader, global climatic mechanism that could cause drought. Specifically, they looked at the Hadley cell, one of the planet's most powerful atmospheric circulation patterns, driving weather in the tropics and subtropics.

Within the cell, air rises at the equator, moves toward the poles and descends over the subtropics.

Increasing levels of greenhouse gases, the researchers said, warms the atmosphere, which expands the poleward reach of the Hadley cell. Dry air, which suppresses precipitation, then descends over a wider expanse of the Mediterranean region, the Middle East and North America.

All of those areas would be similarly affected, though the study examined only the effect on North America in a swath reaching from Kansas to California and south into Mexico.

The researchers tested a "middle of the road" scenario of future carbon dioxide emissions to predict rainfall and evaporation. They assumed that emissions would rise until 2050 and then decline. The carbon dioxide concentration in the atmosphere would be 720 parts per million in 2100, compared with about 380 parts per million today.

The computer models, on average, found about a 15% decline in surface moisture — which is calculated by subtracting evaporation from precipitation — from 2021 to 2040, as compared with the average from 1950 to 2000.

A 15% drop led to the conditions that caused the Dust Bowl in the Great Plains and the northern Rockies during the 1930s.

Even without the circulation changes, global warming intensifies existing patterns of vapor transport, causing dry areas to get drier and wet areas to get wetter. When it rains, it is likely to rain harder, but scientists said that was unlikely to make up for losses from a shifting climate.

Kelly Redmond, deputy director of the Western Regional Climate Center in Reno, who was not involved in the study, said he thought the region would still have periodic wet years that were part of the natural climate variation.

But, he added, "In the future we may see fewer such very wet years."

Although the computer models show the drying has already started, they are not accurate enough to know whether the drought is the result of global warming or a natural variation.

"It's really hard to tell," said Connie Woodhouse, a paleoclimatologist at the University of Arizona. "It may well be one of the first events we can attribute to global warming."

The U.S. and southern Europe will be better prepared to deal with frequent drought than most African nations.

For the U.S., the biggest problem would be water shortages. The seven Colorado River Basin states — Colorado, Wyoming, Utah, Nevada, New Mexico, Arizona and California — would battle each other for diminished river flows.

Mexico, which has a share of the Colorado River under a 1944 treaty and has complained of U.S. diversions in the past, would join the struggle.

Inevitably, water would be reallocated from agriculture, which uses most of the West's supply, to urban users, drying up farms. California would come under pressure to build desalination plants on the coast, despite environmental concerns.

"This is a situation that is going to cause water wars," said Kevin Trenberth, a scientist at the National Center for Atmospheric Research in Boulder, Colo.

"If there's not enough water to meet everybody's allocation, how do you divide it up?"

Officials from seven states recently forged an agreement on the current drought, which has left the Colorado River's big reservoirs — Lake Powell and Lake Mead — about half-empty. Without some very wet years, federal water managers say, Lake Mead may never refill.

In the next couple of years, water deliveries may have to be reduced to Arizona and Nevada, whose water rights are second to California.

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Press Release from Lamont-Doherty Earth Observatory

New Study Shows Climate Change Likely to Lead to Periods of Extreme Drought in Southwest North America

<http://www.riversimulator.org/Resources/ClimateDocs/2007Seager.pdf>

How anthropogenic climate change will impact the arid regions of Southwestern North America has implications for the allocation of water resources and the course of regional development. The findings of a new study, appearing in Science, show that

there is a broad consensus amongst climate models that this region will dry significantly in the 21st Century and that the transition to a more arid climate may already be underway. If these models are correct, the levels of aridity of the recent multiyear drought, or the Dust Bowl and 1950s droughts, will, within the coming years to decades, become the new climatology of the American Southwest.

The study's findings have implications on policies and decision making that protects the region from such extreme climate conditions. "The arid lands of southwestern North America will imminently become even more arid as a result of human-induced climate change just at the time that population growth is increasing demand for water, most of which is still used by agriculture," said Richard Seager, Senior Research Scientist at the Lamont-Doherty Earth Observatory and one of the lead authors of the study. "The West, and in particular, the United States and Mexico, need to plan for this right now, coming up with new, well-informed and fair deals for allocation of declining water resources."

Projections of anthropogenic, or man-made, climate change conducted by 19 different climate modeling groups around the world, using different climate models, show widespread agreement that Southwestern North America—and the subtropics in general—are heading toward a climate even more arid than now. The models show that human-induced aridification becomes marked early in the current century. In the Southwest the levels of aridity seen in the 1950s multiyear drought, or the 1930s Dust Bowl, become the new climatology by mid-century: a perpetual drought.

According to the study, as the planet warms, the Hadley Cell, which links together rising air near the Equator and descending air in the subtropics, expands poleward. Descending air suppresses precipitation by drying the lower atmosphere so this process expands the subtropical dry zones. At the same time, and related to this, the rain-bearing mid-latitude storm tracks also shift poleward. Both changes in atmospheric circulation, which are not fully understood, cause the poleward flanks of the subtropics to dry.

In contrast to historical droughts, future drying is not linked to any particular pattern of change in sea surface temperature but seems to be the result of an overall surface warming driven by rising greenhouse gases. Evidence for this is that subtropical drying occurs in atmosphere models alone when they are subjected to uniform increases in surface temperature. "Our study emphasizes the fact that global warming not only causes water shortage through early snow melt, which leads to significant water shortage in the summer over the Southwest, but it also aggregates the problem by reducing precipitation," said Mingfang Ting, Doherty Senior Research Scientist also at Lamont-Doherty and one of the study's co-authors.

Drying of arid lands in the southwestern United States and northern Mexico will have important consequences for water resources, regional development and cross border relations and migration. According to the models the drying should already be underway and, over the length of time it takes to plan significant changes in water resource engineering and allocation (years to a few decades), will become well established.

The study also shows that, in addition to the Southwestern North America other land regions to be hit hard by subtropical drying include southern Europe, North Africa and the Middle East as well as parts of South America.

The study was conducted in close collaboration with scientists at the NOAA Geophysical Fluid Dynamics Laboratory. This collaboration emphasizes the close ties between Columbia University and NOAA that has developed since the establishment of the NOAA Cooperative Institute for Climate Applications and Research at Lamont in 2003.

LR Testimony 04/30/07

LR comments: Shortage Criteria DEIS

Comments by Living Rivers on Draft Environmental Impact Statement for Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead

[Living Rivers Document](#)

Additional Information:

[The One-Dam Solution by Living Rivers](#)

<http://www.livingrivers2.org/pdfs/TheOne-DamSolution.pdf>

[Link to Draft Environmental Impact Statement](#)

<http://www.usbr.gov/lc/region/programs/strategies/draftEIS/index.html>

[Link to Executive Summary](#)

<http://www.usbr.gov/lc/region/programs/strategies/draftEIS/ExecSumm.pdf>

[Reclamation's web page on Shortage Criteria](#)

<http://www.usbr.gov/lc/region/programs/strategies.html>

Reference materials for LR's comment letter to the Bureau of Reclamation

[1\) Barnett2004](#)

[2\) Cayan2001](#)

[3\) Christensen2004](#)

[4\) ChristensenLettenmaier2007](#)

[5\) Dawdy1991](#)

[6\) Gray2003](#)

[7\) Herweijer2007f](#)

[8\) Hildago2000](#)

[9\) Hidalgo2004](#)

[10\) Hoerling2007](#)

[11\) McCabe2007](#)

[12\) McCabeClark2005](#)

- [13\) Miller1997](#)
 - [14\) Milly2005](#)
 - [15\) Mote2005](#)
 - [16\) National Academy of Sciences2007](#)
 - [17\) NashGleick1993](#)
 - [18\) Piechota2004](#)
 - [19\) Piechota2004Eos](#)
 - [20\) Stewart2003](#)
 - [21\) StocktonJacoby1976](#)
 - [22\) Tootle2006](#)
 - [23\) Webb2005](#)
 - [24\) Woodhouse2003](#)
 - [25\) WoodhouseGrayMeko2006](#)
 - [26\) Woodhouse2005](#)
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Regional News 05/18/07

Epic ancient drought grim news for West

Shaun McKinnon The Arizona Republic May. 18, 2007 12:00 AM

A 60-year drought struck the Colorado River during the 12th century, an epic dry period more persistent than any on record and one that suggests a similar megadrought could strike again with devastating consequences.

University of Arizona researchers found evidence of what they call the medieval drought in tree rings used to reconstruct the river's past. Reaching back to A.D. 762, the researchers drew a picture of a river with flows more vulnerable to dry periods than once thought.

What surprised the researchers most was this drought's staying power: For 25 years in the 1100s, the Colorado flowed an average of 15 percent below what is now considered normal. For 13 consecutive years in that period, the river failed to reach that normal level even once.

A recurrence of those conditions would likely drain the reservoirs that store water from the river for Arizona and six other Western states. A streak of just five consecutive below-normal years, from 2000 to 2004, emptied Lake Powell and Lake Mead of more than half of their supply.

"We didn't expect to see that severe a drought," said David Meko, an associate research professor at UA's Laboratory of Tree-Ring Research. "The individual years were not extremely dry by themselves. . . . It was year after year without having a real wet year."

The new study, which provides the longest record of the Colorado's historic flows, could also help other scientists predict the effects of climate change. A study earlier this year

predicted that warmer temperatures could reduce runoff into the Colorado and other rivers significantly.

"This shows that we can have natural events like this regardless of whether there's greenhouse warming," Meko said. "I would expect climate change, if anything, would exacerbate the type of droughts we saw in the past, putting greater and greater stress on the environment."

The UA team collected samples from living and dead trees in both the upper and lower Colorado River basin. Some of the oldest samples actually dated to about 320 B.C., Meko said, but scientists focused on the time periods with the greatest array of samples.

Using cores from living trees, researchers can examine the rings, which tell the story of the surrounding environment. A thin ring means little growth occurred, which suggests drought; a wide ring means the tree collected enough moisture to grow more.

To delve deeper into the past, scientists examined remnant wood, some of which lingered in a forest for centuries after the tree itself died. The remnants still yield a remarkable trove of data.

"This is part of ongoing work to try to understand the climate system that creates these patterns," said Christopher A. Baisan, a UA senior research specialist. "You need the basic data about what happened before you can ask questions such as 'Why were there 60 years of low flow on the Colorado?' ."

Earlier tree-ring studies found serious droughts in the 16th century, both on the Colorado and on the Salt and Verde rivers in Arizona. Other research has suggested that severe droughts swept through the West during the 1100s, forcing entire populations to flee.

This study appears to confirm that the West turned viciously dry in the 12th century and with a persistence few thought possible.

"Seeing those big droughts was a real eye-opener," said Connie Woodhouse, an associate professor at UA and co-author of the study. "Other work in the western U.S. had indicated that period was one of widespread drought. Our question was, 'How did that look in the Colorado River basin?' ."

The length of the medieval dry periods and the lack of intervening wet years would push Western states nearer to crisis than the severity of the conditions. One wet year in the midst of numerous dry years can replace some of the lost reservoir storage. A wet winter in 2005 helped the West avert possible shortages at Lake Powell.

"Having those wet years can really help with recovery," Woodhouse said.

Finding evidence of a six-decade drought in the 12th century doesn't mean a six-decade drought will occur again, Woodhouse said, but the studies help create a record that adds context to actual observations. On the Colorado, those observations, produced by

flow gauges, led state officials in the 1930s to believe the river was more robust than it turned out to be.

"The ironic thing about the gauge record is that the big droughts of the last 100 years are not much compared to the long record," Woodhouse said. "And the wet years of the early 1900s are pretty unusual."

Reach the reporter at shaun.mckinnon@arizonarepublic.com

Congressional Testimony 06/06/07

Senate hears testimony on Impacts of Climate Change

Subcommittee on Water and Power
Wednesday, June 6, 2007

The purpose of the hearing is to receive testimony on the impacts of climate change on water supply and availability in the United States, and related issues from a water use perspective.

[Link to the subcommittee web page](#)

Witnesses

[Philip W. Mote, JISAO/CSES Climate Impacts Group](#)

[Bradley H. Udall, Cooperative Institute for Research in Environmental Sciences](#)

[Christopher Milly, United States Geological Survey](#)

[Patrick O'Toole, Family Farm Alliance](#)

[Tim Brick, The Metropolitan Water District of Southern California](#)

[Jack Williams, Trout Unlimited](#)

[Tim Culbertson, Representing National Hydropower Association](#)

[Terry Fulp, United States Bureau of Reclamation](#)

Regional News 08/09/07

Vile, 'scary' mussel threatening to overrun Lake Powell

By Judy Fahys

The Salt Lake Tribune

Article Last Updated: 08/10/2007

07:39:37 AM MDT

Quagga mussels have arrived in Utah. Think invasion of the boat-



motor-snatchers; think fields gasping for irrigation; think slimy creatures choking drinking-water pipes; think hydropower sputtering to a stop; think of 'Jaws' the size of thumbnails threatening Lake Powell.

The possibilities sound creepier than an environmental horror flick, ever since wildlife officials confirmed this week they've found mussel larvae at Lake Powell.

"These things are incredibly scary," said Larry Dalton, Utah's new Aquatic Nuisance Species Coordinator.

"They may represent the single largest impact to the aquatic environment that I've seen in 36 years."

Thursday, four government agencies - the Glen Canyon National Recreation Area, the Utah Division of Wildlife Resources, the Arizona Fish and Game Department and the U.S. Fish and Wildlife Service - announced they found three microscopic larvae in water samples taken from Wahweap Marina and near the Glen Canyon Dam.

The agencies are not sure how widespread the mussels might be or if there is an established population. They don't know how the mussels might change the Lake Powell ecosystem or spread to other premiere Utah recreation spots, such as Bear Lake and the Jordanelle Reservoir.

In fact, the DNA and microscope tests that were used to identify the mussels do not tell for sure whether the Lake Powell mussels are quaggas or their close cousins, zebra mussels. The state has estimated it will cost \$17 million a year to deal with quaggas if they spread statewide, not including the impacts of fishing. The fear has prompted the creation of Dalton's month-old position, which will eventually oversee an agency with about 40 people, and an emergency expenditure by the state of about \$1 million through next spring.

"If we wait a year," he said, "it will be too late."

Once the mussels are established, they are virtually impossible to eradicate.

Utah officials have kept a wary eye on mussel developments for years, Dalton noted.

One study showed Great Lake facilities spent \$69 million over seven years to deal with mussels. A Canadian report referred to on the Web site 100thmeridian.org described a price tag of more than \$172 million because of mussel infestations at eight hydropower stations, 86 municipal plants and 67 industrial facilities.

"It's just been killing those guys back there," said Dalton, "so we have been worried."

Then, in January, quagga mussels were found downstream on the Colorado River, in Lake Mead.

"That," he said, "put us on high alert."

In late June, quagga mussels were found on a boat at Wahweap Marina that had been in infested waters. It was decontaminated before the boat was allowed to launch.

Water samples were taken from the two Lake Powell locations on July 19 and 30. Three of the five samples showed "extremely small" numbers of larval mussels. A good contrast is Lake Mead, where the infestation is believed to have started two years ago and where similar samples contain hundreds or thousands of mussels.

Baby mussels are about the size of a grain of sand and take about a year to reach full size. Adults are the size of a thumb nail.

All spring, the government agencies with roles at Lake Powell have pushed mussel prevention. Signs posted around the lake urge boaters to inspect their crafts if they have been in other waters in the past 30 days and to use 140-degree pressure washers to clean up the boats, plus a five-day period of drying, before launching into Lake Powell.

State Sen. Curt Bramble, a Provo Republican who owns a houseboat on Lake Powell, said it was "inevitable" that quagga mussels would come to Utah.

He said the findings announced Thursday "could be a serious concern," far more important than its affect on recreation.

Yet, he added: "I'm not sure the research is in and what the ramifications will be."

Kitty Roberts, superintendent of the Glen Canyon National Recreation Area, noted that that the search for better answers is already under way.

"Additional samples have been collected from Lake Powell and are being analyzed for quagga and zebra mussels," she said. "In the coming weeks, more samples will be collected from various location around the lake to determine if mussels are present in other areas."

Dalton said a biologist donning diving gear had inspected 150 boats Thursday. There are another 1,000 to go.

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Quagga quagmire

A freshwater mollusk indigenous to the Dnieper River in Ukraine has invaded waterways of the United States, altering the food chain and rapidly colonizing on hard surfaces, such as the hulls and outboards of watercraft.

* Range: Found in January in Lake Mead, downriver from Lake Powell. First U.S. sighting was in the Great Lakes in 1989.

* Treatment: Chemical controls pose environmental risks; chlorination has been applied routinely. Biological controls are being researched.

* Prevention: Recreationists are urged to clean their watercraft to curb spread of the mussel.

Regional News 08/28/07

Navajo Tribe must haul own water

Shaun McKinnon
The Arizona Republic
Aug. 26, 2007 12:00 AM

TONALEA - Ethel Whitehair ran out of water again over the weekend, emptied every bucket and pot, drained the barrels lined up outside her front door. The community well was closed until Monday.

Water from a well at a nearby windmill could supply the sheep, but it was untreated and made Whitehair's skin itch. At another windmill down the road, vandals had torn the cover off the storage tank. Deep inside, a car battery steeped in the soupy dregs, the surface stirred by the bloated bodies of three dead crows.

So Whitehair waited, as she had so often during her 87 years on Arizona's Navajo Reservation. She waited for her children to come and haul water from the good well. She waited for someone to end an unthinkable water crisis.

It is a wait shared by nearly 80,000 others who must haul water to meet basic needs. They live far from a water pipeline, and their communities barely have enough water to sustain what few lines exist.

The Navajos' water crisis has persisted so long, it has wormed its way into the routines of life on the nation's largest Indian reservation. Easing the crisis will require decades of work, billions of dollars and the patience to cut through the politics of Western water.

Tribal leaders have stepped up pressure on federal and state officials to settle claims for water guaranteed by the Supreme Court. Ignore those claims, Navajo President Joe Shirley says, and risk a water war.

"There is so much misunderstanding," said Lena Fowler, vice chairman of the Navajo Nation Water Rights Commission. "We live in a situation where we can't even meet our own basic human needs, which is just a drink of water. When we get up in the morning, after we pray, we have to start thinking about how much water we have. That's the first thought we have every day. Do we have to haul water?"

Link to poverty

Little comes easy for the 200,000 people who live on the Navajo Reservation, which surrounds three of the four corners in Arizona, New Mexico and Utah. Homes and

communities lie scattered across an area the size of West Virginia. The land is harsh, the climate dry, the distances long, the opportunities to earn money few.

Unemployment rates run as high as 26 percent. Per capita income is about \$7,000 a year, compared with about \$21,000 elsewhere in Arizona. With no casinos yet on the reservation, the tribe can't rely on gaming revenue. More than 40 percent of the people live below the poverty line, about the same proportion who lack running water.

Tribal officials say they can't ignore the link between poverty and lack of water. Without reliable water systems, businesses can't survive. New housing must wait. Indian Health Services, the federal agency that installs local water infrastructure on the reservation, faces a construction backlog of \$250 million, or about 700 unbuilt systems.

So people haul water, as many as 80 percent of people in some communities. It is a task that cuts deeply into meager incomes, especially as gasoline prices climb. The Bureau of Reclamation estimated in a 2004 study that the total economic cost to haul water on the reservation is about \$113 per 1,000 gallons, or \$37,000 for an acre-foot. A Phoenix homeowner pays about \$5 a month for as much as 7,480 gallons.

"We're talking about things a lot of people take for granted," said Ray Benally, director of the tribe's water resources department. "It's about our quality of life. The lack of clean, potable water has an effect on people's health."

Water haulers

Water haulers inhabit a subculture of reservation life, easily identifiable by the plastic tanks bulging from pickup truck beds. They learn where the good water is, when the lines form and how to stretch time between trips to the well.

At the Seventh Day Adventist mission in Monument Valley, Utah, a line of trucks forms early each day, snaking past low-lying red rocks buffed smooth by incessant winds. People chat while they wait. Kids bound in and out of truck beds. No one leaves early.

The well is a rarity, a reliable and clean source of water, clean enough that haulers will pass by other wells and make longer trips to fill up. It's a source of pride for Goulding's Lodge, which took it over for the church and offers the water for free.

"We have to take samples and send them to the tribe and the EPA (Environmental Protection Agency)," said Ronnie Biard, Goulding's general manager. "From what we're told, our water is so pure you could actually bottle it right out of the ground. We're very fortunate."

Amy Yazzie and her boyfriend, Jonathan Greyhatt, must haul water from the Tonalea community well and then empty it into a cistern that is buried on a small hill above their house. A pipe from the cistern runs to the house, a wooden hogan with a square addition that encloses a kitchen and a bathroom.

Like many reservation homes, the plumbing fixtures in this one hold more hope than water, installed with promises of a modern water line from Tonalea or Tuba City.

On a recent morning after returning from the well with a second tank full, Greyhatt started the siphon hose from the back of the truck and, as it drained, hiked down to the house. He filled bucket after bucket, more than a dozen in all, a process that made more room in the cistern for a third trip to the well. The buckets sat on tables, chairs, on the floor, like a scene after a long rain beneath a leaky roof.

Greyhatt moved efficiently, spilling little.

"We had a leak last month," he said. "We thought we had enough water to last awhile. But we came back, and it was gone."

Greyhatt and Yazzie drive 8 miles round trip to get water, but it's not uncommon for people to drive 30 miles or more, one way. During the summer, livestock can require daily trips on long stretches of dirt roads.

The reservation sits atop several huge aquifers, but not all wells produce usable water. A shallow well can turn brackish without warning. Many dry up in a drought. Windmill-powered pumps break down, often for weeks at a time. Running water guarantees nothing in communities like Cameron, where what comes out of taps isn't always safe to drink.

Three major rivers flank the reservation - the San Juan on the north, the Colorado on the west and the Little Colorado on the south - but the tribe has never secured rights to divert adequate water nor can it afford to build large-scale delivery systems.

New Mexico has signed a deal that would set aside water for a strip of the reservation along the Arizona border and build a pipeline to it, but money and politics threaten to sink that plan and delay other agreements. Arizona wants broader regional claims settled before Congress signs off on the New Mexico deal and also wants the tribe to drop a lawsuit that accused the federal government of mismanaging the Colorado. Failure to resolve the Navajo Nation's need for water would thrust the issue into court - and threaten water supplies for millions of people.

A way of life

With resources stretched so thin, the Navajos have adapted into some of the most efficient water users anywhere.

In a day, an average Navajo uses as little as 10 to 15 gallons of water in a water-hauling home, closer to 80 gallons in a home with running water. In Phoenix, the average person uses as much as 170 gallons per day.

"We know how to conserve. We know how to get by with less," said Sharon Williams, whose family lives a few miles from the Coyote Canyon chapter house in western New Mexico. "People in Phoenix have it made. They have water for grass. They can step in a shower any time. They never have to wonder if they have water."

She cracked a wry smile. "If they had to come up here and live like us for a day," she said, with only a trace of taunting in her voice, "they wouldn't make it."

Williams' parents still live in the same house on the edge of a canyon the family owns. The house sits at the top of a small rise, overlooking sheep pens and planting fields. A dirt courtyard is kept immaculate. An enclosure offers shade, its slatted roof alive with vines that Williams' mother, Annie Tsosie, fusses over daily.

Mark Tsosie, who is 78, retired from the railroad a few years back and now tends the livestock. He rises with the sun each day to check on the sheep and the crops, and about every other day he waters the cattle and horses that graze in the bottom of the canyon. This is not as easy as it sounds.

The canyon slices through the rolling plateau, its rounded rocks colored with shades of tan and dusty orange and occasional streaks of red. In one crevice, the wind has bored a hole big enough to frame a view straight down, a drop of more than 100 feet.

No water runs through the canyon, except after rainstorms. The old wells on the canyon floor dried up, leaving only a well up top not far the Tsosie house.

So Tsosie built an irrigation system, a rickety but reliable routine that depends on the health of an old GMC pickup, one that sometimes doesn't start and that, on one recent morning, sat disabled with a flat tire until one of Tsosie's sons arrived with a tire pump.

The tire inflated, Tsosie filled the tank and drove the truck along a rocky path to the canyon rim. He backed the truck to the edge and attached a hose from the tank to a plastic pipe that drops down to the floor, where it fills a trough.

"I've been taking care of this for 60 years," he said, more comfortable with English than he lets on sometimes. "I've got to get them water. This is the only way."

Back at the house, Annie had heated a kettle of water on the stove. Her son Matthew poured some of it into a plastic basin and took it outside onto a table. He looked around for his children and their cousins and grabs one.

"Time to wash hair," he said.

Each of five children took a turn at the basin. Shampoo, rinse, no repeat. Same basin of water. If it holds up long enough, it'll be used to wash hands. Later, sponge baths are given with a larger basin, but the water is still shared.

"I had a great shower a few weeks ago when it rained," Matthew said "I hiked down to a ledge on the canyon and stood under water pouring over the side. I got so clean."

Claims to water

Another storm threatened to develop on a recent afternoon. Black clouds piled up on each other above the mesas, building billowy towers that give the desert its own skyline. John Leeper, the director of the tribe's water-management branch, is keeping a close watch on some of the reservation's most vulnerable water systems.

"A monsoon storm can wash out a system," he said. "It's tough to keep it going. We're hoping to build some robust infrastructure that can support a sustainable community, but you can't just build them and forget them. We don't have what we need right now."

Navajo Mountain, a remote community on the Arizona-Utah border, causes a drugstore full of headaches these days.

The springs that supply it drop rapidly during dry weather, forcing the tribe to haul water in tanker trucks. Sometimes that fails when the trucks tear up the dirt road, leaving them nearly impassible.

The tribe is working on regional water projects that would shore up its delivery systems, but most of them are still in the planning stages. The two most critical, pipelines tapping the San Juan and Colorado rivers, will require as much as \$2 billion from the federal government, a check Congress appears unwilling to write.

Opposition from the Bush administration and other Colorado River states has frustrated Navajo officials, who insist they're not asking for a pipeline to nowhere.

"The water needed is not that big an amount," said Benally, the water-resources director. "And there is money. It's just a question of where you put it."

He cited a report by government auditors who found more than \$1 billion wasted in Hurricane Katrina recovery efforts.

"That could have funded our Gallup project all by itself," Benally said. "They put a lot of money into rebuilding after a natural disaster, but out here, we have nothing to start with. This is a basic necessity."

Benally said the tribe is preparing for a drawn-out process to settle claims with Arizona, another fight to secure federal funding for delivery projects and years of studies and construction. He sees it all as entirely unnecessary.

"The question they should be answering," he said, "is how come they didn't include the Indian people to begin with? Why weren't we at the table with everyone else?"

Still waiting

Tribal officials acknowledge they may never provide full running water to every home. The reservation is just too big, the ancestral lands too widely spread.

A more practical goal is ensuring that water haulers can find clean sources within shorter distances.

Back in Tonalea, Amy Yazzie and Jonathan Greyhatt filled their cistern and moved the truck across a dirt clearing to a one-room house, where Yazzie's mother, Ethel Whitehair, waited.

"She stays by herself for long stretches of time . . . I worry," Yazzie said. "She can't go get the water herself anymore."

Whitehair brightened as Greyhatt began to fill the barrels.

She found a pot and started boiling water for noodles.

Navajo music played on a radio above the stove.

A black and white kitten sniffed at a bowl of milk, mixed from powder.

"In the winter, the barrels sometimes freeze," Yazzie said as Greyhatt topped off the last one. "Then we have to move them inside by the stove to thaw out."

Greyhatt pointed toward the main highway.

Surveyors have staked some of the area for water lines, and some neighbors say they expect work to begin soon.

But so far only a few broken stakes remain.

And so they will haul water again in another week or two.

And wait.

"It's hard. . . . It's hard," Yazzie said. "They say we're going to get water out here sometime, but it never happens."

Regional News 08/31/07

Water rationing said likely

By Fred Ortega, Staff Writer Whittier Daily News Article Launched: 08/31/2007 11:26:13 PM PDT

A federal judge's ruling Friday means Southern California's primary supplier will likely call for water rationing as soon as next year, officials said.

U.S. District Court Judge Oliver Wanger imposed limits on flows caused by pumps sending water from the San Joaquin-Sacramento River delta to users around the state, saying the pumps were drawing in and destroying the endangered delta smelt.

Wanger's ruling — which only lasts for a year — imposes the limits from the end of December, when the smelt are about to spawn, until June, when young fish can move into areas with better habitat and more food.

Metropolitan Water District officials called Wanger's ruling one of the largest court-ordered water curtailments in state history. They said based on initial estimates supplied by the state, MWD stands to lose as much as 30 percent of its supplies from Northern California next year and possibly longer.

That, combined with reduced supplies from the Colorado River and this year's record dry spell, means the MWD has to plan for a shortfall in deliveries to its 26 member cities and agencies, MWD Board President Timothy Brick said earlier this week.

"All of these factors may necessitate Advertisement a curtailment," said Brick, noting that the Southland has gone from having 60 inches of rainfall during the record wet season two years ago to just 3 inches in Pasadena this year. "We don't think (rationing) will happen this year, but maybe next year.

"We are doing everything we can to avoid it, but it is important for people to know this is on the horizon," he said.

MWD General Manager Jeff Kightlinger offered a somber assessment Friday night.

"California simply cannot lose important water supplies without real consequences throughout the state," he said in prepared remarks. "This historic court decision affirms what the water community has realized for some time, but the general public may not fully appreciate — the delta, both as a valuable ecosystem and essential water supply, is broken. This court ruling did not fix it."

The MWD provides water for 18 million residents in parts of Los Angeles, Orange, Riverside, San Bernardino and San Diego counties.

But local agencies like the Upper San Gabriel Valley Municipal Water District have ample reserves in the form of local groundwater supplies, and could probably stave off rationing for up to two years, said district General Manager Timothy Jochem.

"After three years we may have to institute some mandatory reductions," said Jochem, whose agency imports about 35 percent of its water each year from the MWD.

The drought may continue into the next two years and beyond, said JPL climatologist Bill Patztert, meaning San Gabriel Valley agencies will likely end up instituting some type of mandatory cutbacks like those already being implemented in Palmdale and the Coachella Valley.

"Another decade (of drought) is not out of the question," said Patztert, adding that climatologists believe the entire Southwest is undergoing a prolonged dry spell similar to the 20-year-long drought that affected the region in the 1950s and '60s.

"The last eight years have been the driest on record on the Colorado River," said Patztert. "Normal flow on the Colorado is about 15 million acre-feet per year, and there were periods in the 1980s and '90s when we were above 20 million. The average over the last eight years has been about 10 million acre-feet."

An acre-foot of water is equivalent to about 326,000 gallons.

As a result, today the MWD is importing half as much water from the Colorado as it did just five years ago, said Brick.

At the same time increased demand on the State Water Project, which taps the Sacramento River delta, has contributed to an ecological crisis that has threatened native species like the delta smelt.

The tiny fish forced the closure of the pumps that send river water to Southern California for about 10 days in June. The crisis led to a lawsuit against the state by environmental groups led by the National Resources Defense Council.

Wanger on Friday ruled to protect the fish, which experts say might be on the brink of extinction. He said pressure from the pumps helped reverse the natural direction of water within the estuary, damaging habitat and killing delta smelt.

"The evidence is uncontradicted that these project operations move the fish," he said after hearing objections from defendants, who had argued that other factors led to the fish's decline. "It happens, and the law says something has to be done about it."

Jochem said any mandatory reductions imposed by the MWD could include financial incentives for member agencies, like it did the last time water was rationed in the late '80s and early '90s. For example, an agency that consumes below a certain percentage of the water it imported the previous year could get a reduction in rates.

"The agencies can then pass on the savings to consumers or use the money to implement water conservation programs," said Jochem, noting that his agency used extra money from the last round of mandatory cutbacks to begin a low-flow toilet installation program.

As for how agencies would force customers to use less water, one need only look to Palmdale.

That city has already imposed restrictions limiting lawn watering to no more than three alternating days a week, and only during nighttime hours; prohibiting the hosing down of sidewalks; and asking restaurants not to serve water to customers unless they ask for it.

Regular violators can face \$1,000 fines and disconnection of water service.

The MWD's plans are not only necessary and inevitable, said Patztert, but must be part of a sea change in the way Southern Californians consume water.

"In Southern California we overwater our lawns by anywhere from 6 to 8 feet per year, wash our cars twice a week and sprinkle our streets and sidewalks," said Patztert, noting that 70 percent of local domestic water consumption is used to water lawns. "If we got rid of the English gardens and lawns and replaced them with drought-tolerant landscaping, we could conserve enough water to sustain twice the present population."

And coupled with the fact that the area's population is projected to continue growing over the next 30 years, there are little options left to the area's water purveyors.

"The MWD and associated water districts might as well start thinking about this now," Patztert said. "Because more people and less water is what our future looks like."

The Associated Press contributed to this story.

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Regional News 09/02/07

Dam release coalition blocked

By CYNDY COLE Sun Staff Reporter Sunday, September 02, 2007

The Colorado River in the Grand Canyon grows and shrinks tremendously every day.

The volume of water passing through the turbines at Glen Canyon Dam is incrementally doubled or halved in 24 hours to meet momentary power needs in Nevada, Utah, Wyoming, Colorado, New Mexico and Arizona.

But a growing coalition of national park officials, federal biologists, conservationists and river guides contend such dramatic fluctuations are detrimental to the Grand Canyon ecosystem and possibly illegal during low-water years.

They want Interior Secretary Dirk Kempthorne to order that daily flows be evened out and the water releases to more closely mimic seasonal river changes.

But power companies say such a move would cost millions of dollars to replace the cheap power that would be lost if they cannot ramp up releases during hot, summer afternoons.

They outvoted the growing coalition at a showdown meeting in Flagstaff Thursday, but the insurgents, led by the Grand Canyon Trust of Flagstaff, said the issue is far from settled.

The Fish and Wildlife Service recommended a decade ago that such an experiment be conducted to see if it would benefit endangered fish in the Grand Canyon.

"We would love to be able to have a sufficient duration of steady flows to be able to see what the response would be of humpback chub," said Sam Spiller of the U.S. Fish and Wildlife Service.

But other federal agencies and power officials defeated a proposal on Thursday that would have recommended the Interior Department adjust water flows by season, saying they didn't want an experiment that could cost ratepayers tens of millions of dollars in higher utility bills.

A similar experiment conducted for a few months in 2000 cost customers \$31 million in power production, according to one calculation.. The dam supplies power directly to the Navajo Nation, Hopi Tribe and Arizona Strip and sells power to wholesalers that serve an estimated 4.9 million individuals in six states, mostly in rural areas.

The Trust proposed changing water releases from the dam by season only -- not by day -- which would limit the dam's ability to generate more hydroelectricity when electricity demand peaks.

This is an experiment required by law during years when a minimum amount of water is released from the dam, the group said.

Recent drought years have led to such minimal releases, along with reduced power production.

"The Grand Canyon Trust believes the flows currently coming from Glen Canyon are illegal," said Nikolai Ramsey, of the Trust.

Such a change would force utilities to buy power elsewhere during peak hours, said Clayton Palmer, of the Western Area Power Administration, a federal agency.

NO MORE SPRING FLOODS

Before Glen Canyon Dam was built, the Colorado River used to flood wildly.

The dam, completed in 1963, has eliminated seasonal floods that were once powerful enough to toss around house-sized boulders.

Now, even held fully open, the nation's second-tallest dam couldn't produce the large floods that once existed.

So representatives from Colorado River states, utilities, regional tribes, federal entities and environmental and recreational groups meet every few months to hash out management ideas for the river.

They look over technical reports and data, negotiate, and eventually make a recommendation to the secretary of the Interior Department. Interior makes the decisions.

The Grand Canyon has steadily seen beaches erode, river temperatures change and the number of humpback chub decline in recent decades, according to a 2005 report from the Grand Canyon Monitoring and Research Center at USGS in Flagstaff.

"As a result of dam operations and decreased sand supply, the Colorado River now typically transports more sand downstream than tributaries supply on a seasonal to annual basis," U.S. Geological Survey researchers wrote in one report.

The sandbars and beaches in the Grand Canyon have been eroding since 1963, USGS has found, now at an average rate of 15 percent per year.

That spells trouble for the river runners who camp on beaches, as documented in a series of photos taken by Northern Arizona University geologists.

Grand Canyon River Guides support changing dam operations.

"As camping beaches continue to diminish, crowding and congestion will become even more of an issue, especially in areas where beaches are in high demand, or few in number," said Lynn Hamilton, executive director of Grand Canyon River Guides.

"Sediment is the lynchpin for the health of multiple resources in Grand Canyon, including the recreational resource. River runners care deeply about everything that makes Grand Canyon and the Colorado River so unique, and finding better ways to manage and restore the health of those resources is critical."

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Arizona Daily Sun OpEd

Watershed year for Colorado River and Glen Canyon Dam

Sunday, September 16, 2007

http://azdailysun.com/articles/2007/09/16/news/opinion/20070916_opinion_50.txt

Serving on the Editorial Advisory Board this week were Publisher Don Rowley, Editor Randy Wilson, and citizens Jacqueline LaFave Perkins, Laurel Shelton, Mary Black and Thomas Gorman.

This is a watershed year for the Colorado River below Glen Canyon Dam, and in more ways than one.

Low snowmelt in the Rockies has again meant lower water levels in Lake Powell, which affects the power production from the dam and how much water can be released into the Grand Canyon below.

Now, with the publication of a new USGS study that shows the increasingly harmful effect of the dam's operations on the native fishes, plants and beach habitats downstream, pressure is mounting to change water releases from the dam.

Raising the stakes even higher is the Grand Canyon Trust, which is calling federal power officials on the carpet for failing to adjust dam releases to account for drought years. Federal rules call for much lower and steadier flows during the hot, summer months and higher flows in the spring to mimic seasonal floods, not the high-volume releases each day in summer to accommodate the power needs of air-conditioned Las Vegas and Phoenix.

As Cyndy Cole reported earlier this month, the Trust, along with officials from Grand Canyon National Park, the Fish and Wildlife Service and river outfitters, confronted the federal group that advises the Interior Secretary on dam releases at a meeting in Flagstaff. They lost by a vote of 14-4 on a motion to implement the drought-year river protections, but that's not the end of the issue. Legal action might come next, along with taking their case to the public. As one of the insurgents noted, "This isn't the Glen Canyon Dam State. It's the Grand Canyon State."

On the surface, the dispute might seem like much ado about nothing. The warmwater, native humpback chub, which is the canary in the coal mine for advocates of river preservation, is not particularly photogenic. Its successors, the coldwater rainbow and brown trout, are much preferred by sport fishermen. As for disappearing beach habitat caused by high summer dam releases, some would say that's an unavoidable cost if urban-dwellers are to survive the searing Southwest desert heat.

If the drought cycle in the Southwest was temporary, we might be inclined to agree that worries over the Colorado River ecosystem's ability to adapt to the massive changes caused by Glen Canyon Dam are overblown. The Grand Canyon has been around for eons and no doubt seen many changes in the river's flow, so why would it not be able to adapt now?

The difference is that those epochal changes occurred gradually, not overnight, as was the case when the dam first closed its gates in 1964. River water temperatures have dropped up to 25 degrees, spring floods no longer occur, and daytime flows in summer now fluctuate wildly, depending on how much hydropower the dam needs to generate on a hot afternoon. It's no wonder that a prehistoric fish like the chub, which took millions of years to adapt to the unique river conditions in the Canyon, is now nearly extinct within four decades, and that other native plants and animals are following suit.

The plan to restore some of the balance being advanced by the Trust, Fish and Wildlife, the national park and others is not an either/or choice. It calls for a modest, three-month experiment that would scale back peak daily releases in the hot summer months and open the floodgates in the spring. The lost power would cost the electric utilities an estimated \$30 million a year to replace it from higher-priced sources, including coal-fired plants.

So the issue is not so much cost -- \$30 million is a drop in the bucket compared to the billions of dollars worth of power sold each year on the Southwest electric grid. Nor is it particularly expensive to customers: There are an estimated 5 million people who use power from Glen Canyon Dam, so the experiment would cost just \$6 apiece. What's more compelling is the concern that, by restoring the Grand Canyon ecosystem, advocates of river preservation would be increasing the carbon "footprint" of power consumption in the Southwest by relying more on coal. Until industrial solar and wind plants go online or nuclear power makes a comeback, this area's cheapest and least-polluting source of power will remain hydroelectric dams.

The major flaw in that argument is related to why the river-flow experiment is needed in the first place: drought. If rain and snowfall continue to be low in the Colorado River basin, setting low summer flows won't be optional, they will be mandated by Mother Nature. That will mean less power can be generated from dams as lake levels decline because there isn't as much water pressure to drive the turbines. At some point in the very near future, all of us in the Southwest might have to come to grips with the demise of hydroelectric power, regardless of how we feel about restoring the Grand Canyon's pre-dam ecosystem.

It's for those reasons that we can't emphasize enough -- as we have in this space before - the importance of ramping up industrial-scale renewable energy plants. If that means a major expansion of the tax credits available to the developers of solar and wind plants, so be it. Climate change is not only exacerbating the problems in the Grand Canyon caused by Glen Canyon Dam. It should force us to rethink what kind of energy infrastructure will support population growth in the Southwest and, indeed, how power consumption might need to be radically modified. As we said above, it's a watershed year not just for the Colorado River in the Grand Canyon but for all of us who depend for power on the dam that controls its destiny.

Regional News 10/04/07

Ariz. fights changes in Colo. River plan

Shaun McKinnon The Arizona Republic Oct. 4, 2007 12:00 AM

Arizona balked Wednesday at proposed changes to a Colorado River drought plan and appealed to the federal government to settle the dispute or delay approval of the plan.

In a letter to U.S. Interior Secretary Dirk Kempthorne and the other six states that take water from the Colorado River, Arizona officials said attempts to rewrite an agreement reached earlier this year put Arizona's share of the river at an unacceptable risk.

"We worked hard to try to put together this agreement, and the only thing Arizona asked is that it did not harm Arizona water users," said Herb Guenther, director of the state Department of Water Resources.

At issue is whether a new system of managing reservoirs on the river would threaten the portion of Arizona's allotment that serves Phoenix and Tucson. Arizona argues that changes sought by states on the upper river could deprive Arizona of water even when storage levels in one reservoir were high.

The request for federal mediation could upset an already-tenuous peace among the seven states, which negotiated for more than two years over how to manage the river in times of drought.

The states' version was undergoing a final review, and Kempthorne was expected to approve it in December.

The federal government wanted the plan in place to avoid protracted legal battles if drought or shifting climate continued to shrink the river's flow.

Growing demand for water among the nearly 30 million people who rely on the Colorado River has also increased tension.

Guenther said a delay could help the states produce a better operating plan and, in turn, ward off future lawsuits.

"We think the whole process is moving too quickly," he said.

"We're not giving enough time to seriously resolve this particular issue. It would be our feeling that it would not hurt to slow the process down a little and give the negotiations a chance to succeed."

Federal officials acknowledged the stalemate between Arizona and the other states but suggested further work within the current framework.

"In light of the fact that in the last eight years the Colorado River has suffered through the worst drought in recorded history, it is extremely critical that we implement new guidelines for managing the Colorado River under low-water conditions this year," said Robert Johnson, commissioner of the U.S. Bureau of Reclamation, the Interior Department's water agency.

Johnson said the bureau had been working with the states for the past two months to resolve the differences and even delayed release of the final environmental-impact statement on the operating plan.

He said he will meet with representatives from the states this week, "however, time is short."

"The basin is still in the grasp of this drought, and it is critically important that we resolve this issue now," Johnson added.

The other states hadn't seen Arizona's letter Wednesday and reacted cautiously.

"Utah's position is we're still talking among the basin states, and we are optimistic that an agreement can be reached that will not harm Arizona and that will be beneficial to all the basin states," said Dennis Strong, director of the Utah Division of Water Resources.

Arizona identified several concerns about the agreement in its letter, but the dispute hangs mostly on proposed changes to the way the states manage water in Lake Powell and Lake Mead, the two largest storage reservoirs on the Colorado River.

Under the proposed drought plan, shortages are triggered by water levels in Lake Mead, which stores water for Arizona, Nevada and California. As the lake level declines, the size of the water shortages grows, which is why the three lower-river states have proposed ideas to increase storage.

Arizona would feel the main brunt of any shortage because it gave up legal seniority to part of its allocation in exchange for the Central Arizona Project Canal, which delivers water to Phoenix and Tucson. The water in that canal is the first to be cut off in a shortage.

The agreement called for a system of balancing the water in Mead and Powell, which store water on behalf of the upper-basin states of Colorado, Utah, Wyoming and New Mexico. Those states fear that if Powell drops too low, they could suffer shortages.

Arizona argues that the upper-basin states tried to rewrite the formula for balancing water in the two reservoirs, producing rules that could create a shortage on Lake Mead even when ample water remained in Lake Powell.

"It's a scenario that may never develop," Guenther said. "But it could happen. And if it did, we don't feel it would be appropriate to short Arizona water users when there was water in Lake Powell."

Regional News 11/02/07

Reclamation Issues Final EIS for Colorado River Operations under Low Reservoir Conditions

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Released On: November 02, 2007

Commissioner of Reclamation Robert Johnson today announced that the Bureau of Reclamation (Reclamation) has issued a final Environmental Impact Statement on the proposed adoption of specific Colorado River Lower Basin shortage guidelines and coordinated reservoir management strategies to address operation of Lake Powell and Lake Mead, particularly under low reservoir conditions.

"These proposed operational guidelines will provide Colorado River water users and managers in the U.S. a greater degree of certainty about how the two large reservoirs on the Colorado River will be operated under low water conditions, and when - and by how much - water deliveries will be reduced in the Lower Basin in drought or other low reservoir conditions," Johnson said.

The Final EIS presents six alternatives, including a No Action Alternative and a Preferred Alternative. The Preferred Alternative proposes that:

- * specific water levels in Lake Mead be used to determine when a shortage condition (the availability of less than 7.5 million acre-feet of water) would be declared in the lower Colorado River Basin, and how that shortage would be shared by the three Lower Division States - Arizona, California and Nevada;
- * specific reservoir conditions at Lakes Powell and Mead be used to determine the annual operation of these reservoirs, in a manner that would minimize shortages in the Lower Basin and avoid the risk of water delivery curtailments in the Upper Basin;
- * a mechanism be implemented to encourage and account for augmentation and conservation of water supplies in Lake Mead to minimize the likelihood and severity of

potential future shortages and to provide additional flexibility to meet water use needs, particularly under low reservoir conditions; and

* the Interim Surplus Guidelines established in 2001 be modified and extended through 2026.

"The Preferred Alternative was developed by Reclamation after extensive collaborative efforts with the Colorado River Basin States, environmental organizations and other stakeholders," said Johnson.

"It was designed to allow the river to be managed to meet the demands being placed on it today and into the future. I commend the states and all the other stakeholders who worked so long and hard to develop these guidelines and management strategies - this truly is an historic accomplishment."

Development of the guidelines was spurred by the current drought in the Colorado River Basin, which began in the fall of 1999. In the eight years since then, the Basin has experienced the worst drought conditions in 100 years of recorded history, and storage in Colorado River reservoirs has dropped from nearly full to about 54 percent of capacity.

Because there are currently no specific guidelines for determining shortage conditions in the Lower Basin, or the coordinated operation of Lake Powell and Lake Mead during drought and low reservoir conditions, a public process was initiated in September 2005 to develop them. They are expected to be adopted by the Secretary of the Interior in December, and take effect in January 2008. They would then be used each year through 2026 to develop the Annual Operating Plan for Colorado River reservoirs.

The Final EIS is available for viewing and copying at [Reclamation's project website](#). Alternatively, a compact disc or hard copy is available upon written request to: Regional Director, Lower Colorado Region, Bureau of Reclamation, Attention: BCOO-1005, P.O. Box 61470, Boulder City, Nevada 89006-1470; fax at (702) 293-8156; or [Email: strategies@lc.usbr.gov](mailto:strategies@lc.usbr.gov)

[Reclamation Fact Sheet](#)

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LR in the News 11/03/07

SLC hydrologist says the arrangement means 'everyone shares the pain'

Plan manages Colorado River in drought

By Patty Henetz

The Salt Lake Tribune

Article Last Updated: 11/03/2007 12:25:59 AM MDT

The Law of the River has gotten another adjustment with a federal plan to manage the Colorado River during dry years.

The U.S. Bureau of Reclamation on Friday released a final environmental impact study that could be a way to avoid renegotiating an 85-year-old agreement based on inflated notions of how much water really is in the river.

Or, according to river advocates, the plan that will govern use and allocation through 2026 could be a way to ensure none of the seven Western states that share the river ever has enough water.

The study's conclusions drew from a consensus decision by the seven Western states that depend on the Colorado River on what to do during low-water years, officials said.

"This is an arrangement for operating the river where everyone shares the pain when you're going through a drought time," said Tom Ryan, a Bureau of Reclamation hydrologist in Salt Lake City.

The Bureau of Reclamation began the environmental study in 1999. Since then, the river basin has experienced the worst drought in 100 years of recorded history, and its two largest reservoirs - Lake Powell and Lake Mead - have gone from being nearly full to just over half-full.

The report, expected to be final in December, plans how the upper basin states - Utah, Colorado, Wyoming and New Mexico - will respond to demand from California, Arizona and Nevada, the lower basin states, which have more people and older water rights.

While the Bureau of Reclamation implicitly acknowledges that the 1922 Colorado River Compact is based on estimates from unusually wet years and its report assumes ongoing shortages, it doesn't suggest any changes to the agreement.

"Nobody wants to renegotiate the compact. The feeling is the compact provides an adequate framework for managing the river," Ryan said.

But to John Weisheit, conservation director for the non-profit organization Living Rivers, the bureau's solution entrenches wastefulness and refuses to acknowledge ways to store water more effectively.

"We're extremely disappointed," he said. "Now we're playing this balancing act between two reservoirs that climate change is going to keep empty."

Living Rivers has long campaigned to decommission the Glen Canyon dam and rely on Lake Mead for surface water storage. The organization also believes using aquifers in Arizona and California to store water underground would be a better solution. But the main problem with the bureau's solution is there's not enough water, which speeds destruction of the river ecosystem, Weisheit said.

phenetz@sltrib.com

LR in the News 11/08/07

Reclamation finalizes drought-sharing plan

Eryn Gable, special to Land Letter

The Bureau of Reclamation on Nov. 2 released a final environmental impact statement outlining management of the Colorado River during dry years.

The plan, which will guide the operation of lakes Powell and Mead until 2026, is based on an agreement by seven Western states that depend on the Colorado River. It is expected to be adopted by the Interior Department secretary in December and take effect in January 2008.

"These proposed operational guidelines will provide Colorado River water users and managers in the U.S. a greater degree of certainty about how the two large reservoirs on the Colorado River will be operated under low water conditions, and when -- and by how much -- water deliveries will be reduced in the Lower Basin in drought or other low reservoir conditions," said Reclamation Commissioner Robert Johnson in a statement.

Development of the guidelines was spurred by the current drought in the Colorado River Basin, which began in the fall of 1999. In the eight years since, the basin has experienced the worst drought conditions in 100 years of recorded history, and storage in Colorado River reservoirs has dropped from nearly full to about 54 percent of capacity (Land Letter, April 12).

The final EIS acknowledges that the 1922 Colorado River Compact is based on estimates from unusually wet years, but it doesn't suggest any changes to the agreement, which divvies up water among the seven states.

The document also acknowledges the potential effects of climate change, including decreased mean annual flow, increased variability, more frequent and severe droughts, and decreased runoff. However, Reclamation argues that the science surrounding climate change is not yet precise enough to determine exactly what those effects will be.

Brad Udall, director of the Western Water Assessment, a joint effort by the University of Colorado and the National Oceanic and Atmospheric Administration, said that is a good tack for Reclamation to take. "I actually think that Reclamation did a good job of looking

at the state of the science and acknowledging this is a problem, but the science at the regional level just isn't good enough to provide the answers," he said.

The final EIS presents six alternatives, including a no-action alternative and the agency's preferred alternative. The preferred alternative proposes that:

Specific water levels in Lake Mead be used to determine when a shortage condition (the availability of less than 7.5 million acre-feet of water) would be declared in the lower Colorado River Basin, and how that shortage would be shared by the three lower basin states -- Arizona, California and Nevada.

Specific reservoir conditions at Lakes Powell and Mead be used to determine the annual operation of these reservoirs, in a manner that would minimize shortages in the lower basin and avoid the risk of water delivery curtailments in the upper basin.

A mechanism be implemented to encourage and account for augmentation and conservation of water supplies in Lake Mead to minimize the likelihood and severity of potential future shortages and to provide additional flexibility to meet water use needs, particularly under low reservoir conditions.

The Interim Surplus Guidelines established in 2001 be modified and extended through 2026.

Too optimistic?

John Weisheit, conservation director for the nonprofit organization Living Rivers, said his group doesn't like the agreement at all. "We think the Bureau of Reclamation is hiding behind a model when they really haven't looked at all the parameters we think they should look at," he said.

For example, Weisheit noted Reclamation used the most optimistic estimates of annual yield on the Colorado River based on tree ring records -- 14.7 million acre-feet. Other models show yields as low as 13 million acre-feet, he said.

"There's reason for that," Weisheit said. "The model at 14.7 million acre-feet shows that the world is still rosy, but the model at 13 or 14 million acre-feet shows both reservoirs go empty for a long period. That's not what the Bureau of Reclamation wants the public to know. They're not being honest with the American public."

"There's not going to be water for anything eventually," Weisheit added. "They basically are praying for rain."

Weisheit said his group has not yet discussed whether they will challenge the bureau's plan in court. However, it appears likely that there will be some sort of legal challenge to the plan based on violations of the National Environmental Policy Act.

Gable is an independent energy and environmental writer in Woodland Park, Colo.

LR Press Release 11/15/07

Federal Water Managers Ignore Climate Change on the Colorado River, but You Don't Have to.

FOR IMMEDIATE RELEASE

November 15, 2007

Contacts: Owen Lammers - 435-261-4163; Niklas Christensen - 206-617-2050

Federal Water Managers Ignore Climate Change on the Colorado River, but You Don't Have to.

New simulator puts water shortage forecasting on your desktop.

Two weeks ago the Bureau of Reclamation released its first ever plan for managing the Colorado River under shortage conditions. However, their strategy is based on a narrow set of assumptions that underestimate the potential for future shortfalls, and the risks to the region's \$1.2 trillion economy.

Using the same techniques employed by Reclamation's forecasters, the Colorado River Open Source Simulator (CROSS)* has been developed to allow the public the opportunity to explore a more complete range of scenarios which nature may have in-store for Colorado River water users.

"CROSS's simple interface is designed for anyone to use, whether familiar with the Colorado or not," says Niklas Christensen, who developed the simulator for Living Rivers and is releasing it today at the American Water Resources Association's annual conference in Albuquerque. "Most importantly, using the same inputs, CROSS outputs validate well against Reclamation's far more sophisticated and expensive model, making this a credible and valuable public tool in this era of Colorado River uncertainty."

As a leading scientist on assessing the impact of climate change on the hydrology and water resources of the Colorado river, Christensen is fully aware of the risks that may lie ahead for the watershed. Results from his research, funded by the Department of Energy, predict up to a ten percent reduction in flows by the end of the century. Findings by other scientists, such as Martin Hoerling from the National Oceanic and Atmospheric Administration, predict the change could be much greater and come more quickly, up to a 40 percent reduction in flows by the middle of the century.

"None of us can say with precision what's going to happen, but what the science is telling us is that something very likely will, and it's quite surprising that such an important variable has been omitted from Reclamation's shortage forecasting," adds Christensen.

CROSS shows that a reduction in the middle range of predictions, 20% by the year 2100, would render it highly unlikely that Lake Mead, the nation's largest reservoir, would ever fill again, and a strong likelihood of being empty for good by 2050. By contrast, Reclamation's shortage assumptions have Lake Mead holding steady

throughout their 2008 – 2060 forecast period. Worse still, should flows mimic what the basin has experienced so far this century, CROSS shows how Lake Powell, the Nation's number two reservoir, and Lake Mead would likely become operationally empty within the next five years.

“With the region in its longest recorded drought, reservoirs at below 50% capacity, it's amazing that Reclamation modelers assume the Colorado of the future will likely mimic its high flow periods of the past,” says Owen Lammers, Executive Director of Living Rivers. “With every drop of water already allocated, and just a 2% mistake equivalent to losing Las Vegas's Colorado River water supply, providing the public with comprehensive forecasting is no trivial matter.”

Even if climate change were not an issue, Reclamation's forecasts still errors toward the positive. Current estimates of the long-term annual flow of the Colorado River range from 13.0 to 14.7 million acre-feet (maf). Reclamation's forecasting is largely based on flows of 15.0 maf—the recorded average streamflow from 1900 - 2005. These 20th century flows, however, are now recognized to be among the wettest in 1,200 years. While Reclamation acknowledges this, and has conducted some alternative analysis with flows as low as 14.6 maf, it failed to examine the full range of variability offered by researchers.

CROSS illustrates how at 14.0 maf Reclamation's new shortage policy will be immediately taxed, very likely requiring consultation with the Secretary of Interior to determine who gets what water and when, the precise action these policies were designed to avoid. At 13 maf, the new system collapses altogether with Lake Mead likely operationally empty by 2020, rising for only brief periods through the rest of the century.

“It's not that we feel such scenarios are any more valid than what Reclamation has offered, its just their omission misrepresents the potential for shortages that science suggest we ought to acknowledge,” stresses Lammers. “Fortunately with CROSS, anyone can explore the full range of possibilities, as well as the amount of water conservation we can employ to successfully navigate any uncertainty.”

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*CROSS requires the use of Microsoft Excel installed on a Microsoft Windows operating system. CROSS is designed to be a self-contained application and does not require the user have previous experience with Microsoft Excel.

To download, obtain more information, or view screenshots and sample outputs from CROSS: visit the CROSS page at [onthecolorado.org](http://www.onthecolorado.org), a new website committed to the latest news and views on how we live work and play on the Colorado.

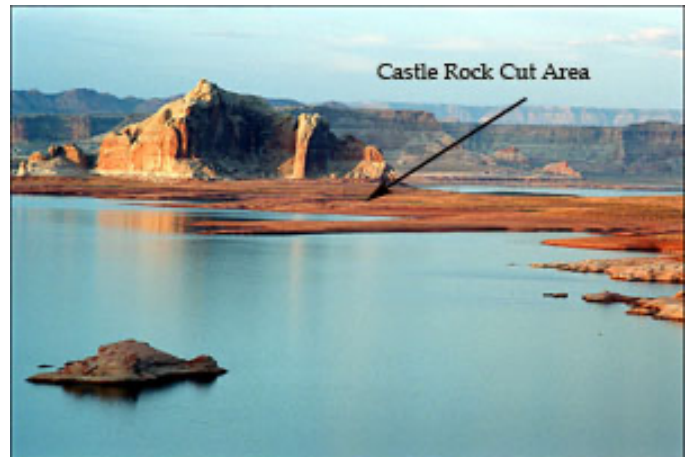
<http://www.onthecolorado.org/cross.cfm>

LR Letter 12/02/07

Scoping letter: Castle Rock Cut at Lake Powell

December 2, 2007
Mr. Kevin Schneider
Public Affairs Office
Glen Canyon National Recreation Area
P.O. Box 1507
Page, AZ 86040-1507

Sent via email:
Kevin_Schneider@nps.gov
Sent via fax: 928-608-6259



Re: Environmental Assessment (EA) for the Castle Rock Cut

Dear Mr. Schneider,

Thank you for this opportunity to provide scoping comments for the proposal to excavate a deeper cut at the divide near Castle Rock for the passage of boats during low reservoir conditions. Our comments are written on behalf of the following organizations:

Living Rivers (www.livingrivers2.org)
Colorado Riverkeeper (www.coloradoriverkeeper.org)
Colorado Plateau River Guides (www.riverguides.org)
River Runners For Wilderness (www.rrfw.org)
Southern Utah Wilderness Alliance (www.suwa.org)
Wildlands CPR (www.wildlandscpr.org/utah)

The cut should be left as it is. The previous excavations should be considered as mistakes by administrations of the past.

To many people the managing guidelines for multiple-use criteria at a National Recreation Area (NRA) does not include large-scale, extraordinary alterations to the natural landscape. The basic facilities for the users of the NRA have already been provided. The cut at Castle Rock is an extraordinary development activity that is inappropriate.

The Park Service must surely be aware that this development plan borders on the unethical and is therefore highly controversial within the public perception. It would be wise and prudent for the Park Service to do no harm and, instead, accept the circumstances that Nature presents.

The issues of safety and congestion at The Narrows, near Antelope Point Marina, is a consequence of the Park Service's decision to allow a marina to exist at a poor geographic location. It has essentially been decided by the Park Service that there are

no safety concerns at The Narrows, since the marina at Antelope Point exists at the discretion of the Park Service. Therefore, this issue has already been determined by the Park Service as a non-issue.

If safety is now an issue, then the Park Service needs to also include a remedy to their planning error, and in addition to the whatever decision is made concerning the cut near Castle Rock. Living Rivers addressed this safety issue on the matter of the development plan for Antelope Point Marina in year 2000. We declared that the marina should not be developed for this and many other reasons, and so it is appropriate for us to ask that an alternative to close Antelope Point Marina be appraised.

If the Park Service permits the excavation at Castle Rock, then this also implies that the Park Service will also be responsible for all the other access issues the multiple-users of the NRA may have concerning facilities when the reservoir levels of Lake Powell are low.

For example, does this mean that the Park Service will also excavate a bedrock take-out at Hite Marina and Clay Hills Crossing for river runners? Will the Park Service excavate a trail in the cliffs of Dark Canyon so that river visitors can circumvent the treacherous sediment deposits at this side canyon? Will the Park Service also excavate a trail so that visitors can once again access Clearwater Canyon?

Additionally, what about the impossible and unsafe camping situations due to massive sediment deposits at lower Cataract Canyon, Narrow Canyon, and lower San Juan Canyon? Will the Park Service also be willing to excavate campsites in the bedrock cliffs so visitors can prepare meals and sleep in safety without having to worry about landslides and blocks of dried sediment tumbling into their camps?

On this matter of declining reservoir levels, as it applies to the visitor experience at the NRA, it is apparent that a Environmental Impact Statement (EIS) is clearly in order because a comprehensive assessment of the issues and remedies will be required for the Park Service to make appropriate decisions. We highly suggest that the Park Service implement such a strategy.

For example, considering that the Shortage Criteria EIS prepared by the Bureau of Reclamation has not considered paleoclimate data or atmospheric warming data into their hydrology model, serious management unknowns yet remain about addressing development plans that are presumed necessary to implement in response to lowering reservoir levels at Lake Powell.

We suggest that the Park Service provide the leadership that Reclamation has demonstrated a reluctance to provide; a reluctance that leaves management plans by cooperating agencies, such as the Park Service, hanging in the realms of uncertainty.

We also suggest that the Park Service investigate a recently released open source simulator to determine for itself how persistent drought and climate change would effect Lake Powell. The simulator is called CROSS and is available at the following web site: www.onthecolorado.org/cross.cfm

It is highly probable that the Castle Rock Cut is not a remedy at all in the long-term. For example, if this drought becomes any more persistent than it has already proven to be, is the Park Service contemplating yet another excavation, and yet another, as it chases an ever declining reservoir? If so, then this issue also needs to be addressed more comprehensively as an EIS.

At this time, the most prudent and reasonable alternative for this proposed management action is to leave the cut at Castle Rock the way it is and accept the extraordinary consequences of Nature.

Sincerely yours,

John Weisheit, Conservation Director
Living Rivers
Colorado Riverkeeper
Colorado Plateau River Guides

Jo Johnson and Tom Martin, Co-Directors
River Runners For Wilderness

Scott Groene, Executive Director
Southern Utah Wilderness Alliance

Laurel Hagen, Utah Program Director
Wildlands CPR

LR in the News 12/09/07

States agree on plan to make water last

As reservoirs dwindle, river states agree to a landmark conservation plan

Shaun McKinnon

The Arizona Republic

Dec. 9, 2007 12:00 AM

Water users from the seven Colorado River states are expected to ratify a regional drought plan this week in Las Vegas, ending years of bickering over how to balance uncertain resources with growing demand.

The heart of the plan is the heart of the river system, its two largest reservoirs along Arizona's northern borders. Lake Powell and Lake Mead hold not only the water needed to survive long dry periods but also the key to a landmark deal meant to give the states a chance to find longer-lasting solutions.

Drought has drained the two reservoirs to below half capacity, increasing the threat of water shortages upstream and in Arizona, along with the loss of cheap hydropower and

damage to riparian habitat and recreation sites. With that much at risk, some of the states were prepared to fight costly legal battles. The drought plan can't keep the lakes from shrinking further if dry conditions persist and could trigger the first shortage as early as 2010. But by focusing on the reservoirs and the way they help manage the river's limited supply, the states hope to protect users from the worst effects of drought.

The plan guides management of the river through 2026 using reservoir levels to trigger rationing and a series of experimental conservation programs. Environmental groups say the plan fails to protect the river itself, but the states insist they produced what they could within their limits.

"This won't eliminate the risk of shortage, but it prolongs the period of time before we experience one," said Sid Wilson, general manager of the Central Arizona Project, which delivers Colorado River water to Phoenix and Tucson. "None of us doubt that drought is a more ominous threat than we ever realized."

Finally, a plan

The seven river states - Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming - had never written a drought plan because they never needed one. The region survived a severe dry stretch in the 1950s, before growth pushed up demand. And when a string of wet years followed, the states instead adopted rules to manage surplus water.

Almost before those rules took effect, drought hit again. Faced with potential shortages and threats from the Interior secretary to impose a federal solution, water users started talking about what happens if the river can't supply demands.

What emerged from negotiations was a plan built around the two big reservoirs.

Until now, separate rules governed the way water flowed from Lake Powell - which was built to benefit Colorado, New Mexico, Utah and Wyoming - into Lake Mead, which stores water for Arizona, California and Nevada.

The drought plan, which includes parts of the old surplus guidelines, would impose one set of rules to operate the reservoirs, balancing the needs of users in both the upper and lower basins. Low water levels in Lake Mead will trigger rationing in Arizona and Nevada under the plan; other measures will attempt to delay shortages.

The first trigger would cut Arizona's allocation by 320,000 acre-feet (about 11 percent) until lake levels recovered. Arizona could lose up to 17 percent of its allocation under the plan's most dire scenario. State officials say agricultural users would absorb most, if not all, of the losses.

Lake Mead currently sits about 36 feet above the first shortage trigger. Federal hydrologists say the lake should remain at least 25 feet above the trigger in 2008.

"By managing the two reservoirs together rather than fighting over how much water will be released every year, we'll help mitigate the probability of Arizona taking shortages," said Herb Guenther, director of the Arizona Department of Water Resources.

How it works

Barely 300 miles separate Lake Powell, on the Arizona-Utah border, and Lake Mead, on the Arizona-Nevada border, but what happens at the two reservoirs reverberates up and down the Colorado River.

If water levels at Powell drop too low, upstream users would face cutbacks. Hydropower generation would decline. Recreation venues would close. As Lake Mead shrinks, so would Arizona's CAP supply, cutting off farmers in Maricopa, Pinal and Pima counties until water levels rise again.

How water users along the Colorado manage the water conversely affects the lakes and the people and businesses that surround them.

The construction of Glen Canyon Dam in the 1960s gave birth to Page on the shores of Lake Powell; when drought reduced the reservoir to one-third of its capacity, tourism revenue in the city plummeted.

Mike McNabb has fished Lake Powell for most of the 27 years he has lived in Page and now runs a fishing-guide business. He has seen the city's fortunes rise and fall with the lake levels, and he watches warily as the states plan the future.

"They say it'll never be full again," he said. "But we could have some unbelievable winters and in about three years fill that lake up again. You just never know."

Two years ago, spring runoff inundated parts of the lake that had been dry, covering tamarisk and other plants that had sprouted. With a new food source under water, the fish population exploded.

Anglers get used to events like that, McNabb said. "Right now, the water's going down, and I know a lot of places where it's good when it's down. In the spring, when the lake comes up, I've learned where the good spots are."

Because Lake Powell sits in a narrow river gorge, fluctuating water levels can uncover rocky outcrops and alter boat lanes. The National Park Service, which manages the lake's recreational amenities, is considering a plan to cut a deeper passage through Castle Rock, where exposed rocks have added 12 miles to a trip upstream.

"The problem is now we have to go through the narrows, between the cliffs, and smaller boats have to wait for the big ones to go through so they don't get caught in the wakes," McNabb said. "Sooner or later there's going to be an accident."

Environmental groups have protested the dredging plan, calling it a temporary fix that will degrade the canyon and the lakeshore. They say the boat path, like the broader drought plan, risks the Colorado River's riparian health and ignores the threat of climate change.

Some of those groups proposed their own drought plan, which would have imposed stricter conservation measures. The states' plan, environmentalists say, relies too heavily on the river's past behavior.

"With the region in its longest recorded drought and reservoirs at below 50 percent capacity, it's amazing that the states would assume the Colorado of the future will mimic its high flow periods of the past," said Owen Lammers, executive director of the group Living Rivers.

Brad Udall, an environmental engineer at the Western Water Assessment in Boulder, Colo., helped analyze future climate shifts for the seven states. He said water managers need to consider that the river may behave differently.

"In the Southwest, almost all the models point to drier conditions," he said.

Scientists and decision makers must now figure out which models to believe.

The states say the drought plan before them now will help bridge the gap in scientific study and avoid paralyzing conflicts over water supplies.

"We now have a better understanding of the risks and what the impacts will be associated with those risks," said Wilson, the CAP executive.

The greater immediate risk was failing to reach an agreement and allowing the dispute to spill into a courtroom.

"Failure was not an option," said Pat Mulroy, general manager of the Southern Nevada Water Authority. "Failure is uncertainty for all of us, it's chaos for all of us, it's spending public dollars in absolutely useless ways.

"You'll never get as good an arrangement from a judge," she said. "No matter how well-intentioned or how well-informed a judge is, he's still not responsible at the end of the day to deliver water to people. We are."

Reach the reporter at shaun.mckinnon@arizonarepublic.com.

LR in the News 12/10/07

Federal pact would allocate Colorado River water to Western states

New York Times

International Herald Tribune

By Randal C. Archibold

Published: December 10, 2007

LOS ANGELES, Dec. 9 — Facing the worst drought in a century and the prospect that climate change could yield long-term changes on the Colorado River, the lifeline for

several Western states, federal officials have reached a new pact with the states on how to allocate water if the river runs short.

State and federal officials praised the agreement as a landmark akin to the Colorado River Compact of 1922, which first outlined how much water the seven states served by the river — California, Nevada, Arizona, Colorado, Utah, New Mexico and Wyoming — would receive annually.

The new accord, outlined by federal officials in a telephone news conference Friday, spells out how three downriver states — California, Arizona and Nevada — will share the impact of water shortages. It puts in place new measures to encourage conservation and manage the two primary reservoirs, Lake Mead and Lake Powell, which have gone from nearly full to just about half-empty since 1999.

The accord is expected to forestall litigation that was likely to have arisen as fast-growing states jockey for the best way to keep the water flowing to their residents and businesses in increasingly dry times. It would be in effect through 2026 and could be revised during that time.

Some environmental groups said the pact did not go far enough to encourage conservation and discourage growth. But federal officials said they took the best of several proposals by the states, environmental organizations and others and emphasized the importance of all seven states agreeing with the result.

“I think for the first time in 85 years we are on the same page,” said Herb Guenther, the director of water resources in Arizona, which had initially balked at some terms of the agreement and was threatening legal action over it.

But with water levels in reservoirs dropping, a record eight-year drought, the prospect that climate change could bring more dry spells and new scientific analyses suggesting the West could be drier than has been traditionally believed, the states were pushed to act.

These factors “forced the issue to the head and we decided to do something unique and different,” Mr. Guenther said.

The agreement, the product of two-and-a-half years of negotiation and study, establishes criteria for the Interior Department to declare a shortage on the river, which would occur when the system is unable to produce the 7.5 million acre-feet of water, enough to supply 15 million homes for a year, that the three downriver states are entitled to.

Water deliveries would be decreased based on how far water levels drop in Lake Mead and Lake Powell. The Bureau of Reclamation, which manages the river system, predicts about a 5 percent chance of such a shortage being declared by 2010, but it all depends on how much the states are able to conserve and, of course, the weather.

The probability projection “does not imply it can’t happen,” said Terry Fulp, a bureau official involved in managing the river.

Water districts, anticipating an eventual cutback of Colorado River water, have been storing large amounts of water and the accord encourages them to continue to do so.

The pact, which Interior Secretary Dirk Kempthorne is expected to sign Thursday, includes a bundle of agreements with the states. One is approval for water managers in the Las Vegas area, which gets 90 percent of its water from the Colorado, to get a greater share of Lake Mead water in exchange for financing a reservoir in California to capture large amounts of river water destined for Mexico but beyond that country's entitlement by treaty.

"It's hugely important for us," said Scott Huntley, a spokesman for the Southern Nevada Water Authority. "This really does provide the bridge for us to get into the next decade."

But John Weisheit, conservation director for Living Rivers, a Utah-based environmental group, said the agreement sends the message to the states that growth trumps sensible water management. Mr. Weisheit said the conservation should have been emphasized and the government's computer modeling was overly optimistic about future water supply.

"There is more water on paper than there actually is on the landscape," he said. "They are looking at this in a way that will allow more development even though the water is not theoretically there."

LR in the News 12/12/07

Scientists want to flush out Grand Canyon again

Past releases from Glen Canyon Dam haven't beefed up sandbars

By Patty Henetz

The Salt Lake Tribune

Article Launched: 12/12/2007 08:39:56 PM MST

LAS VEGAS - Flushing water through the Glen Canyon Dam to try to build up sandbars, beaches and backwaters hasn't worked in the past, but that's not a deterrent to federal scientists who want to try again.

Speaking during a meeting of the Upper Colorado River Commission, U.S. Geological Survey scientist John Hamill said plans are afoot to release 41,500 cubic feet per second of water from behind the dam into the river below for 60 hours.

The release would be a way to incorporate previous results from other experiments to try to find a way to sustain sand flow in a healthy way in the river to discourage exotic invasive vegetation and create safe harbors for species including the endangered humpback chub, said Hamill, chief of the USGS monitoring and research center in Flagstaff, Ariz.

The Upper Colorado River Commission, which manages the Colorado River rights for Utah, Montana [Wyoming], New Mexico and Colorado, met during the annual Colorado

River Water Users Association meeting. The association includes the lower basin states - California, Arizona and Nevada - that have prior rights on the river and hold the balance of power over the entire river system's allocations.

The U.S. Bureau of Reclamation, which already has spent more than \$200 million seeking ways to counter the dam's downstream damage, is actively planning for the release, even though a 2005 USGS report said 13 years of similar efforts had been unsuccessful.

Previous attempts have either blasted away the sand that had accumulated naturally from tributary inflow, or simply didn't deposit any sand. This time, Hamill said, the river below the dam is relatively sandy, and changes in Grand Canyon management have allowed warmer water and more sediments to flow through the dam.

The technique is called "adaptive management," kind of a learn-as-you-go series of experiments designed to run over the long term. The 2008 test would be a synthesis of previous experiments, including a test in summer 2000 where dam releases were kept at a steady 8,000 cubic feet per second from June 1 to Sept. 1.

Hamill said that resulted in water temperatures in backwaters and shallow shoreline habitats reaching about 50 degrees Fahrenheit - the river below the dam is usually about 20 degrees Fahrenheit [colder than the pre-dam river temperature]. The steady release also limited sand drift downstream and kept healthy a population of humpback chub that had been moved near the mouth of the Little Colorado.

Still, there's a limit to building up sandbars; it is only possible if there's already a lot of sand in the river - and there's not.

Scientists acknowledge that the tributaries that feed the Colorado River below the dam, such as the Paria and Little Colorado, don't provide enough sand to keep ecosystems healthy.

And as Lake Powell sediments become increasingly polluted, just sending them down-river isn't a good answer, either, said Living Rivers director John Weisheit. The only solution, he says, is to remove the dam.

Built in 1963, Glen Canyon Dam has provided water and power for the West. The sand-flow issue must be resolved - both because of the need for sandbars in the Grand Canyon, and because the buildup of sediment in Lake Powell will eventually threaten the reservoir and the functions of the already-impaired hydropower plant.

LR in the News 12/13/07

Interior secretary signs historic plan as basin states work on water conservation, augmentation

(Thursday, December 13, 2007)

April Reese, Land Letter Western reporter

After two-and-a-half years of negotiations amid a record drought, an unprecedented agreement aimed at helping the seven states in the Colorado River basin endure future water shortages is final. Interior Secretary Dirk Kempthorne signed the accord today at a ceremony in Las Vegas.

The states and the Bureau of Reclamation claim the new plan will stretch shrinking water supplies in the basin, provide more certainty to the states about what will happen when reservoir levels drop and help avoid lawsuits. Within the framework of the agreement are a series of water management stipulations for the states and a host of conservation and water augmentation measures.

The seven states and the Bureau of Reclamation claim the new plan will stretch shrinking water supplies in the basin and provide more certainty to the states about what will happen when reservoir levels drop. Map courtesy of the Department of Interior.

The agreement, the "Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead," spells out how much the states will be required to reduce their take of the Colorado River during dry times and under what circumstances. In 2005, then-Interior Secretary Gale Norton directed the states to work together to find ways to ease the pain of projected shortages in the basin. The drought, now in its eighth year, along with climate change impacts and increasing growth in many basin states, provided a strong incentive for the states to hammer out their differences during negotiations, federal officials said.

"It really has taken a lot of participation and good will and the commitment among the seven basin states and Reclamation to try to find solutions," said Barry Wirth, spokesman for Reclamation's upper Colorado River Basin office. "They were challenged by the secretary to come up with shortage strategies, and they did."

"It had to be done to stretch the water supply and get through the tough times that are inevitably ahead," said Don Ostler, executive director of the Upper Colorado River Commission. "I think everyone is hopeful this will make a significant difference."

The drought -- the worst the basin has seen in 100 years -- has shrunk water levels in the Colorado River's two main storage reservoirs, Lake Powell and Lake Mead, to about half full. In 1999, before the drought hit, the lakes were near capacity (Land Letter, April 12). Meanwhile, population growth -- and the increased demand it brings -- continues to tax water supplies in the basin, pushing some states to the limit of their Colorado River allocation.

"This is a critical time -- perhaps even an historic time -- in the Colorado Basin," Kempthorne said, during the accord ceremony today.

"We're really trying to take a holistic approach to managing these two reservoirs and come up with a management scheme that really benefits both [upper and lower] basins," said Terry Fulp, area manager for Reclamation's Boulder Canyon operations office and one of the officials involved in writing the plan.

Skeptics of the plan

But river advocates gave the accord mixed reviews. Jennifer Pitt, of Environmental Defense's Boulder, Colo., office, commended BuRec and the states for providing "badly needed flexibility" for managing the river's water. And she lauded a provision that helps clear the way for Mexico to negotiate releases from Lake Mead that could send more water to the beleaguered Colorado River Delta (Land Letter, March 22). But in the end, there may simply not be enough water to go around, she added.

"The bottom line is, if the hydrology stays bad and growth continues, we're still going to be in a water crunch," said Pitt, who submitted a conservation-based proposal during the review process for the plan.

Others criticized the document as a testament to wishful thinking in an increasingly water-strapped -- and overdeveloped -- basin.

"They're not going to conserve a gallon of water," said John Weisheit, conservation director for Living Rivers, an environmental group based in Moab, Utah, that advocates breaching Lake Powell's Glen Canyon Dam. "They're just going to turn around and build another house."

"I'm very skeptical," added Nikolai Lash, senior program director for the Grand Canyon Trust in Flagstaff, Ariz. "It doesn't recognize that we have a very flawed framework of water distribution, that it's based on [estimates from] wet years rather than the realistic climate change years we're in the midst of. We'll be revisiting this agreement 10 years from now."

The 1922 compact that divvies up the river's water among the seven states was negotiated during an unusually wet period in the Colorado River basin, and the allocations to the states may not reflect the hydrological reality in the basin, particularly as climate change takes its toll, he said. In the new plan, Reclamation acknowledged that it may have overestimated average flows in the basin but does not suggest revisiting the compact (Land Letter, Nov. 8).

A balancing act

Reclamation took the best ideas from proposals submitted by the states, environmental groups and other entities, officials said.

Under the 1922 compact and other agreements collectively known as the "law of the river," Lake Powell, on the Utah-Arizona border, stores water for the upper basin, and

Lake Mead, on the Arizona-Nevada border, stores water for Arizona, Nevada and California. The upper basin is required to send 7.5 million acre-feet of water downstream for use in the lower basin each year, and all seven basin states must collectively deliver 1.5 million acre-feet to Mexico.

Under the new agreement, which is intended to direct management of the river until 2026, the two reservoirs will be operated in tandem to ensure that neither drops too low. That will help prevent shortages in the lower basin and the need for curtailments of water usage in the upper basin, Wirth said.

If there is a shortage, which would have to be declared by the secretary of Interior, the states will be required to make specific cuts in their use of Colorado River water, based on three trigger points in Lake Mead.

Under the pecking order laid out in plans, Arizona would be hit first if levels in Mead fell to the first trigger point set in the plan. The state would need to cut 320,000 acre-feet, or 11 percent of the state's Colorado River allocation, until water levels in Lake Mead rose again. If reservoir levels continued to fall, Nevada would then have to reduce its use. Further drops would prompt cuts by California, although some officials question whether reservoir levels would drop that low, even in a severe drought.

In most cases, agriculture would be hardest hit.

Levels in Lake Mead are now about 35 feet above the first trigger point. Fulp of Reclamation said there is a 5 percent chance that shortages will occur in the basin by 2010.

Conservation and augmentation

In an effort to cushion the blow of a potential shortage, the lower basin states also agreed to undertake a host of measures and projects to improve efficiency in the system, increase conservation, and tap alternative supplies to lessen their dependence on the Colorado River and leave more water in Lake Mead to avoid reaching shortage triggers.

Population growth taxes water supplies in the basin, pushing some states to the limit of their allocation. Photo courtesy of NOAA.

For instance, the Southern Nevada Water Authority, which relies on the Colorado River for 90 percent of the water that quenches the fast-growing Las Vegas area, will be able to draw more water from Lake Mead in exchange for helping to build a new reservoir in California, called "Drop Two." The reservoir, which will be built near the Mexican border, will capture additional water not needed by Mexico. Currently, if rainfall adds more water to the lower reaches of the basin, it simply ends up as a bonus to Mexico because there is currently no way to store it, said Bob Walsh, a spokesman for Reclamation's lower Colorado River office.

The lower basin states also have come up with ways to make it easier for managers to transfer water from agricultural lands to cities.

Creating new water supplies through desalinization, which involves treating ocean water to turn it into potable water, is also under discussion.

Essentially, those conservation and augmentation measures would allow states to leave more water in Lake Mead that they could later withdraw for future use. "If you provide that water instead of Colorado River water, therefore saving water in Lake Mead, it could be conserved and used by a state," said Ostler of the Upper Colorado River Commission. Currently, a state that banks water in the reservoir loses it if it is not used within one year.

Under the agreement, only the state that adds water to Lake Mead can remove it later. But about 5 percent of a water contribution is banked for use in the entire lower basin, and some of that water can be used for environmental purposes -- a provision for which environmental groups fought.

The new guidelines, which will go into effect in January, can be revisited if the states or Reclamation feel they are not working or if new information about climate change impacts required a retooling of the plan, Wirth said.

Experimental flow plan for Glen Canyon Dam aims to recover endangered fish

Thursday, January 24, 2008 April Reese, Land Letter Western reporter

The Department of Interior last week announced plans to release an experimental high flow from behind Glen Canyon Dam to help recover endangered fish and other resources downstream in Grand Canyon National Park.

Federal officials hope the surge, which will mimic historic, pre-dam flows on the Colorado River, will deliver sediment downstream and rebuild eroded beaches. Beaches and sandbars provide crucial habitat for wildlife and create backwaters for native fish, including the endangered humpback chub. The accumulation of sand also helps protect archaeological sites.

The Bureau of Reclamation, which manages the dam, conducted a similar experiment in 2004 (Land Letter, Dec. 2, 2004). The new experiment, announced Jan. 17, will build on the information gleaned from the 2004 experiment and another in 1996, said John Hamill, head of the U.S. Geological Survey's Grand Canyon Monitoring and Research Center. This time, there is an influx of sand in the Colorado River system, which will be carried by the high flows released from the dam.

"Given the current amount of sand in the system, we have a tremendous opportunity to learn more about whether high flows can be used to improve important natural, cultural, and recreational resources in Glen and Grand canyons," Hamill said.

If the secretary of the Interior Department approves the plan, Reclamation will send 41,000 cubic feet per second of water surging down the Colorado River through the Grand Canyon for about two-and-a-half days. That is more than twice the amount of water typically released from the dam; since 1996, releases have ranged between 8,000 and 20,000 cubic feet per second.

The effects of the high flows, tentatively scheduled to begin March 4, will be studied by a cadre of federal scientists. The experiment will "provide the valuable information needed to protect the resources within Grand Canyon National Park," said Steve Martin, superintendent of Grand Canyon National Park.

Under the Grand Canyon Protection Act, Reclamation must make sure operations are conducted in a way that protects Grand Canyon resources.

Larry Walkoviak of Reclamation said the experiment will not increase the overall amount of water released over the course of the 2008 water year. Monthly releases later in the year will be lower to make up for the higher flows in March, he said.

Criticisms

But critics say the experiment is not enough to help the park's resources, which have suffered because of the dam.

"This is a half measure," said John Weisheit, conservation director for Living Rivers. "Unless they do it every year, it's not going to work."

And the amount of sediment flowing in from the Paria River and other tributaries is insufficient to make up for the dam's restriction of sediment in the Colorado River itself, he added. Dam managers estimate that 92 percent of the sediment that would be carried downstream by an undammed river is blocked by Glen Canyon Dam.

"They seriously need to start looking at other alternatives, which are sediment augmentation and decommissioning," Weisheit said.

Augmentation would involve trucking or piping sediment around the dam, an option that has been discussed but never tried, partly due to its exorbitant expense.

Decommissioning would involve breaching or removing the dam, a controversial option Living Rivers has advocated for years but Reclamation and power interests oppose.

In December, environmental groups filed suit against Reclamation over the agency's normal operation of the dam (Land Letter, Dec. 13). The groups argue that a 1994 biological opinion from the U.S Fish and Wildlife Service requires the agency to release high flows in the spring and low flows in the summer and fall to benefit the chub. Currently, Reclamation releases low, fluctuating flows throughout the year.

A final decision on the experimental flow proposal is expected in late February.

April Reese writes from Santa Fe, N.M.

Take Action 02/08/08

Announcing: Public Comment Period on River Flow Experiment below Glen Canyon Dam

Bureau of Reclamation
Upper Colorado Regional Office
Media Contact: Doug Hendrix or Dennis Kubly
(801) 524-3837 (801) 524-3715
Release Date: February 8, 2008

Comments due: February 22, 2008

Reclamation Releases Environmental Assessment for Public Comment on Proposed High-Flow and Steady Flow Experiment on the Colorado River

Salt Lake City, UT - The Department of the Interior's Bureau of Reclamation today released for public comment an Environmental Assessment that describes a proposed early-March 2008 high-flow test and fall steady flow experiment from Glen Canyon Dam

downstream through the Grand Canyon. Comments will be due by close of business February 22, 2008.

"Reclamation continues to support the application of science and adaptive management to the operation of Glen Canyon Dam and the management of natural resources in Glen and Grand Canyon," Reclamation Commissioner Robert W. Johnson said in announcing the availability of the Environmental Assessment. "Experiments such as the proposed high-flow and fall steady flow continue to advance our understanding of the ecosystem while providing tangible benefits to the fishery, river environment, and recreational users in Grand Canyon National Park."

The environmental assessment evaluates the impact of the proposed test on a wide range of environmental and socioeconomic resources. A decision by the Department of the Interior is anticipated in late February 2008, with plans to conduct the high flow in early March 2008, if the decision is to move forward with the experiment.

The high-flow experiment and associated research activities, should they occur, will be undertaken cooperatively by scientists and resource managers from Interior's U.S. Geological Survey (USGS), Reclamation, National Park Service, U.S. Fish and Wildlife Service, and Bureau of Indian Affairs.

The 2008 test would be similar to the previous high-flow tests conducted in 1996 and 2004, but the amount of sediment available is considerably larger. In particular, scientists have concluded that more sand is needed to rebuild sandbars throughout the 277-mile reach of Grand Canyon National Park than was available in 1996 or 2004. Currently, sand supplies in the river are at a 10-year high with a volume about three times greater than in 2004 due to tributary inflows below the dam over the past 16 months.

The Environmental Assessment is available for public review on the Internet by following the link at [Click Here](#) or by contacting Dennis Kubly, Bureau of Reclamation, Upper Colorado Regional Office, 125 S. State Street, Salt Lake City, Utah 84138, and by telephone at (801) 524-3715.

LR Letter 02/11/08

Comments: West-wide Energy Corridor DEIS

West-wide Energy Corridor DEIS
Argonne National Laboratory
9700 S. Cass Avenue
Building 900, Mail Stop 4
Argonne, IL 60439
Sent via fax: 866-542-5904

Dear Ms. Julia Souder,

Thank you for this opportunity to submit comments on West-wide Energy Corridor Programmatic Environmental Impact Statement (PEIS). Living Rivers is a non-profit organization based in Moab, Utah, which is situated along the Colorado River and two national parks, Canyonlands and Arches. Our mission is to preserve, protect and restore watershed ecosystems and resources in the Colorado River basin.

The Colorado River is the lifeblood of the seven western states and Mexico. The river supplies water for federal reserve lands, agriculture and 30 million people. The geophysical province, the Colorado Plateau, is the major drainage area by volume in the Colorado River basin.

The Colorado Plateau and the Colorado River will be adversely affected by the development of energy transmission corridors considered in this PEIS. This development will encourage industries that are inappropriate for a watershed of this importance, because it will jeopardize our drinking water and watershed habitats that are necessary to recover federal endangered species.

This development sets the stage for extractive industries, and power-generation facilities, of both fossil and nuclear fuels, to enter the Colorado Plateau. The Colorado Plateau is the largest intact wilderness and refuge by area in the contiguous United States.

These industries require incredible amounts of water to operate. Water the Colorado River can no longer reliably provide, because the legal documents of the system have created a situation of over-allocation. Additionally, over-consumption and excessive evaporation from rising temperatures in the atmosphere, will continue the trend of dwindling supplies. Reservoirs are currently lowering and in-stream flows are diminishing throughout the basin.

The energy program proposed in this document, and its connection to large-scale energy fuel development projects, will cause unnecessary harm to the various communities dependent on the Colorado River. They are also financially burdensome and will not reduce our dependency of finite energy resources.

The paradigm of status quo energy development must be changed. Research and development funds must be appropriated to begin a new paradigm of renewable resources and conservation. These programs will reduce the ever-increasing amount of pollution entering the atmosphere and the landscape.

Furthermore, transmission lines spanning the open spaces of the Colorado Plateau, which has the highest concentration of national parks in the United States, can be avoided completely by keeping energy-producing facilities as close to the market place as possible. Eliminating extensive transmission lines altogether will help to increase the yield of electricity through efficiency, and protect what cherished landscapes yet remain in our wild lands of the Colorado Plateau.

If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely yours,

John Weisheit
Conservation Director

Regional News 02/12/08

Lake Mead Could Be Dry by 2021

From: Scripps Institution of Oceanography/UC San Diego

[Scripps's Press Release](#)

[Scripps's science paper](#)

[Reaction by the water managers to the Scripps's press release](#)

Tuesday, February 12, 2008

Lake Mead Could Be Dry by 2021

Analysis of current and scheduled use and human-induced climate change sparks urgent warning from researchers at Scripps Institution of Oceanography, UC San Diego.

There is a 50 percent chance Lake Mead, a key source of water for millions of people in the southwestern United States, will be dry by 2021 if climate changes as expected and future water usage is not curtailed, according to a pair of researchers at Scripps Institution of Oceanography, UC San Diego.

Without Lake Mead and neighboring Lake Powell, the Colorado River system has no buffer to sustain the population of the Southwest through an unusually dry year, or worse, a sustained drought. In such an event, water deliveries would become highly unstable and variable, said research marine physicist Tim Barnett and climate scientist David Pierce.

Lake Mead at Hoover Dam, October, 2007. According to Scripps researchers, the lake could dry up by 2021 if preventative measures are not taken. Photo courtesy of Dr. Ken Dewey, Applied Climate Sciences Group, University of Nebraska, Lincoln.

Lake Mead at Hoover Dam, October, 2007. According to Scripps researchers, Lake Mead could be dry by 2021 if climate changes as expected and future water usage is not curtailed. Photo courtesy of Dr. Ken Dewey, Applied Climate Sciences Group, University of Nebraska, Lincoln. Barnett and Pierce concluded that human demand, natural forces like evaporation, and human-induced climate change are creating a net deficit of nearly 1 million acre-feet of water per year from the Colorado River system that includes Lake Mead and Lake Powell. This amount of water can supply roughly 8 million people. Their analysis of Federal Bureau of Reclamation records of past water demand and calculations of scheduled water allocations and climate conditions indicate that the system could run dry even if mitigation measures now being proposed are implemented.

The paper, "When will Lake Mead go dry?," has been accepted for publication in the peer-reviewed journal *Water Resources Research*, published by the American Geophysical Union, and is accessible via the AGU's website (see instructions below).

"We were stunned at the magnitude of the problem and how fast it was coming at us," said Barnett. "Make no mistake, this water problem is not a scientific abstraction, but rather one that will impact each and every one of us that live in the Southwest."

"It's likely to mean real changes to how we live and do business in this region," Pierce added.

Research marine physicist Tim Barnett (right) and programmer/analyst David Pierce of the Climate, Atmospheric Science and Physical Oceanography (CASPO) division at Scripps Institution of Oceanography, UC San Diego.

Research marine physicist Tim Barnett (right) and programmer/analyst David Pierce of the Climate, Atmospheric Science and Physical Oceanography (CASPO) division at Scripps Institution of Oceanography, UC San Diego.

The Lake Mead/Lake Powell system includes the stretch of the Colorado River in northern Arizona. Aqueducts carry the water to Las Vegas, Los Angeles, San Diego, and other communities in the Southwest. Currently the system is only at half capacity because of a recent string of dry years, and the team estimates that the system has already entered an era of deficit.

"When expected changes due to global warming are included as well, currently scheduled depletions are simply not sustainable," wrote Barnett and Pierce in the paper.

Barnett and Pierce note that a number of other studies in recent years have estimated that climate change will lead to reductions in runoff to the Colorado River system. Those analyses consistently forecast reductions of between 10 and 30 percent over the next 30 to 50 years, which could affect the water supply of between 12 and 36 million people.

The researchers estimated that there is a 10 percent chance that Lake Mead could be dry by 2014. They further predict that there is a 50 percent chance that reservoir levels will drop too low to allow hydroelectric power generation by 2017.

The researchers add that even if water agencies follow their current drought contingency plans, it might not be enough to counter natural forces, especially if the region enters a period of sustained drought and/or human-induced climate changes occur as currently predicted.

Barnett said that the researchers chose to go with conservative estimates of the situation in their analysis, though the water shortage is likely to be more dire in reality. The team based its findings on the premise that climate change effects only started in 2007, though most researchers consider human-caused changes in climate to have likely started decades earlier. They also based their river flow on averages over the past 100 years, even though it has dropped in recent decades. Over the past 500 years the average annual flow is even less.

"Today, we are at or beyond the sustainable limit of the Colorado system. The alternative to reasoned solutions to this coming water crisis is a major societal and economic disruption in the desert southwest; something that will affect each of us living in the region" the report concluded.

The research was supported under a joint program between UC San Diego and the Lawrence Livermore National Laboratory and by the California Energy Commission. The views expressed here do not necessarily represent the views of the California Energy Commission, its employees, or the state of California.

#

Additional news on this subject

[U.S. Faces Era Of Water Scarcity: Profligate Use Hurts In Unexpected Places; Quest For New Supplies Nationwide](#)

Regional News 02/13/08

Lake Mead Not Going Dry, say Dozier and Fulp

"We were contacted by some newspaper reporters to respond to a report to be released by Scripps Institute that says Lake Mead could be dry by 2021," said Larry Dozier, Deputy General Manager of Central Arizona Project.

"That is absurd," he added.

The seven states that draw water from the Colorado River, in conjunction with the U.S. Bureau of Reclamation (BOR), recently reached an agreement on management of the Colorado River. That agreement was reached after extensive studies about the drought conditions and how severe shortages could be avoided. "The studies evaluated a broad range of potential hydrologic conditions and several alternative operating criteria," Dozier said. "Lake Mead did not "go dry" at any time during the various scenarios. Shortages were manageable."

In addition, CAP produced its own separate drought impact analysis in 2007 by creating a "worst case" scenario based on the University of Arizona's tree ring study and it showed that Lake Mead did not go "dry," Dozier said.

Terry Fulp, an area manager of Boulder Canyon Operations for BOR, which oversees water deliveries and hydropower output at Hoover Dam put the chances of Lake Mead running dry at almost zero, according to a story in the Las Vegas Review-Journal.

Ultimately, Fulp said, there is nothing new about the findings in the Scripps study. Such "doom and gloom" predictions have been circulating for years now.

"In my lifetime, I don't expect to ever see it," he said. CAP is a 336-mile-long system that brings about 1.5 million acre-feet of Colorado River water to its customers -- cities, businesses, agriculture and Indian communities -- in Pima, Pinal and Maricopa counties.

An acre-foot of water is about 326,000 gallons.

REFERENCE: [CAP press release](#)

LR Letter 02/22/08

LR comments on EA for operations at Glen Canyon Dam 2008-2012

February 22, 2008

Mr. Dennis Kubly
Bureau of Reclamation, Upper Colorado Regional Office
125 S. State Street, Salt Lake City, Utah 84138
Fax: (801) 524-3858
GCexpReleases@uc.usbr.gov

Re: Environmental Assessment of Experimental Releases from Glen Canyon Dam, Arizona 2008 through 2012.

Dear Mr. Kubly,

On behalf of Living Rivers and the Center for Biological Diversity, we submit the following comments on the February 08, 2008 *Environmental Assessment of Experimental Releases from Glen Canyon Dam, Arizona 2008 through 2012*. While we appreciate Reclamation's intentions to potentially aid in the redistribution of sediment, such that it might improve habitat conditions for endangered native fish, we find this action insufficient on its own to offer any lasting benefits toward fulfilling this objective.

1. Sediment Augmentation

Past experience has already illustrated the limited benefits such experimentation can achieve. The 1996 and 2004 high flow experiments have revealed that there is not enough sediment entering the river ecosystem below Glen Canyon Dam to make up for the 44 million tons that would otherwise be entering the system on an annual basis were the dam not in place. In 2005, during the Science Symposium by Grand Canyon Monitoring and Research Center (GCMRC), and again in 2006 during meetings of the Technical Working Group, scientists discussed or recommended that the Adaptive Management Program should consider bringing additional sediment into the system through a mechanical augmentation plan. The public also recommended augmentation during the scoping period for the Long-Term Experimental Plan Environmental Impact Statement. Absent such augmentation, this proposed action will offer no lasting benefits, either to endangered fish or recreational beaches. As noted in the 2005 Score Report by the United States Geological Survey, Grand Canyon is running a sediment deficit, and

no amount of experimental flows can fix this problem. Reclamation must explore sediment augmentation as a viable alternative to meeting the objectives of this action.

2. Seasonally Adjusted Steady Flows

As has been stated repeatedly, Reclamation is in violation of the terms set forth in the 1994 Biological Opinion requiring that Seasonally Adjusted Steady Flows be implemented from Glen Canyon Dam for reasons of insufficient progress to remove jeopardy to threatened and endangered species, and during minimal releases of 8.23 million acre feet (maf). Only when such flows are integrated with sediment augmentation, as noted above, will there be any real opportunity for species recovery.

We find it particularly unfortunate that the 2007 Biological Assessment also chose to ignore Seasonally Adjusted Steady Flows (SASF). It's unfortunate that such operating criteria may offer the best opportunity for meeting the objectives of the Grand Canyon Protection Act, but continues to be shunned by the hydropower interests.

3. Declining Reservoir Levels

This action is wholly contingent on there being sufficient water in Lake Powell, such that flood flows greater than 41,500 to 45,000 cfs (cubic feet per second) can be created. However, should the reservoir elevation drop below 3,490 feet msl (mean sea level), this will be impossible. The maximum flow that could be achieved would be less than 15,000 cfs through the bypass tubes alone. While current snow pack indicates that for at least the next two years, there should be sufficient water in Lake Powell to undertake such experiments, there is no guarantee that this will be the case through the completion of the proposed action period in 2012. Lake Powell's present elevation is 3,595 feet, meaning reduced inflows during the experiment period to 2012 of a net -6.8 maf will be sufficient to force the shut down the penstocks, and this proposed action. As you are well aware, in the three years after 2000, Lake Powell's level dropped 11 maf, thus history illustrates that such reductions have occurred, yet the EA assumes, without any justification, that they will not.

While section 3.1.1.1 discusses climate change, it relies on the same limited analysis undertaken by Reclamation for Shortage Criteria—analysis which Reclamation states does not take into account climate change. More importantly, isolating the ISM single trace (index sequential hydrologic modeling) that begin with water years 1950 or 2000, would clearly show the potential for Lake Powell dropping to levels near or below the 3,490 msl threshold. While Reclamation may wish to argue the likelihood of such an occurrence, it cannot ignore the prospect altogether.

4. Water Quality

The continued avoidance by Reclamation to address the likelihood of reservoir levels dropping significantly below their current levels, represents a potentially ticking time bomb for Grand Canyon. The implications are far greater than whether or not GCMRC scientists find more grains of sand near the Little Colorado River six months following a

high-flow experiment. The quality of water entering Grand Canyon could become so poor as to pose a serious threat to Grand Canyon's entire river ecosystem.

As the EA points out in section 3.1.3.1, dissolved oxygen levels at the upper portion of the reservoir are far greater than that of the water that is typically released from the penstocks. Even now, the levels flowing into Grand Canyon are higher than prior to the experimentation of 1996. This situation only worsens the lower the surface of the reservoir becomes and with the decreased volume of water generally. This issue has never been addressed by Reclamation, nor a number of other potential water quality impacts to Grand Canyon including: extreme water temperature, increased nutrient concentrations, higher salinity, high hydrogen sulfide, heavy metals such as mercury and selenium, and the pass through of exotic reservoir animals. This EA must therefore evaluate the potential water quality impacts the Grand Canyon ecosystem might face from decreasing reservoir levels during the period of the proposed action. More importantly, Reclamation must immediately undertake a comprehensive assessment of the potential water quality impacts on Grand Canyon should the reservoir drop to dead pool.

5. Archeology

As noted in section 3.2, this action is likely to cause harm to a number of archeology sites, as well as to cultural vegetation. Such a problem would not occur were Reclamation to implement SASF as noted above in combination with sediment augmentation. Reclamation continues to make archeology a low priority, preferring to dig and relocate sites and artifacts than preserve them in situ as is their mandate.

Lastly, we remain frustrated by Reclamation's ongoing policy of unnecessarily limiting public comment periods. This action has been contemplated by Reclamation since December of 2007, yet the Environmental Assessment is offered for public comment less than one month prior to the scheduled date of the proposed action. Additionally, a federal action of this magnitude deserves a proper *Federal Register* notice, which Reclamation has failed to do.

Whether it's poor management on behalf of the AMP and the GCMRC, an intentional disregard for public participation, or both, Reclamation must correct this problem, beginning with extending the deadline for comments on this EA an additional 15 days.

As evidenced by the ramping up of publicity for the first experimental flow contemplated with this action on March 4, it appears Reclamation is more interested in mobilizing media interest in support of Reclamation's own interpretation of this action, than it is on assuring the public has an opportunity to evaluate it for themselves and draw their own conclusions.

In conclusion, we view this EA as merely one more volume in the unfortunate history the Bureau of Reclamation and the Adaptive Management Program has visited on Grand Canyon. Until such time as Reclamation and the AMP makes a commitment to restoring the natural process that nurtured the evolution of Grand Canyon's river ecosystem, no

possibility exists for the ecosystem itself to be restored consistent with intent of the 1992 Grand Canyon Protection Act.

Sincerely,

John Weisheit, Conservation Director, Living Rivers
Michelle Harrington, Rivers Conservation Manager, Center for Biological Diversity

Additional Information:

[Bureau of Reclamation EA Documents](#)

[Living Rivers scoping letter LTEP EIS](#)

[Living Rivers letter Shortage Criteria DEIS](#)

[Use the Colorado River Open Source Simulator \(CROSS\) to perform hydrological modeling yourself.](#)

Regional News 03/17/08

Moab activists call builder a threat to area's water supply

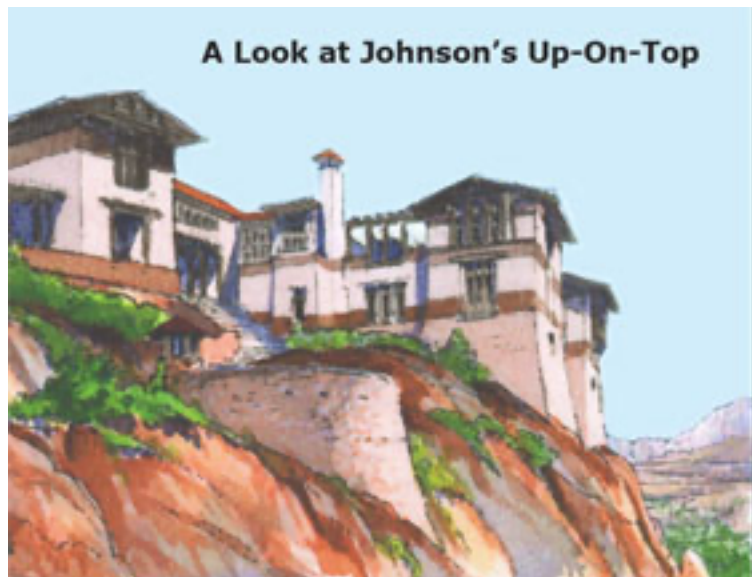
By Christopher Smart
The Salt Lake Tribune
Article Last Updated: 03/17/2008
06:42:03 AM MDT

[Download "A Look at Johnson's Up-On-Top"](#)

Developers call it fear-mongering. But a group of residents against a proposed upscale housing project on a redrock mesa overlooking Moab say it could put the town's drinking water in jeopardy.

In a slick, 10-page brochure distributed inside Moab's The Times- Independent newspaper, the Grand County Citizens for Clean Water claim that neither the developer nor Grand County can ensure that the Cloudrock project will not harm the aquifer that feeds the municipal water system.

It's the latest round in an eight-year battle.



The joint proposal by Leucadia National Corp. and the Utah School and Institutional Trust Lands Administration (SITLA) already has been approved by the Grand County Planning Commission and the County Council. The plans include a 225-room lodge, 150 condominiums and 110 home sites on 1,935 acres of state trust lands on the mesa called Johnsons Up On Top.

But the group that distributed the flyer has put the developers on notice that any groundwater pollution and a subsequent cleanup would be cost prohibitive.

"Should damage occur to the aquifer, it is reasonable for the affected parties to insist that SITLA be responsible for the full cost of mitigation," the brochure states.

The group earlier filed suit in 7th District Court alleging that Grand County's adoption of the Cloudrock development was "arbitrary and capricious."

A SITLA official said Friday the agency is confident that Leucadia's plans have gone "above and beyond" engineering requirements - set by Grand County and Grand Water and Sewer Service Agency - to prevent pollution of the aquifer.

"Based on what we've seen, we don't see any risk in the world of reality," said Associate Director John Andrews.

A Salt Lake City-based attorney representing Leucadia said the four-color brochure was just the latest installment of an ongoing "misinformation campaign" aimed at scuttling an approved development.

"It's NIMBYism - not in my backyard," said Michael Zimmerman. "It is our view that the opponents are fundamentally against any development and have been since the origin of the project" in 2000.

Nonetheless, County Councilwoman Joette Langianese, who is not affiliated with the group of residents, said because of the complexities of the sandstone formations surrounding the aquifer, she continues to have doubts about the safety of the water source.

"There isn't enough information for me to be comfortable with a big development like that on top of our aquifer," she said. "Hopefully, nothing will go wrong."

What's next? 7th District Judge Lyle Anderson will hear arguments April 15 at 9 a.m. on whether the group of residents can appeal the Cloudrock proposal to the Grand County Board of Adjustment. Anderson also could rule that the project can go forward.

csmart@sltrib.com

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Lionsback not first controversial project

The Daily Sentinel
Saturday, July 19, 2008

The proposed Lionsback Resort is not the first luxury development to stir up controversy in Moab.

The Cloudrock Resort Development office in downtown Moab has been fully furnished but not staffed since 2001, and Lionsback may be forced to travel a path similar to that development, which has been tied up in lawsuits since 2003.

The Cloudrock resort would sit on State Institutional and Trust Lands Administration land about seven miles south of Moab as per an almost mirror-image agreement of what the Lionsback developers had with the trust lands organization.

Only in Cloudrock's case, the developers sought approval and annexation into Grand County, not the city of Moab.

The approved preliminary plat for the Cloudrock Desert Lodge consists of a 225-room "Wilderness Lodge," 150 residential condominiums, and 110 homes in small clusters.

The development would be across four phases, with the first phase centering on the construction of the lodge.

"These are well-developed units. World-class units, but the developers don't want all their money tied up in construction," said Gene Ciarus, Grand County Council member. "The hotel was first to give people a reason to go out there."

A coalition of Moab residents, the Moab Citizens Alliance, protested the proposed annexation of the property, but the county approved it in 2001.

The complaints also included concerns over water protection and road width within the development, Ciarus said.

"These protesters are grasping at straws," Ciarus said. "This development will bring in big money and tax revenue without taxing our resources. It has exceeded every requirement, and that has been tested in court."

The first of several back-and-forth court filings between the county, SITLA and the MCA began in 2003, leaving the Cloudrock development in limbo.

Ciarus said the "continuing saga" is about to end, however, as the court has two more issues to settle.

He said he didn't want to speak before the judge's ruling, but Ciarus said every prior decision had been in favor of the developers.

"I'm sure with every decision regarding Cloudrock, they will file an appeal until they realize the developers aren't violating any law or asking for anything out of the ordinary," Ciarus said.

Though protesters of the Lionsback development say they don't want litigation, City Councilman Rob Sweeten said he foresees a legal battle in the future.

"They've already tried," Sweeten said.

“You look at what happened at Cloudrock, and it’s happening at Lionsback.”

Additional News

Group appeals council approval of Cloudrock phase 1
by Craig Bigler

Once again the group of citizens has filed an appeal of a Grand County Council decision on the Cloudrock development proposed for Johnson’s Up On Top mesa. Because the action taken by the council to approve the final plat for the first phase (phast 1A) of the development was administrative, according to group member John Weisheit, the appeal should be heard by the Grand County Board of Adjustment.

Last month the council approved the first phase, for development of 12 lots, even though an appeal by the same group is pending in the Utah Court of Appeals. The earlier appeal, if granted, would stop the entire project, except for the approved first phase, Cloudrock Land Company representative Mark Oligschlaeger said at the time.

This latest appeal is designed to stop any development, the appellants have said. It asserts the application for the first phase was incomplete and did not comply with requirements of the amended development agreement approved by the county council last December. The appeal claims that requirements for detailed sewer line construction plans were not submitted or approved.

“Our intent,” appellant Barb Morra said, “is to preserve and protect our drinking water recharge area, which is primarily on Johnsons Up On Top, where Cloudrock is being developed.”

The appeal claims that cost estimates for improvements required by the agreement are incomplete. It also asserts that the \$1.5 million financial guarantee proposed by Cloudrock covers only the estimated costs of roads and drainage required for the first phase, and “violates the requirements of the code and the amended development agreement that the financial guarantee be sufficient to cover the costs of all required improvements.”

During the county council’s deliberation on the issue last month, Grand County Planner Kristine Killoy said the bond was “adequate.”

“They didn’t follow the law,” Morra said, adding that the development’s financial guarantee should cover all required improvements, not just the access road. If the development goes bankrupt or loses in the court of appeals, it may not proceed beyond phase 1A and the county would be stuck with the cost of remediation, she said.

Weisheit said that Cloudrock must pay interest on the bond, and it is not large enough to cover all improvements. “They’re just ensuring their right to develop while waiting for the court to act,” he said.

Oligschlaeger declined to comment on the appeal. But when the county approved the first phase last month, Oligschlaeger said that if the 12 lots contained in that phase are

sold, that cannot be reversed, even if the court rules for the appellants. But, he said, such a ruling would stop the rest of the project. He also said that the Cloudrock Land Company would make full disclosure to potential customers about the possibility.

"Once again, they are putting the cart before the horse," Weisheit said. "It is wrong to move ahead until we've had our day in court."

###

New appeals contest PC approval of Cloudrock special exceptions
by Craig Bigler

Once again, attorneys representing a group of Grand County residents have filed appeals of decisions made by the Grand County Council and the Grand County Planning and Zoning Commission that give the go-ahead to development of the proposed Cloudrock Lodge.

Salt Lake City-based Smith Hartvigsen, PLLC, has filed two new appeals with the Grand County Board of Adjustment. The group is appealing the county council's Nov. 20 approval of Cloudrock's use-on-review application, and the planning commission's Dec. 12 approval of Cloudrock's two special exception applications.

Smith Hartvigsen also recently filed a cross-motion to a motion for summary judgement filed by Cloudrock in a separate appeal that was filed last year in 7th District Court in Moab. "It is nothing new, just the next step in resolving the lawsuit," said Smith Hartvigsen attorney Nancy Delacenserie.

The cross-motion asks Judge Lyle Anderson to remand the appeal to the board of adjustment and direct the BOA to hear the plaintiffs' appeal. Delacenserie said the appeal should go first to the board of adjustment because the decision last May by the county council to approve the amended Cloudrock development agreement was an administrative decision.

Smith Hartvigsen argues that the court has first jurisdiction only if the decision is legislative. "The court can decide on the facts if all parties agree on the facts," Delacenserie said. "We don't agree on the facts."

Noting that additional briefs will be filed before the court sets a hearing date to hear the issues, Mark Oligschlaeger of Leucadia Corp., which has partnered with Cloudrock Land Company, for the proposed Johnson's Up On Top project, agreed that nothing new has happened. "This process is playing out in the court system," he said.

Grand County Attorney Happy Morgan disagreed with Smith Hartvigsen assertions that the board of adjustment has jurisdiction over county council decisions and that the Grand County residents who filed the appeal represent the general public.

In an Aug. 29 memo, Morgan refers to the appellants as "a small contingent of persons opposed to the Cloudrock PUD."

Morgan's memo concludes, "The BOA has no authority to overturn an ordinance enacted by the Grand County Council. The elected Grand County Attorney represents both the BOA and the Council, and it is the opinion of the Grand County Attorney that the BOA has no jurisdiction over the appeal filed by Contingent [the appellants]; the proper venue is the District Court."

Regarding special exceptions, the appeal before the board of adjustment stems from the board's refusal to consider nearly identical appeals at a hearing on Dec. 10. The board decided to vacate the planning commission's approval of the exceptions on grounds that the public hearing held by the commission was invalid because proper 15-day notice was not given to the public.

Two days later, the planning commission held another set of public hearings and immediately re-approved the two special exceptions. One exception allows larger lodge unit size, the other allows streets as narrow as 20 feet. These re-approvals are now under appeal.

The use-on-review appeal is in regard to the county council's approval of changes that allow Cloudrock to alter the configuration of the lodge and "village" from the preliminary plat that was approved in May, 2007.

The use-on-review appeal argues that the change in configuration is so dramatic that the preliminary plat approval process should start over. Both the council and the commission indicated that they based their 2007 approval on the original preliminary plat approved in 2002, and the land use code that was in effect at the time.

###

Cloudrock LLC to withdraw phase one plat by Craig Bigler contributing writer 12 hrs ago | 83 views | 0 | 0 | | The Cloudrock development is on hold once again. In a Nov. 26 letter to the Grand County Council, Cloudrock Land Company LLC told elected officials the company has elected to withdraw its pending final plat application for the first phase of development, called phase 1A. The letter also states that the project will resume once the current national financial crisis turns around.

The letter from Cloudrock principal Mark Oligschlaeger notes that the pending final plat has not officially received final approval because it has not been signed by the applicant or by the county, and, it has not been submitted to the Grand County Recorder for official recordation.

The development agreement between Cloudrock and the county does not set a deadline for when final plats must be submitted. Council chairman Gene Ciarus said Cloudrock LLC's withdrawal of the plat means that the process for final approval of the first phase will have to start over again when the company determines it is ready to begin development.

"The primary purpose for this withdrawal is related to deteriorating market conditions, and not to pending legal challenges concerning the project," Oligschlaeger wrote, "Cloudrock will continue to aggressively defend and litigate these specious claims, and

anticipates that it will be successful in each case, as it has in the cases which have already been decided.”

Barb Morra, a spokesperson for the group of residents that has filed those appeals with 7th District Court in Moab and the Utah Court of Appeals, said she thinks the delay was caused because bonding for all infrastructure must be in place before the first phase development can begin. The bonding required amounts to \$8-10 million because it must include not just the access road along with sewer and water pipes, but also electricity and other utilities, Morra said she has been told “on good authority.”

The council approved phase 1A on Oct. 7 with a requirement that Cloudrock secure bonding of \$1.5 million for the access road and drainage. In a statement to the council last week Grand County Engineer Mark Wright acknowledged that an additional bond of \$2.5 million for sewer and water facilities is also required by the development agreement. A letter from Daniel Velazquez, project manager for Cloudrock, apologized for the “oversight” and stated Cloudrock’s intention to activate a letter of credit for the additional amount.

Morra said she believes that all infrastructure means more than just a road, sewer, and water.

“Who is going to move there without DSL?” she asked. Morra said that bonding for infrastructure for the entire proposed Cloudrock development planned for Johnson’s Up On Top mesa southeast of Moab (a total of 309 units) is far too great to be justified by the preparation and sale of only 12 units in the first phase.

Oligschlaeger closed his letter to the council by saying the company will move forward with the development.

“Cloudrock intends to submit applications for final platting when the timing is appropriate, consistent with the terms of the Development Agreement,” Oligschlaeger wrote.

Ciarus said the current economic climate and the pending appeals make it more difficult to proceed with the first phase at this time.

“I think [withdrawing the plat is] the rational thing to do,” Ciarus said. “Why spend a lot of money until these things [the appeals] get settled in court?”

“They’re just trying to keep the development agreement alive any way they can,” Morra said.

Oligschlaeger has requested that the county council hear the request to withdraw the plat at its upcoming meeting on Dec. 16.

###

July 29, 2009

Moab City Council approves development agreement for proposed Lionsback Resort

Moab Times-Independent by Jeannine Wait contributing writer

In a 3-2 vote Tuesday night, the Moab City Council approved a development and phasing agreement for Lionsback Resort. Council members Kyle Bailey and Sarah Bauman voted against the measure.

The council's decision moves the development, planned for property east of Moab owned by the state School and Institutional Trust Lands Administration, another step closer to becoming a reality.

The controversial Lionsback proposal has been in the works for several years, as the project wound its way through the city planning process that included a series of public hearings and efforts to annex the property into city limits .

From the submission of the proposed resort's design concept to the planning commission in 2007 to Tuesday night's decision on the development and phasing agreement, the Lionsback process has included contentious public hearings before the planning commission and the city council, approval of the preliminary plan, annexation of the 175.12 acre parcel of SITLA land into the Moab city limits and the creation of a new sensitive area resort zone that city officials have said was specifically designed for large, environmentally sensitive developments such as Lionsback. Future approval of a final plan will be the last step in the development process for the proposed resort.

The Lionsback resort development is planned for a 46.8-acre portion of the property located on Sand Flats Road that was formerly the Lions Back Campground. The development will be constructed in five phases, according to the development plans. Phase one calls for the construction of a large hotel center, 50 hotel guest condominiums and the platting of 34 single-family lots.

According to the development and phasing agreement approved Tuesday, a variety of infrastructure requirements will have to be met in phase one. Internal subdivision roads and 105 parking spaces near the hotel are included in the construction design. A storm drain will be required for storm water management, and connections to the city sewer system and the city water system will be included, along with the installation of a large water storage tank that will distribute water to all proposed development facilities located within the resort.

Electric, natural gas, cable television and telephone lines will be extended and installed along Sand Flats Road to serve the resort. Sand Flats Road will be improved to allow for greater public safety with an expected increase of traffic the presence of the resort will bring on the road.

Unlike a standard subdivision agreement, the development agreement approved by the city council requires separate agreements for each proposed phase in order to establish the responsibilities for construction of particular onsite and offsite improvements, city officials said.

A Drinking Water Source Protection Plan will also be required, according to city officials. But that plan is not an element of development agreements and will be presented within the next two council meetings for approval.

At a public hearing held at city council Aug. 26, 2008, Moab citizens spoke for an hour about their concerns regarding the proposed development. Many who spoke raised concerns about the possible effect the development might have as a potential source of contamination of the sole-source aquifer located on a portion of the property.

Lionsback Resort development partner Mike Lawler, and Tom Kennedy, attorney for the developers, were present at Tuesday's council meeting. After the council approved the development and phasing agreement Lawler and Kennedy were asked when construction could possibly begin. Kennedy explained that the partners are still in court defending a decision by the city council to approve the preliminary master plan for the development.

Several area residents and groups, including Living Rivers and Julianne Fitzgerald, who have been fighting the city's decision to grant approval, filed an appeal of the council's decision last year. The matter was heard by the city Board of Adjustment in August 2008. The BOA ruled that the city of Moab acted in accordance with city code. The BOA decision was then appealed to 7th District Court in Moab. Judge Lyle Anderson has yet to issue a decision in the matter, and a final ruling could take several more months.

"We feel that the earlier approval decisions will be validated in the court," Kennedy said Tuesday.

Lawler expressed confidence in the Lionsback plan. "This is a good project and we're still committed to it," he said.

LR Letter 03/20/08

Comments: Oil Shale and Tar Sands Draft Programmatic Environmental Impact Statement

Sherri Thompson
Bureau of Land Management
Colorado State Office
2850 Youngfield Street
Lakewood, CO 80215
Sent Via Fax: 303-239-3808

Re: Oil Shale and Tar Sands Draft Programmatic Environmental Impact Statement

Dear Ms. Thompson,

Thank you for this opportunity to provide comments for the Programmatic Environmental Impact Statement on development of oil shale and tar sands in Utah, Colorado and Wyoming. We understand that this NEPA process will be ongoing for several years and we desire to be added to the contact list for all future correspondence about public participation in this process.

Living Rivers/Colorado Riverkeeper is a non-profit organization based in Moab, Utah. Our mission is to mobilize the public toward restoring the ecological integrity of the Colorado River and its tributaries, especially as it relates to federal reserve lands.

We understand this federal action now under review will have serious negative impacts on the scarce water resources of the Colorado River basin. This federal program should be terminated because it will harm the water supply of 30 million people and to critical habitat for threatened and endangered species.

We support a new direction for the federal government to provide leadership toward energy independence through conservation, improving efficiency standards, and investing in renewable alternatives that do not further impair water resources and the atmosphere.

Quality fossil fuel products derived from deposits of oil shale and tar sands are wholly dependent on the availability of water resources. The demand for water in the Colorado River basin remains over-allocated and federal and state leadership to balance demand with supply has yet to occur. The annual supply from the Colorado River at the Compact Point, Lees Ferry, Arizona, has declined by 2 million acre feet since 1922, when the Colorado River Compact was first negotiated. Contrarily, the over-allocated demand continues to increase, of which this federal action will contribute to. Consequently, this federal leasing program will cause unnecessary harm to existing downstream users and ecosystems in the acquisition new water rights.

Furthermore, the transfer of senior water rights from agriculture to shale and tar extraction will adversely affect water quality in the form of diminished return flows, which will bring harm to wildlife habitat and increase the load of total dissolved solids in the water supply.

Many hydrology and climate studies funded by the federal government continue to provide more evidence that the downward trend in the water supply will continue into the 21st century and beyond. Indeed, it is highly probable that senior water rights are at risk as well. This federal action is poised to further aggravate an already serious water quantity/quality problem for the basin.

The Bureau of Reclamation recently completed an EIS (2007) called Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead (Shortage Criteria). This document permits further depletions in the upper basin of the Colorado River. Contrarily, hydrologists and climate scientists have recently provided evidence, since the signing of the Record of Decision, that Lakes Mead and Powell have a 50/50 chance of going empty as soon as 2021. Regardless of

the odds or the dates, these reservoirs will empty for reasons of over-consumption and increased evaporation due to atmospheric warming.

We strongly recommend that the Bureau of Land Management do what the Bureau of Reclamation for Shortage Criteria did not: model the water supply of the Colorado River using paleoclimate and climate change data to make a sound determination of the hydrologic condition of the Colorado River basin for the 21st century.

Again, we thank you for this opportunity to comment and if we can be of any assistance to you please do not hesitate to call us.

Sincerely yours,

John Weisheit
Conservation Director
Colorado Riverkeeper

References:

Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead (Shortage Criteria). <http://www.usbr.gov/lc/region/programs/strategies.html>

Barnett, T. P., and D. W. Pierce (2008), When will Lake Mead go dry? Water Resources Research, doi:10.1029/2007WR006704, in press. <http://www.onthecolorado.org/Resources/ClimateDocs/2008BarnettPierce.pdf>

Colorado River Open Source Simulator <http://www.onthecolorado.org/cross.cfm>

LR Letter 03/20/08

Comments: EA Castle Rock Cut

Mr. Kevin Schneider
Public Affairs Office
Glen Canyon National Recreation Area
P.O. Box 1507
Page, AZ 86040-1507
Sent Via Fax: 928-608-6259

Re: Environmental Assessment (EA) for the Castle Rock Cut

Dear Mr. Schneider,

Thank you for this opportunity to provide comments concerning the excavation of bedrock near Castle Rock at Glen Canyon National Recreation Area (GCNRA) for the purpose of creating a short-cut on Lake Powell when reservoir levels are below 3620

feet (mean sea level). Our comments are written on behalf of the following organizations:

Living Rivers, www.livingrivers2.org
Colorado Riverkeeper, www.coloradriverkeeper.org
Colorado Plateau River Guides, www.riverguides.org
Red Rock Forests, www.redrockforests.org
River Runners For Wilderness, www.rrfw.org
Southern Utah Wilderness Alliance, www.suwa.org
Water Advocacy Center, www.wateradvocacy.org
Wildlands CPR, www.wildlandscpr.org

In the Environmental Assessment the National Park Service made no comment in regard to our scoping request for an Environmental Impact Statement to consider not only this federal action, but all impacts associated with declining reservoir levels at GCNRA. To piece-meal a single impact on the reservoir is not internally consistent.

Since submitting our scoping comments in December, scientists from the Scripps Institute provided further evidence that Lakes Mead and Powell will naturally drain due to the effects of over-consumption and increased overall evaporation due to atmospheric warming. Their report has forecasted that the reservoirs have a 50/50 chance of going empty by 2021.

See: Barnett, T. P., and D. W. Pierce (2008), When will Lake Mead go dry? Water Resources Research, doi:10.1029/2007WR006704, in press.

<http://www.onthecolorado.org/Resources/ClimateDocs/2008BarnettPierce.pdf>

This science journal cites the comment letter by Living Rivers for the Draft EIS for Shortage Criteria (now called 2007 Interim Guidelines): [Living Rivers letter Shortage Criteria DEIS](#)

Regardless of the odds and the dates of this forecast (including all the previous scientific reports that reach the same conclusion), reservoirs levels will likely be in a situation of decline for the 21st century. This scientific forecast compels the Park Service to complete, instead, an Environmental Impact Statement to manage all the facilities in the GCNRA and for all benefit of all the different kinds of users in the NRA.

Though some may argue that this science justifies deepening the cut near Castle Rock in the short-term, but it does not justify this federal action for the long-term. Does the Park Service intend to continue deepening Castle Rock Cut until the reservoir reaches the level the penstocks at Glen Canyon Dam (3490 feet), or the level of the bypass tubes (3375 feet)? Rather than create an ever-deepening eyesore to this federal reserve land, it makes more sense to just leave Castle Rock Cut the way it is and educate and encourage the public to accept and work with this situation.

Our organizations want the federal government to provide effective leadership toward conserving and managing our finite natural resources wisely in a new century of uncertainty. This includes preserving all the natural features and resources in our

federal reserve lands. This also includes the conservation of diminishing fuel resources, improving the degraded condition of the atmosphere, and to protect our diminishing water resources for people and endangered species.

The majority of comments provided so far on this issue have come from a specific recreation group that is dependent on motorized boat activities at Lake Powell. This user group claims they need this excavation to save time, fuel and ensure their safety.

It is important to our members and partners that we educate the public about the impacts of popular motorized recreation at Lake Powell. This form of recreation is consumptive no matter what the reservoir level is. A boat owner/renter will spend anywhere from \$500 to a \$1000 in fuel alone for a typical motorized vacation at Lake Powell. This includes the fuel to get to and from Lake Powell by highway. Our question to the federal government is who or what is the real impact here to our diminishing and altered natural resources? Is it the consumer or the half-full reservoir?

This proposal is not about saving fuel. This proposal is about providing convenience. The federal government should encourage consumers of fuel to provide alternatives that will reduce their personal consumption at Lake Powell, rather than consumers of fuel asking the federal government and taxpayers to provide expensive alternatives for the sake of convenience with a trade-off that incurs permanent destruction to a natural landscape on federal reserve lands.

Safety is always an issue at Lake Powell. There are narrow channels throughout the reservoir. Boat accidents occur when the reservoir is full and when it is low. The Park Service claims the cut will reduce the dangers of congestion inherent at The Narrows near Antelope Point Marina. Yet the Park Service is responsible for creating this liability in the first place, because it approved the development of the marina. Again, the Park Service is not internally consistent in its management of GCNRA because the environmental studies are not comprehensive and instead done in a piece-meal fashion.

The Castle Rock Cut will be tight and narrow too. Indeed, it is possible the cut will increase the danger of boating at Lake Powell. It is possible that the risk to non-motorized boaters will actually be higher at the cut than The Narrows. Our organizations are compelled to suggest that the problems of boat safety have not been properly addressed at all in this Environmental Assessment.

Thank you for this opportunity to comment. We again ask that the Park Service perform a comprehensive Environmental Impact Statement to address the impacts of declining reservoir levels at GCNRA before engaging in any action at Castle Rock Cut. Please do not hesitate to contact us should you have any questions.

Sincerely yours,

John Weisheit, Conservation Director
Living Rivers/Colorado Riverkeeper
Colorado Plateau River Guides

Terry Shepherd, Executive Director
Redrock Forests

Jo Johnson and Tom Martin, Co-Directors
River Runners For Wilderness

Scott Groene, Executive Director
Southern Utah Wilderness Alliance

Laurel Hagen, Utah Program Director
Wildlands CPR

Harold Shepherd, Executive Director
Center For Water Advocacy

LR Letter 05/05/08

LR letter to Western Area Power Administration: Rate Increase Review

Living Rivers comment letter on Rate Order No. WAPA-137 for Colorado River Storage Project Transmission and Ancillary Services Rates for new rate schedule (SLIP-F8) that expires September 30, 2010, and that the current rate is insufficient to meet within the allowable period the revenue requirements for the Salt Lake City Area/Integrated Projects.

The requirements include operation, maintenance, interest expenses, and the required repayment of investment, commonly called the Basin Fund.

This proposal will extend the service rates for five years to 2015. The long-term contracts (20-year) will expire on September 30, 2024.

[Download letter](#)

ADDITIONAL INFORMATION

[WAPA's Rate Order #137 web page](#)

[March 2008 - Federal Register Notice](#)

[September 2008 - Federal Register Notice](#)

[2006 - Informal Rate Adjustment Meeting](#)

[2004 - Report to the Upper Colorado River Commission](#)

Scientist: Warming bodes ill for water

By Phoebe Sweet for The Las Vegas Sun

Federal scientists and Western water managers will call Congress' attention Friday to the potentially devastating effects of climate change on the Colorado River, warning that an expected warming trend would reduce the amount of water in the river.

All told, the Colorado is a water source for more than 25 million people in seven states and Mexico. The volume of the river is particularly critical for Southern Nevada because the Colorado feeds Lake Mead, which supplies 90 percent of the Las Vegas Valley's water.

At Friday's congressional briefing, research scientist Gregory J. McCabe will present a study that shows even a 1.5-degree increase in the overall temperature of the Southwest will decrease the river's flow and increase the likelihood that it will fall short of the amount needed to meet the annual allocations upon which Nevada and the other members of the Colorado River Compact rely.

"I live in the West. I worry about water supply," McCabe said. "We have lived in an anomalously wet century. A shift to a much drier climate coupled with additional warming spells trouble for the future."

"Because the water usage is so large in the (Great) Basin, it is very sensitive to even small warmings," McCabe said.

McCabe's study estimated the effects of 0.86-degree Celsius warming, which is 1.548 degrees Fahrenheit — the same amount as the climate has changed in the past century — and the 2-degree Celsius, or 3.6-degree Fahrenheit, warming of the climate that scientists say is possible in the next century. He analyzed these changes against the backdrop of tree ring records used to estimate river flows going back more than 500 years, as well as more than 100 years of data from the river.

Friday's hearing comes on the heels of the release last week of a report detailing effects of warming on fish, forests, rangelands and arid lands. The U.S. Agriculture Department report predicts dwindling rivers, an increase in extreme weather — droughts and floods — and the death of plant life.

None of these conclusions should come as a surprise, said Eric Kuhn, general manager of the Colorado River Water Conservation District. Kuhn said he hopes Friday's briefing will impress upon congressional staffers — including two from the office of Nevada Rep. Jon Porter, a sponsor of the briefing — that continued funding for scientific studies and river flow monitoring is crucial.

But Tim Barnett, author of a controversial study published in February that predicted a 50 percent chance that Lake Mead would go dry by 2021, said Wednesday that no

matter how much new science is done, the future is clear. The professor with the Scripps Institution of Oceanography said every credible Southwest water study has concluded that serious water shortages will hit in the 2020s.

If global climate models are anywhere close to correct, Barnett said Wednesday, “we’ve got a real problem coming.” The time line is so short that preventing global climate change before the predicted water shortages become reality is impossible, so it’s time to plan, instead, for how we’ll deal with the inevitable deficits when they arrive, he said.

And shortage guidelines agreed upon in December by state and federal water management agencies, designed to cut water deliveries to Western states if river flows and reservoir storage dip below certain levels, won’t cut it, he said.

We are heading toward a future in which water will probably be rationed, Barnett warned.

[Study by McCabe](#)
[Study by Barnett](#)

Regional News 06/25/08

CAP official's vision for 2048: Mexican-gulf desalination

Salt water foreseen as vital to Southwest

By Tony Davis for the ARIZONA DAILY STAR
Tucson, Arizona | Published: 06.25.2008

PHOENIX — It's 2048 in the Sonoran Desert. Do you know where your water will come from? Thomas McCann, a top official with the agency that runs the Central Arizona Project, laid out a vision in response to that question Tuesday at a conference on the future of the Colorado River:

- Three desalination plants are on line by that year to increase the supply of CAP water flowing to Phoenix and Tucson. One is removing salt from seawater along the Gulf of California in the Mexican state of Sonora, and its booty is shared by Arizona, California, Nevada and Mexico.
- Two others are treating salt-laden groundwater in the areas of Buckeye and Gila Bend.
- A huge nuclear power plant is humming along the Gulf of California in Sonora, producing 600 megawatts of power to provide the juice for the adjoining seawater desalination plant.
- Construction is under way to expand the size of the concrete CAP canal running from the Colorado River to Tucson to deliver up to 2.2 million acre-feet of water a year. An

acre-foot — 325,851 gallons — will supply enough water for two to three families for a year. Currently, the aqueduct can deliver 1.8 million acre-feet.

- The Colorado River, over-allocated by 1.5 million acre-feet a year to the seven river-basin states and Mexico, has been boosted in supply by about one-third that much through cloud seeding and other forms of weather modification.

McCann, resource-planning manager for the three-county Central Arizona Water Conservation District, which oversees the CAP, was looking at how the state could furnish water to support a 2048 population of 11.5 million in Pima, Pinal and Maricopa counties, compared with less than 6 million today.

It was a controversial vision, with many conservationists, led by Sierra Club members and others in the crowd of more than 300, attacking it as a fantasy. They questioned whether the money would be available for such a large number of projects and whether the increased energy use for desalination would make it economically and environmentally unfeasible.

The critics also said leaders should concentrate on conserving water rather than simply searching for more water to serve population growth.

And they questioned whether solutions would ever be found to handle the waste produced by the nuclear plant. Bob Cook, a planner and economist active in Sustainable Tucson, an environmental group, said the presentation ignored the rising costs of energy that already are causing crises in the airline and trucking industries.

"People will migrate to where the water is," Cook said. "There's no real analysis here of the factors behind our population growth — cheap water, cheap land and cheap energy — and how they are changing."

It's good that CAP officials are looking that far ahead, but "I didn't get a sense of the problems to be overcome, so we can do all the things to get us where we need to be," said University of Arizona professor Karl Flessa, head of the geosciences department.

But the CAP's top official predicted that at least some of the ideas in McCann's vision will come to pass, although the agency has no formal blueprint for turning them into reality.

"Every element of what Tom talked about will be addressed by 2048, although I'm not sure how large of a scale," CAP General Manager Sid Wilson said to the crowd immediately after McCann's talk. "I'm absolutely sure he hit the right buttons."

The ideas also had many supporters in the audience. One was Sahuarita-area pecan farmer Richard Walden, whose father, Keith Walden, pushed for congressional approval of the CAP 40 years ago.

Walden said it's realistic to start looking at desalination now, given that water projects are something that needs planning 40 years in advance.

"We built CAP and started getting water from it (nearly) 25 years ago, and for a while we had more water than we needed," said Walden, of Farmers Investment Co. "Years later, we have to start looking for more."

The CAP has four Pima County representatives on its board and runs the day-to-day operations of the country's largest water project.

Educators, activists, economists, planners, consultants and researchers came to the Colorado River conference from at least 45 cities and towns around the state, including a substantial contingent from Tucson. The conference, held at the Arizona Biltmore, was sponsored by the University of Arizona Water Resources Research Center and a host of other parties.

The prospect of desalination has in recent years gained more currency among water leaders in Arizona and the West as they try to deal with the twin pressures of population growth and drought that have kept flows in the river below normal for seven of the past 10 years. State and Mexican officials have started preliminary talks on possibly building a plant along the Gulf of California.

The CAP agency has hired a consultant to explore the feasibility of desalinating salt-laden groundwater inside Arizona.

After his speech, McCann said his ideas were based on population projections for Pima, Maricopa and Pinal counties for the late 2040s. His vision also assumed that people would reduce their water use by about 5 percent per person by then, that local governments increase the amount of sewage water captured from homes by 5 percent, and that they increase the re-use of wastewater by the same amount.

He also assumed that the river would have minor shortages of water in 2018-19 and in 2025, but nothing affecting urban users until a major five-year shortage hits in the 2030s. He acknowledged, however, that those projections were based on simple speculation.

Contact reporter Tony Davis at 806-746 or tdavis@azstarnet.com

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Arizona mulls new water source: Ocean Mexican city considers desalination plant; U.S. partnership a possibility

By Shaun McKinnon - Aug. 31, 2008 12:00 AM
The Arizona Republic

The water for Arizona's future needs may lie off the coast of a popular Mexican resort, in the Gulf of California.

State officials are studying the idea of importing filtered ocean water from an as yet unbuilt desalination plant in Puerto Peñasco, 60 miles south of the U.S. border. The water - potentially billions of gallons a year - would help sustain urban supplies in

Arizona and could someday bring relief to rural residents, who have long sought a water source to replace rapidly depleting aquifers.

A Scottsdale company already is looking at possible designs for the plant in Puerto Peñasco, where overworked groundwater wells are on the verge of running dry. Arizona water managers see an opening for the state to team up with the seaside resort on a larger plant to serve both countries.

Such a project would raise a host of political, economic and environmental issues, and it's not clear who would pay the construction costs, which could top \$250 billion.

But if backers can clear those hurdles, Arizona and neighboring states could tap a plentiful supply of water largely immune to the effects of drought and climate change.

"Desalinated ocean water is the future sustainable source," said Herb Guenther, director of the Arizona Department of Water Resources. "It's only logical that eventually we'll migrate toward it. We don't need interim supplies now. We need a permanent supply."

Oceans, which hold 97 percent of the Earth's water, were long considered a source of last resort, mostly because of the high cost of removing enough salt to produce drinking water.

Big desalination plants operate widely in arid Middle Eastern nations, where water is pricey and energy is cheap, but only recently has the ocean emerged as a viable resource in the United States. At least two dozen plants are now on drawing boards in California, a state beset with water woes.

"People explored and utilized the most cost-effective sources of water as long as they could," said Randy Truby, past president and a current director of the International Desalination Association, an industry group. "In California, they had the state water project, the Colorado River, sewage-water reclaim, conservation . . . but once you exhaust all of those things, seawater desalting is about the only place you can go."

That's where Puerto Peñasco finds itself. The city's groundwater resources have dwindled after years of steady use. The wells produce poor-quality water, and many are nearly exhausted. With growing interest from American developers, the city decided to turn to the most obvious alternative: the ocean.

"The water needs are severe," said Walt Bouchard, whose Scottsdale-based environmental consulting company was hired to study desalination options for Puerto Peñasco. "There are concerns that water may not be available for future development."

A need for water

The city, also known as Rocky Point, has long drawn Arizonans looking for a quick trip to the coast, but in recent years it also has attracted American investors eager to build hotels and time-share condominiums. About 81 projects sit in the planning stages, Bouchard said, and "they are going to need water."

Bouchard's company was asked by city officials to determine the feasibility of a seawater desalination plant, settle on a technology, produce a blueprint and prepare a bid package for a company that would design, build and operate the plant.

The study is based on a desalter that would produce 11.4 million gallons a day at the start and up to 45.6 million gallons a day by 2020, when the final stage is completed. That is enough water to serve at least 250,000 people a year.

Construction costs will depend on the technology, the location, the workforce and other factors. Poseidon Resources, a private company, is working on a plant near Huntington Beach, Calif., that could produce up to 50 million gallons of drinking water a day. The company estimates it will cost \$250 million to build.

Mayor Heriberto Rentería put the Puerto Peñasco project on a fast track, with a goal of firing up the first desalination module by 2010 or 2011. Bouchard said his team expects to deliver its findings by the end of the year.

So far, the plan calls for a plant that would produce water for the local and tourist demand, but Bouchard said the city is aware of Arizona's interest and could consider a joint project once Puerto Peñasco's needs are met.

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A Mexican partnership

Arizona isn't desperate for water yet, but the prospect of finding a Mexican partner in Puerto Peñasco persuaded state officials to start planning now. In June, the Arizona-Mexico Commission, a non-profit trade and business group that works with government officials, endorsed a plan to study the feasibility of a jointly operated U.S.-Mexico desalination plant on the Gulf of California.

That study will look at a range of issues, including cost, funding sources, energy needs and environmental effects on the gulf. Its findings could point toward a joint project with Mexico or to some other alternative. The major players so far are Puerto Peñasco; the states of Arizona and Sonora; and Arizona's two largest water providers: Central Arizona Project and Salt River Project.

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McCann said neighboring California and Nevada, which are desperate for water, could participate in the project and use their share of water early, before Arizona needs it. Other Arizona cities also could help build infrastructure that could allow water exchanges as far away as Flagstaff or Prescott.

Although water from a plant would probably be used mostly in southwestern Arizona to start, it would give the entire state added security. Water normally drawn down the lower Colorado could remain in Lake Mead, offsetting the risk of shortages. Water made available to rural areas could help protect rivers and riparian habitat.

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The price of water

Potential roadblocks exist. One of the biggest unanswered questions for this project and any new desalination plant is how it will be powered. Desalting ocean water requires significant amounts of energy, which is why many of the early plants were built alongside power plants.

The proposed Puerto Peñasco plant would likely be built in stages. The first stage could operate using power from the existing electrical grid, but at full operation it would need additional sources. Bouchard, the consultant on the project, said his team is exploring clean technologies, such as a solar-energy array that uses molten salt, a technology that allows a power plant to store electricity after the sun sets.

A higher-capacity U.S.-Mexico plant would require even more electricity, which is another issue under study by the Arizona consultants.

The environmental effects of a desalination plant also raise red flags. Seaside plants can disturb or damage ocean habitat and risk contaminating the water with chemicals used in the process. The waste product - a concentrated brine - threatens sea life and water quality.

A National Research Council study released earlier this year warned that significant uncertainties remain about the environmental effects of seaside desalination. The council said researchers need to more thoroughly explore what happens on both ends of the process.

Protecting the ocean will make the water more expensive, but "part of the real cost of desalination means spending the money to properly address the environmental impacts," said Peter Gleick, president of the Pacific Institute, a non-profit research center in Stanford, Calif., that monitors water and the environment.

"It's a classic economic issue, making sure the full costs are addressed. We can't ignore environmental costs."

The institute studied California's plans to expand desalination and concluded that cities in that state could find water more quickly and cheaply through conservation and better management of existing resources.

For an inland state like Arizona, desalinating mineral- laden groundwater might be cheaper and require less energy, Gleick said. Filtering seawater and moving it even a short distance could push prices so high that no one will buy it.

An acre-foot of desalinated seawater costs from \$750 to more than \$1,200, depending on the location and the technology used. CAP and SRP sell water to cities and agricultural customers for \$30 to \$110 per acre-foot, and farmers along the Colorado River rarely pay more than \$50 an acre-foot. An acre-foot is 325,851 gallons, enough to serve one or two typical households for one year.

California's higher water costs have made desalinated supplies more attractive. Municipal customers pay about \$600 per acre-foot to the Metropolitan Water District of Southern California, the region's largest water provider.

The break-even point could take longer to reach in Arizona, especially if rising energy prices push the cost of desalination higher. The gap could close faster if the same high energy prices raise the cost of traditional water sources, such as the CAP Canal, which moves supplies 336 mostly uphill miles.

"We are spoiled by cheap water," said Guenther, the state water chief. "Right now we're fighting over the few remaining scraps of an inexpensive water supply. We'll have to get used to the fact that these alternative or sustainable supplies are going to be considerably more expensive than we're used to. We're going to have to bite the bullet."

###

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by Shaun McKinnon - Aug. 31, 2008 12:00 AM The Arizona Republic

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But if backers can clear those hurdles, Arizona and neighboring states could tap a plentiful supply of water largely immune to the effects of drought and climate change.

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<http://www.azcentral.com/arizonarepublic/news/articles/2008/08/31/20080831river-desalter0831.html#comments>

Regional News 07/06/08

Water: A Special Feature by The Las Vegas Sun

[Click here to download](#)

LR Letter 07/07/08

LR Scoping Letter for Lake Powell Pipeline (and regional news)

Scoping comments by Living Rivers about environmental issues for the proposed Lake Powell Pipeline Project, Utah and Arizona, to the Federal Energy Regulatory Commission (Project No. 12966-002).

[Click here to download letter](#)

[Click here to download Coalition letter of November 19, 2008](#)

[Click here to download Coalition letter of January 5, 2009](#)

###

Projections have doubled Inflation driving up cost estimate of planned Lake Powell pipeline Plan now tabbed at \$1.1 billion, but that's before debt service

By Patty Henetz for The Salt Lake Tribune
Article Last Updated: 07/18/2008 09:43:55 PM MDT

The estimated cost of building the Lake Powell pipeline has nearly doubled in three years and could continue to grow.

State officials on Friday say they expect construction of the 174-mile pipeline that would bring water to Washington, Kane and Iron counties would cost at least \$1.1 billion. In 2005, the cost estimate was \$585 million.

"We're still working through the economic analysis," said Eric Millis, spokesman for the Utah Division of Water Resources. "This is a good snapshot of where the project is now."

But the estimate doesn't include debt service on bonds, which pipeline critics say could push the ultimate cost much higher, perhaps beyond residents' ability to pay.

Paul Van Dam, a former Utah attorney general and director of Citizens for Dixie's Future, said debt repayment would at least triple the pipeline cost to \$3 billion, and could reach \$6 billion by the time the project is finished.

"It's pretty striking that this cost estimate can double in three years. What's going to happen in the next three years?" Van Dam said. "I wonder how in the world anyone thinks these counties can pick up these costs?"

The engineers who put together the construction estimate included building small hydroelectric stations on the pipeline.

A line-item breakdown of the estimate shows the hydroelectric components account for \$95.5 million of base construction costs for Washington County.

Necessary electrical transmission lines would cost about \$73.3 million. Together, they come to about one-quarter of Washington County's total cost. A 15 percent contingency would be added to the base.

Power transmission would account for \$14.8 million of the Cedar City spur, which would incur a base construction cost of about \$100 million. Kane County's base cost estimate is \$5.3 million.

The pipeline would provide about 100,000 acre-feet of water per year, with 70 percent going to Washington County, 20 percent to Iron County and 10 percent to Kane County. An acre-foot is enough for one or two households a year.

While the hydroelectricity generated by falling water in the 69-inch diameter pipes could offset the cost of the power needed to pump the water uphill, there still would be a net energy loss, Millis said.

But he couldn't say whether it might be less expensive to build the pipeline and pump the water uphill without the added hydroelectric construction costs.

"We know that we have to pay for the pumping regardless," Millis said. "We know first and foremost that it's a water development project."

Strong has said the state chose the Federal Energy Regulatory Commission as the lead agency on the water-delivery project because licensing the hydro and then doing required environmental studies of the massive project would be quicker and less expensive than with the U.S. Bureau of Land Management at the helm as originally planned.

FERC says it could produce 300 megawatts of power, equivalent to the needs of at least 225,000 households. But even FERC acknowledges it will take far more power to pump the water uphill than the little electric projects could yield. The hope is that selling the electricity at peak-hour prices will raise extra cash.

The money would go to a state-run enterprise fund set up to pay for operations, maintenance and other costs associated with the project, Millis said.

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Pipeline costs: Lake Powell project looks less like smart idea

Tribune Editorial

Article Last Updated: 07/21/2008 06:57:53 PM MDT

More scientists are making more dire predictions about how much the Colorado River water levels could shrink in coming years due to climate change and less snowpack in the Rockies.

At the same time, the estimated price tag on a pipeline to carry 100,000 acre feet of that dwindling water from Lake Powell 139 miles to three Utah counties grows ever bigger. In fact, it has nearly doubled in the three years the pipeline project has been on the Utah Division of Water Resources' drawing board, from its original \$585 million to \$1.1 billion at least.

The uncertainty about future water flow and the eventual cost of the pipeline makes the project too risky. Taking that risk would be foolhardy, when conservation of existing water sources could make the pipeline unnecessary.

Opponents of the project, many of whom live in the St. George area, where the additional water would encourage more growth (read: sprawl), say the project could end up costing \$6 billion.

That is speculation, of course. So is the DWR estimate, which does not include debt service on bonds needed to finance the project. The three counties that would benefit from the additional water - Washington, Iron and Kane - will pay off the debt. At least, that's the current plan. But if the cost continues to escalate as steeply as it has so far, it's doubtful the counties would be able to raise connection fees and water rates enough to make the payments. Who would be on the hook then? All Utah taxpayers.

But the most speculative - and most important - of these unknowns is whether the pipeline will be worthless by the time it is built because the 100,000 acre feet of water it is designed to transport no longer flows into Lake Powell.

Climate scientists believe the American West will feel the effects of climate change more intensely than other areas. Some predict the annual mountain snowpack that feeds not only the Colorado but all the other streams Westerners rely on for drinking water and irrigation will shrink drastically or even disappear. That would leave all Utahns holding the bag - an empty bag attached to hefty debt payments.

The more we learn about the potential effects of this project, both intended and unintended, the less appealing it is. Moving ahead with it could be disastrous.

Regional News 07/20/08

Is growth over?

California's continuing water crisis may mean the end of the state as we have known it.

By Cary Lowe for Los Angeles Times
July 20, 2008

Gov. Arnold Schwarzenegger's recent executive order certifying that California is in a drought and directing state agencies to start thinking about what to do about it is only the latest sign that a way of life built on cheap and readily available water is coming to a close. For much of the state, June was the driest month on record, according to the National Climatic Data Center. The continuing water crisis raises the question of whether we are approaching the limits of growth in California.

For the last century, it seemed there was no limit. More than any other state, California's economy and population exploded, a growth spurt fueled in large part by abundant water supplies. Now we may be at a turning point, especially in Southern California.

Growing Western cities at crossroads, report says

The most obvious indicators certainly point in that direction. Snowmelt in the Sierras, which historically has filled the state's major reservoirs and aqueducts, has been shrinking steadily. California's rights to Colorado River water have been gradually scaled back by regional agreements and mounting claims by other states. Court orders in response to environmental lawsuits aimed at protecting endangered fish species have slashed water deliveries from the San Joaquin-Sacramento River Delta. And reduced rainfall throughout the region has made it increasingly difficult to replenish groundwater basins.

Initially, the public agencies responsible for ensuring water supplies were cautious in their response to the signs of a growing water crisis, perhaps fearing a political backlash from Californians who expect to be able to open a tap and let it flow, without limits, any

time, anywhere, for any purpose. Adding a reservoir, drilling a few more wells or cutting deals with farmers to transfer some of their water to nearby cities helped soften, if not avoid, the effects of the state's growing water shortage. Now, however, the situation is becoming sufficiently dire that the water agencies are beginning to give the public a taste of what lies ahead.

Earlier this year, the Metropolitan Water District of Southern California, the largest water agency in the region and the principal supplier to the cities of Los Angeles, San Diego and numerous others in between, announced a 30% reduction in deliveries to agricultural customers, which means that farmers will have less water for their crops and to give to cities. And things could get worse. The agency also adopted a contingency plan that could result in similar cutbacks to urban consumers and rate hikes of up to 20%. Local water agencies, including the Los Angeles Department of Water and Power, followed suit, beginning with voluntary conservation programs but warning of mandatory ones to come.

Such steps alone will probably not make enough of a difference to avert a water-supply crisis. There is a finite amount of water available in Southern California, and it has not increased since 1990. The MWD annually imports 2.1 million gallons of water to the region. Without a plan of action by state and local governments, coupled with across-the-board changes in how we consume, major sectors of the state's economy such as agriculture and real estate development will soon face previously unimagined restrictions.

Meanwhile, environmental groups such as the California Water Impact Network are contending that many of our water-use practices violate the state's constitutional mandate that water be put to beneficial use to the maximum possible extent and that waste or unreasonable use be prevented. They particularly object to pumping water from the San Joaquin-Sacramento River Delta to irrigate thirsty crops like cotton and alfalfa, as well as lawns. These environmentalists plan to petition the state Department of Water Resources to permanently reduce Delta pumping. If state officials or the courts agree, it would affect virtually every aspect of water use.

Real estate development already is feeling the pinch. State laws that took effect six years ago require water agencies to document sufficient long-term water supplies to support large developments. If they can't, they must block the developments, and these agencies are increasingly doing just that. The Eastern Municipal Water District, the largest water agency in Riverside County, recently delayed approval of a huge industrial development because it couldn't guarantee water supplies to the facility. The agency also indicated that it may withhold certifications of water availability for other projects if conditions do not improve.

Courts are increasingly weighing in on the issue. Last year, the state Supreme Court overturned approval of a major new planned community in the Sacramento area because the project's environmental impact report did not adequately address long-term water supplies. Earlier this year, a court in Riverside County reversed the go-ahead for a large residential project in Banning, in part on similar grounds. All told, dozens of

planned developments throughout Southern California already have been delayed or abandoned because of uncertainty about long-term water supplies. And that number will soar once the recession in real estate eases.

Scaled-down developments that clear the water-supply hurdle must still meet tough new water-use standards. For instance, don't expect new homes to be built along the fairways of a new golf course or the shores of a man-made lake. The appliances in the new homes will be low-flow, and the pavement outside permeable to help replenish groundwater. State legislation that would have required developers to utilize all feasible water-efficiency measures in new construction and carry out other conservation measures in the surrounding community didn't pass earlier this year, but it undoubtedly will be back. Meanwhile, the Legislature is considering a requirement that all urban water agencies reduce their consumption by 20% within 12 years.

Agriculture, which consumes two-thirds of the delivered water in the state and remains a huge component of the California economy, is also feeling the sting of dwindling water supplies. Beginning with the MWD's reduction in water supplies, agencies throughout the state are pressing farmers to cut their water consumption by not growing water-intensive crops, investing in more efficient irrigation systems and even taking land out of agricultural use altogether. Pending state legislation would establish agricultural water conservation requirements.

The entire state economy ultimately will be affected by the water crisis. Yet it is unrealistic to expect that California's population and economy will stop growing. Accommodating that growth will require major commitments to reducing water consumption and increasing supply.

Unlike previous droughts, the current shortage of water is largely the product of long-term climate change because of global warming. This means that the shortage will not abate without major changes in how we consume water. The cheapest and easiest way to increase water supplies is conservation. Even small increases in the efficiency of agriculture's use of water can produce huge savings. Cutting back landscape irrigation, which accounts for more than half of urban and suburban consumption, is another option, as is treating and recycling water. Finally, rain and snowmelt can be collected and stored for future use.

As things stand now, California is rapidly approaching the limits of growth. Those areas of the state with limited local water supplies already are off-limits for development, and those sectors of the economy that are big users of water, such as agriculture, are cutting back. We can extend the period of growth and prosperity by pursuing the measures mentioned above. What remains to be seen is whether that will just postpone the day of reckoning -- when we have done all we can do to cut consumption but demand still exceeds supply. At the point, California will have reached the limit of its growth.

Cary Lowe is a land-use lawyer and urban planning consultant.

Regional News 08/25/08

McCain stirs uproar with call for renegotiating Colorado River Compact

By Patty Henetz for The Salt Lake Tribune

Article Last Updated: 08/21/2008 09:32:13 AM MDT

The bonfire has been stacked for some time, but Arizona Sen. John McCain tossed in a match last week when he said the 86-year-old law that governs use of the Colorado River 'obviously' should be renegotiated.

The presumptive Republican presidential nominee clarified his statement Wednesday, saying it may have been "mistakenly construed as a call to rescind the Colorado Compact" when all he wanted was a more measured approach - which nevertheless could mean less water for Utah.

But Wednesday morning, after speaking during a water-conservation symposium in the tiny mountain town of Alta, Republican Gov. Jon Huntsman Jr. said he, too, would be open to at least looking at changes to Colorado River law--as long as regional governors lead the way.

[Click here](#) to read the rest of the story.

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By Kristen Wyatt for THE ASSOCIATED PRESS

2:38 p.m. August 20, 2008

DENVER – Sen. John McCain has backed off his comment that a key Western water agreement should be renegotiated, but Democrats signaled they plan to pummel him for his remarks, which even Republicans in swing-state Colorado denounced.

The GOP presidential candidate told the Pueblo (Colo.) Chieftain last week that the 1922 Colorado River Compact ought to be “renegotiated over time.” But in a letter Wednesday to Sen. Wayne Allard, R-Colo., McCain wrote that his comments were misconstrued.

“Let me clear that I do not advocate renegotiation of the compact,” the letter said. McCain aides said the letter was e-mailed across the West after even fellow Republicans derided McCain for suggesting the water agreement may need to be retooled.

The Colorado River is one of the most important water sources in the West, and the 1922 compact allocates the river among the lower basin states – Arizona, California and Nevada – and the upper basin states – Colorado, New Mexico, Utah and Wyoming.

A second agreement signed last year a 2007 was designed to ease tension among the compact states caused by a long-term drought.

Despite McCain's letter, Democrats heated up their criticism of McCain's comments, apparently seeing political traction in their criticisms.

Several Mountain West states once considered solid GOP country are now seen by Democrats as within reach of their candidate, Barack Obama. Democrats pounced on McCain's water remark last week and renewed their criticism Wednesday.

Sen. Ken Salazar, D-Colo., a former head of the state's Department of Natural Resources, said McCain's comment was "dangerously naive."

"It reflects, in my view, a fundamental misunderstanding" of the importance water politics has in the arid West, Salazar said. He cited the old Colorado political adage that "whiskey's for drinking, water's for fighting."

Wyoming Gov. Dave Freudenthal, also a Democrat, said McCain's water comment could provide an opening for Democrats.

"I was absolutely astonished that anybody running for president would suggest it," Freudenthal said Wednesday at a news conference in Casper, Wyo.

Democrats argued that McCain's misstep shows that, if elected, he may give Southwest population centers such as Los Angeles or Phoenix priority over the less-populous states along the Colorado River.

"I don't think his suggestion was premised on the idea that he'd like to have the upper Colorado basin states keep their water. Quite the contrary," Freudenthal said.

Arizona Democratic Gov. Janet Napolitano said she hoped McCain misspoke in his original comments "because he obviously doesn't know that we actually went in and revised that compact and signed that agreement" in 2007.

"I think he needs to be briefed on what's actually happening with the Colorado River," she said.

In his letter, McCain said he is a Westerner who understands water is scarce. He said he advocates cooperation and dialogue among the seven states – but "in a way that is fully consistent with the compact."

An Allard aide did not immediately return a call for comment on the letter. Last week, Allard denounced McCain's comment.

Democratic Colorado Gov. Bill Ritter brushed aside McCain's letter and said his comment shows the Republican has "a bias for the lower basin states" such as Arizona.

"The word 'renegotiate' does not have double meaning," Ritter said.

A political scientist at Colorado College in Colorado Springs, Bob Loevy, said Democrats would love to establish an image of McCain as someone more concerned with California and Arizona than the Mountain West. But Loevy said McCain's water comment likely won't remain on voters' minds until November.

“Above all, he didn't say, 'We're going to reduce Colorado's allotment,’” Loevy said.

Associated Press Writers Paul Davenport in Phoenix and Ben Neary in Cheyenne, Wyo., contributed to this report.

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A new set of negotiations need for The Colorado River Compact

Robert W. Adler

Article Last Updated: 08/30/2008 12:19:59 AM MDT

In its Aug. 24 editorial, "Law of the river: Don't dis the Colorado River Compact," The Salt Lake Tribune suggested that Sen. John McCain's proposal that the 1922 Colorado River Compact be revisited might generate costly and divisive conflict among the Colorado River Basin states.

Strategic amendments to the compact, however, could prevent rather than generate conflict, correct mistakes made when the compact was originally negotiated, and address issues that were beyond consideration in 1922.

The Tribune suggests that the compact is like the Constitution, and equally resistant to change. But we have amended the U.S. Constitution 17 times (not including the 10 in the Bill of Rights). The Colorado River Compact has never been amended in 85 years.

The Southwest is a very different place than it was in 1922. The region's population has grown dramatically, and shifted from rural to urban. Recreational and other instream water uses compete with traditional offstream uses such as farming and ranching. We know more about the river's hydrology. We better understand the environmental impacts of dams and water diversions, and the public places a higher value on environmental protection.

As The Tribune noted, compact negotiators relied on a 20-year hydrological record and assumed they could safely dole out at least 16.5 million acre-feet of water per year. Unfortunately, the rest of the 20th century was much drier. The average flow from 1896 to 2004 was less than 15 million acre-feet, but even that may understate the long-term picture. Based on tree-ring records, scientists have identified periods of longer and much more severe droughts in the basin than anything in the 20th century.

But other factors also support renegotiation of some aspects of the compact. First, recent scientific models show that global warming is likely to exacerbate water shortages in the basin. We may face as much as 25 percent declines in streamflow by 2030, 45 percent by 2060, and flows too low to meet even current water demands in as little as 20 years.

Second, neither Mexico nor Native American tribes had a seat at the compact negotiating table. Although the United States negotiated a treaty with Mexico two decades later, questions remain about the fairness of that allocation, especially during

dry periods. Some tribal water rights have been quantified, but water rights for other tribes remain unsettled.

Third, environmental impacts of water development were not considered in 1922. The Colorado River once hosted the largest percentage of endemic fish - species found nowhere else on the planet - of any river system in the world. Some are now extinct, and many more species of fish, birds, amphibians, reptiles and mammals are threatened or endangered. The American public has supported new environmental laws that profoundly affect how and where Colorado River water can be used.

Fourth, growth patterns in the basin have shifted dramatically. In 1922 it was obvious that rapid growth would continue in Southern California, but no one anticipated the urban booms in Nevada, Arizona and along Utah's Wasatch Front.

Fifth, while the upper basin states (including Utah) have not used all of the water they are entitled to under the compact, that water may not be available when they are ready to do so. So what happens when we try to use those allocations, honor tribal rights and our treaty obligations to Mexico, try to restore the river's endangered ecosystems, and satisfy demand in growing urban areas, all with less water to go around?

All negotiations require parties to guess about the future and then live by their predictions. A deal is a deal. However, it is one thing to apply that principle to commercial transactions, but quite another to apply it to decisions made by one generation on behalf of another across an entire region.

Interstate agreements with profound implications for growth and development, ecological health and societal welfare across seven states should not be revisited lightly. But neither should reconsideration be off-limits.

A new set of negotiations will implicate a broader, more complex set of tradeoffs between offstream and instream uses, international and domestic factors, economic versus environmental needs, and private versus public uses and values.

If the federal government, the basin states, tribes, environmental groups, Mexico and other players wait for water conflicts to become more acute, the likely response will be litigation and/or political warfare. A fairer and more reasoned agreement would be more likely if we addressed the future of the Colorado River sooner rather than later.

ROBERT W. ADLER is associate dean for academic affairs, James I. Farr chair and professor of law at the University of Utah's S.J. Quinney College of Law. He also is the author of "Restoring Colorado River Ecosystems: A Troubled Sense of Immensity" (Island Press, 2007).

Regional News 08/27/08

Poll says half of Nevadans willing to live with tighter restrictions on water use

By HENRY BREAN for Stephens Media

Half of Nevada residents would support restrictions on their water use to help stretch the region's shrinking supply in the face of climate change, according to a Las Vegas Review-Journal opinion poll.

Fewer than one third of Nevadans polled said they would oppose new restrictions on water use, while 19 percent of respondents were undecided.

Among the likely voters interviewed in six Western states, those in Nevada and Utah were most willing to accept new limits on their water use.

Activist Bob Fulkerson was pleasantly surprised by the results in Nevada.

"It shows that people are willing to do a lot more with water conservation, and that's encouraging," said Fulkerson, who is executive director of the Progressive Leadership Alliance of Nevada.

Several recent scientific studies warn that climate change could reduce rainfall and snow accumulation in the Rocky Mountains, leading to longer and more severe droughts on the Colorado River. The Las Vegas Valley gets 90 percent of its water from the river.

Though Nevadans remain split over whether climate change is real or unproven, 57 percent of those polled said the benefits of reacting to the phenomenon will be worth the economic costs.

Fifty-six percent of respondents said they thought efforts to address climate change would create new jobs in agriculture and alternative energy research and production.

The questions on climate change came as part of a wide-ranging survey commissioned jointly by the Las Vegas Review-Journal, the Denver Post and the Salt Lake Tribune.

The poll was conducted in mid-August by Mason-Dixon Polling & Research of Washington, D.C., which interviewed 400 likely voters each in Nevada, Arizona, Colorado, New Mexico, Utah and Wyoming.

The margin of error for the regional results is plus or minus 2 percentage points.

The margin of error for state-specific results is plus or minus 5 percentage points.

The level of support for water restrictions among Nevada residents comes as no surprise to J.C. Davis, spokesman for the Southern Nevada Water Authority.

In a desert state that ranks as the nation's driest, the importance of water is never far from people's minds, he said. "It hits home. It's not some invisible factor to us."

There are limits to which conservation measures people are willing to support.

If pollsters asked about harsher punishments for water wasters, the response would be overwhelmingly positive. If they asked about making it illegal to wash a car in your driveway, "they'd get what we got when we tried that in 2003: torches and pitchforks," Davis said.

Of the seven Western states that share water from the Colorado River, all but one was included in the Review-Journal poll. Davis said he was "surprised" by the omission of California, whose share of the river is 14 times the size of Nevada's and the largest among the seven states.

Fewer than half of the Westerners polled, and 48 percent in Nevada, consider climate change to be "scientifically established reality." Arizona residents were the most confident and Wyoming residents the most skeptical about climate change.

Slightly more than half of those polled in the six states said climate change is no more of a threat in the West than it is throughout the country.

A similar percentage said taking action to deal with climate change would be worth the economic costs, though neither the action to be taken nor the costs were spelled out in the poll question.

Some 54 percent of those polled in the region believe addressing climate change in the West would create jobs "through the development of new energy and agricultural technologies."

A breakdown of the responses in the six states polled also reveals:

- More women than men, 53 percent to 45 percent, consider climate change to be scientific reality;
- More women than men, 51 percent to 45 percent, favor conservation measures to curb water use;
- And Western Democrats and independents, at 59 percent and 54 percent respectively, support conservation measures more than do Republicans, at 36 percent.

And, finally, there is this striking result from the poll, a disparity for which Al Gore might bear some responsibility:

While 74 percent of Democrats in the West see climate change as a reality, 70 percent of Republicans consider it "unproven and subject to debate."

[Click here](#) for more detail.

Contact reporter Henry Brean at hbrean@reviewjournal.com or 702-383-0350. <http://media.lvrj.com/images/2930818.jpg>

Regional News 09/09/08

Crucial Grand Canyon sandbars have rapidly eroded

By AMANDA LEE MYERS for The Associated Press

PHOENIX (AP) — Newly built-up sandbars crucial to wildlife in the Grand Canyon have rapidly eroded in the last four months, some shrinking back to the size they were before a costly manmade flood.

Torrents of water were released from the Glen Canyon Dam on the Arizona-Utah line in March to mimic natural flooding and rebuild sandbars along the 277-mile river in the Grand Canyon, where the ecosystem was forever changed by the dam's construction more than four decades ago.

Officials had expected erosion following the three-day flood, but they hadn't expected so much so fast.

"Circumstances conspired against our being able to protect the beaches as long as we had hoped," Grand Canyon National Park Superintendent Steve Martin said Tuesday. "Substantial erosion has occurred."

The accelerated erosion is the result of a requirement to release extra water from Lake Powell above the dam into the Colorado River, said John Hammill, chief of the Grand Canyon Monitoring and Research Center.

The requirement says that when Lake Powell has extra water, some of it needs to be released and go to Lake Mead on the Arizona-Nevada line. The requirement is designed to ensure that Colorado River states all get an equal share of water, a precious and limited resource in the West.

Lake Powell rarely has extra water because of extended drought, but a wet winter led to the highest water level in the reservoir in six years. That triggered the requirement in April, a month after the three-day flood in the Grand Canyon.

Between April and Sept. 1, officials increased flows from the Glen Canyon Dam by 20 percent. Time-lapse videos taken by the U.S. Geological Survey of two sections of the Grand Canyon show that the three-day flood created sandbars as large as football fields. But the sandbars began shrinking in April and by August, appear to be much smaller and about the same size they were before the flood.

Four to five times the normal amount of water was released from the dam during the flood, picking up sediment and depositing it in sandbars.

The 20 percent higher flows this summer then washed away much of it. Compounding the erosion is the practice of sending more water through the dam in the daytime to maximize power generation, then trimming output at night.

Martin said some benefits remain from the three-day flood, and despite the erosion, more floods should be released into the canyon whenever there's enough sediment to be deposited along the shoreline — about every one to two years.

Since 1963, the Glen Canyon Dam has blocked sediment from the Colorado from flowing downstream, turning the once muddy and warm river into a cool, clear environment that helped speed the extinction of four fish species and push two others near the edge.

The sediment provides a habitat for plants and animals, builds beaches for campers and river runners and helps protect archaeological sites from the elements.

Watch time-lapse videos of erosion in the Grand Canyon:

http://www.gcmrc.gov/research/high_flow/2008/timelapse/

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Grand Canyon flood results erode. Some of the sandbars and beaches built up in the March high-flow release are back to pre-flood levels.

By CYNDY COLE for Sun Staff Reporter
Wednesday, September 10, 2008

A half-year after a manmade flood built bigger sandbars and beaches in the Grand Canyon that are boon to native fish and plants, U.S. Geological Survey researchers say beaches are again eroding.

The data at this point is incomplete, researchers say, but some of the photos to date point to eroding sand bars as water releases from Glen Canyon Dam vary to meet peak power demands and interstate water-sharing agreements. A group of federal agents, tribes, environmentalists and power agencies that advises the Interior Department on how the Colorado River in Grand Canyon should be managed is meeting in Flagstaff Tuesday and today to discuss the latest research and propose next steps.

A budget up for discussion by the group today could determine whether there are any more experimental floods in the next five years. The next one called for in an earlier report by the Bureau of Reclamation is not until 2012.

About \$3.3 million is projected to be spent on USGS research related to the flood this year and next.

The amount of sand in the Colorado River is of interest because it is believed to be linked to the creation of backwaters that could help promote the survival of some fish species, and because boaters use beaches for camping.

All of the sand that once flowed into the lower Colorado River upstream of Lake Powell is now trapped by the dam, leaving it to the remaining tributaries to supply sand to the main channel during periods of high water.

The advisory group did some battle publicly this spring, when Grand Canyon Superintendent Steve Martin proposed more regular floods to improve the canyon's ecosystem, to the disagreement of power producers and his bosses.

The floods are conducted as part of an experimental program to manage the Grand Canyon ecosystem to allow for power generation at the dam, while offsetting the dam where possible.

USGS researchers say it is possible to maintain some sandbars and beaches along the Colorado River with the dam in place.

But for that to happen, according to researchers' findings, power production would often suffer.

Environmental groups, including the Grand Canyon Trust, have litigated over dam operations, saying what's beneficial for peak power production puts some of the canyon's few remaining endangered fish species in jeopardy.

Trust employee Nikolai Lash, who works on this issue, said it's hopeful that the coming presidential election could change the Colorado River.

"The orientation has been completely backwards," he said. "This dam has been operated not for the benefit of Grand Canyon, but for the benefit of hydropower interests."

The third experimental flood since 1996, the March experiment was timed to move around three times more sand than was available in the tributaries to the Colorado River in 2004.

Cyndy Cole can be reached at 913-8607 or at ccole@azdailysun.com.

LR Letter 09/11/08

Proposed pump station, reservoirs and hydroelectric power plant in Grand County, Utah.

FERC Project Nos. 13227 and 13146. Comments on the application for a preliminary permit known as Bull Canyon Pumped Storage Water Power Project and Long Canyon Pumped Storage Water Power Project by Utah Independent Power, the applicants. Pursuant to Federal Register Notice of July 16, 2008, Vol. 73, No. 137.

[Click here](#) to download letter.

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Proposed hydro-electric reservoirs raise concerns about environmental impact

By Ron Georg for The Times-Independent

Representatives of Utah Independent Power, including company president Frank Mazzone, will make a presentation at the Grand County Council's Aug. 19 evening session detailing their plans to create two reservoirs – that would comprise a pumped water energy storage facility – in the Bull Canyon area.

The plan appears simple. The company would build two reservoirs, one higher than the other. They'd allow the higher reservoir to drain into the lower one, through a set of turbines to create electricity. Then they'd pump it up and start over.

Mazzone said that because there is much less demand on the electrical grid during low-peak hours and electricity is cheaper, Utah Independent Power would purchase the inexpensive, surplus electricity to pump the water. Then they would turn the stored water back into electricity during peak times, when power is at a premium.

"What we do is we displace the use of high cost fossil fuel with low cost energy that's available when people aren't using it," Mazzone said.

The plan has a potential ecological benefit, he said. The nation's electrical power grid is dominated by coal-fired plants, as well as some nuclear facilities, which can't vary their output easily. So they operate at a level slightly below peak need, and they are supplemented by plants which can be ramped up quickly, mostly natural gas facilities.

The need to supplement the grid with natural gas plants can be offset by storage, according to Mazzone. Since there is no battery technology that can handle this task, pumped water energy storage is one of the few available options. Because wind power is more effective during off-peak hours, the technology can be used to store green energy. According to Mazzone, there are more than 100 such plants operating worldwide, mostly owned by major utilities in this country.

Utah Independent Power has applied for a permit with the Federal Energy Regulatory Commission, which will be a 30-month, \$5 million process, according to papers filed with FERC. That process will include input from the Bureau of Land Management, though Moab Field Office Manager Shelley Smith said she is uncertain how much input the agency will have. "I'm not sure how that FERC process works," she said.

Further complicating matters for the BLM is the transition between resource management plans, which set the context for all BLM decisions. "We're kind of between plans, so we have to operate under our 1985 plan until our new plan is final," Smith said. "We're identifying what the resource conflicts would be under both plans."

Those conflicts could include some that preclude disturbance of natural areas. "I think there's bighorn sheep habitat, but I'm waiting for our specialists to see what sort of conflicts exist," Smith said. She emphasized that the agency doesn't make judgments. "We identify the conflicts within our resource plan; we don't opine one way or the other. We would have to issue the right of way, and we would conduct that environmental assessment."

The Southern Utah Wilderness Alliance won't be quite so objective in their response, according to field advocate Scott Braden. "We're opposed, and we're going to be participating," he said. "While we're sympathetic to people's need for energy, we feel this is unsuitable. It would be tragic to lose more wild areas."

Braden said the proposal would affect an area known for its wilderness qualities. "It would not be appropriate in an area the BLM has identified as having wilderness characteristics, especially in a place like Moab, where the economy is based on the scenery," he said.

Mazzone said he hopes other aspects of his plan will outweigh those concerns. "We have nothing to hide. The facility produces no air emissions, no water emissions, no noise, and we are looking to build the facility so the only thing you see will be the surface of the lakes," he said. "All we can do is be honest with what we have, and trust that people will be logical about decisions they make. We look upon this as a public good."

LR in the News 11/14/08

Moab mayor plans to protest BLM's planned lease sale

By Patty Henetz for The Salt Lake Tribune

Article Launched: 11/14/2008 02:25:44 AM MST

Moab's sole source of drinking water could be in jeopardy unless federal officials back off a plan to sell an already-disputed oil and gas lease next month during a regular quarterly sale.

Mayor Dave Sakrison said Thursday that he has met with U.S. Bureau of Land Management officials about a 600-acre parcel in the aquifer the city and Grand County tap for all of their municipal uses. Sakrison said he would ask the Moab City Council on Nov. 25 to submit an official protest against the sale of the lease parcel, which also underlies several neighborhoods.

"Obviously we've got some major concern. It's our sole-source aquifer protection area," Sakrison said. And despite federal assurance that any actual drilling would have to occur outside the neighborhoods, "that's still problematic as far as we're concerned," he said.

"Part of our golf course sits in this lease parcel and a whole lot of private property. We're taking this very seriously," Sakrison said.

Moab residents were shocked earlier this week to discover that a BLM oil and gas lease sale scheduled for Dec. 19 includes a parcel in unincorporated Grand County just beyond the Moab city line. Several residential neighborhoods in Spanish Valley, parts of the municipal golf course and popular hiking trails are on the parcel.

That was bad enough. But the prospect of petrochemical pollution in the 10,000-acre aquifer is even more unacceptable, said John Weisheit, conservation director of the nonprofit group Living Rivers in Moab.

"If we have accidents in our aquifer, the toxic material would move very quickly into our water [taps]," Weisheit said. A cleanup would have to be done in a matter of hours, which is impossible, he said.

Shelley Smith, the BLM's Moab field office director, said the long-range management plan for the region prohibits "surface occupancy" - that is, no drill pads would be allowed on the 600-acre lease parcel. However, drillers could reach the oil from an angle, which means pipes and other industrial apparatus would be intruding on the aquifer that lies just under the ground's surface.

The Moab resource management plan has stricter protections on the watershed that feeds the aquifer; absolutely no oil or gas drilling is allowed around the springs and wells on the sandstone rims above the valley. Once the water is in the aquifer, however, restrictions are no stricter than those in place for the Moab airport and landfill.

The Environmental Protection Agency has certified the aquifer as pristine. The certification means that as the sole source of potable water, special guidelines and policies are in place to ensure the aquifer is not put at risk.

Smith said the BLM knows the parcel doesn't have high potential for oil yield; in fact, there is very little oil and gas development in the area - just a few pumps operate around Dead Horse Point State Park and the BLM's Island in the Sky.

So who nominated the parcel? And why? Smith said she doesn't know the answer to either question. Even if she had the name of the person who made the nomination, there likely would be no direct link to a developer.

"Maybe whoever nominated it won't be interested now that it would have development costs it wouldn't have had before," she said. "We're giving it a real close look."

The BLM already is battling the National Park Service over oil and gas lease parcels near Arches and Canyonlands national parks and Dinosaur National Monument also on the list. The Park Service wants to delay the Dec. 19 lease sales. The BLM has refused to do so. Senior officials with the two agencies, both administered under the Interior Department, are in negotiations that Mike Snyder, the Denver-based Park Service regional director, says he expects to conclude by Nov. 24.

Moab's concerns

- * At issue: BLM oil and gas lease plans include local pristine water source.
- * Complaint: Locals believe the plan poses a danger of contamination.
- * Response: BLM maintains proper planning process and protections are in place.
- * Ahead: Moab's mayor is asking City Council to make a formal protest.

Regional News 11/29/08

Drought deepens strain on a dwindling Colorado Flows falling

California first in line as Utah, other states fight for water.

By Patty Henetz for The Salt Lake Tribune

Updated: 11/29/2008 08:49:15 AM MST

Utah's water forecast: Thirsty times are a-brewin' The drought gripping Utah, Southern California and the rest of the Southwest this century shows no sign of ending. Scientists see it as a permanent condition that, despite year-to-year weather variations, will deepen as temperatures rise, snows dwindle, soils bake and fires burn.

That's grim news for all of us in the West, perhaps most especially for the 10 million residents along the northern stretch of the Colorado River -- Utah, New Mexico, Wyoming and Colorado -- whose water rights are newer, and therefore junior, to those in Southern California, Nevada and Arizona.

Making matters worse, the Colorado -- the 1,450-mile-long lifeline that sustains more than 30 million souls and 3.5 million acres of farmland in seven states, 34 tribal nations and Mexico -- is in decline, scientists warn.

Even so, demand for the Colorado's water echoes from city leaders, industry giants, oil drillers, farmers, fishers, ranchers, boaters, bikers and hikers -- along with silent pleas from wildlife and the ecosystem. Trend analyses by federal scientists, probably conservative, predict the population dependent on the river will reach at least 38 million during the coming decade.

Right now, California, with the most senior rights and the largest share of the Colorado under a 1922 law, is struggling with a statewide water shortage. Not enough rain has fallen in the southland, as weathercasters like to call it, home to 18 million people, roughly half the state's population.

California already uses all of its Colorado River allocation. As the drought has worsened, Southern California water bosses have labored to keep the taps running through a host of conservation schemes.

Meanwhile, water managers in Utah and the Upper Basin are working to get all of their water rights in use, even as their cities and counties register some of the highest per-capita consumption in the nation.

Demand is up. Flows are down. Something has to give. And when it does, Utah could be in trouble if it doesn't change its wasteful ways -- just as 19th-century explorer Maj. John Wesley Powell predicted.

The West lacks water, he wrote in his 1879 Report on the Lands of the Arid Region of the United States, With a More Detailed Account of the Lands of Utah. "Disastrous droughts will be frequent."

Law of the River

The 1922 Colorado River Compact may have given California water rights senior to the other six states, but the Metropolitan Water District (Met), which supplies up to 60 percent of the water for 19 million people spread across six Los Angeles-area counties, made its claims after the state's allocation already had been divvied up. That means the most populous part of California is last in line among its peers when water runs low.

"If California ever did take a shortage," said Assistant General Manager Roger Patterson, "Met would take the hit."

That's already happened.

In 2003, California had to curtail its Colorado River use to its 1922 allocation of 4.4 million acre-feet per year, enough water for about 8 million households. Previously, under water-sharing deals with Arizona, the Golden State had been funneling about 5.2 million acre-feet. Because of its junior standing, Met had to eat about half the total shortage. No one else in the state had to cut supplies, Patterson said.

In February, Met agreed to a rationing plan for most of Southern California, including Los Angeles and San Diego. It expects to add 5 million residents during the next five years. Since the Pacific Ocean blocks growth to the west, the district is pushing eastward, where it's hotter.

A federal judge has ordered California water managers to leave 30 percent more water in the Sacramento-San Joaquin Delta in Northern California to stave off fish kills and keep the massive estuary healthy. More for the environment means less for Los Angeles.

Other populous regions of California also have taken steps to ensure a good water supply.

-- Developers in Riverside, Kern, Santa Barbara and San Luis Obispo counties must guarantee a 20-year water supply before they build.

-- The state has brought back a water bank, last used 17 years ago, in which Southern California cities can buy water from willing Sacramento Valley farmers. However, given the high prices farmers can get for their crops, especially rice, willing sellers might be hard to find.

-- Orange County residents are drinking recycled sewer water.

-- In San Diego County, the Coastal Commission greenlighted a \$300 million desalination plant adjacent to a state beach. The operation still has to meet lots of conditions -- which probably will make the plant more costly to build and run -- but even if completed would supply no more than 9 percent of San Diego's current needs.

Met residents have cut back to about 185 gallons of water per person per day. Residents of Long Beach are down to 115 gallons.

"If Long Beach can do this," said Kevin Wattier, the city water department's general manager, "so can every other city in Southern California."

Splish, splash

Upstream, Utahns on average use 291 gallons of water per person per day, a rate second only to Nevada. In Salt Lake County, it's 255 gallons; Washington County, 350 gallons; Kane County, a bloated 430 gallons. Sixty percent of Utah's water goes for outdoor use, including landscaping and agriculture. In California, agriculture consumers about 85 percent. California, however, is the fifth-largest farm economy in the world.

By comparison, Utah's agriculture profile is nearly nonexistent, contributing less than 1 percent to the state's economy.

The system might seem out of balance. Yet no state, not even Nevada, which has the measliest Colorado allocation, wants to reopen the 1922 Colorado River Compact that divided the water. Each fears getting an even worse deal. Nor does anyone know what soon-to-be-settled Navajo claims on the river will mean to both basins.

There is, however, a growing sense that the Colorado Basin states are all in this together.

"Everybody ought to share in the reality of the river," said former Utah Attorney General Paul Van Dam, now director of Washington County-based Citizens for Dixie's Future. "And there ought to be great flexibility in how we use it without losing it."

Dozens of scientific studies issued since 2004 have documented the Colorado's decline.

The river's annual flow has averaged 11.7 million acre-feet this decade, according to federal records. In 2002, the U.S. Bureau of Reclamation measured only 6.2 million acre-feet passing Lee's Ferry below Glen Canyon Dam, the lowest flow of the decade. Even after this year's above-average precipitation, Lake Powell and Lake Mead combined are at 57 percent capacity.

A 2007 U.S. Geological Survey report found that, by 2050, rising temperatures in the Southwest could rival those of the nation's fabled droughts, including the Dust Bowl of the 1930s. Hotter weather is expected to reduce Colorado River runoff by at least 30 percent during the 21st century.

If the USGS is correct, and if this century's trend persists, average annual flow in the Colorado could fall to 8.2 million acre-feet per year.

Imagine that. The Law of the River requires 9 million acre-feet to pass Lee's Ferry on the way to the Lower Basin and Mexico. Under a strict interpretation of the law, the Upper Basin could be left with nothing.

A far more likely scenario would have the states banding together to rework the river allocations. But when Arizona Sen. John McCain suggested just that during his failed presidential campaign, the shrieks emanating from Colorado's halls of power were enough to prompt the Republican nominee to back down.

Pipeline dream

Dennis Strong, director of the Utah Division of Water Resources, in October told the state Water Development Commission that the state is using about 1 million acre-feet of its yearly 1.4 million acre-foot allotment from the Colorado.

Tribal water settlements yet to be signed would take up about 186,000 acre-feet, he said. New agricultural uses, mostly dedicated to controlling the salinity of the water that flows back to the Colorado, would take 35,000 acre-feet. Municipal and industrial uses along the river corridor would account for 5,000 acre-feet, and the proposed Lake Powell Pipeline would need 100,000 acre-feet, leaving about 74,000 acre-feet unused, theoretically.

Utah water managers are pushing the \$1 billion-plus pipeline, which would lavish more water on a Dixie desert region likely to feel the full brunt of global climate disruption and permanent drought within the next 40 years.

The state hasn't actually secured rights to the 100,000 acre-feet for the pipeline. Strong said that would have to be nailed down by 2010, when the Federal Energy Regulatory Commission is expected to issue the license necessary to start building it. He's confident the water will come.

By 2040, the pipeline's water would be entirely committed to a regional population of about 400,000, Strong said.

Given current scientific warnings about the shrinking Colorado, that prospect looks shaky.

But Strong isn't worried. He's skeptical about global warming, though he "sees evidence" of it. "Water managers," he said, "have been dealing with drought forever."

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###

Climate change, drought to strain Colorado River

By MIKE STARK – December 5, 2008

SALT LAKE CITY (AP) — Seven Western states will face more water shortages in the years ahead as climate change exacerbates the strains drought and a growing population have put on the Colorado River, scientists say.

"Clearly we're on a collision course between supply and demand," said Brad Udall, director of the Western Water Assessment at the University of Colorado.

Although there is some disagreement about when the most dire conditions will materialize, scientists at a conference in Salt Lake City said Thursday they expect less water to be available in the coming decades. Without fundamental shifts in water management, the result will be shortages and difficult decisions about who in the seven states the river serves will get water and who will go without, said Dave Wegner, science director for the Glen Canyon Institute, which organized the one-day conference at the University of Utah.

"To me, it's not going to be a pretty debate," Wegner said.

The changes are already being seen in reduced water flows, higher air temperatures and an unrelenting demand on the Colorado, which snakes across more than 1,400 miles and provides water for farms, businesses, cities and homes. The river serves Arizona, California, Colorado, Nevada, New Mexico, Wyoming and Utah, an area where 30 million people live.

Last year, officials from the seven states and Interior Secretary Dirk Kempthorne signed a far-reaching agreement aimed at conserving and sharing scarce Colorado River water. The 20-year plan formalized rules for cooperating during the ongoing drought.

A study released in February by the Scripps Institution of Oceanography in San Diego said there's a 50 percent chance that Lake Mead, which straddles the Arizona-Nevada state line, could run dry by 2021.

Several models by different scientists have made predictions about the future flow of the Colorado, all of which forecast less water, said Tim Barnett, one of the Scripps study's authors. The prospect of warming temperatures only increases the strain on an already strained system, he said.

"The current usage is simply not sustainable," Barnett said.

Udall quibbled with Barnett's prediction about 2021 but not the overall speculation that water in the Colorado River basin will become more scarce. "It's a question of when," he said.

Even if the West's climate doesn't get as warm as predicted, the river system will likely be faced with shortages, said Gregory McCabe, a project chief at the U.S. Geological Survey's water resources division in Denver.

Building more reservoirs to store water probably won't be enough to mitigate the effects of changes to the system — especially warming temperatures, he said. One of the best approaches will be to drive down demand by finding better and more ways to conserve water, McCabe said.

The Colorado has long been the source of controversy as thirsty states fight for their share to quench growing economies.

The 20th century was one of the wettest going back several centuries. But it shouldn't be assumed that water levels will remain as plentiful in the future, researchers said.

Connie Woodhouse, a University of Arizona scientist, said tree rings in the basin indicate that the amount of moisture has fluctuated widely over hundreds of years, but has tended to be drier than was seen in the last 100 years.

It's time to consider a "new normal" for shrinking water supplies in the Colorado River basin, Wegner said. That will require a sweeping re-evaluation of allocations, use, conservation, dams and legal obligations, he said.

###

Water agency needs an overhaul, congressman says

Conservation award » George Miller was honored for leadership on natural resource policies.

By Judy Fahys for The Salt Lake Tribune
Updated: 12/05/2008 09:16:21 AM MST

The federal government's water-management agency can no longer operate as though Colorado River water is abundant, said one of Congress' leaders on natural resources Thursday night.

"The Bureau of Reclamation has to reinvent itself," said U.S. Rep. George Miller, D-Calif. and longtime leader on natural resource policy. "It has to address the future in an innovative way and not be tied so strongly to the past."

Miller made the remarks as he accepted the David R. Brower Award for Conservation by the Salt Lake City-based Glen Canyon Institute, an organization that made its name by calling for the draining of Lake Powell.

The institute now focuses on scientific issues surrounding the vitality of the Colorado River, and much of Thursday's program was devoted to updates about how climate change might affect the 27 million people and 3.5 million acres of farmland that rely on the 1,450-mile river.

Miller was a driving force behind legislation in the early 1990s to complete the Central Utah Project -- the water program behind construction of the Jordanelle Dam in Wasatch County -- along with the creation of a mitigation fund to address the environmental damage caused by decades of dam-building in Utah.

He also pushed for moderating flows through the Glen Canyon Dam to lessen the harm high-energy water releases were causing to Grand Canyon National Park. The northern California lawmaker served from 1991 to 1994 as the chairman of the House committee that oversees the nation's mining programs, water, national parks and other natural resources.

Miller attacked the departing Bush administration for what he described as a culture of corruption in the Interior Department. Science, he added, was "tampered with" and "pushed aside." "You don't get to change the conclusions for political reasons," he said.

Instead, with a change in administration in Washington, science should be harnessed to help make smarter decisions about preserving already-taxed water supplies.

Scientists who spoke at the conference talked about Western water resources that are dwindling in the face of growing populations and are threatened by global warming.

Tim Barnett, a researcher at the Scripps Institution of Oceanography in San Diego, told the conference that no models of Colorado River water -- even without climate change factored in -- predict an increased flow.

"You have a river that's on the brink of failure," he said.

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Regional News 12/16/08

Abrupt Climate Change: Will It Happen this Century?

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The United States faces the potential for abrupt climate change in the 21st century that could pose clear risks to society in terms of our ability to adapt.

"Abrupt" changes can occur over decades or less, persist for decades more, and cause substantial disruptions to human and natural systems.

A new report, based on an assessment of published science literature, makes the following conclusions about the potential for abrupt climate changes from global warming during this century.

Climate model simulations and observations suggest that rapid and sustained September arctic sea ice loss is likely in the 21st century.

The southwestern United States may be beginning an abrupt period of increased drought.

It is very likely that the northward flow of warm water in the upper layers of the Atlantic Ocean, which has an important impact on the global climate system, will decrease by

approximately 25-30 percent. However, it is very unlikely that this circulation will collapse or that the weakening will occur abruptly during the 21st century and beyond.

An abrupt change in sea level is possible, but predictions are highly uncertain due to shortcomings in existing climate models.

There is unlikely to be an abrupt release of methane, a powerful greenhouse gas, to the atmosphere from deposits in the earth. However, it is very likely that the pace of methane emissions will increase.

The U.S. Geological Survey led the new assessment, which was authored by a team of climate scientists from the federal government and academia. The report was commissioned by the U.S. Climate Change Science Program with contributions from the National Oceanic and Atmospheric Administration and the National Science Foundation.

"This report was truly a collaborative effort between world renowned scientists who provided objective, unbiased information that is necessary to develop effective adaptation and mitigation strategies that protect our livelihood," said USGS Director Mark Myers.

"It summarizes the scientific community's growing understanding regarding the potential for abrupt climate changes and identifies areas for additional research to further improve climate models."

Further research is needed to improve our understanding of the potential for abrupt changes in climate. For example, the report's scientists found that processes such as interaction of warm ocean waters with the periphery of ice sheets and ice shelves have a greater impact than previously known on the destabilization of ice sheets that might accelerate sea-level rise.

To view the [full report](#), titled Synthesis and Assessment Product 3.4: Abrupt Climate Change, and a summary brochure on abrupt climate change, [visit this web page](#)
<http://www.climatescience.gov/default.php>

USGS provides science for a changing world. For more information, visit www.usgs.gov

**** www.usgs.gov ****

Regional News 12/21/08

How the West's Energy Boom Could Threaten Drinking Water for 1 in 12

by Abrahm Lustgarten for ProPublica
David Hasemyer for The San Diego Union-Tribune
December 21, 2008 11:23 am EDT
Dec. 22: This post has been corrected [1].

This story was co-published with the [2]San Diego Union-Tribune [2] and also appears in that newspaper's Dec. 21, 2008 issue.

[Click here for ProRepublica site with document archive](#)

The Colorado River, the life vein of the Southwestern United States, is in trouble.

The river's water is hoarded the moment it trickles out of the mountains of Wyoming and Colorado and begins its 1,450-mile journey to Mexico's border. It runs south through seven states and the Grand Canyon, delivering water to Phoenix, Los Angeles and San Diego. Along the way, it powers homes for 3 million people, nourishes 15 percent of the nation's crops and provides drinking water to one in 12 Americans.

Now a rush to develop domestic oil, gas and uranium deposits along the river and its tributaries threatens its future.

The region could contain more oil than Alaska's National Arctic Wildlife Refuge. It has the richest natural gas fields in the country. And nuclear energy, viewed as a key solution to the nation's dependence on foreign energy, could use the uranium deposits held there.

But getting those resources would suck up vast quantities of the river's water and could pollute what is left. That's why those most concerned are water managers in places like Los Angeles and San Diego. They have the most to lose.

The river is already so beleaguered by drought and climate change that one environmental study called it the nation's "most endangered" waterway. Researchers from the Scripps Institution of Oceanography warn the river's reservoirs could dry up in 13 years.

The industrial push has already begun.

In the eight years George W. Bush has been in office, the Colorado River watershed has seen more oil and gas drilling than at any time in the past 25 years. Uranium claims have reached a 10-year high. Last week the departing administration auctioned off an additional 148,598 acres of federal land for gas drilling projects outside Moab, Utah.

As still more land is leased for drilling and a last-minute change in federal rules has paved the way for water-intensive oil shale mining, politicians and water managers are now being forced to ask which is more valuable: energy or water.

"The decisions we are making today will be dictating how we will be living the rest of our lives," said Jim Pokrandt, a spokesman with the Colorado River Conservation District, a state-run policy agency. "We may have reached mutually exclusive demands on our water supply."

Some experts and officials say the economic and ecological importance of the Colorado is just as vital to American security as the natural resources that can be extracted from around it.

"Without (the Colorado), there is no Western United States," said Jim Baca, who directed the Bureau of Land Management, or BLM, in the Clinton administration and says the agency's current policy is narrow-sighted. "If it becomes unusable, you move the entire Western United States out of any sort of economic position for growth."

Balancing that risk with the need for energy is complicated, because scientific understanding of the Colorado is limited and no single agency manages the river as a national resource.

The Interior Department, which includes the BLM, oversees where the water goes, but not how it is kept clean. The EPA is charged with maintaining water quality, but it can't control who uses it and doesn't conduct its own research.

Furthermore, the EPA delegates much of its authority to the states that the river runs through, and the federal, state and local authorities in charge of separate aspects of the river don't always coordinate or cooperate. "I don't know that there is, quite honestly, anyone that looks at an entire overview impact statement of the Colorado River," said Robert Walsh, a spokesman for the Bureau of Reclamation, which governs the allocation and flow of the southern part of the waterway.

Oil and natural gas drilling in Colorado already require so much water that if its annual demand were satisfied all at once, it would be the equivalent of shutting off most of Southern California's water for five days. If Colorado's oil shale is mined, it would turn off the spigot for 79 days.

Although company executives insist they adhere to environmental laws, natural gas drilling has led to numerous toxic spills across the West. According to the Environmental Protection Agency, mining has contaminated four out of 10 streams and rivers in the West. Similarly, mining has topped the government's list of the most polluting industries for the past decade, and new mine problems continue to arise today.

Industry representatives and the Bush administration say breaking America's dependence on foreign oil makes using all available energy resources here at home a priority.

"I believe this country needs to offer domestic resources to be energy independent," said Tim Spisak, a senior official who heads the BLM's oil and gas development group. "The way to do that is to responsibly develop public resources on our lands."

Critics of Bush's energy policies said they favor business interests at a time when climate change demands a fundamental shift in the way the nation values water. They also complain that the administration doesn't grasp the West's looming water problem.

"When Lake Mead goes dry, you cut off supply to the fifth largest economy in the world," said Patricia Mulroy, general manager of the Southern Nevada Water Authority, referring to the reservoir that sits behind the Hoover Dam and controls water flow to the Southwest's cities. She points out that while some dispute the timing of Lake Mead's demise, no one says it won't happen. "We've ignored the need to adapt," Mulroy said. "We've never looked at what the secondary impact of, say, an energy decision is."

Both the U.S. House and Senate are considering bills that would require better management of the nation's water quality and water assets. But the bills focus more on the threat of climate change than the threat of industrial development. A growing number of water professionals say even a congressional act isn't enough to clarify the government's responsibility. They want the president to appoint a new national water authority -- or even a cabinet-level water czar.

"If you are really going to deal with water, the nation needs to deal with it in a far more comprehensive manner," said Brad Udall, director of the National Oceanic and Atmospheric Administration's water assessment program at the University of Colorado. "We can't afford to play around with potentially damaging activities."

The Southern Nevada Water Authority, the state of Arizona and the Metropolitan Water District, which governs the water supply to Los Angeles and San Diego, have implored Bush's Interior to proceed with caution as it races in these last days to develop mining, gas and oil near the river.

"We have other sources of power," said Jeffrey Kightlinger, MWD's General Manager. "We don't have other sources of water."

Hot Water

One of those alternative sources of energy is uranium, which is essential to the production of nuclear energy. In the last six years, new uranium mining claims within five miles of the river have nearly tripled, from 395 to 1,195, according to a review of BLM records by the Environmental Working Group, a Washington-based policy organization.

Although few of those claims will actually be mined, mining has a track record of contamination that alarms water officials dependant on the river. The Metropolitan Water District points to a 16 million ton pile of radioactive waste near Moab as a warning of what can happen when mining isn't carefully controlled.

The pile sits on the banks of the Colorado at the site of a mill that once processed uranium for nuclear warheads.

The plant closed in 1984, but the Grand Canyon Trust estimates 110,000 gallons of radioactive groundwater still seep into the river there each day. The U.S. Department of Energy decided in 2000 to move the pile away from the river. But the planning was so complicated and the cost so high -- estimates top \$1 billion -- that the first loads of waste won't be hauled off until next year.

The industry says the Moab case is an outdated blight from the distant past.

"What gets my ire up is when we get compared to stuff that happened in the 60s. There is no argument from us now about being careful... with an eye to preserving the environment," said Peter Farmer, CEO of Denison Mines, a Canadian company that operates seven U.S. mines as well as the nation's only operating uranium mill in Blanding, Utah.

Denison recently spent more than \$5 million to triple-line a waste pit and outfit it with leak detection sensors. It's cheaper to pay up front, Farmer says, than to clean up later.

Roger Haskins, a specialist in mining law at the BLM, agrees that concerns over mining are overblown. He says landmark environmental regulations in the 1970s prepared the industry for the 21st century. While it's still easy to stake a mining claim, projects must now undergo extensive environmental review before they can be turned into mines.

"Whatever happens out there is thoroughly manageable in today's regulatory environment," Haskins said. Scientists say some degree of pollution is inevitable, because mining sometimes uses toxic chemicals like cyanide. It also exposes naturally toxic metals that would otherwise remain deep underground.

Drilling for uranium creates pathways where raw, radioactive material can migrate into underground aquifers that drain into the river. Surface water can seep into the drill holes and mine shafts, picking up traces of uranium and then percolating into underground water sources. The milling process itself creates six pounds of radioactive and toxic waste -- including ammonia, arsenic, lead and mercury -- for every ounce of uranium produced.

"There has to be some impact to downstream water. Whether or not we can measure -- that is the question," said David Naftz, a hydrologist at the U.S. Geological Survey in Salt Lake City who studies uranium mining. Naftz has documented dangerous levels of uranium near waste dumps at more than 50 separate test sites in Utah.

While much of the mining happens in high, dry places where contaminants don't easily seep into surface water, he says periodic storms can still wash them into the river.

"What we've done is kind of upset the geochemical equilibriums in these basins by taking these ores and exposing them to conditions on the surface," he said. "The question is, how long is it going to take to transport them down to water systems?"

Pollution problems with gold, copper and other mines also challenge the assertion that technology and better regulation have eliminated the environmental risks.

One study compared the EPA's environmental impact statements for 25 sites to what really happened after mining took place. Water at three quarters of the mines was found to be contaminated, even though the mines used technology and techniques that the EPA had said would keep the environment clean, according to the research done for the Earthworks by Jim Kuipers, an environmental engineer in Butte, Mont. and Ann Maest in Boulder, Colo.

At least four large mines that operated as recently as the 1990s -- long after new regulatory standards were put in place -- have caused so much contamination that the EPA designated them as priority Superfund cleanup sites. One rendered a 20-mile stretch of a Colorado River tributary completely dead.

"Promises are made and promises are broken," said Roger Clark, who is director of the Grand Canyon Trust's air and energy program and has been monitoring the rise in

mining claims near the Grand Canyon. "This is not something we can sit back and take industry's word for."

Clark, who explored the Colorado River as a Boy Scout and later as a river guide, already has seen signs of the park's decline. On a recent hike along the Grand Canyon's rim, he passed a stream whose water he drank freely as a boy.

Now it's marked with a sign saying, "Drinking and bathing in these waters is not advisable." The Park Service posted the same warning along five other canyon streams that feed into the Colorado, because high concentrations of uranium have leached into the water, likely from old mines.

In June, the House Natural Resources Committee invoked a rarely-used authority to force the Bush administration to make one million acres of public land adjacent to the park ineligible for exploration. Two months later, though, Interior Secretary Dirk Kempthorne allowed some 20 new claims in the area by deciding that the committee's move violated executive authority.

Secret Chemicals

In the last decade, a pattern of contamination has also emerged in places where natural gas drilling has intensified. If drilling increases substantially across Colorado, Wyoming and Utah, it could also imperil the river.

Most wells rely on a process called hydraulic fracturing [3], which requires as much as two million gallons of water plus small amounts of often-toxic chemicals for a single well. The waste water then sits in open pits until it is treated, recycled or disposed of.

In February a waste pit high on a mesa overlooking the town of Parachute, Colo. sprang a leak, allowing some 1.6 million gallons of fluid to soak into the arid earth. According to state records, the spill migrated underground until it seeped from a cliff side and froze into a gray pillar of ice more than 200 feet tall. When it melted, the fluids dripped into the torrid currents of Parachute Creek and finally dumped into the Colorado River.

Although the number of gas drilling accidents in the upper Colorado River watershed is small relative to the amount of drilling, they have begun adding up. Colorado state records show that of some 1,500 spills in drilling areas since 2003, more than 300 have seeped into water. In one case last summer a truck carrying drilling fluids crashed into the Colorado, where it remained partially submerged for more than three weeks.

In neighboring Wyoming, the BLM found a 28-mile-long plume of benzene contamination in an aquifer beneath a gigantic gas field. The aquifer is near a tributary to the Green River, which in turn flows into the Colorado.

Doug Hock, a spokesman for the Canadian gas company Encana, which drills in Colorado and Wyoming, says that while there will always be spills, the fears of pollution are exaggerated. Encana uses steel and concrete casing around its drill pipes, lines its waste pits and, increasingly, cleans its waste water and re-uses it inside its wells.

"We have put in place safeguards to protect the water," Hock said. "There is always a balance -- this country has a great demand for energy."

But because the energy industry has been exempted from so many federal environmental regulations during the Bush administration, it's difficult to assess the industry's true impact on the river.

The mix of chemicals used in hydraulic fracturing is held as proprietary competitive information by the industry and kept secret from even the EPA. Scientists say that without knowing the specific ingredients in the mix, they don't know what compounds to test for after a spill and can't check to see if they've reached the river.

The 2005 Energy Policy Act exempted hydraulic fracturing from the Safe Drinking Water Act. Also exempted from federal control and water protection laws are the drilling industry's construction activities, including the sediments and dust produced from thousands of miles of road building, site grading and the drilling itself, even though that debris often ends up in waterways.

"We have seen an explosion in drilling, and at the same time we have seen a weakening of the federal standards under which drilling occurs," said Dusty Horwitt, an analyst with the Environmental Working Group.

Given the relaxation in regulatory authority, the development may be out-pacing scientists' ability to measure the implications.

In August drilling companies bid on 55,000 acres of federal parcels atop the Roan Plateau, a cherished wilderness area in central Colorado that drains into the Colorado River. A September report from the University of Colorado Denver predicted that in 15 years Garfield County, a western drilling area bisected by the river, will have 23,000 wells, six times what it has now, based on permit applications already filed with the state.

The push to drill continued last week, when the BLM opened 148,598 more acres of federal land near Moab to drilling.

Quarterly lease sales in that area during the last two years were typically about 75,000 acres.

"It seems reckless," said Bill Hedden, director of the Grand Canyon Trust. Near his home outside Moab, natural gas drilling rigs may soon be visible through Delicate Arch, the wind-hewn bridge of rock at Arches National Park that graces Utah's license plate.

"We Americans have tried to export a lot of our problems off to the boondocks -- but in this case the boondocks is the watershed and the problem is coming right back to us," Hedden said.

According to Spisak, the BLM official in charge of drilling, the Moab sale is the result of "pent up build-up" in the queue of requests the agency is handling. Companies that want to drill on federal land ask the BLM to consider listing that land for a future lease sale.

Over the past few years, Spisak said, environmental organizations have challenged some of the listings the BLM approved, delaying their sale. Now the agency is catching up. "We are required to push them forward," Spisak said. "It's due to pressures of prices and industry, and we are responding to the market demand."

An Unprecedented Demand

No project poses a greater threat to the Colorado River -- or better represents the choice between water and energy -- than mining for oil shale.

In mid November the BLM quietly approved a rule change that paved the way for extracting oil from rock deposits in Colorado and Utah, smack in the heart of the river's watershed. If the vast deposits are mined to their potential -- and it could be a decade before any of the projects go forward -- the reserves could help the United States make a significant leap towards energy independence.

Getting oil from the shale, if researchers can find a reliable way to do it on a large scale, would be astronomically expensive. It might also require more water than the Colorado River can provide.

A recent study for the state of Colorado estimates that if the oil shale industry takes off in northwest Colorado, the region's energy industry will need at least 15 times as much water as it uses now. In 30 years, the report predicts, the energy industry in the upper Colorado River basin would stop the river's entire flow for nearly six weeks if it used the water all at once.

"It would take every bit of water rights that we currently have plus more," said Scott Ruppe, general manager of Uintah Water Conservancy District in northeastern Utah.

Counties across the Western states are apportioned a limited quota of water rights that can be used for industry, farming, or municipal use, he explained. Using Colorado River water for oil shale means less water for urban growth, agriculture and personal use. It means trading fresh fruit and vegetables -- not to mention green lawns -- for energy.

"It just comes down to how needy the nation is for energy," he said. "If energy is short then some of the other concerns might get pushed aside."

These stark choices have driven Congress to begin examining the water problem in the absence of leadership from the White House. One of the bills that has been written would, if passed, direct the Interior Department to undertake the kind of comprehensive inventory of the nation's water quality and supply that critics say is missing.

It will be up to the Obama administration, though, to ultimately decide the nation's priorities. The appointment of Colorado Sen. Ken Salazar to head the Interior Department will inject a unique understanding of western water issues into Washington politics. Salazar is a long-time rancher and a former water attorney.

The new administration could temper some of Bush's decisions by limiting mining claims in sensitive areas, refusing to finalize leases sales that haven't been signed, and

rigorously enforcing existing environmental regulations. It also could try to reverse some of the rules the Bush administration has issued to speed development, although that will be difficult.

Obama's greatest opportunity to address the conflict between water and energy may lie not in undoing policies from the past, but in looking to the future.

"The administration has an opportunity to start thinking about water as a national resource," said Nevada's Mulroy. "We have no rear view mirrors anymore."

Correction: This post originally stated that the Bureau of Land Management had auctioned off 359,000 acres of land for natural gas drilling near Moab Utah. In fact, as a result of protests over that lease sale, the BLM made a last minute change to the total amount and auctioned 148,598 acres of land on Dec. 19, 2008. This story also refers to a study comparing real pollution at 25 mines to that anticipated by the EPA. That study was commissioned by Earthworks, not the Environmental Working Group, and was authored by James Kuipers and Ann Maest.

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LR in the News 01/03/09

Advocacy groups greening Utah

Study shows groups are increasing at nearly double the rate of other nonprofits.

By Judy Fahys for The Salt Lake Tribune

Updated: 01/04/2009 09:20:04 AM MST

The grass roots sprouting up around Utah are mostly green.

New environmental groups are sprouting up all over -- contrary to a declaration five years ago that the green movement had grown monolithic, fossilized and died. Some of Utah's new groups focus on neighborhoods, such as the San Juan County community concerned about uranium mining planned for their area.

Others organize constituencies, like the Utah Physicians for a Healthy Environment and the Utah Moms for Clean Air.

And still more focus on a particular environmental problem, like Uranium Watch, concentrating on pollution from nuclear energy, or Urgency Utah, campaigning to bring climate-change solutions to the forefront.

Brigham Young University political science professor Kelly Patterson says the sprouting of new green groups makes sense on an issue as diverse as the environment. While Utahns might snub a Washington-based organization focused broadly on national environmental policy, they readily welcome neighbors addressing a problem down the block.

"It's what you do about uranium tailings," said Patterson, who studies interest groups. "It's what you do about particulate matter [air pollution], it's what you do about preserving open spaces."

The trend isn't unique to Utah. A new study by the Urban Institute shows that green groups are increasing at nearly double the rate of other kinds of nonprofits.

Meanwhile, author Paul Hawken describes the phenomenon as part of a global movement in his book *Blessed Unrest*.

For Cherise Udell, president and founder of Utah Moms for Clean Air, none of this is surprising.

Exasperated with the apparent apathy about high-pollution periods in the Salt Lake Valley, she recognized "a need and a niche to be filled" when she launched Moms nearly two years ago.

"Caring about the environment has become mainstream," says Udell. "It's no longer a fringe issue." The group now has an e-mail list of around 1,200 and a track record of accomplishments that include reducing motor vehicle idling at schools and a school-bus retrofitting program intended to lessen children's exposure to polluted exhaust. Members, many with a professional background, have been known to petition lawmakers with a baby balanced on their hips, a loaf of banana bread in one hand and legal documents in the other.

"We really brought the air issue to the kitchen table," says Udell.

Air-quality problems also prompted Salt Lake City anesthesiologist Brian Moench to create the doctors' group. With about 80 members now, the doctors emphasize health impacts of pollution to nearby communities.

"The public's knowledge of these issues is probably our biggest ally," he says. "The best progress that will be made is through public pressure."

Jim Westwater, founder of the Utah Valley Sierra Forum, says he rallied inactive Sierra Club members and others interested in environmental issues after he relocated to Utah a couple of years ago. Now over 400 people are part of the network, participating in hikes, cleanups and the group's monthly discussion forums.

The debate has included lively sessions on such issues as the benefits of nuclear power, consumerism and faith and the environment. It's a delicate balance to strike in a community where environmentalism is often shunned.

Says Westwater: "We're trying to appeal to people's higher nature."

Sarah Fields, of Moab-based Uranium Watch, agrees that public education is key. For many years the go-to person for information on all things nuclear in southeastern Utah, Fields now shares the government documents she digs up on the group's Web page.

A better-informed community years ago might have gone a long way toward preventing the Atlas uranium-processing mill from becoming a \$1 billion hazardous waste cleanup, she says.

"It's when you are in the local community -- that's when you know what's going on."

In the end, the proliferation of environmental groups is a trend that's likely to continue, says University of Utah political science professor Dan McCool. It's also bound to be good for democracy, he says.

"Small, local groups, can target in a way that national groups cannot."

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[Uranium Watch](#) is a project of Living Rivers.

River News 01/09/09

The West is hurtling toward a water crisis

Opinion

The Salt Lake Tribune

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The Utah Legislature will soon begin its 2009 session, and we may expect bills promoting two favorite pieces of home-grown pork, the Lake Powell pipeline and Transition Power's nuclear nightmare on the Green River.

But before legislators cast more of our recession-stretched cash before these two swine, they should read the latest study of Colorado River issues, James Powell's [Dead Pool](#), from which the following is taken.

For eight years under George W. Bush, the Bureau of Reclamation has refused to acknowledge the effects that global warming is having and will yet have on the Colorado, in spite of record temperatures and the recent 500-year drought that nearly brought Lake Powell to its knees. Instead, the bureau continues to use only data from the last century, the first half of which was one of the wettest periods in the known history of the Colorado.

According to Bush's BOR, in 2050 Lake Powell, which reflects the health of the river as a whole, will stand at 3,660 feet, just 40 feet below full pool.

Studies done by climate scientists suggest an entirely different future. Recent tree-ring studies have shown that the true multicentury average flow of the river is well below that used by the BOR. They also show periods when river flow, even without the effects of global warming, was lower than that experienced in our 500-year drought.

When one adds to this natural variability and drought-prone history even a conservative estimate of projected global warming effects, the results are devastating. Current estimates of how much the flow of the Colorado might be reduced range between 6 and 30 percent.

Using just a 10-percent figure, and accepting the bureau's own estimates of increased demand and new draws such as the Lake Powell pipeline, Powell gives a harrowing scenario in which Lake Powell drops to "dead pool" by 2022, rendering projects such as the pipeline useless almost as soon as they become operational.

But far scarier is the possibility that in this time frame the effects of the devastation of the Colorado due to overuse and reduced flow could well render life in today's desert megacities such as Phoenix and Las Vegas impossible. What Powell's book shows is that global warming is without any stretch of imagination capable of rendering life in western America unrecognizable not in our grandchildren's lifetime but in ours.

While I doubt that the 2009 Legislature will take this scenario seriously, there are others in this state who might. No one has more at stake in this crisis-in-the-making than the LDS Church. Let me therefore pose a "morality" question to church leaders.

Given the possibility that the Colorado will not be available for future development in the Mormon heartland, what stance is the church willing to take on growth and conservation in southern Utah? Given the possibility that St. George will have no additional sources of water for future use, and that all sources will be put under climate strain, what is a provident church to do today to prevent future catastrophe?

With such possibilities to consider, the proposition that we will take Colorado River water to run nuclear power plants or to promote continued unsustainable growth in the nation's second-driest state is not only an absurdity. It is cultural genocide.

What the federal government failed to accomplish in its persecution of the Mormons a century ago, Mormon legislators, county councils, mayors, and developers are visiting on themselves.

In the words of Bernard DeVoto, "The future of the West hinges on whether it can defend itself against itself."

Ed Firmage Jr. is a fine-art photographer. He lives in Salt Lake City.

World News 01/12/09

Mulroy issues harsh predictions on global warming

Jan. 12, 2009

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By STEVE TETREAULT

STEPHENS WASHINGTON BUREAU

WASHINGTON — Southern Nevada's top water official warned federal policymakers today that they underestimate climate change at their own risk as they consider ways to bolster the nation's infrastructure.

"We need to understand where the floods are going to occur and where the drought conditions are going to be protracted before we start making long-term investments," said Pat Mulroy, general manager of the Southern Nevada Water Authority.

In the short term, fixing long-neglected bridges, roads and water and sewer systems is fine, Mulroy said. But beyond that, she said, "We need to look at (infrastructure) through a 21st century lens in a very different climate and not take a 19th century climate and assume that is going to be the norm."

“We have not spent any time in this country investing in the science of climate change in any kind of concerted action,” she said. “We have not spent time talking about how we are going to adapt.”

Mulroy, who directs the agency that supplies most of the water in Clark County, sounded the alarm as part of a panel assembled by the Brookings Institution to discuss infrastructure and recommendations for President-elect Barack Obama to pursue in his economic stimulus strategy and beyond.

Investments in infrastructure create jobs as well as shore up the physical foundations of the nation, but panelists said the ways such projects are weighed and funded are grossly inefficient.

The audience of several hundred at the think tank grew silent at Mulroy’s striking predictions. She said Southern California “is very much facing the real possibility of having a major water crisis in 2010,” and that three more years of drought along the Colorado River will cost Southern Nevada 40 percent of its water supply.

“Two more years after that, we lose 90 percent of our water supply,” if the drought persists over the longer period, she said, referring Lake Mead levels dropping beneath the intake pipes that draw water for municipal use.

Professional water managers recognize climate change “could destroy the very underpinnings of every economy of the United States, whether it is dikes that are going to break from rising ocean levels to whether it is wastewater or water treatment plants that are situated on the banks of rivers that can be flooded out, to if it is in the West from the most dire and desperate drought that we have ever experienced.”

Mulroy said she was hopeful at the appointment of former EPA administrator Carol Browner to become the global warming coordinator in the Obama White House. While federal science agencies now compete for climate change funding, there might be some coordination in the new administration.

“Once that science gets going and we get a better understanding of the true impacts of climate change, then we can look at the most at-risk situations, whether it is the dikes in California, whether it is the potential of losing a significant part of Florida, whether it is the protracted droughts that are going to wipe out whole economies, and what are the possible solutions,” she said.

Policymakers will need to become creative, even “outrageous,” Mulroy said. For instance, she suggested that floodwaters from the Mississippi River might be diverted west for drought prevention.

“Why can’t floodwaters in one part of the country, through a series of exchanges, be a water supply in another part of the country?” she said. “I could show you a series of exchanges between the Mississippi and California and you could start fixing some problems.

“When it comes to watersheds and water supplies, we are all interconnected,” she said.

Contact Washington Bureau Chief Steve Tetreault at stetreault@stephensmedia.com or 202-783-1760.

Find this article at: http://www.lvrj.com/news/breaking_news/37468904.html

Regional News 01/15/09

Navajo President Shirley won't sign Glen Canyon measure

Copyright © 2009
Gallup Independent
By Kathy Helms
Diné Bureau

WINDOW ROCK — Legislation passed by the Navajo Nation Council to dissolve a memorandum of agreement related to the use and development of Glen Canyon National Recreation Area has been returned to the Office of the Speaker without the signature of President Joe Shirley Jr.

In a Jan. 5 memorandum to Speaker Lawrence T. Morgan, Shirley said he was returning the legislation, sponsored by Morgan, due to a transmittal error, but also said he felt compelled to express his concern about Council's action and "hope that we can work diligently to negotiate a new agreement for the benefit of the Navajo Nation."

Shirley said the terminated agreement was the foundation of existing economic development at Antelope Point and formed the basis for several other subsequent agreements between the federal government and the Navajo Nation. In the 1970 agreement, the federal government committed to seeking congressional action to transfer the annual franchise fee collected at Rainbow Bridge to the Navajo Nation, however, Congress never passed the legislation approving the transfer.

Shirley said the legislation approved by Council relies on this failure as justification for terminating the agreement, and that while it is true that the Nation has never received the annual fee, it does receive revenue from the existing development at Antelope Point, including revenue from economic activities occurring off the Navajo Nation on National Park Service lands in the Glen Canyon area.

Various agreements and business arrangements have been entered into as a result of the 1970 agreement, Shirley said, and terminating that agreement likely will have an adverse impact on Antelope Point development, including providing the Park Service with potentially sufficient justification to terminate agreements reached in 1994 and 2003, thus making joint administration at Antelope Point extremely difficult, if not impossible.

Without a mechanism for joint administration of development at Antelope Point, the Nation's ability to play a role in Antelope Point Holdings LLC's operations is severely

limited, Shirley said. Future development calls for expanding marina operations, building a hotel and developing a visitor center — all of which would result in increased tourism and tax revenue to the Nation.

Should the Park Service terminate the company's concessions contract, the Nation's business site lease with the company also would terminate and it would not be able to continue operations on Navajo lands at Antelope Point. Shirley said the company has invested more than \$20 million, and in the event its business site lease is canceled, the company could take legal action.

Agreements entered by the company in 2004 to obtain financing from National Bank of Arizona also would be affected and the company could be considered in default, in which case the bank could call the loan, he said.

"Termination of the 1970 MOA provides National Bank of Arizona with a basis for arguing that a default has occurred," Shirley said.

This would have a potentially crippling impact on the company's operations at Antelope Point, thus opening the door to potential legal action, he said.

"The intent of the legislation to pursue economic development in the Antelope Point area of the Navajo Nation is to be commended. Unfortunately, the termination of the 1970 MOA will have significant harmful consequences on the existing economic development," he said, adding that the potential benefits associated with possible new economic opportunities may not outweigh the adverse economic impacts.

In addition to Shirley's refusal to sign the legislation, Morgan also has taken a hit from the LeChee Chapter, which has unanimously approved a resolution denouncing a potential development by Texas billionaire B.J. "Red" McCombs of 50,000 acres along Navajo Canyon in LeChee, Kaibeto and Inscription House for private home sites, hotels, casinos, and possibly other business ventures. "We, the people of the LeChee Chapter, adopt this resolution to put the central government on notice that we will resist any move to take our land. The chapter calls upon the central government of the Navajo Nation, specifically Speaker Lawrence Morgan and Delegate Ervin Keeswood to disclose any discussions on such a venture before proceeding further."

The chapter also is requesting Kaibeto, Gap/Bodaway, Navajo Mountain, Oljato, Cameron and Tsah Bi Kiin (Inscription House) chapters join in the resolution.

Ivan Gamble of LeChee said the chapter has cultivated a relationship with Antelope Point Holdings and Jerry Moyes and has worked tirelessly for more than 30 years to make the marina a reality.

"Over 300 jobs are at risk for our regional economy because of Mr. Morgan's legislation to unilaterally withdraw from this agreement. Now, because of his actions, we are on rocky ground with our marina and our neighbors, the U.S. Park Service. Our water source of Lake Powell, which we share with our neighbors in Page, is at risk; our Diné way of life is threatened because of Mr. Morgan.

"LeChee will not allow this to happen and will fight this at every step. We are unanimous in our dissent of this and have retained legal representation," Gamble said.

There was no response from the Speaker's Office Wednesday.

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Additional information:

See NGO coalition [letter](#) opposing Antelope Marina

Regional News 01/28/09

Interior Ignored Science When Limiting Water to Grand Canyon

By Juliet Eilperin

Washington Post Staff Writer

Wednesday, January 28, 2009

<http://www.washingtonpost.com/wp-dyn/content/article/2009/01/27/AR2009012703283.html>

Interior Department officials ignored key scientific findings when they limited water flows in the Grand Canyon to optimize generation of electric power there, risking damage to the ecology of the spectacular national landmark, according to documents obtained by The Washington Post.

A [Jan. 15 memo](#) written by Grand Canyon National Park Superintendent Steve Martin suggests that the department produced a flawed environmental assessment to defend its actions against environmentalists in court. The Grand Canyon Trust, an advocacy group, has sued Interior for reducing the flow of water from Glen Canyon Dam at night, when consumer demand for electricity is low, on the grounds that the policy hurts imperiled fish species such as the endangered humpback chub and erodes the canyon's beaches.

"The government's brief as presented continues to misinterpret key scientific findings related to the humpback chub, status of downstream resources in Grand Canyon, and the need for the Secretary to acknowledge [National Park Service] authorities and responsibilities to protect resources under [National Park Service] administration," Martin wrote in a memo that The Post obtained from the group Public Employees for Environmental Responsibility. Martin added that his agency continues to fear that the current policy "will significantly impair Grand Canyon resources."

The behind-the-scenes skirmish, which took place just days before President George W. Bush left the White House, highlights the sort of challenges Interior Secretary Ken Salazar will face in his new position. While Salazar declined to comment specifically on the Grand Canyon case because it is the subject of an ongoing legal battle, he said in

an interview yesterday that he would emphasize "the need to have sound science in all decision making in the Department of Interior."

"Science should not be shoved under the table in order to deal with special interests that are knocking at the door," said Salazar, adding that he will be looking at several last-minute decisions made by Bush before he left office. "My point of view is, nothing is sacrosanct in terms of being reexamined."

The federal government has spent about \$100 million studying water flows on the Colorado River, and the studies indicate that the ecosystem would benefit from occasional short bursts of massive amounts of water along with more regular flows during the day and night. This pattern would mimic the river's natural fluctuations and deposit sediment on canyon beaches while also sustaining fish populations.

Last February, however, Interior approved a five-year "experiment" in which it would allow only one river surge, in March 2008, and afterward would control the water and prohibit any high flows through 2012. Martha Hahn, chief of science and resource management for Grand Canyon National Park, said the power and water industry representatives belonging to Interior's advisory committee on the plan "didn't want to see a high flow" on the Colorado River.

Leslie James, executive director of the Colorado River Energy Distributors Association, said the utilities that use the power generated by the dam do not see why federal authorities would change the water flows, because the number of humpback chub in the river has increased recently.

"Hey, it's a good thing, so let's not make any radical changes," James said, adding that timing the water flows to meet public demand saves money for the 4 million customers using electricity generated from the river.

Hahn, however, said the canyon's humpback chub population is still struggling. The fish's numbers had dipped from 15,000 in the mid-1980s to 2,000 before rising to 5,000 recently, she said: "That's hardly a recovery."

Bureau of Reclamation spokesman Kip White said he could not discuss the controversy in detail because it was "under litigation," but he noted that a federal judge had already ruled that Interior had not violated any laws in drafting its operating plan for the Colorado River.

Mike Snyder, the Park Service's intermountain regional director, received Martin's memo this month. He said yesterday that he concurred with the superintendent's analysis and had tried to petition the Interior Department's top officials to reexamine the Colorado water experiment.

"I think we have some really good science. My concern is we're not using that science to make our decisions," Snyder said. "This is an issue of protecting the resources and values of the Colorado River and Grand Canyon National Park."

When asked whether he had been cautioned by political appointees to mute his criticism of the water plan, Snyder responded, "I was counseled on the importance of having a single Department of Interior family response [to environmentalists' criticism], particularly as it relates to lawsuits."

Jeff Ruch, executive director of Public Employees for Environmental Responsibility, challenged Salazar to change the policy and allow for a more natural water flow. "If Secretary Salazar really means to clean house at Interior, he needs to start right here," Ruch said.

In the interview, Salazar said he had made it clear to his department's 64,000 employees that "the ethical lapses of the past will be no more" and that he will push for greater accountability at Interior. On Thursday, he plans to travel to Lakewood, Colo., to address Minerals Management Service employees. In September, the Interior Department inspector general accused more than a dozen MMS employees of engaging in unethical and criminal behavior.

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[See PEER Press Release](#)

LR in the News 01/29/09

'Clean coal' plant proposed for Emery County

by Ron George and Rick Shaw
special to The Times
01.29.09 - 10:28 am

[Click here to visit The Times-Independent](#)

Southern California Edison is proposing a new power plant for an area south of Woodside and west of U.S. 6 in Emery County.

The project, revealed in a Jan. 14 public meeting in Price, would include a power station with the capability of producing 500 megawatts while sequestering liquid CO₂ in an underground saline aquifer.

"There are many things that need to be done and many hurdles to go over before anything like this can happen," said Jenifer Hedrick, an engineer and the project manager.

The initial hurdle, she said, is to secure money through an application process with the United States Department of Energy for a feasibility study for such a "clean coal technology" plant. The application deadline for that money was Jan. 15 and the DOE will make grant decisions in July. Depending on the outcome of funding and further studies, the plant could be up and running in 2017 or 2018, Hedrick said.

The plant would use existing technology, but would be the first of its kind to employ all the technologies for a clean coal plant together in one place, according to Hedrick.

Hedrick said the goals for the plant would be converting coal to hydrogen to run the plant, capping the CO₂ emissions so they meet California standards now coming on line concerning clean electricity generation, and generating power that could be used across the West.

The plant would use integrated combined cycle turbines (IGCC), like those currently used in natural gas plants, to generate the power.

The gasification of coal into hydrogen is also in use in smaller scale in some places and Hedrick said that would be a key to the plant's operation. The process of converting the coal and sequestering the CO₂ would make the power that came out of the plant 20-40 percent more expensive than conventional plants, she said.

"But this would be an on-line plant that could supply power at anytime," said Hedrick.

Hedrick said conservative estimates show that the aquifer into which the company wants to inject the compressed liquid CO₂ would hold 500 million tons of the material. The plant would generate about four million tons of CO₂ every year.

"We wouldn't be able to fill that aquifer up in 50 years," Hedrick said. "In fact, if this project goes on line and works we would expect other plants might be built in the same area to utilize the same technology and that storage space."

Gasification of coal, as the process is now known, takes a great deal of water and there were questions from the assembled group about where California Edison would acquire the water for the project.

"We are still very preliminary on this study, but we think we could piece together enough water rights to run the plant or we wouldn't be looking at that site," Hedrick said.

John Weisheit, conservation director for Moab-based Living Rivers, has concerns about how that will be pieced together. "Our number one concern was, 'where are you going to get the water,' and they explained that they're going to get it from farmers, on the Price River," Weisheit said.

"I am very concerned about the endangered fish, of course," he said. "During the summer the flows on the Green River are going to become so small, the water's going to heat up. I've been a river guide for 30 years, and I've been watching dead catfish in the middle of the summer. When it gets warm, and the dissolved oxygen is depleted, these critters succumb to suffocation, which tells me it's already bad. They're going to make it worse."

Hedrick said that the company estimated that the plant would use one million tons of coal a year and would employ about 100 people at the plant, but could create about 1,000 jobs during construction.

The plant would be located on Bureau of Land Management property, and the sequestering site is on state School and Institutional Trust Lands Administration property.

California Edison has partnered with the University of Utah in the sequestering study process, she said.

“We have no detailed engineering yet and there is no permitting done,” said Hedrick. “We have a long way to go... But we wanted the community to know what we are doing.”

While non-toxic slag and sulfur were discussed in Hedrick’s presentation, it didn’t address potential mercury contamination. There is already a fish consumption warning for channel catfish from the Green River in Desolation Canyon due to mercury contamination.

Edison spokesman Steve Conroy said further research will be done regarding mercury. “Those issues, like the by-products, the sequestration, the unburned products and how it will be used or captured are all part of that process. That is part of the entire scope of work we have to do to determine the viability of the entire process,” he said.

Weisheit said he is skeptical that a coal plant can be built that addresses all the environmental concerns, but he acknowledges the need to develop new energy sources. “By the way, I’ll be happy to give my roof for solar panels,” he said. “I realize we’re in an energy crisis, but this isn’t the answer – we need a brighter portfolio for the area.” © moabtimes.com 2009

Regional News 02/26/09

Las Vegas Running Out of Water Means Dimming Los Angeles Lights

By John Lippert and Jim Efstathiou Jr.

Feb. 26 (Bloomberg) -- On a cloudless December day in the Nevada desert, workers in white hard hats descend into a 30- foot-wide shaft next to Lake Mead.

As they’ve been doing since June, they’ll blast and dig straight down into the limestone surrounding the reservoir that supplies 90 percent of Las Vegas’s water. In September, when they hit 600 feet, they’ll turn and burrow for 3 miles, laying a new pipe as they go.

The crew is in a hurry. They’re battling the worst 10-year drought in recorded history along the Colorado River, which feeds the 110-mile-long reservoir. Since 1999, Lake Mead has dropped about 1 percent a year. By 2012, the lake’s surface could fall below the existing pipe that delivers 40 percent of the city’s water.

As Las Vegas’s economy worsens, the workers are also racing against a recession that threatens the ability to sell \$500 million in bonds so they can complete the job.

Patricia Mulroy, manager of the Southern Nevada Water Authority, is the general in this region's war to stem a water emergency that's playing out worldwide. It's the biggest battle of her 31-year career.

'We've Tried Everything'

"We've tried everything," says Mulroy, 56, who made no secret of her desire to become secretary of the U.S. Interior Department before President Barack Obama picked U.S. Senator Ken Salazar of Colorado in December.

"The way you look at water has to fundamentally change," adds Mulroy, who, after 20 years of running the authority, said in January she's ready to start thinking about looking for a new job, declining to say where.

Across the planet, people like Mulroy are struggling to solve the next global crisis.

From 2500 B.C., when King Urramma of Lagash diverted water in the Tigris and Euphrates Valley in a border dispute with nearby Umma, to 1924, when Owens Valley, California, farmers blew up part of the aqueduct that served a parched Los Angeles, societies have bargained, fought and rearranged geographies to get the water they need.

Mulroy started her push with conservation. She's paying homeowners \$1.50 a square foot (0.09 square meter) to replace lawns with gravel and asking golf courses to dig up turf. That helped cut Las Vegas's water use by 19.4 percent in the seven years ended in 2008, even as the metropolitan area added 482,000 people, bringing the total to 2 million. It wasn't enough.

Paul Bunyan

So she's planning a \$3.5 billion, 327-mile (525-kilometer) underground pipeline to tap aquifers beneath cattle-raising valleys northeast of the city. She's even suggested refashioning the plumbing of the entire continent, Paul Bunyan style, by diverting floodwaters from the Mississippi River west toward the Rocky Mountains.

If Mulroy's ideas are extreme, one reason is that the planet's most essential resource doesn't work like other commodities.

There's no global marketplace for water. Deals for property, wells and water rights, such as the ones Mulroy must negotiate to build the pipeline, are done piecemeal. As the world grows needier, neither governments nor companies nor investors have figured out an effective and sustainable response.

"We have 19th-century ways of utilizing water and 21st-century needs," says Brad Udall, director of Western Water Assessment at the University of Colorado at Boulder.

Unyielding Pressure

Water upheavals are intensifying because the population is growing fastest in places where fresh water is either scarce or polluted. Dry areas are becoming drier and wet

areas wetter as the oceans and atmosphere warm. Economic roadblocks, such as the global credit crunch and its effects on Mulroy's attempts to sell bonds, multiply during a recession.

Yet local governments that control water face unyielding pressure from constituents to keep the price low, regardless of cost. Agricultural interests, commercial developers and the housing industry clash over dwindling supplies. Companies, burdened by slowing profits, will be forced to move from dry areas such as the American Southwest, Udall says.

"Water is going to be more important than oil in the next 20 years," says Dipak Jain, dean of the Kellogg School of Management at Northwestern University in Evanston, Illinois, who studies why corporations locate where they do.

No Cheap Water

Even before the now decade-long drought began punishing Las Vegas, people used more than 75 percent of the water in northern Africa and western Asia that they could get their hands on in 2000, according to the United Nations.

In 2002, 8 percent of the world suffered chronic shortages. By 2050, 40 percent of the projected world population, or about 4 billion people, will lack adequate water as entire regions turn dry, the UN predicts.

"We can no longer assume that cheap water is available," says Peter Gleick, editor of *The World's Water 2008-2009* (Island Press, 2009). "We have to start living within our means."

Over the Sierra Mountains from Las Vegas, Shasta Lake, California's biggest reservoir, is less than a third full because melting snow that fed it for six decades is dwindling. A winter as dry as the previous two may mean rationing for 18 million people in Southern California this year, says Jeffrey Kightlinger, general manager of the Metropolitan Water District.

Across the Pacific Ocean, wildfires fueled by a 10-year drought and fanned by 60-mile-per-hour winds around Melbourne killed more than 200 people in February.

Developing Giants

In Asia, developing giants are battling pollution as their populations grow. China, home to 21 percent of the world's people last year, has just 7 percent of the water. Nine in 10 Chinese-city groundwater systems are fouled by industrial toxins, pesticides and human waste, says Maude Barlow, the first senior adviser on water to the UN and author of *"Blue Covenant"* (New Press, 2007).

In India, with 1.2 billion people, three-quarters of the surface water is contaminated, that country's government said in September.

In the Mideast, where the Dead Sea is dropping 3 feet (1 meter) a year, Israel, Jordan and Syria are diverting water upstream from the Jordan River. That's adding another source of discord to an already volatile region.

'Gambling, Gluttony and Girls'

"There's a growing risk of conflict over water shared by nations, ethnic groups or economic interests," Gleick says.

Las Vegas, an adult-entertainment haven carved into the Mojave Desert, may not draw much sympathy as a poster child for water emergencies.

For decades, new residents imported their cravings for lawns, sprinklers, pools and golf courses to a region that receives 4 inches (10 centimeters) of rain a year, about 1/10 of what Chicago enjoys. Casinos and hotels with water slides and river rides sucked up limited groundwater.

Until the real estate meltdown, Nevada was the fastest-growing U.S. market, with a 33 percent surge in new homes from 2000 to '07.

Now the city is getting a dose of reality, says Cecil Garland, a rancher in neighboring Utah who opposes Mulroy's groundwater pipeline.

"Las Vegas is a place of gambling, gluttony and girls," Garland, 83, says.

He says there's no extra water along the proposed route, which travels through valleys green with 3-foot-tall shrubs called greasewood. If pumping kills the greasewood, dust storms that plague his town of Callao would soar 5,000 feet into the sky, he says.

'Driest Areas'

"We live in one of the driest areas of the driest part of the U.S.," Garland says. "How in the world can anybody with reason or common sense think they can pump water in the amount they're talking about and leave the integrity of the valley in place?"

Mulroy says Nevada's resorts use 3 percent of the state's water compared with 90 percent going for farms and ranches.

For the past two decades, Mulroy, a lifelong government employee whose business attire tends toward pantsuits with the collar of her blouses pointed up behind her neck, has wrestled with the competing truths that dog all water managers: There's only so much to go around, somebody has already claimed most of it, and citizens and companies keep demanding more.

"People view water as a human right and expect it to be virtually free," says Michael LoCascio at Boston-based Lux Research Inc., which analyzes water issues. "Governments respond to that, and you end up with inefficiency."

Without price-setting markets, water that cost 33 cents a cubic meter for the first 15 cubic meters delivered to homes in Memphis, Tennessee, in June 2007 was \$3.01 in Atlanta and 57 cents in Las Vegas.

That's cheap compared with Copenhagen, where the same amount that month was \$7.71 per cubic meter, Gleick says.

Human Survival

Robert Glennon, a University of Arizona law professor, says governments must provide enough water for human survival. Beyond that, only freely functioning markets can allot it to people who need it most, he says.

Fast-growing cities should buy from farmers who use water on marginal land, says Glennon, author of "Unquenchable" (Island Press, 2009). That would cut inefficiency caused by irrigating deserts, such as those around Las Vegas, to raise alfalfa or beef, he says.

Worldwide, about 60 percent of fresh water goes to irrigate crops through flooding, losing 70 percent of the moisture to evaporation, Lux Research says.

Rudimentary Markets

The rudiments of water markets are cropping up across the American West.

In 2005, after 19 years of negotiations, Los Angeles's Metropolitan Water District signed a 35-year "dry year option" with the Palo Verde Irrigation District south of Las Vegas in California. Los Angeles pays 7,000 farmers to leave land fallow during droughts and ship their water to city residents. The city gives a one-time payment of \$3,170 an acre (0.4 hectare) to farmers who sign up and then \$630 per year for every acre not farmed.

Companies and investors that see moneymaking opportunities in strategies to quench the world's thirst may draw lessons from corporations that have tried.

In October, General Electric Co. named the third head of its water unit in three years. GE had paid \$3.8 billion to buy several treatment and filtration companies, including Watertown, Massachusetts-based Ionics Inc., which makes reverse-osmosis membranes for purifying salt water.

Big Deals

Last year, GE opened a \$250 million desalination plant, Africa's largest, with state-owned Algerian Energy Co. GE had hoped to profit from its newly acquired water technologies with the backing of its General Electric Capital Corp. financing arm, says Jeffrey Fulgham, chief marketing officer for the Trevose, Pennsylvania-based unit. Instead, GE wound up footing a lot of the building work for the plant, he says.

"At the end of these big hardware deals, there isn't much profit," says Fulgham, who adds that GE now focuses on water technology and avoids construction.

Pure Cycle Corp., which buys and transports water for housing developments near Denver, seemed to have scored a windfall. Starting in 1976, it paid \$110 million for water rights valued at \$4 billion last year, Chief Executive Officer Mark Harding says. Yet shares in the Thornton, Colorado, company tumbled by 47 percent during the six months ended on Feb. 25. to trade at \$3.25 apiece.

The real estate slowdown convinced investors that profits from water rights may be years away, Harding says.

Just financing water for municipal use is getting harder in the global recession.

\$8.3 Billion

The southern Nevada authority is about halfway through a 30-year, \$8.3 billion construction campaign. Last year, 57 percent of the money for it came from a \$6,310 fee to hook up new homes. The Las Vegas real estate slump is so severe that total hookup collections dropped to \$61.5 million last year from \$188.4 million in 2006. Mulroy says the authority actually lost money on hookups in January because of refunds to developers who abandoned construction projects.

As a result, reserves in the construction fund dropped 6 percent in the first six weeks of 2009, to \$480 million. Without those reserves, Mulroy says, she couldn't assure investors the authority would be able to repay the \$500 million in bonds she plans to start selling by early fall to complete the Lake Mead project. The authority had \$3.9 billion in liabilities on June 30.

'Rub Two Sticks Together'

The authority also gets money from water deliveries, property taxes and fees from federal land sales. If she has to protect the reserves, Mulroy says, she'll raise water rates, which total about \$21 a month for a single-family home.

She's asked fellow Nevadan Harry Reid, the U.S. Senate majority leader, for a federal guarantee on the bonds. Reid is exploring how to help big municipal water systems, including Mulroy's, get easier access to credit, spokesman Jon Summers says.

In February, Mulroy presented such a dire description of the authority's finances to the Nevada legislature that Jerry Claborn, chairman of the Natural Resources Committee, told her, "You'll have to do like you did years ago: rub two sticks together."

Mulroy said afterward she wanted to quash any notion that cash-strapped legislators could appropriate her reserves for some other purpose.

To Richard Bunker, who hired her as an administrative assistant when he managed Clark County, Nevada, in 1978, Mulroy's hardball tactics are a delight.

"She walks into a room with guys who've been on the river 50 and 60 years and they just cringe," he says with a smile.

'Pay Me Enough'

One thing Mulroy has ruled out, even in the economic meltdown, is using water as an excuse to limit Las Vegas's growth.

"During the next 50 years, this country's population is expected to explode by another 140 million," she says, citing U.S. Census projections. "I always ask, 'Where do you want the people to go?'"

Mulroy also opposes the idea of privatizing water, or giving investors power to set prices.

"You'd be telling people, 'Pay me enough or I withhold it,'" she says, her voice rising, in the cafeteria of Clark County's terra cotta-colored municipal headquarters. "It's like you're telling me I can live."

Mulroy's unflagging commitment to keeping Las Vegas green and growing gets the blessing of casino owner Stephen Wynn.

"Pat is the best public servant I've met in my 40 years on the Strip," says Wynn, who credits her with teaching him to save money by using treated groundwater for the lagoons surrounding the artificial volcano at the Mirage hotel, now owned by MGM Mirage.

Lake Mead

Finding the water for casinos is one reason crews are working around the clock at Lake Mead.

In 2002 alone, lack of rainfall lowered the deep-blue waters by 24.6 feet, leaving white bathtub-ring-like marks on the brown cliffs and stranding docks half a mile from shore.

Today, the lake is 1,112 feet above sea level. Should it fall to 1,075 feet, the federal government would cut the water to seven states that depend on the Colorado River, according to an agreement they all signed in 2007. If that happens, the states would likely renegotiate a 1922 pact that divided up the river's water rights in the first place, Mulroy says. Mexico's allocation under a 1944 treaty could also change.

If the drought persists and more water is diverted from the Colorado, the lake could drop to 1,050 feet. That would prevent water from flowing into the intake pipe and cut 40 percent of Las Vegas's supply -- the disaster Mulroy is trying to head off. Hoover Dam, completed in 1935 to regulate the river and form Lake Mead, wouldn't be able to produce electricity for the 750,000 people it supplies in Los Angeles.

No More Water

At 1,000 feet, the remaining intakes and the rest of the Lake Mead water would go. Because of climate change and population growth, chances of this are as great as 50 percent by 2026, the University of Colorado's Udall says.

When Mulroy, a daughter of a civilian employee of the U.S. Air Force, arrived in Las Vegas in 1974, the city had yet to be consumed by a water quest. Until the 1940s, parts of downtown had freely flowing springs.

Mulroy, a native of Germany, studied German literature; got her master's degree from the University of Nevada, Las Vegas; and went to work for Bunker at Clark County. A Mormon bishop, he later ran the state's Gaming Control Board and the Nevada Resort Association.

Shoeboxes

Bunker supported her promotion to administrator for the county justice court, which was storing records in shoeboxes when she took over. In 1989, he backed her as general manager of the Las Vegas Valley Water District, which the state legislature had formed four decades earlier. Mulroy helped create the seven-community Southern Nevada Water Authority two years later.

"Absent her being here, I don't know where we'd be," Bunker says.

Around the time Mulroy became water czar, Wynn unleashed the era of Wall Street-financed megaresorts with his 30-story Mirage. He tinted the hotel's windows with real gold.

Mulroy raced to boost water deliveries throughout the city by as much as 20 percent a year. With Bunker's help, she started planning the pipeline to tap melting snow under Wheeler Peak, Nevada's second-highest mountain.

The pipeline's planned path runs northeast out of Las Vegas, enters Lincoln County and passes through the Pahrangat National Wildlife Refuge, where, in December, gold leaves of cottonwoods shimmer and migratory birds swoop onto lakes fed by artesian springs. Farther north, hilltops are dotted with abandoned mining towns and bands of wild horses.

'Already Spoken For'

As Mulroy marched north to secure land and permits, she ran headfirst into what Gleick says is a fundamental truth about water across the U.S. and other parts of the world.

"Nearly every drop is already spoken for, often more than once," he says.

Determined to get what she required, Mulroy went into horse-trading mode.

"You need a large amount of money and some very powerful people to make water projects happen," says Greg James, a California water rights attorney and a consultant for pipeline opponents.

She struck a deal with Harvey Whittemore, then Nevada's top gambling lobbyist. Members of Whittemore's law firm include Rory Reid, Harry Reid's son. The younger Reid later served as the water authority's vice chairman, from 2003 to '08.

120,000 New Homes

Whittemore, 56, is also a developer who's planning a new suburb called Coyote Springs, 55 miles north of the Las Vegas Strip. Even with the real estate crash, Coyote Springs will have 120,000 homes and a dozen golf courses when it's finished in four or five decades, he says.

Whittemore's land included one of the most productive wells ever drilled in southern Nevada. He sold 9,000 acre-feet of groundwater that he wasn't using to Mulroy for \$30.1 million. (One acre-foot equals about 326,000 gallons, or 1,240 kiloliters, enough for two average U.S. homes for a year.) That led to what Mulroy describes as a partnership in which Whittemore will help pay for the pipeline and use it to ship water to Coyote Springs.

In 2003, Mulroy bargained with reluctant officials in neighboring Lincoln County, persuading them to drop opposition to the project by ceding back to them some of the water rights that she held.

In 2006, farther up the route, she learned how tough the water business can be. She paid \$22 million for a ranch that had cost \$4.5 million six years earlier. The seller, Carson City, Nevada-based Vidler Water Co., a unit of PICO Holdings Inc., based the price on similar purchases Whittemore had made, Vidler President Dorothy Timian-Palmer says.

Fight Over Greasewood

Last year, Mulroy got into a fight over greasewood with Tim Durbin, a hydrologist who'd once been a consultant for her. Durbin disputed Mulroy's assessment that the pipeline would avoid major damage to the shrub. In his rebuttal, Durbin described a scene that still touches an open wound in the psyche of the American West.

In 1913, William Mulholland built a 223-mile aqueduct from Owens Valley in California's Sierras to Los Angeles, where he was water superintendent. The aqueduct drained a 40-foot-deep lake, exposing the valley floor and unleashing dust storms that plagued Los Angeles throughout the 20th century. The aqueduct also inspired the 1974 movie "Chinatown." In 1970, Los Angeles built a second aqueduct.

'A Model'

Today, the valley's 75-mile-long expanse looks like it did a millennium ago. The water diverted to Los Angeles makes economic development in the valley impossible.

"Because of groundwater pumping, vegetation was disappearing in the Owens Valley," says Durbin, who was chief hydrologist for the U.S. Geological Survey in California and Nevada before becoming a private consultant in 1984. "It's a model for what one would expect in eastern Nevada."

Because of such memories, Mulroy hasn't won many friends among eastern Nevada's old-timers.

Rancher Dean Baker fears Mulroy's pipeline would drain the water that's let him survive in Snake Valley, in the shadow of Wheeler Peak, for more than half a century.

Baker, 69, remembers when people staked uranium claims only to realize their Geiger counters were clicking because of residue from atomic tests outside Las Vegas. He recalls flying solo in a Piper J-3 Cub before he could drive.

Most of all, Baker remembers water. He rose at dawn to deliver it to cattle 50 miles away. He culled his herd and watched greasewood wither during droughts. It took 20 years for him to afford a backhoe with a jackhammer that could break rocks that covered a spring on his ranch.

Legacy of Dust

"Water is the limiting factor in everything we do," Baker says. "The legacy of this pipeline will be dust."

Baker says people who want to move to Las Vegas should look instead to Mississippi and Louisiana. "People should go where there's water," he says.

Mulroy says her job is to bring water to the people. Last year, she said she thought the proposed pipeline could begin transporting water in 2015. Now, because of the recession, she doesn't know when she'll have the money to build it.

She says she'll wait for the economy to recover to decide -- unless Lake Mead drops even more and forces her to act.

Mulroy's struggle to get water to a growing desert population wouldn't have surprised John Wesley Powell, the first known explorer to pass through the entire Grand Canyon 130 miles east of Las Vegas.

"You are piling up a heritage of conflict and litigation over the water rights," he told the International Irrigation Congress in Los Angeles in 1893. "There is no sufficient water to supply the land."

'Little Bubbles'

Four generations later, Mulroy is a veteran of these age-old conflicts. She says the region's water emergency is becoming more dangerous because of climate change and population growth. The crisis is too big to be solved one river or one continent at a time, she says.

"We've managed water in such small, incremental units," she says. "We won't be able to survive in our little bubbles."

Even people who agree with Mulroy's warning won't have an easy time acting on it. As she has, they'll discover the effort it will take to quench the world's thirst and realize that the time and money to do so -- like water itself -- are running short.

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Regional News 03/11/09

Fast-growing Western U.S. cities face water crisis

Rueters

Wed Mar 11, 2009 4:56am EDT

By Tim Gaynor and Steve Gorman

LAS VEGAS/LOS ANGELES - Desert golf course superintendent Bill Rohret is doing something that 20 years ago would have seemed unthinkable -- ripping up bright, green turf by the acre and replacing it with rocks.

Back then "they came in with bulldozers and dynamite, and they took the desert and turned it into a green oasis," Rohret said, surveying a rock-lined fairway within sight of the Las Vegas strip. "Now ... it's just the reverse."

The Angel Park Golf Club has torn out 65 acres of off-course grass in the last five years, and 15 more will be removed by 2011, to help conserve local supplies of one of the most precious commodities in the parched American West -- fresh water.

But Rohret's efforts have their limits. His and many other golf courses still pride themselves on their pristine greens and fairways and sparkling fountains, requiring huge daily expenditures of water.

Aiming to cut per capita use by about a third in the face of withering drought expected to worsen with global warming, water authorities in the United States' driest major city are paying customers \$1.50 per square foot to replace grass lawns with desert landscaping.

Built in the Mojave Desert, Las Vegas leads Western U.S. cities scrambling to slash water consumption, increase recycling and squeeze more from underground aquifers as long-reliable surface water sources dry up.

From handing out fines for leaky sprinklers to charging homeowners high rates for high use, water officials in the U.S. West are chasing down squandered water one gallon at a time.

Nowhere is the sense of crisis more visible than on the outskirts of Las Vegas at Lake Mead, the nation's largest manmade reservoir, fed by the once-mighty Colorado River. A principal source of water for Nevada and Southern California, the lake has dipped to below half its capacity, leaving an ominous, white "bathtub ring" that grows thicker each year.

"We are in the eye of the storm," said Pat Mulroy, general manager of the Southern Nevada Water Authority. "As the realities of climate change began to manifest themselves at the beginning of this century, we had to get serious about it."

For now, policymakers have emphasized the need to curb water use rather than urban growth, though the U.S. recession has put the brakes on commercial and housing development that otherwise would be at odds with the West's water scarcity.

GETTING TOUGH

Warm, dry weather has long made the American West attractive to visitors, but piped-in water has created artificial oases, luring millions to settle in the region. Las Vegas has ranked as one of the fastest-growing major cities.

But scientists say climate change is shriveling the snow pack in California's Sierra Nevada, the state's main source of fresh surface water, and in the Rocky Mountains that feed the Colorado River, whose waters sustain seven states.

Further pressure from farming and urban sprawl is straining underground aquifers, placing a question mark over the future growth of cities from Los Angeles to Tucson, Arizona.

"There is going to have to be a big adjustment in the American Southwest and in California as we come to grips with limits in this century -- not just limited water, but also limited water supply," said James Powell, author of the book "Dead Pool," exploring challenges facing planners in the West.

Reactions among local water authorities differ.

In Phoenix, the United States' fifth-largest city, authorities say sustainable groundwater and ample surface water allocations from the Colorado and Salt rivers meet the city's needs, even factoring in growth through a moderate drought. The city is also recycling waste water and plans to pump some back into the aquifer as a cushion.

Tucson will require new businesses to start collecting rainwater for irrigation in 2010.

California requires developers of large housing projects to prove they have sufficient water.

In Las Vegas, where rain is so infrequent that some residents can remember the days it fell in a given year, front-yard turf has been banned for new homes.

The Southern Nevada Water Authority also has hired "water cops" to fan out into the suburbs to identify violations of mandatory lawn irrigation schedules and wasteful run-off. Repeat offenders get \$80 fines.

Major hotel-casinos such as the MGM Mirage and Harrah's Entertainment have adopted "green" building codes, including modifications designed to slash water use by 40 percent.

Those measures are starting to pay off, with daily water use down 15 percent per person in the greater Las Vegas area.

BUYING TIME

In a wake-up call to California, water officials there recently announced that prolonged drought was forcing them to cut Sierra-fed supplies pumped to cities and irrigation districts by 85 percent.

That has led many California cities, topped by Los Angeles, the nation's second-largest, to plan for rationing, including price-enforced household conservation and tough new lawn watering restrictions.

"The level of severity of this drought is something we haven't seen since the early 1970s," Los Angeles Mayor Antonio Villaraigosa said in unveiling his city's drought plan, which also would put more water cops on the beat.

California Gov. Arnold Schwarzenegger last month called on the state's urban users to cut water consumption 20 percent or face mandatory conservation measures.

The California drought, now in its third year, is the state's costliest ever. Complicating matters are sharp restrictions on how much water can be pumped from the Sacramento-San Joaquin Delta in northern California, which furnishes much of the state's irrigation and drinking supplies, to protect endangered fish species.

Moreover, the severe dry spell is leaving the state more vulnerable to wildfires, which last year consumed some several Los Angeles suburbs. The previous year, fires forced a record 500,000 Southern Californians to flee their homes.

PLANNING FOR THE WORST

Conservation will buy time, experts say. But bolder steps are needed in anticipation of longer droughts and renewed urban expansion once the recession ends.

Cities like Los Angeles and San Diego are revisiting an idea once abandoned in the face of staunch political opposition -- recycling purified sewer water for drinking supplies.

Disparaged by critics as "toilet-to-tap," such recycling plans have gained new currency from the success of the year-old Groundwater Replenishing System in Orange County near Los Angeles.

That system distills wastewater through advanced treatment and pumps it into the ground to recharge the area's aquifer, providing drinking supplies for 500,000 people, including residents of Anaheim, home of Disneyland.

Water specialists also see a need to capture more rainfall runoff that otherwise flows out to sea and to change the operation of dams originally built for flood control to maximize their storage capacity.

The situation in Las Vegas has grown so dire that water authorities plan to build a \$3 billion pipeline to tap aquifers lying beneath a remote part of Nevada, a project critics call the greatest urban water grab in decades.

Southern Nevada water czar Mulroy says a broader national conversation about water is needed -- but not happening.

"We are talking about investing in public infrastructure, we are looking at building projects, but I get frustrated because we are doing it in complete denial of the climate change conditions that we are facing," she said.

"We are not looking at where the oceans are rising, where the floods are going to occur, where things are going to go from that normal state to something extraordinary."

(Additional reporting by Deena Beasley in Los Angeles, editing by Alan Elsner)

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Climate change accelerates water hunt in U.S. West

Wed Mar 11, 2009 4:54am EDT By Peter Henderson

SAN FRANCISCO (Reuters) - It's hard to visualize a water crisis while driving the lush boulevards of Los Angeles, golfing Arizona's green fairways or watching dancing Las Vegas fountains leap more than 20 stories high.

So look Down Under. A decade into its worst drought in a hundred years Australia is a lesson of what the American West could become.

Bush fires are killing people and obliterating towns. Rice exports collapsed last year and the wheat crop was halved two years running. Water rationing is part of daily life.

"Think of that as California's future," said Heather Cooley of California water think tank the Pacific Institute.

Water raised leafy green Los Angeles from the desert and filled arid valleys with the nation's largest fruit and vegetable crop. Each time more water was needed, another megaproject was built, from dams of the major rivers to a canal stretching much of the length of the state.

But those methods are near their end. There is very little water left untapped and global warming, the gradual increase of temperature as carbon dioxide and other gases retain more of the sun's heat, has created new uncertainties.

Global warming pushes extremes. It prolongs drought while sometimes bringing deluges the parched earth cannot absorb. California Department of Water Resources Director Lester Snow says two things keep him up at night: drought and flood.

"It isn't that drought is the new norm," said Snow. "Climate change is bringing us higher highs and lower lows in terms of water supplies."

Take Los Angeles, which had its driest year in 2006-2007, with 3 inches (7.6 cms) of rain. Only two years earlier, more than 37 inches (94 cms) fell, barely missing the record.

California Governor Arnold Schwarzenegger declared a drought emergency last month, and Los Angeles plans to ration water for the first time in 15 years. Courts are limiting the amount of water taken from into rivers to save decimated fish populations, which is cutting back even more to farms.

California farmers lost more than \$300 million in 2008 and economic losses may accelerate to 10 times that this year as 95,000 people lose their jobs. Farmers will get zero water from the main federal supplier.

Nick Tatarakis sank his life savings into the fertile San Joaquin Valley but now thinks his business will die of thirst.

"Every year it seems like this water thing is getting rougher and rougher," he said. "I took everything I had saved over the last three or four years, put it into farming almonds, developed this orchard. Now it is coming into its fifth year and probably won't make it through this year."

SWINGING TEMPERATURES, PRICES

In the global economy, a little trouble goes a long way when supplies are tight, said University of Arkansas Ecological Engineering professor Marty Matlock.

The essence of climate change is greater swings in precipitation -- and thus food production. At times of peak demand, prices can skyrocket, he said, as happened to food prices last year.

"There's no slack any more. The rope is tight, and if you give it a tug, it yanks on something," he said.

While farmers suffer, cities continue to grow. The sunny, warm American West remains a magnet.

"Add water and you have the instant good life," said James Powell, author of "Dead Pool," a book about global warming and water in the U.S. West.

"For the last few years, the driest states, Arizona, Utah, and Nevada, have been the fastest growing. And you know that can't be sustained," he said.

California, the world's eighth-largest economy, already uses a staggering amount of water -- roughly enough to cover the nearby state of Washington with a foot (30 cms) of it.

Some 80 percent is used by farms, growing organic lettuce on the temperate coast; rice and citrus inland. Almost anything will grow in the ideal climate -- if there is water.

California water planners in a draft report see three different scenarios for the state by 2050. In the most unfettered, suburbs sprawl ever-farther, replacing productive farms with water-soaking lawns and the population doubles -- as does urban water use. In the best case scenario for water use, the population increases about 20 percent, but denser housing and conservation help keep urban water use roughly steady.

All of the scenarios show agricultural output dropping -- it is just a question of how much.

Businesses, too, have much to fear. Semiconductor manufacturers and beverage companies are high on a list of at-risk sectors in a report on corporate water by Pacific Institute and investor group Ceres.

SLOW CHANGE

Change is happening too slowly, nearly all water planners say, but they disagree about what to do and which options are financially viable, especially the expensive dam projects favored by agricultural interests.

Climate change's challenge to traditional water supplies starts in the mountains. The snow-capped Sierras in eastern California and the Rockies farther east fuel rivers that provide a steady supply of water through much of the year.

The Sierras will have 25 percent to 40 percent less snow by 2050 as rising global concentrations of greenhouse gases raise the temperature, California's water department forecasts.

The U.S. Climate Change Science Program sees the entire West on average getting less precipitation, but there is plenty of debate about that. There is a consensus, however, that most of today's snow will turn in coming decades to rain, often in the form of blinding thunderstorms early in the year, when it is needed least.

California wants to raise or build new dams to catch the increased flow as part of a broad set of solutions.

"There is no one silver bullet," the water department's Snow said.

But the Natural Resources Defense Council and a Los Angeles business coalition see dams as a costly solution that mostly favors farmers.

"The dams are an expensive detour that I don't think will ever be built," said Lee Harrington, executive director of the Southern California Leadership Council, a group of urban public utilities and other businesses.

A study by his group put the price of new dams at up to \$1,400 per acre foot. Current supplies cost about \$700 for one acre foot -- a year's supply for two houses. Urban water conservation costs \$210, local stormwater \$350 and desalination of ocean water or contaminated groundwater about \$750 to \$1,200 an acre foot.

The NRDC estimates that California could get 7 million acre feet per year from conservation, groundwater cleanup and stormwater harvesting.

Even energy-intensive desalination is cheaper than dams, the group argues. "People always used to think that desal was the lunatic fringe of water supply. (Now) desal is the mainstream, and dams are exiting the mainstream," said policy analyst Barry Nelson.

But so far water is the cheapest utility in most homes and businesses, and it's treated that way.

"As long as you are undervaluing a resource, you are going to be perpetually short," said Robert Wilkinson, director of the Water Policy Program at the University of California, Santa Barbara.

Many see water's pricing future following that of electricity. Despite the energy crisis of the early 2000s, California leads the nation in controlling electricity use. One key strategy was letting utilities charge more when consumers use less, making power producers advocates for conservation.

But the simple conclusion is that the West must secure a water supply, even at a high price, says business advocate Harrington.

"While these options are expensive, the options of not having the water makes them all viable at the end of the day," he said.

(Editing by Alan Elsner)

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Aquifer recharge projects catching on in water-strapped cities

April 2, 2009

By APRIL REESE, Greenwire

ALBUQUERQUE, N.M. -- For about a mile, a steady stream of water flows down Bear Canyon before finally petering out in the sand near a golf course. The arroyo is not supposed to be wet this time of year; the spring snowmelt does not usually occur until later in the season. But under a new demonstration program, local water managers are diverting water from the Rio Grande and sending it down the arroyo, where it seeps through the riverbed into the aquifer 500 feet below.

If all goes according to plan, the water percolating underground will provide a sort of water savings account for the city of Albuquerque to draw upon during times of drought.

"You put a little in each year, and then one year, when there isn't enough water in the river, you can take it out of the aquifer," said Stephanie Moore, manager of the Bear Canyon Recharge Demonstration Project, this week while standing along the banks of the arroyo.

The new \$400 million project to tap the water will eventually supply up to 90 percent of the Albuquerque metropolitan area's drinking water needs.

"It could be very important for us," added John Stomp, manager of the water resources program for the Albuquerque-Bernalillo County Water Utility Authority.

The move toward artificial aquifer recharge signifies a shift in thinking about water supplies in the West. Just a few decades ago, "people thought they were sitting on a huge lake, and that we'd never run out of water," Moore said. Then, after hydrologists found that overpumping was depleting aquifers, water managers began to look to surface waters like the Rio Grande to supplement dwindling resources.

The Bear Canyon water comes from the San Juan-Chama Project, which pipes water from the Colorado River Basin across the Continental Divide to the Rio Grande Basin. Moore, a hydrologist with the consulting firm Daniel B. Stephens & Associates, which is overseeing the project for the water utility authority, said flows from the San Juan-Chama project currently provide more water than is needed for immediate use, so the extra water is routed to the aquifer.

"We have more water to divert than we have demand for," she said.

While the Bear Canyon project is a first for New Mexico, the artificial aquifer recharge concept is gaining momentum across the country. Utilities and water managers from Florida to California are increasingly relying on recharged aquifers to help maintain water supplies during periods of drought.

"The trend has picked up," said Moore, who worked as a hydrologist for the U.S. Geological Survey before joining Daniel B. Stephens & Associates.

In some places, such as Florida, aquifers are routinely recharged in the winter, then tapped in the summer when water demand exceeds supply. But in other areas, geologic constraints and the need for long-term storage have led water managers to view aquifer recharges and withdrawals as a last resort.

In Nevada, for instance, there are restraints on how much water one can draw from an aquifer in a given year without causing subsidence of the ground above, said J.C. Davis, a spokesman for the Southern Nevada Water Authority, which serves the Las Vegas metropolitan area. The authority has stored an estimated 350,000 acre-feet in the aquifer underlying the city.

"It's a good long-term resource. We view it as a savings account -- we'll use it as we encounter specific needs," Davis said.

Nevada is augmenting its in-state aquifer storage with a water "bank" in neighboring Arizona, as well. Under a deal signed in 2004, Nevada pays Arizona \$330 million to store up to 1.25 million acre-feet of water from the Colorado River for its northern neighbor (See below: Land Letter, Dec. 9, 2004). Nevada can take up to 40,000 acre-feet of the water each year as long as the Lower Colorado River Basin is not facing a shortage.

In Albuquerque, water officials hope the Bear Canyon pilot project, which is funded by a grant from the state of New Mexico, will demonstrate that infiltrated water from the Rio Grande can recharge the overpumped Middle Rio Grande Basin aquifer and effectively store water for use in times of drought.

According to the monitoring data, the project sank about 750 acre-feet of Rio Grande water into the aquifer during its second run, from Dec. 11, 2008, to this week. The project's first run funneled about 400 acre-feet into the aquifer.

Cities typically store water in reservoirs, but in arid states like New Mexico, 10 to 15 percent of that water is lost to evaporation, Moore noted. Storing some of the water underground reduces that loss to about 3 percent, and shields it from the vagaries of the elements.

"Surface water is renewable [because of snowmelt], but it's highly variable and affected by drought and climate change," unlike water stored underground, Moore said.

But whether the water can be withdrawn in places like New Mexico has yet to be determined. A withdrawal permit is still under review by the New Mexico State Engineer John D'Antonio, who regulates water use in the state. He will likely make his determination after reviewing a report summarizing the data culled from the Bear Canyon project's monitoring wells over the past two seasons.

Moore acknowledged that the project's outcomes remain uncertain. "They're risking their water," she said of the Albuquerque-Bernalillo County Water Utility Authority. "There's a chance they won't be able to take it back out."

But Stomp, the utility manager, remains optimistic.

"Bear Canyon has been a tremendous success," he said. "I can't imagine that he wouldn't allow it. I think it makes really good sense for New Mexico to do this."

Stomp is also thinking about future potential aquifer recharge sites in other areas of the city, including a former gravel pit that could potentially store up to 30,000 acre-feet of river water. There, however, water would be injected into the aquifer via wells instead of being filtrated through a streambed.

"We're going to have to continue to come up with innovative ideas if we're doing to address these huge water challenges the West has," Stomp said.

April Reese writes from Santa Fe, N.M.

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WATER: Arizona, Nevada strike storage deal
(Land Letter, 12/09/2004)
April Reese, Land Letter Southwest reporter

SANTA FE, N.M. -- In the ongoing effort to meet water needs in the drought-stressed West, one state has found a way to buffer against future shortages -- by storing water in a neighboring state.

Under a deal approved by the Central Arizona Project board last week, Arizona will store up to 1.25 million acre-feet of water for Nevada's future use. In return, Nevada will pay \$330 million to Arizona and will boost CAP's efforts to upgrade its junior rights status among Colorado River users.

Nevada can take up to 40,000 acre-feet each year out of its water "bank" in Arizona during years when there is not a shortage. If drought forces Arizona cities to reduce their water use, Nevada will voluntarily cut its use as well.

The deal amends a tentative storage agreement between the two states, making it the first to guarantee the delivery of stored water from one state to another. Federal regulations that prohibited interstate water transfers were revised two years ago to allow for water banking.

"I believe this amendment is in the best interests of the state and the people of Arizona," Herb Guenther, director of the Arizona Department of Water Resources, told the CAP Board last week.

CAP officials said the agreement will help Arizona take its full 2.8 million acre-foot allocation of Colorado River water while also adding momentum to the push to change CAP's water rights status. And the money that Arizona receives from the deal could be used to help protect some of the state's riparian areas, Guenther added.

In moving closer to taking its full Colorado River apportionment, Arizona hopes to buffer itself against any future claims on unused water -- most likely by California, said CAP spokesman Bob Barrett.

"Our concern is that if we don't take off our full allocation, some judge might say, 'Wait, they've come to depend on it so much, they can take it, since Arizona is not using it,'" he said. "It's a fear of 'use it or lose it.'"

As for Nevada, the water will help prevent shortages as the state develops new in-state supplies, which is expected to take several years.

"It's very important," said Pat Mulroy, general manager of the Southern Nevada Water Authority. "It provides some protection from shortages, and it gives us back the bridge we've lost because of the drought."

Under an agreement with the Interior Department, Nevada initially planned to use Colorado River water not needed by other states to meet its needs over the next 15 years. But because of the drought, there is no excess water flowing down the Colorado for Nevada to use.

The state has two water development projects in the pipeline: one that involves tapping groundwater in Lincoln, northern Clark and White Pine counties; and another that calls for diverting water from the Muddy and Virgin rivers. But both involve studies and other obligations that could take about 10 years, said Southern Nevada Water Authority spokesman J.C. Davis.

If Nevada takes the maximum amount of water allowed each year under the Arizona deal, the storage agreement will expire in 35 years. But if the drought recedes, the deal will give Nevada a water buffer until 2060. "That's the beauty -- if the river comes back up, we don't have to use it," Mulroy said.

The Arizona Water Banking Authority must still decide whether to approve the interstate banking agreement, but it is expected to do so at a meeting scheduled for today.

Both Arizona and Nevada water officials said changing CAP's status in the Colorado River water allocation hierarchy is necessary to ensure that neither state finds itself at the end of the line if the drought continues.

Under the Colorado River Compact, which divvies up the river's water among seven Western states, California receives 4.4 million acre-feet (maf), Arizona gets 2.8 maf and Nevada is allocated 300,000 acre-feet. Currently, if a shortage is declared on the Colorado River, California could take its full apportionment, potentially forcing junior users upstream to cut their use. Arizona and Nevada are advocating for equal

reductions among all three lower Colorado River Basin states -- California, Arizona and Nevada -- in the event of a shortage.

"The only two states that are assigned shortages are Nevada and Arizona," said Mulroy. "It becomes very, very difficult when only two states bear the brunt."

When Congress authorized the construction of CAP, it was assigned junior rights to assuage concerns from California lawmakers. But the water hierarchy among the three states is unfair in light of growing water needs in the lower basin, Arizona and Nevada water officials say.

"If there's a half-million acre-foot shortage on the river, if everybody took a 2 percent cut, then that would be relatively easy, as opposed to taking it all out of our hide," Barrett said.

But all three lower basin states would have to agree to change the CAP's water rights status, and some California water officials have expressed reservations about the plan.

Mulroy said she is confident that Nevada and Arizona can work out their differences with California. But Nevada and Arizona are prepared to take the matter to court if the parties cannot agree, she added.

"I know that Arizona doesn't want this to be confrontational with California, and we don't want this to be, but given the reality, it's almost impossible for the two states to not go to court if necessary," she said. "With the drought, I'm not sure we have a choice."

Regional News 04/04/09

Water Wars in the West / Nevada's thirst a threat to Utah

By Charles Trentelman
Standard-Examiner staff
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LOGAN -- Utah can oppose Nevada's plan to pump water from an aquifer that reaches under Millard County, but Nevada will get its water one way or another, says the director of the Southern Nevada Water Authority.

If it can't pump the aquifer, which is under both states, Nevada will demand, and get, more water from the Colorado River, even if that means less for Utah, said Patricia Mulroy.

To avoid that, she said, Utah needs to start talking to other Western states about changing how water is managed in the West.

Utah needs to enter into shared shortage agreements with Nevada.

"It's culture in the West to fight over every single drop," she said, and that has to stop.

Mulroy was a keynote speaker at Friday's session of Utah State University's annual spring runoff conference. The two-day conference features speakers on the science and management of water in the West.

Mulroy manages the water supplies that feed Las Vegas, one of the nation's fastest-growing cities in one of the nation's driest areas.

In the past two years, her agency has been criticized in Utah for plans to pump water out of an aquifer in Spring Valley in central Nevada. The area is just west of Snake Valley, in Millard County, Utah.

Ranchers in Millard County say the pumping will harm their underground water supplies.

In 2007, the Utah Legislature ordered the Utah Geological Survey to dig wells in Snake Valley to monitor the effect of the Nevada work.

Mulroy was just one of several speakers talking about climate change and its impact on water in the West. Her position is unique, she said, because Nevada is facing the crisis now, not sometime in the future.

"We're the canary in the mine shaft," she said.

Several other speakers made it clear that the Colorado River Basin is on a steadily declining supply curve because of climate change.

David Pierce, of the Scripps Institution of Oceanography in San Diego, said new studies have narrowed down the possible effects on the Colorado River Basin over the next 50 years.

Climate records, he said, and tree-ring data all show that the 20th century was the wettest of the last 1,200 years. With carbon emissions worldwide exceeding even the most pessimistic predictions, he said, the West will continue to get warmer and drier.

If runoff in the Colorado River Basin drops only 10 percent, he said, flows in the Colorado River will drop to 13.7 million acre-feet per year and delivery quotas to customers in all states will be missed 58 percent of the time by 2050.

If runoff drops 20 percent, he said, flows in the basin will plunge to 12.5 million acre-feet per year. Deliveries will be missed 88 percent of the time, and levels in Lake Mead and Lake Powell will continue to drop.

Mulroy said Las Vegas gets 90 percent of its water from Lake Mead. The city already recycles all of its wastewater and has spent more than \$100 million to pay people to rip out lawns at \$1 a square foot.

As a result, she said, in 18 months, per-capita use dropped from 360 gallons per day to 248, and the city wants to hit 199.

Even so, she said, the drought that began 10 years ago is still lowering the level of Lake Mead.

The lake is currently at 1,100 feet above sea level, she said, 104 feet below full. With the declines in the river that people like Pierce are predicting, she said, Southern Nevada has to find more water somewhere else.

Either that, she said, or demand it from the Colorado River under the terms of the 1922 Colorado River Compact, which divided the Colorado River into an upper basin of Utah, Wyoming, New Mexico, Arizona and Colorado and a lower basin of Nevada and California.

The compact guarantees the lower-basin states specified amounts of water, even if that means less for the upper-basin states.

In 2007, she said, Nevada and the other states in the compact signed an agreement that said Nevada would not make a call on states in the upper basin for water if there was a shortage.

"Imbedded in that is the in-state project" to pump water in Spring Valley, she said.

If Utah stops that project, she said, the agreement to not make a call is dead.

"The prospect of losing southern Nevada water supplies is a daunting proposition because it is where the results of climate change come home to roost," she said.

If no other source of water can be found, "we have no choice but to make a call on the upper basin."

Nevada would do it, she said, because "you cannot say to a community, 'You have to come to an end,' and that is what will happen if Lake Mead drops below 1,000 (feet above sea level)."

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Regional News 04/14/09

Lake Mead water level set to drop below 1965 mark

The Associated Press

LAS VEGAS—Drought-stricken Lake Mead is expected to drop this summer to its lowest level since May 1965, and water managers say it is approaching the trigger point for restrictions on water use by Nevada and Arizona. A U.S. Bureau of Reclamation report projects that by July, the vast Colorado River reservoir behind Hoover Dam will stabilize about 13 feet below its current level of 1,105 feet above sea level.

The lower level of 1,092 feet would be below 1,100 feet for the first time in 44 years, and just 17 feet above the 1,075-foot elevation that would trigger the first shortage declaration under a sweeping interstate pact signed in December 2007.

That 20-year agreement involving California, Arizona, Nevada, Wyoming, Utah, Colorado and New Mexico provided new rules for jointly operating the Lake Mead and Lake Powell reservoirs during extended dry spells such as the one that has gripped the Southwest since 2001.

Colorado River water flow to Mexico is not affected by the 2007 pact, said Bob Walsh, a Bureau of Reclamation spokesman in Boulder City.

The bureau manages two large Colorado River reservoirs—lakes Powell and Mead—in tandem to capture snowmelt from the Rocky Mountains and deliver water to seven downstream states under water rights agreements dating to 1922.

A declaration of shortage would cut Lake Mead water deliveries to Nevada by 13,000 acre-feet, and Arizona deliveries by 320,000 acre-feet. Excluding surplus water available in wet years, Arizona is entitled to 2.8 million acre-feet of water from the Colorado River annually. Officials say an acre-foot of water is about enough to serve two southern Nevada families per year. Nevada receives some 300,000 acre feet of water per year from Lake Mead, including about 90 percent of Las Vegas-area drinking water.

Lake Powell was 52 percent full Monday, with some 12.7 million acre-feet of water, Walsh said. Lake Mead, on the Nevada-Arizona border east of Las Vegas, was 46 percent full, with 12 million acre feet of water. Since 2000, the Lake Mead water level has dropped more than 100 feet. But the lake remains enormous, with some 500 miles of shoreline and water as deep as 300 feet in some places.

Walsh said the projections in the bureau's April 6 water level report may be revised after new data is collected in May. But he said the surface of Lake Mead was projected to be 1,092 feet at the end of September.

That has marina operators planning to extend gangplanks to reach moored boats, and Las Vegas' main area water provider scrambling to finish a new Lake Mead drinking water intake in case two existing intakes become ineffective. The \$817 million construction project is slated for completion in 2013.

"We're going to continue to race against Mother Nature to get that third intake done," said J.C. Davis, spokesman for the Southern Nevada Water Authority in Las Vegas.

Jim Holland, park planner for the Lake Mead National Recreation Area, said several boat ramps, access roads and utility lines might need to be extended this summer to reach the receding water line.

"It's going to cost a lot of money to accommodate a 10-foot drop in such a short amount of time," he said. Andrew Munoz, a recreation area spokesman, estimated that each 20-foot drop in the lake level costs the park service and its contract marina operators about

\$6 million.

On the Net:

U.S. Bureau of Reclamation: <http://www.usbr.gov>

Southern Nevada Water Authority: <http://www.snwa.com>

Lake Mead National Recreation Area: <http://www.nps.gov/lame/>

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Lake Mead braces for lowest level since 1965

Marinas, docks are moved as water level drops below last year's lowest point

By Jean Reid Norman

Fri, Apr 24, 2009 (2:01 a.m.)

On the concrete launch ramp of Boulder Harbor, where a marina once docked boats at Lake Mead, National Park Service spokesman Andrew Munoz points to a thin strip of land that protrudes almost a foot out of the water. "See that?" he asks. "A week ago, if you were to stand on that finger of land, you would be knee deep in water." Lake Mead's elevation has dropped to 1,103 feet above sea level, and by July, the Bureau of Reclamation forecasts that it will be at 1,092, its lowest level since 1965, when Colorado River water was being retained upstream to fill Lake Powell in Arizona.

Rough asphalt installed in the 1960s to help boats reach the lake at the previous low-water mark at Boulder Harbor is visible at the end of the concrete launch ramps. Munoz points in the distance to a wooden structure hanging over a small bluff. It used to be a fishing pier, he says.

After nine years of drought, the Lake Mead National Recreational Area is preparing for another year of moving ramps, marinas and other facilities, chasing the shoreline as it recedes.

Echo Bay Marina in the northern part of Lake Mead began preparations Thursday to tow the docks to deeper water, Munoz said. The marina will close from April 26 through May 5, but boat owners who use the slips will be shuttled from shore to their vessels, Munoz and marina employees said. Boat rentals will still be available by reservation, Munoz said.

Temple Bar Marina on the Arizona side will also close soon to move it to deeper water, Munoz said. At Boulder Harbor, pipe matting made of corrugated steel will be laid over the dirt where the concrete launch ramp ends, to prevent vehicles and vessels from creating potholes at the water's edge, he said. That will be a temporary fix while a contract is sought to extend the launch ramp yet another time.

In addition, park rangers continually move buoys and other navigational aids to help boaters avoid an unpleasant run-in with a rock or other obstruction that used to be well

below the water's surface. The work is expected to cost the park service \$10 million, and the marinas are expected to put another \$1 million into the move, he said.

These changes are part of the larger story of the drought that has gripped the Southwest. Fourteen months ago, Lake Mead Marina, which used to occupy Boulder Harbor and was known as a place where tourists and children could feed popcorn to carp, pulled up its anchors and was floated down the shore to Hemenway Harbor.

The Southern Nevada Water Authority, which draws 90 percent of Southern Nevada's water supply from two intake pipes in Lake Mead, is racing the falling water levels to complete a third intake that will preserve its ability to fill Las Vegas' water needs, spokesman J.C. Davis said.

One of the intake pipes will lose its ability to draw water when the lake reaches 1,050 feet elevation, a level that the Bureau of Reclamation is not predicting in its two-year forecast, Davis said.

The Water Authority has drawn a line in the sand at 1,000 feet, he said. That's the lowest level the second intake and the new intake will be able to accommodate, he said. Before the lake reaches that point, the states that depend on Colorado River water have agreed to renegotiate the way water is divided, Davis said. The current low-water level can be traced upstream, Davis said. The snow pack in the Rocky Mountains was 82 percent of normal, which is better than the average of 67 percent over the past several years, he said. If there had been more, he said, the water level of Lake Powell might have reached a high enough level that more water would have been released to Lake Mead.

In addition, he said, the growing season in California and Arizona is beginning, and orders are coming in for agriculture, which uses 80 percent of the water taken out of Lake Mead. Because of that cycle, summer is when the lake always reaches its annual low-water mark, Davis said.

Still, it's discouraging to boaters like Jesse Keenan, who was pulling his boat in from an outing at Boulder Harbor Thursday morning.

"There's nothing you can do about it," he said. "It's like a martini glass. You take one sip at the top and it's no big deal. When you get to the bottom, each sip is a big deal. "We didn't used to have a problem. Now, are you kidding me?"

CORRECTION: This story was updated to correct the area of Lake Mead referenced as Boulder Harbor.

Regional News 04/20/09

Study: Shortages 60% to 90% likely on Colorado River by 2050

By MIKE STARK, Associated Press Writer

Monday, April 20, 2009

(04-20) 15:03 PDT Salt Lake City, UT (AP)

If the West continues to heat up and dry out, odds increase that the mighty Colorado River won't be able to deliver all the water that's been promised to millions who rely on it for their homes, farms and businesses, according to a new study.

Less runoff — the snow and rain that fortify the 1,400-mile river — caused by human-induced climate change could mean that by 2050 the Colorado won't be able to provide all of its allocated water 60 percent to 90 percent of the time, according to two climate researchers at the Scripps Institution of Oceanography at the University of California at San Diego.

The more parched the landscape, the more difficult the choices will be for those with dibs on the Colorado's water and those in charge of divvying it up, said Tim Barnett, lead author of the study.

"The dry year scenarios in the future are going to be absolutely brutal," he said.

Barnett and fellow Scripps scientist David Pierce made waves last year with a study saying there's a 50 percent chance that Lake Mead, the reservoir created by the Hoover Dam, could run dry by 2021.

They teamed up on the latest study to predict when the river — under different climate scenarios predicting 10 percent to 30 percent reductions in runoff — will be unable to fully meet all of the demands put on it.

The results were published Monday in the journal Proceedings of the National Academy of Sciences.

"Without numbers like this, it's pretty hard for resource managers to know what to do," Barnett said.

The Colorado is a lifeline of the southwest, flowing through seven states and into Mexico and quenching the thirsts of some 27 million people who use it to irrigate crops, water lawns, produce drinking water and operate businesses.

Drought has already stressed the river. The problem is being compounded by growing populations demanding more water and the expected effects of climate change, said Brad Udall, director of the University of Colorado's Western Water Assessment.

"We're on a collision course between supply and demand," Udall said.

The Bureau of Reclamation, the federal agency that plays a key role in how the river system is managed, has used a different set of calculations than the Scripps researchers to reach a similar — though less dire — prediction, according to Terry Fulp, the agency's Nevada-based deputy regional director for the Lower Colorado.

His agency's calculations predict the Colorado could run short of water 58 percent to 73 percent of the time by 2050.

There's room to quibble over percentages, Fulp said, but the overriding point remains.

"We've got some serious issues to grapple with," he said.

Under conservative climate change scenarios in the West, Barnett and Pierce found decreases in runoff could short the Colorado River by about 400,000 acre feet of water 40 percent of the time by 2025. That's equivalent to the amount of water needed to supply 400,000 to 800,000 households.

Those figures double later in the century, according to the Scripps researchers.

The signs point toward tough decisions about who will get less water. Agricultural operations use about 80 percent of the water taken out of the Colorado, Barnett said. He knows the arguments, though: Shorting farms could drive up food prices. Curbing development in cities and suburbs will make developers unhappy. Whatever the case, he said, some decisions need to be made soon.

"The actions that need to be taken aren't going to be fun," Barnett said. "It's not going to be life as usual."

But, Barnett and Pierce said, it isn't too late to buffet some of the harshest effects.

Measures such as conservation and water exchanges, which can require upfront investments and flexibility, could play a key role in avoiding some of the biggest shortfalls, they said.

In 2007, officials from the seven states that get water from the river — Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming — and then-Interior Secretary Dirk Kempthorne signed a far-reaching agreement aimed at conserving and sharing the scarce resource. The 19-year plan formalized rules for cooperating during the ongoing drought.

Meanwhile, researchers will continue gathering information on climate change and looking for ways to keep the Colorado functioning — albeit with a new set of climate-driven rules.

"It really depends on how innovative people get," Fulp said.

On the Net:

Proceedings of the National Academy of Sciences: www.pnas.org/

Regional News 04/23/09

Dust Storms Escalate, Prompting Environmental Fears

By Juliet Eilperin
Washington Post Staff Writer
Thursday, April 23, 2009

Nestled in the San Juan Mountains at 9,300 feet, and surrounded by 13,000-foot peaks, Silverton, Colo., seems an unlikely place for a dust storm, especially with two feet of snow on the ground. So Chris Landry was alarmed on the afternoon of April 3 when he spotted a brown haze on the horizon; an hour later, a howling wind had engulfed the town in a full-fledged dust storm, turning everything from the sky to the snow a rusty red.

"It was almost surreal," recalled Landry, executive director of the Center for Snow and Avalanche Studies. The landscape looked like Mars after the storm passed, he said: "You could feel the dust, you could taste the dust."

The scene Landry witnessed that day was the most severe example of a phenomenon that has overtaken parts of the West this year, one that could exacerbate a slew of environmental problems there in the years to come. The Colorado Rockies, including the headwaters of the Colorado River and the Rio Grande, have experienced 11 serious dust storms this year, a record for the six years researchers have been tracking them.

More important, an increasing amount of airborne dust is blanketing the region, affecting how fast the snowpack melts, when local plants bloom and what quality of air residents are breathing.

The dust storms are a harbinger of a broader phenomenon, researchers say, as global warming translates into less precipitation and a population boom intensifies the activities that are disturbing the dust in the first place. Jayne Belnap, a research ecologist at the U.S. Geological Survey who has studied the issue, predicts that by midcentury, the fragility of the region's soil "will be equal to that of the Dust Bowl days."

"We're headed for this massive soil movement, these massive dust storms on a frequency we're not used to, and it's going to have enormous ecosystem impacts," Belnap said. "No one has an appreciation for the scope of the calamitous impacts."

Dust storms are not new in the West, but the fact that so much dust is on the move reflects that across vast areas, soil is being loosened by off-road vehicles, livestock grazing, and road development for oil and gas production, much of it on public land. A Washington Post analysis of federal data from areas managed by the Bureau of Land Management found that between 2004 and 2008, off-road vehicle use rose 19 percent,

the number of oil and gas wells increased 24 percent and grazing acreage climbed 7 percent.

The trends have sparked an intense debate between interests being blamed for loosening the soil and those calling for controls on those activities.

Advocates for off-road vehicle users, for example, charge that environmentalists have seized upon the dust issue as a political club in their efforts to curb the increasingly popular recreational sport.

"A lot of the public land in the West is a very dusty place. What human uses make it more dusty, and to what extent, is unknown," said Brian Hawthorne, public lands policy director for the BlueRibbon Coalition, which represents off-road enthusiasts. "There's just no studies on it."

Scientists are trying to get better measurements of how much soil is getting stirred up -- and the consequences.

People tend to think of arid regions as inherently dusty, but research by the U.S. Geological Survey and others has shown that even dry soil, if undisturbed, stabilizes plant life and can provide a critical, albeit fragile, crust.

Once disturbed by off-road vehicles, grazing, plowing or other forces, however, the dust can travel long distances on the wind.

According to several studies, a vehicle traveling at 27.5 miles per hour over a dirt road composed of 20 percent silt can kick up five to 30 pounds of dust with every mile it drives.

By studying sediment cores from high-elevation lakes in the San Juan Mountains, Jason Neff, a geological sciences professor at the University of Colorado at Boulder, has estimated that the amount of dust falling back to Earth now is up to five times as much as the amount before Europeans arrived. Dust deposition was even greater around the turn of the last century, before the government put restrictions on grazing.

"Nobody could deny all this activity is causing more dust," Neff said, adding that the phenomenon is depositing more nutrients at higher elevations, changing what plants grow there and disrupting ecosystems.

The groups most frequently cited for stirring up Western soils -- cattle growers, oil and gas companies, and off-road vehicle users -- all challenge the charge that their activities are to blame.

Tom Field, director of production education for the National Cattlemen's Beef Association, said his members have improved their land-management practices, and he argued that "without the ranching industry in the Western U.S., much of the accessible private and public land would be converted to housing developments and recreational sites, which would diminish open space and create ecosystem disturbance."

Tim Sampson, manager for exploration and production at the American Petroleum Institute, questioned whether oil and gas exploration has worsened the dust problem: "We have high winds, and we have dust storms. They've been there since before Texas was a state."

One of the biggest problems, scientists say, is that each storm deposits a layer of dark material on the mountain snowpack; that layer absorbs the sun's heat and causes the snow to melt earlier. Thomas H. Painter, a University of Utah cryospheric science professor, has calculated that dust deposition significantly reduces snow's reflectivity.

"It's effectively like turning up the sun 50 percent and putting that energy into the snow," he said.

The earlier snowmelt changes the blooming and growing times of vegetation, triggering ripple effects that hurt Colorado farmers. Steve Vandiver, general manager of the Rio Grande Water Conservation District, said farms in the valley are getting the snowmelt runoff two to four weeks earlier each year, making it difficult to keep grain and potato crops irrigated.

"A lot of the water's gone by the time the crops need it," he said.

Snowpack melt is not the only effect: Many Southwestern communities are struggling with poor air quality, and dust is making it worse. Arizona's Maricopa County, which includes Phoenix and Scottsdale, has failed to meet federal air quality standards and is cracking down on off-road vehicles and unpaved roads to limit dust.

Lawrence Odle, director of the Maricopa County Air Quality Department, said officials have little choice.

"We have vehicles that just tear across the desert," he said, adding that the county stands to lose \$7 billion in federal transportation funds if it does not improve its air quality. "Do you allow for recreational activity, or do you try to get into compliance with federal health standards?"

Researchers say a shift in policy could help avert some of the worst impacts in the coming years.

"We can do something about it," USGS's Belnap said. "We just have to decide it's important."

But the Bureau of Land Management says it sees no reason to change its rules for issuing permits for dust-generating activities on the land it controls.

"It's something we look at," said Scott Archer, a senior air resource specialist at the bureau. "In the big scheme of things, no, it's not that big a deal."

Database editor Sarah Cohen contributed to this report.

Colorado River adaptive management program needs overhaul, critics say

By APRIL REESE, Greenwire After 13 years of experimentation, a collaborative program aimed at reversing some of the ecological damage wrought by Glen Canyon Dam in the Grand Canyon's stretch of the Colorado River has failed to live up to its congressional mandate, critics within the program say.

And even as the science on the river's health points in the direction of flow changes that would mimic natural conditions, members of the 25-member Adaptive Management Work Group remain entrenched along old battle lines that pit power producers and Colorado River Basin states against environmental groups and wildlife agencies concerned about the river's ecological decline.

The result is a policy stalemate that has effectively kept Glen Canyon Dam operating under the same conditions as in 1992, when Congress passed the Grand Canyon Protection Act, calling on the Interior Department and stakeholders to figure out ways to "protect, mitigate adverse impacts to, and improve" conditions within Grand Canyon National Park's river corridor.

The construction in the 1960s of Glen Canyon Dam and its reservoir, Lake Powell, has drastically altered historic downstream flows on the Colorado River. Among other things, the dam captures sediment that once gave the river its signature murky reddish color, and water releases from the bottom of the reservoir have substantially cooled river temperatures, creating adverse conditions for federally endangered humpback chub, a native fish, and other species.

Yet despite the continued impacts on the Grand Canyon ecosystem, the Glen Canyon Dam Adaptive Management Work Group, or AMWG, has never reached sufficient consensus to execute its primary charge -- recommending a new dam operations policy to the Department of Interior.

"My frustration with this process is that it's not an adaptive management program," Rick Johnson, who represents the Grand Canyon Trust on the work group, said during a break of a meeting of the work group last week in Phoenix. "We've never changed policy."

Battle over flows

Since the mid-1990s, the Bureau of Reclamation, which operates the dam, has conducted three high-flow experiments aimed at mimicking spring surges of snowmelt that historically inundated the Grand Canyon, scouring sediment from the Colorado River's channel and depositing it downstream in sandbars and beaches.

In studying those three controlled floods, scientists have found that a large surge, carried out after spring thunderstorms have stirred up sediment, followed by low summer flows to reduce erosion of new sandbars and beaches, appears to benefit the humpback chub, which needs backwater habitat created by the sandbars, and improves conditions for recreational rafters, who use the beaches as campsites.

Last month, the U.S. Geological Survey issued a report that found the humpback chub population in the Grand Canyon had increased by 50 percent between 2001 and 2008, partly due to such flow experiments.

While some questions about the effects of the experimental flows remain unanswered, federal biologists and some advocacy groups say there is sufficient evidence from the 13-year, \$80 million research program to suggest a flow regime change.

"I think that there's enough data that we could propose that," said Sam Spiller, a biologist and Lower Colorado River coordinator for the U.S. Fish and Wildlife Service and an AMWG member. "There seems to be a consensus among scientists that that's what the resources in the Grand Canyon need."

The National Park Service also would like to see more high flows. Last year, Grand Canyon National Park Superintendent Steve Martin said in an interview that "the science is clear" and justifies regular surges from Glen Canyon Dam (Land Letter, April 10, 2008).

But while the work group has voted for three high-flow experiments in recent years, all seven of the Colorado River Basin states -- Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming -- along with power utilities that sell hydropower to some of those states, have resisted recommending permanent changes to the dam's operating regime, citing concerns about lost power and reduced revenues.

Currently, the dam is operated under a "modified low fluctuating flow" regime, under which releases vary throughout the day. While that prescription is ideal for power generation, it has proved problematic for the humpback chub and other Grand Canyon resources.

Two reports, a biological opinion from FWS in 1994 and a USGS analysis (pdf) of the effect of 10 years of dam operations issued in 2005, concluded that modified low fluctuating flows have not restored sediment transport or helped native fish recovery in the Grand Canyon.

"There's going to be a huge debate if there's a management action to alter flows on a regular basis," John Shields, interstate streams engineer for the state of Wyoming who represents Wyoming on the AMWG, said in an interview after the meeting.

'Who pays?'

Part of the problem, said Shane Capron of the Western Area Power Association, who heads the adaptive management program's technical working group, is that it is unclear

who would shoulder the economic burden of tweaking flows to more closely mimic historic conditions.

"We don't know right now how to transition from science to management," he said at the meeting. "There are big implications of moving these things into management: Who pays? Who implements?"

The inherent difficulties of balancing resource protection and power and water needs were on display at last week's meeting, when Andre Potochnik, who represents Grand Canyon river guides on the work group, floated a motion calling for consideration of a new high-flow test within the next couple of years.

That motion was rejected on a 10-8 vote, with three abstentions. The seven Colorado River Basin states voted no, while three American Indian tribes, along with the Bureau of Indian Affairs, the National Park Service, two environmental groups and Potochnik, voted yes.

Leslie James of the Colorado River Energy Distributors Association, which distributes power from Glen Canyon Dam to customers in the Colorado River Basin, said the association supports high-flow tests. But James emphasized conditions have to be right to conduct them, and that the science is not yet solid enough to determine what those conditions are.

"So I think it's premature" to recommend a new high-flow test, James said.

Shields, the Wyoming representative, noted that under a 2008 Bureau of Reclamation plan, the working group cannot recommend a new high-flow test until scientists complete their evaluation of the 2008 test, which is not due until next year.

Furthermore, the Bureau of Reclamation's plan calls for an annual "steady flow" experiment each fall through 2012. And before a new high-flow experiment can go forward, Reclamation would have to undertake an environmental review of its effects under NEPA, a process that could take one to two years.

"We've committed to five years of those fall steady flows," said Larry Walkoviak, Reclamation's regional director for the Upper Colorado region, who is serving as the Interior secretary's acting designee to the work group. "I think it's probably too early to tell" how the flow regime should be changed, he added.

Voting blocs

But environmental advocates said there are other considerations driving the panel's reluctance to call for another high-flow experiment.

"It's all about money," said John Weisheit of the nonprofit group Living Rivers, which has advocated breaching the dam. "They're doing the minimal things to be compliant."

Since power distributors have to purchase replacement power from more expensive sources during flow experiments, they incur a loss with every test flow. The 2008 high-flow experiment, for example, cost power contractors \$4 million in lost revenues.

"The optimal flow for sediment -- keeping it in the channel -- is a constant steady flow [after a high flow in the spring], but we realize that's not really an option because of power needs," Ted Melis of USGS's Grand Canyon Monitoring and Research Center said during a presentation at last week's work group meeting.

Johnson of the Grand Canyon Trust said that according to his group's estimates, power customers would have to pay only an additional 10 cents a month under an altered flow regime.

He suggested that the very makeup of the adaptive management work group favors electric power interests over ecological ones, since group members tend to vote in blocs, with power contractors and the states voting together against environmental groups, natural resource agencies and tribes.

"The secretary should say, 'This group isn't doing what I need,'" Johnson said.

The Grand Canyon Trust has carried that frustration into the courtroom, where a pending lawsuit against the Interior Department charges that the government has failed to protect the Grand Canyon's resources downstream from the dam.

Privately, some federal officials speculated that the program -- and perhaps the controversial flow regime -- might change under the Obama administration.

Interior Secretary Ken Salazar nominated Deanna Archuleta to be deputy assistant secretary for water and science last month. If confirmed, Archuleta would become Salazar's designee at the AMWG meetings.

Archuleta, the board chairwoman of the Bernalillo County Water Utility, which serves the Albuquerque, N.M., region, formerly served as the Southwest regional director for the Wilderness Society. She is considered an expert in developing water policy and has extensive experience in dealing with Western water issues, including drought, climate change and population growth.

But Weisheit of Living Rivers said a change in senior leadership will make little difference in the direction of the program. "The administration might change, but the voting bloc never changes," he said. "It's designed to make sure that hydropower has precedence over Grand Canyon restoration."

April Reese writes from Santa Fe, N.M.

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LR Letter 05/26/09

Letter to Utah Division of Water Rights regarding proposed nuclear power plant at Green River, Utah

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OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RIGHTS
STATE OF UTAH

PROTEST and HEARING REQUEST

In the Matter of Change Application No. A35402
(Water Right Nos. 89-74, 89-1285, and 89-1315)

May 26, 2009

Living Rivers, Uranium Watch, and the Glen Canyon Group of the Sierra Club hereby submit a timely PROTEST and request for a HEARING, pursuant to Utah Code Ann. §73-3-7, regarding Application for Permanent Change of Water No. A35402 (Application) filed by the Kane County Water Conservancy District (KCWCD or Applicant), received by the Salt Lake Office of the Division of Water Rights on March 30, 2009.

Living Rivers is a public interest, non-profit organization dedicated to the restoration of Colorado River ecosystems that are presently damaged by excessive diversions and pollution.

Uranium Watch is a public interest, non-profit organization that works to educate and advocate for protection of public health and the environment from impacts of uranium mining and milling and other nuclear fuel cycle operations in Utah.

The Glen Canyon Group of the Sierra Club works to restore and protect the environment of Southeastern Utah, in the heart of Red Rock Country.

Uranium Watch and Living Rivers are located in Moab, Grand County; the Glen Canyon Group has members in Carbon, Emery, Grand, San Juan, and Wayne Counties.

The change application relates to the provision of water for a nuclear power generating station a few miles west of the Green River in Emery County. Grand County, just east of Green River, and Carbon County, north of Green River, will be in the nuclear power station's plume exposure pathway Emergency Planning Zone (EPZ). Moab and other communities will be in the ingestion pathway EPZ, as designated by the U.S. Nuclear Regulatory Commission (NRC).

The Application proposes to change the point(s) of diversion, place of use, and nature of use for water rights 89-74 (A35818), 89-1285 (A35818a), and 89-1315 (A35818B). The Application proposes to change the point(s) of diversion from Lake Powell on the Colorado River to the Green River; the place of use from Lake Powell to land about 3 miles west of the City of Green River and the Green River; and the use from a coal-fired power plant to a nuclear power plant to generate electricity, named the Blue Castle Project. The water would be used by Transition Power Development LLC (Transition Power) pursuant to a Water Rights Lease Agreement, dated September 20, 2007.

See Attachment A.

The proposed site for the proposed reactor is land that Emery County leased from the Utah School and Trust Lands Administration for an industrial development park on November 17, 2008 (Development Lease No. 813). The site is just north of Interstate 70 and the Union Pacific passenger and freight railway, and just east of Hwy. 6.

See Attachment B.

Water for the proposed nuclear power generation station must provide an adequate supply of cooling water for normal operation, anticipated operational occurrences, safe shutdown, and cool down (first 30 days) and long-term cooling (periods in excess of 30 days) during natural and emergency conditions.

This protest is based on the following grounds:

1. Standing.

Living Rivers and Uranium Watch are “persons interested” for the purposes of Utah Code Ann. §73-3-7.

2. Utah Code Ann. §73-3-8.

The KCWCD Application fails to address any of the criteria that the State Engineer must consider when approving a water right appropriation or change application.

Utah Code Ann. §73-3-8 lays out the criteria for the approval of a water right appropriation or change application. Section 73-3-8 states, in pertinent part: (1) (a) It shall be the duty of the state engineer to approve an application if:

- (i) there is unappropriated water in the proposed source;
- (ii) the proposed use will not impair existing rights or interfere with the more beneficial use of the water;
- (iii) the proposed plan is physically and economically feasible, unless the application is filed by the United States Bureau of Reclamation, and would not prove detrimental to the public welfare;
- (iv) the applicant has the financial ability to complete the proposed works; and

(v) the application was filed in good faith and not for purposes of speculation or monopoly.

(b) (i) If the state engineer, because of information in the state engineer's possession obtained either by the state engineer's own investigation or otherwise, has reason to believe that an application to appropriate water will interfere with its more beneficial use for irrigation, domestic or culinary, stock watering, power or mining development, or manufacturing, or will unreasonably affect public recreation or the natural stream environment, or will prove detrimental to the public welfare, it is the state engineer's duty to withhold approval or rejection of the application until the state engineer has investigated the matter.

(ii) If an application does not meet the requirements of this section, it shall be rejected.

There is nothing in the Application to demonstrate that there is unappropriated water in the proposed source; the proposed use will not impair existing rights nor interfere with more beneficial use of the water; the proposed plan is physically and economically feasible; the applicant (or, in this instance, Transition Power, the entity that would carry out the proposed project) has the financial ability to complete the proposed works; the application was filed in good faith and not for the purposes of speculation or monopoly; the Application will not interfere with more beneficial uses; the Application will not unreasonably affect public recreation or the natural stream environment; and the Application will not prove detrimental to the public welfare.

Normally, when a government regulatory agency has criteria that must be addressed for the approval of an application for agency action, the applicant must submit information responsive to those criteria. If the information is incomplete, the agency does not accept the application until it is, and the agency does not notice the application for public comment, challenges, or hearing requests until an acceptable application has been submitted. However, this has not been the case with water right applications in the State of Utah.

For some inexplicable reason, the Division of Water Rights did not require an applicant to provide any information that addresses the criteria in Section 73-3-8(1)(a) or is pertinent to the withdrawal and use of the water for such a large, expensive, and technologically complex project. So, an interested person does not know if the information that the State Engineer might rely on is complete, relevant, and accurate.

In this instance, the State Engineer lacks the required information on which to base any findings responsive to the requirements of Utah Code Ann. §73-3-8.

Therefore the Application must be rejected.

3. Unappropriated water in the proposed source.

Section 73-3-8(1)(a)(i) requires sufficient unappropriated water for the proposed appropriation or change.

3.1. The State Engineer must evaluate the availability of unappropriated water in the proposed source over the long term. The State Engineer must identify and assess the factors that could impact the availability of an adequate water supply for the proposed use — over the full life of the project. Such factors would include drought, impacts from climate change, icing on the river, use limitations imposed by federal and state agencies authorizing the use of Colorado River Basin water, agreements and compacts affecting the use of Green River water, potential blockage, effect of existing and proposed water-control structures, and site and regional hydrological conditions.

3.2. The Application does not contain information regarding how long the water is needed for the purpose of use. A nuclear power plant usually has an operating life from 20 to 40 years. It can take up to 20 years to go through the licensing and construction phase, and Transition Power can obtain an NRC Early Site Permit that is good for 20 years, but can be extended for another 20 years before initiating construction.

See Attachment C.

Also, see <http://www.nrc.gov/reactors/new-reactors/esp.html>.

Transition Power submitted a January 30, 2008, Letter of Intent to the NRC, stating that they intended to submit an Early Site Permit Application and/or a Combined License Application by April 2010.

See Attachment D.

After the operating life of the reactor there is the period of reactor shut down and decommissioning, with the possibility of on-site storage of spent fuel for many years. This easily adds up to over 100 years for the life of the proposed project.

Therefore, the State Engineer must consider the amount of water that will be available, with the numerous demands on water from the Green River and Colorado River systems and factors impacting the availability of water, over the next 120 years — at the very minimum. This is because, if the Application is approved, the water sought could be tied up, with or without use, for that length of time.

3.3. Since the Colorado River Compact was negotiated in 1922, the annual yield of the Colorado River has been reduced naturally by over 2 million acre-feet (maf). Since 1948, when the Upper Colorado River Basin Compact was negotiated, the annual yield of the Colorado River has only averaged 14.1 maf. This declining trend is expected to continue beyond the next century as a result of human activities that cumulatively load the atmosphere with greenhouses gases.

It is reasonable to assume that a full 10% reduction in the annual streamflow of the Colorado River will occur by the time this proposed project begins construction, and a 20% reduction will likely occur before the current century ends.

The Colorado River system cannot function properly with a 10% reduced annual yield of 13.5 maf, and a 20% reduction to 12 maf will render an impossible situation that will assuredly lead to complex legal struggles that will include the State of Utah.

Considering this cumulative impact, it would be appropriate for the State Engineer to fully consider a worst-case scenario occurring within the next 100 to 120 years. Specifically, the State Engineer must evaluate how this proposed water withdrawal in a time period of severe water shortages would likely contribute harm toward preexisting water users in the State of Utah.

For example, the State Engineer should consult with the National Oceanic and Atmospheric Administration (NOAA) in Boulder, Colorado, as a cooperating agency in this regard. These scientists will soon complete the task of reconciling the various results of general circulation models that were developed to help water managers prepare for the long-term effects of global warming on the water supply of the Colorado River.

3.4. Transition Power may apply for and receive an Early Site Permit, which is good for a period of 20 years and may be extended for an additional 20 years. Construction of the project might not commence during that time. Already the subject water rights have not been put to beneficial use since they were first appropriated in 1964 — 45 years ago. So, it could be another 20 to 50 years before the water is put to use, and there is no guarantee that the reactor will eventually be constructed and the water put to use. This is an unreasonable amount of time for an entity to hold onto water for a specific project and not put it to beneficial use.

The State Engineer must obtain and consider all relevant data and information related to all aspects of the planned life of the project and the amount of time before the water will actually be put to use. This is also necessary if the Application is approved, because any approval decision must state "the time within which the construction work must be completed and the water applied to beneficial use." See Utah Code Ann. § 73-3-10(5). These dates must be realistic. 4. Impairment of existing rights or interference with the more beneficial use of the water.

Section 73-3-8(1)(a)(ii) requires that the proposed use will not impair existing rights or interfere with the more beneficial use of the water.

4.1. As discussed above at 3.3, the proposed withdrawal has the potential to impair all of the existing water uses and water rights in the event of a severe drought.

4.2. The appropriation of water could adversely impact existing uses and rights because, once operating, a nuclear power plant requires water, even during shut down. Water for the plant cannot just be turned off in times of low water availability in order to provide water to senior water rights holders, for recreation, to maintain a healthy stream environment, or to satisfy commitments to Colorado River Compact members. The safe operation of the reactor systems would take precedence. This could impair existing rights and interfere with other uses of the water.

The Applicant must submit information regarding the projected use of the water — under varying water availability conditions — for various operational, shutdown, emergency, and long-term scenarios.

4.3. The proposed use will interfere with the beneficial uses of the Green River water for recreation due to the intake structures in the Green River, withdrawal of water, and the threat of planned and emergency releases of radioactivity from the site. The proposed project would interfere with other recreational, agricultural, and municipal uses of the water. It would adversely impact the native fish and other wildlife habitats, including the habitat of endangered fish species that are unique to the Colorado River Basin: Colorado pikeminnow, razorback sucker, bonytail chub, and humpback chub. Intake structures kill fish and aquatic organisms. The withdrawal of the water lowers the water level, which could impact spawning areas and fish habitat, particularly during low flow conditions.

4.4. The proposed withdrawal use has the potential to impact the Upper Colorado River Endangered Fish Recovery Program. The State Engineer must consult with the participants in the Upper Colorado River Endangered Fish Recovery Program and state and federal agencies that have responsibilities for the health and well being of the Colorado River Basin and the wildlife that depends on it.

4.5. The State Engineer must thoroughly identify and evaluate all of the potential adverse impacts to the current and proposed beneficial uses of the Green River water.

The State Engineer must fully investigate the amount and kinds of radiological and non-radiological effluents that will be released into the air from the site, the meteorological conditions that will influence the dispersion of those effluents, and the impacts of those effluents on the agricultural lands and agricultural activities in the vicinity of Green River, including melon growing, grazing, stock raising, gardens, and growing of alfalfa and other feed crops.

The State Engineer must fully investigate the potential impacts to the agricultural lands and agricultural community from a radiological emergency. According to the NRC, the primary source of radioactivity beyond a few miles from the site is the ingestion of contaminated water and food, including agricultural products.

See <http://www.nrc.gov/about-nrc/emerg-preparedness.html>.

Also, see Attachments E and F. 5. Physical feasibility.

Section 73-3-8(1)(a)(iii) requires that "the proposed plan is physically . . . feasible."

A nuclear reactor makes many demands on the physical environment. Neither the Applicant nor Transition Power has made any information available to the public regarding the feasibility of the proposed project. There are a number of issues that should be considered.

5.1. It is not known whether the amount of water that Transition Power has leased (29,600 acre-feet from the KCWCD and 24,000 from the San Juan Water Conservancy District) will provide the water necessary for a 2-unit reactor. There is no information about the specific design of the proposed reactor. There is no information about the amount of water that would be required to cool the reactor core, operate the plant, and as a heat sink to dissipate of heat after reactor shutdown and in the event of an accident

— based on a specific reactor design at the proposed site and under the specific site conditions.

The Application states the water would be diverted for storage in a reservoir that would inundate 100 acres and have a 2,000 acre-foot storage capacity. It is not known if the site is suitable for a storage reservoir or if the capacity of the reservoir is sufficient for the multiple water demands of the reactor.

This technical information must be provided to the State Engineer and the public.

5.2. Transition Power has not purchased the proposed site, and little is known about the numerous site aspects relevant to placement of a reactor; for example, hydrology, geology and seismic conditions, local meteorology, emergency planning, ecological systems and biota, water availability, and the exclusion zone requirements. So it is not known if the site is suitable for a nuclear power facility and meets the siting and safety assessment requirements of the NRC.

5.3. The Application does not contain information about the required depth of the Green River to accommodate the water intake structures and assure the required flow into those structures. There is no information about the past and expected future variations in the depth of the Green River during various flow conditions. Therefore the feasibility of the use of the Green River, based on depth requirements, is an important factor affecting the feasibility of the proposed project. The Applicant should submit this information for the review of the State Engineer and the public.

5.4. There is no information in the Application or available to the public elsewhere that demonstrates that Transition Power has exercised due diligence in pursuing plans for a nuclear generating station.

5.5. The State Engineer should not approve the Application until he has obtained, evaluated, and made public relevant information about the feasibility of the proposed nuclear reactor project.

6. Economic feasibility.

Section 73-3-8(1)(a)(iii) requires that "the proposed plan is . . . economically feasible."

6.1. A nuclear reactor is a multi-billion dollar project. There is no information in the Application or that is available to the public elsewhere that demonstrates that constructing and operating the proposed nuclear power reactor is an economically feasible plan. The State Engineer should have substantial data, information, and analysis to support a claim that the proposed project is economically feasible and there are no unacceptable economic risks. One of the economic risks that should be evaluated is that associated with a lack of water availability during the life of the reactor.

6.2. The State Engineer must also identify and evaluate the economic impacts associated with emergency response planning and other community responsibilities associated with the construction and operation of a nuclear facility near Green River.

According to the NRC, "Before a plant is licensed to operate, the NRC must have 'reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.'"

See <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/emerg-plan-prep-nuc-power-bg.html>.

Also, see <http://www.nrc.gov/about-nrc/emerg-preparedness.html>.

This emergency planning for the protection of the public from exposure to, and the inhalation of, airborne radioactive contamination and/or the ingestion of food and liquid that is contaminated by radioactivity will involve local, state (Utah and Colorado), and federal entities. Who will pay for this emergency planning and implementation of the plans?

There will be other economic impacts on the community of Green River and in the surrounding area, such as an increase in the school population and demands for community resources on a long-term and day-to-day basis. The State Engineer must obtain, review, and consider information about all of the economic demands of the proposed reactor on the surrounding communities and consider whether the proposal is economically feasible for those communities.

7. Detriment to public welfare.

Section 73-3-8(1)(a)(iii) also requires that the Application "would not prove detrimental to the public welfare."

KCWCD has submitted no information regarding the impacts of the proposed uranium mill on the welfare of the City of Green River and surrounding communities, the Green and Colorado Rivers, and their environments. A nuclear reactor releases radiological and non-radiological particulates on a routine basis. It will require thousands of gallons of water a day to operate and be prepared for an emergency in an area that has historically been used for grazing, agriculture, and recreation. It will bring in hundreds of workers, which may adversely impact the resources of the community: schools, housing, emergency services, health providers, law enforcement, and social services. There are potential adverse and costly impacts to air quality, ground and surface water, and the health and safety of the workers and the community.

A nuclear reactor is potentially a very hazardous enterprise. A radiological emergency or grave accident could devastate the economy of the area and the land, the resources that the human community relies upon, and the mental and physical health of the who live there — for years to come. Any appropriation of water and proposed use of water that has a clear potential to be detrimental to the public welfare should not be approved without thoroughly identifying all of the potential adverse impacts to the economy, services, environment, and human health and welfare over the complete life of the project.

Until that information has been made available and thoroughly reviewed by the State Engineer, the Application should not be approved.

8. Financial ability to complete proposed works.

8.1. Section 73-3-8(1)(a)(iv) requires a finding that "the applicant has the financial ability to complete the proposed work." There is no information in the Application or that is available to the public elsewhere that demonstrates that Transition Power is financially able to permit, engineer, construct, operate, and decommission the proposed nuclear power generating station, including funds for the required financial assurances.

8.2. Utah Code Ann. § 73-3-11 addresses the question of the financial ability of the applicants. In this instance, it is the financial ability of Transition Power, not KCWCD, that is crucial. Section 73-2-11 states: 73-3-11. Statement of financial ability of applicants.

Before either approving or rejecting an application the state engineer may require such additional information as will enable him properly to guard the public interests, and may require a statement of the following facts: In case of an incorporated company, he may require the submission of the articles of incorporation, the names and places of residence of its directors and officers, and the amount of its authorized and its paid-up capital. If the applicant is not a corporation, he may require a showing as to the names of the persons proposing to make the appropriation and a showing of facts necessary to enable him to determine whether or not they are qualified appropriators and have the financial ability to carry out the proposed work, and whether or not the application has been made in good faith.

Completion of the proposed works should include the construction and operation of the nuclear reactor, not just receipt of an Early Site Permit. It will take millions of dollars just to develop an application to the NRC and the applications to other appropriate local, state, and federal agencies. It will take billions to complete the project. Transition Power is not public utility, is not a publicly traded company, and has no experience in the nuclear power industry, so the State Engineer should require additional information that would enable him to determine whether or not Transition Power has the financial ability to carry out and complete the proposed work and to fulfill its responsibilities to the surrounding communities for emergency planning and the mitigation of adverse impacts on community resources.

8.3. NRC regulations set out general requirements for a combined license application in 10 C.F.R. § 50.33. The requirements include the financial assurance requirements in § 50.33(f): (f) Except for an electric utility applicant for a license to operate a utilization facility of the type described in Sec. 50.21(b) or Sec. 50.22, information sufficient to demonstrate to the Commission the financial qualification of the applicant to carry out, in accordance with regulations in this chapter, the activities for which the permit or license is sought. As applicable, the following should be provided:

(1) If the application is for a construction permit, the applicant shall submit information that demonstrates that the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated construction costs and related fuel cycle costs. The applicant shall submit estimates of the total construction costs of the

facility and related fuel cycle costs, and shall indicate the source(s) of funds to cover these costs.

(2) If the application is for an operating license, the applicant shall submit information that demonstrates the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operation costs for the period of the license. The applicant shall submit estimates for total annual operating costs for each of the first five years of operation of the facility. The applicant shall also indicate the source(s) of funds to cover these costs. An applicant seeking to renew or extend the term of an operating license for a power reactor need not submit the financial information that is required in an application for an initial license. Applicants to renew or extend the term of an operating license for a nonpower reactor shall include the financial information that is required in an application for an initial license.

(3) If the application is for a combined license under subpart C of part 52 of this chapter, the applicant shall submit the information described in paragraphs (f)(1) and (f)(2) of this section.

(4) Each application for a construction permit, operating license, or combined license submitted by a newly-formed entity organized for the primary purpose of constructing and/or operating a facility must also include information showing:

(i) The legal and financial relationships it has or proposes to have with its stockholders or owners;

(ii) The stockholders' or owners' financial ability to meet any contractual obligation to the entity which they have incurred or proposed to incur; and

(iii) Any other information considered necessary by the Commission to enable it to determine the applicant's financial qualification.

(5) The Commission may request an established entity or newly-formed entity to submit additional or more detailed information respecting its financial arrangements and status of funds if the Commission considers this information appropriate. This may include information regarding a licensee's ability to continue the conduct of the activities authorized by the license and to decommission the facility.

Transition Power is a newly formed entity; Transition Power is not an electric utility. Transition Power has stated that it intends to submit an Early Site Permit and/or a Combined License Application. Therefore, the State Engineer should require the submittal of the same information that the NRC would require of a newly-formed entity that is applying for a Combined License, in accordance with 10 C.F.R. § 50.33(f), (1) through (5), in order to demonstrate the financial qualification to carry out the proposed works.

8.4. Information about Transition Power's financial ability to complete the proposed works must also be made available to any protestors.

9. Speculation.

Section 73-3-8(1)(a)(v) requires a finding that "the application was filed in good faith and not for purposes of speculation."

At this time there is no information that demonstrates that Transition Power has not leased the KCWCD water for purposes of speculation. Transition Power is not an established nuclear industry or utility company, and there is no information to show that Transition Power has retained personnel and contractors who have the expertise to fully carry out the proposed project. Sometimes companies obtain land, leases, rights, permits, and similar resources necessary for a project, and then attempt to sell those resources or join with other, better funded, companies to carry out the proposal. This type of activity is speculative, because the original company cannot carry out the proposed project on its own. Even if Transition Power intends to carry out the project, it will use the water rights to encourage speculative investment in the project. Since Transition Power is not public utility, obtaining the water for a nuclear power plant would be an important stepping-stone in convincing others to invest in this speculative venture or purchase the project's assets from Transition Power.

Section 73-3-11 also addresses the question of good faith and should be considered.

The State Engineer should request the necessary data and information to enable him to determine whether or not the Transition Power is operating in good faith and in not appropriating the water (through a lease agreement with KCWCD) for purposes of speculation.

10. Effect on public recreation.

The Green River and the Colorado River are used extensively for commercial and non-commercial recreation. Recreation on land and water is an important part of the economies of Emery and Grand Counties (Utah) and Mesa County (Colorado)—the counties that would be most impacted by a nuclear reactor in Green River. A reactor would adversely impact public recreation, for example, by:

- Discouraging visitation to the area,
- Need for commercial companies to have emergency response plans so that they can care for clients during an emergency,
- Lowering water levels in the river,
- Water intake structures in the Green River creating a boating hazard,
- Competition with public accommodations, or
- Having a radiological emergency that requires sequestration or evacuation and impacts transportation.

Since there is no information in the Application about the effects on public recreation, the State Engineer must seek and consider information about the potential impacts a nuclear reactor would have on public recreation both in Green River area and on the Colorado River downstream. The inquiry should include obtaining information about

intake structures that Transition Power intends to place in the Green River to bring the water from the river to the shore and evaluating how the intake structures would impact the recreational boating on the river.

11. Effect on natural stream environment.

The State Engineer must identify and evaluate the impacts of the withdrawal of water over the lifetime of the reactor. As discussed above at 3.2, that would be for at least the next 120 years. The State Engineer must consider the impacts of the intake structures and the withdrawal of water during a drought situation. The State Engineer must consider the impacts to the biota in the river, birds and other wildlife, the deposition of sand and sediments, and other aspects of the natural stream environment.

This evaluation must also address the impacts during normal operation of the nuclear power reactor, as the result of a minor to serious accidents, and as the result of a catastrophic accident. 12. Time of use.

12.1. Section 73-3-8(2)(a) requires that the period of time for the use of the requested water cannot be "for a period of time less than that ordinarily needed to satisfy the essential and primary purpose of the application." In this instance, KCWCD has not indicated the amount of time the appropriated water would be used from the Green River for the proposed project. There is no information regarding the expected life of proposed nuclear power plant, through complete decommissioning and removal of all radioactive waste — when water will not longer be needed. A nuclear reactor requires a continual supply of cooling water for safety-related structures, systems, and components. Water is needed to maintain the reactor is a safe operating, emergency, and decommissioning environment, so any reduction in the amount of available water would have serious health and safety implications. If the available water for the power plant decreases, for any reason whatever, the plant cannot just be shut down to stop water usage. It is not like a ranch, where the rancher can choose not to plant that year because there is not enough water. Once a nuclear power plant starts operating, water for safety related operational, shutdown, and decommissioning components will be required. The water will have to come from somewhere. Unfortunately, there is no information on the amount of water required during various permitting, design and construction, operational, and shutdown scenarios and various time frames.

The State Engineer must ascertain how long the Applicant has requested the water and how long the water will be needed by Transition Power over all phases of the nuclear power generating station, using the most conservative estimate. Without such information, the State Engineer should not approve the change. The State Engineer should deny the Application if the time for the use of the requested water is less than that needed to satisfy the purposes of the appropriation.

12.2. The Water Rights Lease Agreement (Attachment A) between KCWCD and Transition Power is 40 years from the "EPC" Approval Date. According to the Lease, the EPC (engineering, procurement, and construction) is when "the performance warranty from the construction company has been accepted, in writing, by the owning and

operating entities, and the power site facilities have been scheduled for commercial operation.

If the power plant operates for 40 years, there will still be the need for water during shutdown and decommissioning. Therefore, the Water Rights Lease Agreement does not cover the full life of the facility.

Information is needed regarding all of the water needs for the power plant over time in order to justify the Lease Agreement term. If the Lease term does not allow for all the water uses for the full life of the facility, then the Application must be denied.

12.3. As discussed above at 3.4, the State Engineer must also determine the length of time the water would be appropriated, but not used, for the proposed project. The State Engineer should take into consideration the amount of time that the water will not be put to use once appropriated, due to the lengthy permitting processes; because Transition Power applies for and receives an Early Site Permit; time for contracting, engineering, procurement, and construction; or other reasons. The State Engineer needs to know when Transition Power expects the construction work to be completed and when they would apply the water to beneficial use, in order to provide those dates in any approval order, as required by Utah Code Ann. 73-3-10(5).

13. Application to the NRC, Safety Evaluation Report, and Environmental Impact Statement.

The State Engineer should not approve the Application until information that would be provided in an Early Site Permit of Combined License Application, the Safety Evaluation Report (SER), and the Environmental Impact Statement (EIS) are available.

It would be premature for the State Engineer to approve the Application until the relevant technical and environmental information has been made available and the NRC develops an SER and EIS that will thoroughly evaluate all of the relevant technical issues and environmental impacts related to an Early Site Permit or a Combined License. There are a number of impacted individuals, groups, organizations, and local, state, tribal, and federal entities that will have a chance to participate in the EIS process and explore all of the relevant impacts to public recreation, the natural stream environment, and the public welfare that no protestor or the State Engineer alone would be able to do.

14. Extension of time to show proof of beneficial use proceeding.

On September 25, 2008, KCWCD applied for an extension of time to show proof of beneficial use of the water rights that are the subject of the change application, at issue herein. Living Rivers and Uranium Watch were parties to a timely submittal of a protest and request for hearing regarding that extension request, submitted to the State Engineer on November 4, 2008.

The State Engineer should clarify the relationship between the hearing on the extension of time and any hearing on the change application. 15. Supplement to protest.

Protestors reserve the right to supplement this protest in writing or at the hearing as additional information becomes available.

16. CONCLUSION

16.1. The State Engineer must obtain all of the necessary information that would enable him to fully address all of approval criteria set forth in Utah Code Ann. §§ 73-3-8(1), 73-3-8(2), and 73-3-11.

16.2. The State Engineer must make that information available to protestors in a timely manner so that protestors will have an opportunity to review and respond to the new information that is submitted.

16.3. Based on the information that is currently available in the Application, the State Engineer must reject the Application, because the Application does not meet the requirements of Utah Code Ann. 73-3-8.

Respectfully submitted, this 26th day of May 2009,

John Weisheit
Sarah M. Fields
Program Director
Uranium Watch
P.O. Box 344
Moab, Utah 84532

Chair, Nuclear Waste Committee
Glen Canyon Group, Sierra Club
P. O. Box 622
Moab, Utah 84532

ATTACHMENTS

[Click here](#) to download letter with attachments

A. Water Rights Lease Agreement, Kane County Water Conservancy District and Transition Power Development Corporation LLC, September 20, 2007

B. Map: Green River Industrial, Emery County, Utah

C. Screen Print: Early Site Permit Applications for New Reactors, Nuclear Regulatory Commission, <http://www.nrc.gov/reactors/new-reactors/esp.html>

D. Letter of Intent: Transition Power Development LLC to Office of New Reactors, NRC, January 30, 2008

E. Radiological Emergency Information for the Agricultural Community, New York State Public Education Management Group

F. Agriculture and Nuclear Power in Florida, Florida Department of Community Affairs

CERTIFICATE OF MAILING

I hereby certify that I sent an electronic copy and mailed, First Class, Return Receipt Requested, a copy of this Protest and Request for Hearing regarding Change Application No. A35402 to:

Kent L. Jones, State Engineer
Utah Division of Water Rights
Box 146300
Salt Lake City, Utah 84114-6300
E-mail: kellyhorne@utah.gov

Dated May 26, 2008.

John Weisheit
Conservation Director
Living Rivers

Congressional Testimony 05/28/09

Problems with Colo. River water could trickle down to Tucsonans

By Tony Davis
ARIZONA DAILY STAR
Tucson, Arizona | Published: 05.28.2009
<http://www.azstarnet.com/allheadlines/294755>

[Congressional hearing documents](#)

For many years, many local officials and others with water expertise have seen the Colorado River as a regional plumbing system, providing water to thirsty cities, farms and Indian tribes.

But at a congressional subcommittee hearing Wednesday in Tucson, speakers from a host of government agencies agreed that it's time to give equal weight to water-quality issues plaguing or threatening the Colorado River, such as sewage discharges, pharmaceuticals, invasive mussels, uranium, salinity and a rocket-based jet fuel known as perchlorate.

The bottom line is that if more attention isn't paid to these problems soon, they could filter from the Colorado River down to Tucson, which lies at the end of the 330-mile Central Arizona Project canal-pipeline system, said the subcommittee chairman and the head of one of the agencies.

The speakers said more federal attention is needed for these problems. The solution is not just more money, but a big-picture approach that looks at the problems as a whole rather than separately, they said. The Lower Colorado needs a massive, regional approach like those now being applied to cleaning up or restoring other major ecosystems such as Puget Sound, the Everglades and the San Francisco Bay, speakers said.

After the hearing, Rep. Raúl Grijalva, a Tucson Democrat and a subcommittee member, said he plans to introduce some kind of comprehensive legislation to try to address these problems after two more congressional field hearings are held on them.

"Water quantity and water quality are totally linked," said one of the speakers, CAP chief David Modeer, immediately after the hearing of the House Subcommittee on Water and Power held at the Pima County Board of Supervisors hearing room Downtown.

Solving these water-quality problems is directly linked to the future economy, tourism and quality of life for the Southwest, said Rep. Grace Napolitano, a Southern California Democrat who chairs the subcommittee. "If they don't do anything about these problems, their children may be forced into some serious, hard choices in the future," Napolitano said.

These quality problems will be aggravated by climate change and megadroughts and, paradoxically, more intense rainfall and flooding, a prominent University of Arizona climate scientist told the subcommittee. In part, that's because there will be less water to dilute the pollution. And because the more intense storms and floods will wash more sediment and other polluting or potentially polluting materials from mines and other sources into the river, testified Prof. Jonathan Overpeck, co-director of UA's Institute of the Environment.

Today, threats from pollution put at risk a \$400 million farming economy of the four Colorado River Indian tribes who irrigate 100,000 acres of crops from the Lower Colorado River, testified Eldred Enas, a tribal chairman.

Overall, the river serves an estimated 24 million people in seven Western states with water and makes up 40 percent of Arizona's water supply, testified Herb Guenther, Arizona's water resources director.

Contact reporter Tony Davis at 806-7746 or verdin@azstarnet.com

DETAILS OF SOME OF THE PROBLEMS DISCUSSED AT THE HEARING

SEPTIC DISCHARGES Nitrate-laden wastes from septic plants in communities along the river such as Lake Havasu and Bullhead cities are slowly seeping underground toward the river. The communities have gone heavily into debt to build sewage plants to properly treat the wastes, but they can't afford the \$2.1 billion tab alone, Lake Havasu City Mayor Mark Nexsen told the subcommittee.

QUAGGA MUSSELS The invasive mussels, which can clog water-pipeline intake valves and disrupt a lake's delicate ecology, were discovered in Lake Havasu in early 2007. A

year later, their numbers had grown to more than 40,000 per square yard. The mussels have already reached Lake Pleasant, a CAP storage reservoir northwest of Phoenix.

URANIUM Uranium-mining claims have increased significantly across the West, including areas near Grand Canyon National Park. Grijalva and other congressmen have tried to block uranium leasing and exploration in and around the park but have been unsuccessful. In testimony, Roger Patterson, a top Metropolitan Water District of Southern California official, said that while the district doesn't want uranium mining totally stopped, "it needs to be done safely for the river's sake. If it can't be done safely, don't expand it."

PHARMACEUTICALS Concentrations of various kinds of what's known as "emerging contaminants," including antibiotics, anti-epileptics, anti-coagulants, insecticides, insect repellents and other compounds, have been found in levels in the parts-per-trillion range in Lakes Havasu and Mead. The health effects of the compounds at those levels are unknown but being researched.

PERCHLORATE Cleanup efforts at a rocket fuel plant in Henderson, Nev., that started in 1999 have dramatically reduced levels of the toxic compound entering the Colorado to the point where the concentrations entering local water systems have dropped below drinking water standards. But in January, the company now running the facility — Tronox — filed for Chapter 11 bankruptcy protection, calling into question the cleanup's future.

###

Degraded Lower Colorado River Needs Federal Help to Recover

TUCSON, Arizona, June 4, 2009 (ENS)

<http://www.ens-newswire.com/ens/jun2009/2009-06-03-095.asp>

Protection of Lower Colorado River water quality needs comprehensive legislation and adequate funding for a major effort like programs underway in the Chesapeake Bay and the Great Lakes, local officials told a hearing held by the House Natural Resources Subcommittee on Water and Power in Tucson on May 27.

The Colorado River is the major water resource in the arid southwestern United States. It is the source of drinking water for 25 million people throughout southern California, southern Nevada, Arizona, and Mexico. The river provides irrigation water for almost two million acres, fish and wildlife habitat and water-based recreation for millions of people.

Calling for a comprehensive approach to surface water protection, Lake Havasu City Mayor Mark Nexsen testified on behalf of the 56,000 Havasu residents and the 42,000 people living in Bullhead City. He also spoke as chairman of the regional Colorado River Regional Sewer Coalition, which serves area tribes, cities and towns, including Tucson.

Nexsen called for comprehensive legislation and adequate funding to address all the threats to the Colorado River with a coordinated council of relevant agencies, "similar to clean up efforts in the Chesapeake Bay and the Great Lakes Region."

"Tens of millions of dollars of federal, state, regional and local government money are being spent to protect endangered species through the Lower Colorado Multi-Species Conservation Program, yet virtually no federal money has been expended to help mitigate water quality issues," Nexsen said.

The largest water quality federal program, the Clean Water State Revolving Fund, provides low cost loans to fund water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management in place to assist communities with infrastructure.

But, Nexsen told the subcommittee, "it has been well documented that the funding for this program over the years has not been sufficient to meet our nation's clean water needs."

Threats to water quality on the Lower Colorado include a Pacific Gas & Electric compressor station site on the California side of the river at Topock that emits a plume of hexavalent chromium that is now only 60 feet from the river.

The threat of Uranium tailings from mines near Moab, Utah is of great concern, said Nexsen. The tailings pile is built in the center of an alluvial fan, which is vulnerable to possible failure during a large flood.

Pharmaceuticals in the Colorado River are a growing concern, the mayor said. Tests performed by Lake Havasu City have discovered detectable levels of pharmaceuticals in the river and in the local ground water.

The most recent threat to the Colorado River is the alien invasive quagga mussel, discovered there in early 2007. These mussels have become established in the Colorado River from Lake Mead downstream. Over 40,000 quagga mussels per square meter have been reported in Lake Havasu and Lake Mohave one year after their discovery.

Water agencies are now spending tens of millions of dollars annually to remove quagga mussels from intake pipes and other water distribution equipment, said Nexsen.

"The quagga mussel not only threatens the water supply for millions of Americans but also, along with the other aforementioned threats to the River, imperils the economic existence of cities such as Lake Havasu City and Bullhead City that depend on tourism from boaters that enjoy the River," he said.

Research indicates a relationship between the mussels' feeding habits and nutrient loading such as nitrates and phosphates from septic tanks.

Soaring sewer costs led Mayor Nexsen to tell the subcommittee, "The citizens of Lake Havasu City in a valiant effort to deal with nitrates are now, quite frankly, in an emergency situation."

With a large proportion of the population retired or on a fixed income and the average wage at \$12 per hour, the mayor said, Placing the financial burden to protect the River alone by Lake Havasu City and Bullhead City residents is unacceptable."

The river cannot be protected by local governments alone, he said, citing a March 2007 wastewater improvements report from the federal Bureau of Reclamation that documented the cost of remediation at roughly \$2.1 billion through the year 2025.

Lorri Lee, regional director for the Bureau of Reclamation Lower Colorado Region, confirmed to the subcommittee that septic systems appear to be adversely impacting groundwater quality along the Colorado River.

To meet federal and state water discharge standards, she said, communities along the river are being required to construct costly municipal wastewater systems.

The total population of the 24 communities along the Colorado River is projected to increase from 290,000 to 480,000 by 2025 according to State of Arizona projections, said Lee.

"A total of over 1,400 miles of wastewater pipelines and 26 million gallons per day of wastewater treatment capacity may be needed," she said.

Alexis Strauss, Water Division director with the U.S. EPA Region 9, told the subcommittee that under Clean Water Act Section 319, the nonpoint source program, states receive EPA funding to develop watershed-based plans and support local projects to address nonpoint source pollution.

"A Watershed Plan for the Lower Colorado River is under development by the state of Arizona Department of Environmental Quality," Strauss said. "This plan, which we expect to be drafted within the next year, will identify the causes and sources of pollution to the lower Colorado, management measures to address pollution sources and the pollutant load reductions expected as a result."

Strauss said the 2010 President's Budget requests \$2.4 billion for the Clean Water State Revolving Fund, an increase of over \$1.5 billion from 2009 levels. If passed by Congress, the 2010 budget will increase Arizona's share of Clean Water SRF monies, making more low-cost financing available to municipalities' most critical wastewater needs.

An additional \$26.4 million has come to Arizona under the American Reinvestment and Recovery Act for State Revolving Fund programs, plus another \$55.3 for the drinking water SRF program, Strauss said.

Lake Havasu City applied for \$5 million for its Wastewater Sewer Expansion project, she said, "and we expect them to receive this funding later this year, partly as a grant and partly as a low interest loan."

Regional News 05/28/09

Judge: Dam power releases invalid

By CYNDY COLE Sun Staff Reporter Thursday, May 28, 2009

A federal judge has delivered a notable legal victory to the Flagstaff-based Grand Canyon Trust and Earthjustice in a yearslong dispute over how best to manage the Colorado River below Glen Canyon Dam.

If upheld, the ruling could lead to conditions on the Colorado that more closely follow seasonal snowmelt and summer dryness -- and reduce electricity generation in seasons when it is currently most demanded. At present, releases from the dam increase and decrease, within some limits, based on how much electricity is needed by customers in the Southwest.

The agency charged with telling the Interior Department how to operate Glen Canyon Dam to promote the recovery of endangered fish species in the Colorado last year reversed its longstanding recommendations with little explanation, the judge found.

Now the U.S. Fish and Wildlife Service must explain by October how it concluded in 2008 that more than a decade of research establishing dam operations were eroding beaches and harming habitat was wrong.

Just one year earlier, the same agency had concluded that the science showed current dam operations were harmful to beaches and ecosystems downstream. It had said since the mid-1990s that operating the dam to mimic natural seasons was best for endangered fish.

Federal lawyers were unable to prove otherwise in oral arguments, the judge wrote.

"...an agency cannot entirely fail to consider an important aspect of a problem, nor can it offer an explanation for its decision that runs counter to the evidence before it," U.S. District Judge in Arizona David Campbell wrote in a ruling issued Tuesday.

The Grand Canyon Trust has argued that the politics of keeping one's job under the Bush Administration forced Fish and Wildlife personnel to reconsider their long-held scientific advice on the Colorado River last year.

Ultimately, it is up to the Interior Secretary to set operations at Glen Canyon Dam.

The Trust is calling recent management decisions a waste of more than \$100 million in taxpayer-funded research over more than a decade on the Colorado River through Grand Canyon.

"The Bureau of Reclamation has done a very good job in misleading the public about what they're doing at Glen Canyon Dam," said Nikolai Lash, of the Grand Canyon Trust. "... They have been aware of science over and over saying things need to change at Glen Canyon Dam, and they have ignored that science."

Glen Canyon Dam generated enough power in 2008 to supply more than 300,000 homes.

The changes the Trust is proposing would cost one-third of the ratepayers about a nickel per month, and two-thirds of them nothing, Lash said.

PROTECTION FOR HUMPBACK CHUB

The Grand Canyon Trust filed the lawsuit against the Bureau of Reclamation in 2007, arguing that federal agencies weren't doing all they were legally obligated to do to restore a federally-listed endangered fish, the humpback chub.

The chub is a fish originating in the Colorado River 3 million to 5 million years ago. It lives in six spots on the Colorado River, with one downstream of Glen Canyon Dam near the Little Colorado River.

The fish's population has fluctuated from an estimated 2,400 to 4,400 fish in 2001 to an estimated 7,650 last year, with multiple factors possibly contributing to the rise, including a trout removal project and warmer river temperatures.

Its populations were estimated at 10,000 to 11,000 in 1989, according to the ruling and U.S. Geological Survey science.

Disputes over how best to manage Glen Canyon Dam began with construction of the dam.

From 1963 to 1991, the dam was operated for maximum power generation, with daily fluctuations that resulted in river levels that sometimes rose and fell 13 feet in a day.

In 1996, Interior Secretary Bruce Babbitt set limits on how much releases from the dam could fluctuate in a day, and those limits are in place most of the time today.

In 1994, the U.S. Fish and Wildlife Service recommended releases from the dam change with the seasons. That would lead to a spring flood and smaller flows in summer.

While the Bureau of Reclamation did implement many other recommendations intended to improve life for the humpback chub, it did not change dam operations as prescribed.

One question, wrote Judge Campbell, is whether changing dam operations to make the river calmer in summer and wilder in winter could also make it more hospitable to non-native fish that prey on the chub.

Another is whether any solution will work, given that 84 percent of the sediment that once flowed into the Grand Canyon is now trapped behind the dam.

A Fish and Wildlife spokeswoman said the agency was reviewing the case and would respond to the judge's questions.

Cyndy Cole can be reached at 913-8607 or at ccole@azdailysun.com.

LR Press Release 05/28/09

Groups Protest Use of Water from Green River for Nuclear Power

FOR IMMEDIATE RELEASE

May 28, 2009

Contacts: Sarah Fields - 435-210-0166; sarah@uraniumwatch.org
John Weisheit - Cell: 435-260-2590; john@livingrivers.org

Moab, Utah — Living Rivers, Uranium Watch, and the Glen Canyon Group of the Sierra Club filed a joint protest and request for a hearing on the application by the Kane County Water Conservancy District (KCWCD) to provide water for a proposed nuclear power plant near Green River, Utah. The protest was submitted to the State Engineer, Division of Water Rights, on May 26. KCWCD requested a change the point of withdrawal of 29,600 acre feet (over 2.5 million gallons per day) from the Colorado River to the Green River so that Transition Power Development LLC (Transition Power) would have some of the water they need for the 2-unit nuclear reactor, called the Blue Castle Generation Project.

Transition Power proposes to site the reactor on land about three (3) miles west of the City of Green River in Emery County. The site is part of an industrial development park on land that Emery County has leased from the Utah School and Institutional Trust Lands Administration. The KCWCD leased the water to in 2007. In addition to the water from the KCWCD, Transition Power has leased 24,000 acre-feet of water from San Juan County Water Conservancy District. There is no information about the reactor design, costs, or where the electricity will be sent.

The joint protestors are concerned that the application does not provide any information responsive to the criteria that the State Engineer must consider. These include the feasibility of the project, availability of water, ability of Transition Power to finance the project, and environmental impacts of the withdrawal of the water and the nuclear facility.

"The Conservancy District and Transition Power can no longer withhold information about the proposed reactor and the viability of such a hazardous project so close to a major tributary of the Colorado River, major transportation corridors, and the center of a recreational and agricultural economy," said Sarah Fields of Uranium Watch.

"The State Engineer must evaluate how this proposed water withdrawal in a time period of severe water shortages would likely contribute harm toward preexisting water users in the State of Utah," according to John Weisheit, Living Rivers' Conservation Director.

Additional information:

[Click here](#) to view the protest letter from Living Rivers and Uranium Watch.

[Click here](#) to view all protest letters.

(<http://waterrights.utah.gov/cblapps/wrprint.exe?wrnum=89-74>)

Instructions: Click on "Select Related Information" at top left.

Choose "Scanned Documents" to bring up index.

Recent documents are at bottom of index.

###

Critics say N-plant would harm ecosystem

By Amy Joi O'Donoghue

Deseret News

Published: Wednesday, May 27, 2009 10:38 p.m. MDT

Critics of a proposal to divert nearly 30,000 acre feet of water from the Green River for use at Utah's first nuclear-power plant say it would threaten already endangered fish and rare plants.

The protest by the Center for Biological Diversity, filed with the Utah State Engineer's Office, raises concerns over the Kane County Water Conservancy District's application to change the nature of the water's use and its diversion point.

Specifically, the center questions "how the water diversion will be consistent with the need to protect river flows and habitat conditions critical for the survival of imperiled plants and animals in the vicinity of the power plant's footprint, including endangered fish," according to a news release from the group.

The Las-Vegas based organization joins other conservation and environmental groups like Living Rivers, Moab Local Green Party, Red Rock Watch and Uranium Watch, in addition to Healthy Environment Alliance (HEAL) of Utah, in protesting the water's diversion.

A total of 239 protests were filed, said state engineer Kent Jones. Of those, 195 came as part of a combined protest from HEAL Utah.

Headed by Rep. Mike Noel, R-Kanab, the district made an application to divert 29,600 acre feet of water to lease to Transition Power Development, which wants to build a two-unit nuclear-power reactor, named the Blue Castle Generation Project.

Transition's chief executive officer is former Utah Rep. Aaron Tilton. Earlier this year, Transition contacted the federal Nuclear Regulatory Commission to convey the company's intent to submit an application for an early site permit of two nuclear units by April 2010.

Transition is proposing to site the reactor three miles west of Green River city in Emery County.

Protests over the water diversion — which were due Tuesday — raise a variety of issues in general.

"There are major health and safety and environmental issues associated with the construction and operation of a nuclear-power station next to a major Union Pacific passenger and freight line, an interstate highway (I-70), the town of Green River and the Green River (a major tributary of the Colorado River)," according to Uranium Watch.

The site is part of an industrial-development park on land that Emery County has leased from the Utah School and Institutional Trust Lands Administration.

Earlier this year, an escrow agreement was inked to put in motion the development of a uranium mill at the site. There will likely be a formal hearing this fall, in which parties on both sides of the issue can speak publicly.

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###

Proposed water transfer for Green River nuclear plan draws protests

by Craig Bigler
contributing writer
06.11.09 - 01:04 pm

A number of state, federal and local agencies and environmental organizations and individuals will have a seat at the table when the State Engineer conducts meetings on Kane County's application to transfer 29,600 acre feet of water for use by a nuclear power plant near Green River. But the Grand County Council will not, because council members chose last month not to submit a protest letter.

The Center for Biological Diversity, the Uintah County Water District, U.S. Fish and Wildlife Service, the Bureau of Reclamation, several farmers and outfitters, Living Rivers, the Green Party, Ruby Ranch, and several dozens of others, including many individuals have formally submitted letters protesting the water transfer.

Directed by state representative Mike Noel, the Kane County Water District has applied to transfer water rights originally slated for the (now defunct) Kaiparowits power plant in the 1960s. According to Grand County Council member Pat Holyoak, that water right must be transferred to a use, or it will be lost.

Heal Utah submitted 76 pages of postcards the group solicited, along with a detailed analysis of the application's shortcomings.

"I think if we're going to act as a board for the environmental group, this council is strongly in the wrong position," Grand County Council member Gene Ciarus said when the council considered the matter. Ciarus opposed submitting the protest letter because, he said, it is not appropriate for the council to get involved with the economic interests of another county. He also said water shareowners have the right to sell their shares.

"By protesting we get a place at the table," Scott Ruppe, director of the Uintah County Water District said. "It looks to me like Kane County is selling [the water right] for profit. Our biggest concern is we want to know how this will affect our water rights." Ruppe said his agency is also worried about reduced stream flows and negative effects on fish.

The Fish and Wildlife Service's protest raises the issue of three sensitive fish species – roundtail chub, bluehead sucker, and flannelmouth sucker – currently being protected under a joint plan including several federal and state agencies.

The depletion of the Green River would degrade river habitat and could result in the three species being listed under the Endangered Species Act, agency argued. Such a listing could restrict future development, including agriculture, along the river, according to Jana Mohrman of FWS's Mountain-Prairie Region office.

"We felt we were doing a public service by pointing out the possible impacts in the future should the three species be listed," Mohrman said.

The Bureau of Reclamation, in its protest, noted that Central Utah Project water rights are junior to the rights in question. But current water users "who depend on and have committed billions of dollars to develop" the CUP could lose out if they lose their water to the nuclear plant. "We ask that the next extension of time [for the application] reduce the priority of this water right to make it junior to the CUP water rights," Bureau Area Director Bruce Barrett wrote in his protest.

The nuclear power plant proposed by former state representative Aaron Tilton, may or may not actually happen in Green River's industrial park. Or the water could be used for something else.

Living Rivers objects to such speculation because it violates the state engineer's regulations against speculative transfers of water rights.

Nearly all protesters raised health and safety issues for nearby communities and major recreation areas.

Attempts to assess attitudes about a potential nuclear plant from the Moab Area Chamber of Commerce were unsuccessful. President Phil Mueller discussed it with members and the board and found such a diversity of opinion that "the board hesitates to take a position," he said.

Calls to Noel, Green River Mayor Pat Brady, and Kane County Commissioner Mark Habbeshaw were not returned.

The state engineer's office has confirmed that a public hearing will be held, possibly in August or September.

The protests, or at least the first pages of them, can be viewed at the state engineer website at waterrights.utah.gov. Click on "water rights", then "queries." Type in water right number 89-74, then under "select related information" click on "scanned documents."

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Regional News 06/01/09

Lake Mead level trigger for Las Vegas pipeline project

By HENRY BREAN
LAS VEGAS REVIEW-JOURNAL

Opponents of a proposed pipeline to tap groundwater across eastern Nevada now have one more way to fight the project: Pray for the drought to end on the Colorado River.

For the first time, the Southern Nevada Water Authority has established a direct link between its multibillion-dollar pipeline project and the shrinking water level at Lake Mead.

Actually it's more than a link; it's a trigger.

If Lake Mead's elevation falls another 23 feet, the water authority board will be asked to give the official go-ahead to construct the pipeline.

The lake trigger is the newest addition to the authority's Water Resource Plan, which plots how the valley's wholesale water supplier expects to keep local taps running amid unprecedented drought on the Colorado.

Board members have already approved the pipeline concept and signed off on ongoing efforts to secure water rights and environmental permits, but they have never actually voted to build the project.

That decision will come if, or perhaps when, the surface of Lake Mead sinks to elevation 1,075, a low-water mark not seen since 1937 when the reservoir was being filled for the first time.

Water authority General Manager Pat Mulroy doesn't know when the trigger point might be reached.

Current projections by the U.S. Bureau of Reclamation call for Lake Mead to remain above 1,075 for the next two years at least. The closest it is expected to come is in July, when the reservoir is projected to slip below elevation 1,092 for the first time since March 1965.

The problem, Mulroy said, is that bureau projections are based on average flow, and the Colorado has been anything but average over the past 10 years.

Between 1999 and 2008, the river has seen about 66 percent of its normal inflow, most of which comes from melting snow in the Rocky Mountains. Over that same period, lakes Mead and Powell, the two largest man-made reservoirs in the United States, lost about half their total volume.

Elevation 1,075 could arrive quickly if the drought deepens, Mulroy warned. "It could be next year."

The trigger point was set at 1,075 to give the agency enough time to reach its closest groundwater holdings in rural Nevada, Mulroy said.

If the lake level falls to 1,050 feet above sea level, the authority will be forced to shut down one of the two intakes it uses to draw about 90 percent of the valley's drinking water from the reservoir.

The surface of Lake Mead now stands about 1,098 feet above sea level. The last time it was that low was April 1965, when much of the Colorado River's flow was being withheld upstream to fill Lake Powell for the first time.

Mulroy said it will take about three years to build a pipeline from Las Vegas to Delamar and Dry Lake valleys, the first two Lincoln County basins from which groundwater will be drawn.

From there, the pipeline is expected to push into Cave Valley in Lincoln County and Spring Valley in White Pine County.

The authority also has applied for permits in Snake Valley that would allow it to pump more than 16 billion gallons of groundwater a year, enough to serve about 100,000 average Las Vegas homes. A state hearing on those applications is tentatively set for September 2011.

The groundwater project is expected to take 10 to 15 years to build, Mulroy said.

When it is done, the network of pipes, pumps and reservoirs is expected to stretch about 300 miles north and cost between \$2 billion and \$3.5 billion, according to authority cost estimates now several years old.

Opponents of the project expect the scheme to cost billions of dollars more and deliver less water than the authority expects. Some fear that large-scale groundwater pumping in the arid valleys of eastern Nevada would threaten wildlife and the livelihoods of ranchers and farmers.

The authority's 2009 Water Resource Plan, which the board adopted on May 21, calls for Las Vegas to eventually tap 134,000 acre-feet of groundwater a year from eastern Nevada.

The plan calls for that water -- enough for almost 270,000 homes -- to be put to use by 2020, though it "may be needed sooner if drought conditions persist or intensify," the document states.

Critics argue that the drought is used as a smokescreen for the pipeline's real purpose: to fuel unfettered development in Southern Nevada.

Bob Fulkerson is executive director of the Progressive Leadership Alliance of Nevada, an advocacy group that has come out against the groundwater development project. He said the new trigger point seems "arbitrary" and a little suspicious to him.

"It could be just a Trojan Horse to allow more unrestrained growth in Las Vegas," Fulkerson said.

"If there's going to be a trigger, why not a trigger for curbing irresponsible water waste and growth?"

Of course, authority board members could always vote not to build the pipeline when the time comes.

Mulroy said the board's decision will come down to a question of risk, as in can the community risk losing access to some of its Lake Mead supply before the pipeline goes on line.

Elevation 1,075 is significant for another reason. It is the legal threshold for a shortage on the Colorado River, a federal designation that would force Nevada and Arizona to reduce the amount of water they pull from the river.

Nevada's share of such a shortage would be 13,000 acre-feet a year, roughly the amount used by 26,000 average households. Arizona would be shorted more than 10 times that amount.

Water authority officials long have said the pipeline is not about sustaining growth, but protecting the community from extended drought on the Colorado River.

In that respect, the new trigger point seems like good news for even the pipeline's staunchest opponents. It means the project might never be built so long as the river rebounds and Lake Mead remains above 1,075.

Mulroy isn't optimistic about that. As chief of the agency charged with keeping water flowing to Las Vegas, she gets paid to plan with pessimism.

"If we can avoid building it, we won't build it," Mulroy said of the pipeline. "But we haven't had a lot of luck on the Colorado River lately."

Contact reporter Henry Brean at hbrean@reviewjournal.com or 702-383-0350.

Regional News 07/21/09

UNLV prof to Congress: Mining contaminates Colorado River

Las Vegas Sun

By Mary Manning

Tuesday, July 21, 2009 | 4:13 p.m.

<http://www.lasvegassun.com/news/2009/jul/21/unlv-professor-congress-uranium-mining-contaminate/>

Restarting uranium mining near the Grand Canyon poses a contamination risk to the Colorado River, serving more than 25 million people in western states, a UNLV hydrology professor told a congressional committee today.

David Kreamer, a UNLV professor, said that assuming renewed uranium mining would have little or no effect on the river and surrounding springs is "unreasonable" and cannot be supported by past investigations and research.

Kreamer and his students have been conducting studies on springs in the Grand Canyon for 25 years and he told the House Natural Resources Committee's parks subcommittee that past mining activities have polluted a spring that feeds the Colorado River and that pollution is expected to continue if more mining occurs.

The committee is hearing a bill by Rep. Raul Grijalva, D-Ariz., that would permanently bar new claims filed on 1.1 million acres of federal lands north and south of the canyon. Renewed interest in building nuclear power plants as alternative energy sources has spurred a surge in uranium mining claims in the area, Grijalva said.

As many as 10,000 mining claims exist on neighboring federal lands for all hard-rock exploration and some 1,100 uranium mining claims exist within five miles of the canyon.

Neither the proposed bill nor Interior Secretary Ken Salazar's announcement Monday that he is barring new claims on public lands for two years while a study is conducted would stop mining on existing claims.

Kreamer said his research found uranium levels three times above the Environmental Protection Agency's recommended limit on water supplies in Horn Creek, a canyon creek that runs into the Colorado. He said that the uranium polluted the creek's water from mining that stopped more than 10 years ago.

The potential for uranium reaching the Colorado River poses a risk for water consumers in California, Nevada and Arizona, said Kay Brothers, deputy general manager of the Southern Nevada Water Authority. Las Vegas draws 90 percent of its water from the Colorado River, she said.

Two scientists said modern mining has improved environmental protection and new mining development shouldn't stop because of old practices.

Most of the uranium claims have been staked in the Arizona Strip, an area just north of the Grand Canyon National Park notable for its superior uranium ore.

Uranium mining stopped 20 years ago as the price of uranium for nuclear energy, weapons and medicine went into freefall. The nuclear industry believes mining should be restarted as the price of uranium has climbed to about \$55 a pound.

The Associated Press contributed to this report.

Regional News 07/22/09

Western Reservoirs Could Be Dry By 2050 (one-in-two chance)

Note (as of April, 2026): hydropower at Glen Canyon Dam will cease in December of 2026.

By LiveScience Staff

<http://www.livescience.com/environment/090720-colorado-river-dryup.html>

There's a one-in-two chance that the water reservoirs of the Colorado River will dry up by 2050 if water management practices remain unchanged in our warming world, a new study finds.

Roughly 30 million people — including many in Arizona and Southern California — depend on the Colorado River for drinking and irrigation water.

The Colorado River system is enduring its 10th year of drought, with the reservoir system currently at 59 percent of capacity, about the same as this time last year.

Previous studies have warned of the potential for water shortages with the drier conditions in the West brought about by climate change. The region's growing population has also put pressure on the water supplies of the desert West.

The researchers, including Balaji Rajagopalan of the University of Colorado in Boulder, examined the effects of a range of reductions to the water flowing through the Colorado River and held in local reservoirs, as well as how different water management strategies might affect those water levels.

Rajagopalan and his colleagues found that even under the harshest drying caused by climate change, the large storage capacity of reservoirs on the Colorado might help sustain water supply for a few decades, but only if new management practices are enacted.

"This study, along with others that predict future flow reductions in the Colorado River Basin, suggests that water managers should begin to re-think current water management practices during the next few years, before the more serious effects of climate change appear," Rajagopalan said.

Specifically, the researchers found that through 2026, the risk of fully depleting reservoir storage in any given year remains below 10 percent under any scenario of climate fluctuation or management alternative. During this period, the reservoir storage could even recover from its current low level, according to the researchers.

Part of this is due to the enormous capacity of the reservoirs: The river hosts more than a dozen dams along its 1,450-mile journey from Colorado's Rocky Mountains to the Gulf of California. Total storage capacity of reservoirs on the Colorado exceeds 60 million acre feet, almost four times the average annual flow on the river; and the two largest reservoirs — Lake Mead and Lake Powell — can store up to 50 million acre feet of water.

But if climate change results in a 10 percent reduction in the Colorado River's average stream flow as some recent studies predict, the chances of fully depleting reservoir storage will exceed 25 percent by 2057, the study found. If climate change results in a 20 percent flow reduction, the chances of fully depleting reservoir storage will exceed one in two by 2057, Rajagopalan said.

"On average, drying caused by climate change would increase the risk of fully depleting reservoir storage by nearly ten times more than the risk we expect from population pressures alone," Rajagopalan said. "By mid-century this risk translates into a 50 percent chance in any given year of empty reservoirs, an enormous risk and huge water management challenge."

Implementing more aggressive management practices — in which downstream releases are reduced during periods of reservoir shortages — could reduce the risk of depleting all reservoir storage during this period, the study suggests.

The magnitude of the risk will ultimately depend on the extent of climate drying and on the types of water management and conservation strategies established.

"Water conservation and relatively small pre-planned delivery shortages tied to declining reservoir levels can play a big part in reducing our risk," said study co-author Ken Nowak, a graduate student at CU-Boulder.

"The important thing is not to get lulled into a sense of safety or security with the near-term resiliency of the Colorado River basin water supply. If we do, we're in for a rude awakening," he added.

The study, which will be detailed in an upcoming issue of the journal Water Resources Research, was conducted with support from the Western Water Assessment, a joint venture of CU-Boulder and the National Oceanic and Atmospheric Administration (NOAA), as well as CADSWES and the Bureau of Reclamation.

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[Paper by Rajagopalan et al](#)

LR in the News 07/22/09

Appeals Court Rejects Suit Against Motorized Rafts in Grand Canyon

By NOELLE STRAUB of Greenwire

<http://www.nytimes.com/gwire/2009/07/22/22greenwire-appeals-court-rejects-suit-against-motorized-r-20848.html>

A federal appeals court yesterday upheld a decision rejecting attempts by environmental groups to stop rafters from using motors and helicopters in Grand Canyon National Park.

Four conservation groups had argued that the use of motorized rafts on the Colorado River and helicopters to make passenger exchanges impairs the wilderness character of the park and that the National Park Service violated its management policies and federal law by allowing their continued use.

In 2007, Judge David Campbell of the U.S. District Court for the District of Arizona concluded that the Park Service can allow motorized rafts under its own rules and followed the law when revising its Colorado River Management Plan in 2006 (Greenwire, Nov. 29, 2007).

The groups appealed, and the 9th U.S. Circuit Court of Appeals yesterday agreed with the decision that the Park Service met its requirements under various laws when developing the plan. Both courts rejected all the claims of River Runners for Wilderness, Rock the Earth, Wilderness Watch and Living Rivers.

The groups had sued the Park Service; a group of commercial operators, the Grand Canyon River Outfitters Association; and a coalition of private rafters and kayakers, the Grand Canyon Private Boaters Association.

Grand Canyon Superintendent Steve Martin welcomed the news, saying the plan is the result of many years of work "and required making many difficult decisions after

considering extensive analysis of impacts and widely divergent points of view on many issues." He added, "We look forward to working with persons of all interests, including wilderness advocates, as we continue to implement the plan."

Jo Johnson, co-director of River Runners for Wilderness, said her group is "extremely disappointed" with the decision. It will continue its efforts in other ways, she said, such as pursuing a congressional wilderness designation for the park or a broader grass-roots effort the next time the plan is revised.

"We certainly hoped for better because the place deserved it," Johnson said. "It's not a negation of what we were trying to accomplish in the end, but it was a rejection of that particular channel for doing so."

Earlier this month, the Park Service proposed to extend the rules for boating on the Colorado River through portions of the Grand Canyon to cover the river's entire length in the park (Greenwire, July 10).

Environmental groups have long been critical of the management plan for the river, claiming that the park's continued authorization of motorized watercraft damages wilderness characteristics of the waterway. The park recommended the river for wilderness designation in 1980, but the proposal has never been carried out by Congress.

[Click here](#) to read the 9th Circuit's decision.

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For more news on energy and the environment, visit www.greenwire.com.

LR Letter 07/27/09

Scoping for Million Conservation Resource Group's Regional Watershed Supply Project

July 27, 2009
Ms. Rena Brand
U.S. Army Corps of Engineers
Denver Regulatory Office
9307 S. Wadsworth Blvd.
Littleton, CO 80128-6901
(303) 979-4120
mcrgeis@usace.army.mil

Dear Ms. Brand:

Thank you for this opportunity to provide scoping comments to the Army Corps of Engineers (Corps) for developing an Environmental Impact Statement (EIS) for the

effects of the proposed Regional Watershed Supply Project (RWSP) sponsored by the Million Conservation Resource Group. Living Rivers is a non-profit organization based in Moab, Utah and dedicated to restoring the Colorado River ecosystem.

The Big Picture

For the past few years Colorado River water users have come to the realization that current consumption levels may not be sustainable. Colorado River flows over the past decade have been about 25% below normal, forcing the establishment of the first “Shortage Criteria” for the operations of Lake Powell and Lake Mead reservoirs. This new environment of scarcity was predicted as far back as the debates surrounding the authorization of the Colorado River Storage Project Act, and arguments presented in *Arizona v. California*.

Moreover, scientists continue to stress that drying reservoirs are likely to be a persistent problem in the coming decades due to climate change. Proposed depletions, such as the RSWP, will surely aggravate this condition. The EIS team should consult with the National Oceanic and Atmospheric Administration, Colorado University at Boulder, in developing an up-to-date analysis of the Upper Basin’s ability to utilize the proposed project under a full range of climate change scenarios.

At present, it is reasonable to assume that a 10% reduction in the Colorado River’s annual streamflow has already occurred, and that forecasting should be based on a mean annual flow of 13.5 maf. It’s quite possible that runoff could fall to 12.0 maf or less by mid-century. Such a reduction would certainly complicate deliveries for holders of new water rights in the Upper Basin.

Such hydrologic modeling should then be applied to complete a programmatic, basin-wide EIS to establish water budget for the Colorado River, perfect the water rights of federal reserve lands, and to develop and initiate programs to improve the ecological health of the Colorado River system as a whole. Neither the RSWP nor any other water supply project should be examined until some of the larger issues affecting the management of the Colorado River system have been resolved first.

Water Quality and Quantity

One of the provisions in the Colorado Compact of 1922 is that the water delivered to the lower basin not be impaired, which indicates that the commissioners considered water quality is just as important as water quantity. Development of water diversions in the upper basin is partly why Congress authorized the Salinity Control Act of 1974. Other authorizations by Congress of concern include the Clean Water Act of 1972 and the Endangered Species Act of 1973.

Extracting these flows from the basin will increase salinity for the lower basin, and deplete instream flows for the Green River above Lake Powell, and the delta ecosystem in Mexico. The Corps must determine how this depletion will affect critical habitat of endangered species, and assess the potential for salinity damage to downstream agriculture and urban water infrastructure.

Such an analysis must include increases in heavy metals, industrial toxins and waste from agricultural fields, oil and gas drilling, and mining (with particular emphasis in the renewed uranium mining in the upper basin). The Corps should therefore consult with the US Fish and Wildlife Service, the Salinity Control Forum, the Bureau of Land Management, and the Environmental Protection Agency.

Water quality impacts to Lakes Powell and Mead will also likely result. The dramatic remobilization of stored sediment in these reservoirs has already been observed in the present decade. These perched sediment deposits include toxins, heavy metals, salt, hydrogen sulfide and create a situation of lower dissolved oxygen in the water column. It would be appropriate to investigate these impacts and consult with the US Geological Survey and with the Technical Service Center of the Bureau of Reclamation at Denver.

Contributions to Global Warming

The gas-fired electric generating stations proposed for this project to pump water over the continental divide, and other divides of high elevation, will further aggravate the problems of a warming atmosphere on the water supplies of the globe. This cumulative impact must also be analyzed in this EIS for its contribution to diminishing water supplies over time.

Conclusion

It is our hope The Corps will use this opportunity to initiate a programmatic basin-wide EIS and not perform yet another piece-meal EIS that adds another layer of vulnerability to an already over-stretched water delivery system. The Colorado River system, as guided by the Colorado River Compact, is on the brink of collapse, as are the growing number of river reaches now designated as critical habitat. It's time that the federal government exert the leadership necessary to assure the sustainable management of the Colorado River in the 21st century by developing a basin-wide strategy that puts conservation first and resists all efforts to extract more water from this over-taxed river system.

Sincerely,
John Weisheit
Living Rivers
Conservation Director
PO Box 466
Moab, UT 84532
435-259-1063

Regional News 08/08/09

WATER TALKS: State might partner with Mexico

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Shared investment in desalination plants just one proposal being discussed

By HENRY BREAN

LAS VEGAS REVIEW-JOURNAL

If Mexico begins harvesting drinking water from the sea some day, Nevada also might get a taste.

Talks are progressing among officials from both sides of the border over new joint efforts to squeeze more water out of the arid region.

One idea being discussed is U.S. investment in Mexican desalination plants along the Pacific Ocean and Gulf of California.

The jointly funded plants would supply drinking water to growing coastal communities south of the border and thirsty U.S. cities, including Las Vegas.

Mexico might be the new frontier for the seven Western states that share the drought-stricken Colorado River, said Pat Mulroy, general manager of the Southern Nevada Water Authority.

Early this week, Mulroy traveled to San Diego for two days of talks with state and federal officials from both countries.

She said "jointly funded desalt projects in Mexico" are only one element of the discussions. Nevada might find additional opportunities to partner with Mexico on conservation initiatives, such as lining leaky irrigation canals south of the border to save water diverted from the Colorado.

Mexican officials also are interested in cooperating to protect the delta wetlands where the diminished river trickles into the Gulf of California.

"This administration has a huge environmental agenda," Mulroy said, referring not to the Obama White House but to the government of Mexican President Felipe Calderon.

Desalination holds the most promise for Nevada.

For example, if Mexican officials built a desalination plant for the growing city of Rosarito, south of Tijuana, the Southern Nevada Water Authority could buy a piece of that plant in exchange for a portion of Mexico's allocation of Colorado River water, Mulroy said.

Water wholesalers in Phoenix and Los Angeles could strike similar deals, she said.

The major problem with the arrangement, however, is it works only if the Colorado River has enough water to allow an exchange.

"If there's nothing in the river, there's nothing to swap," Mulroy said.

The cross-border water talks were convened in March 2008 by the International Boundary and Water Commission, a bilateral panel that administers the boundary and water treaties between the two nations.

Representatives have been meeting every other month or so to discuss the development of new water resources, the conservation of existing resources, and related operational and environmental issues.

The discussions were dealt a blow in September when the boundary and water commission's top two men, U.S. commissioner Carlos Marin and Mexican commissioner Arturo Herrera, were killed in a plane crash.

This week's meeting was the second for Mulroy, who joined the talks for the first time earlier this year.

She said the meeting held Tuesday and Wednesday in San Diego included officials from the U.S. departments of State and Interior, their Mexican counterparts, and representatives from the seven western states that share the Colorado River.

The boundary and water commission and the Mexican states of Sonora and Baja also were represented, she said.

Under a 1944 treaty, Mexico receives 1.5 million acre-feet of water a year from the Colorado River. That's five times more than Nevada's share, but only about one third of what California gets and about half of what Arizona receives.

There is no set schedule or deadline for the talks, but everyone involved is hoping for meaningful progress "sooner rather than later," said Sally Spener, spokeswoman for the U.S. section of the boundary and water commission.

Ongoing drought on the Colorado is driving the talks.

"We're all assuming the worst. There's a real sense of urgency in the room," Mulroy said.

But there are multiple treaties and a tensely managed international border in play as well, so Mulroy said no one should expect results too quickly.

"It's going to take an enormous amount of work," she said. "We're still a ways away."

Contact reporter Henry Brean at hbrean@reviewjournal.com or 702-383-0350. 8/8/09

World News 08/23/09

Our Water Supply, Down the Drain

Washington Post Op-Ed [Linked here](#)

By Robert Glennon

Sunday, August 23, 2009

TUCSON

In the United States, we constantly fret about running out of oil. But we should be paying more attention to another limited natural resource: water. A water crisis is threatening many parts of the country -- not just the arid West.

In 2008, metro Atlanta (home to nearly 5 million people) came within 90 days of seeing its principal water supply, Lake Lanier, dry up. Rainstorms eased the drought, but last month a federal judge ruled that Georgia may no longer use the lake as a municipal supply. The state is now scrambling to overturn that ruling; but Alabama and Florida will oppose Georgia's efforts.

In Florida, excessive groundwater pumping has dried up scores of lakes. In South Carolina, a paper company recently furloughed hundreds of workers because low river flows prevented the company from discharging its wastewater. That state's battle with North Carolina over the Catawba River has reached the U.S. Supreme Court. Water has become so contentious nationwide that more than 30 states are fighting with their neighbors over water.

Lake Superior, the largest of the Great Lakes, is too shallow to float fully loaded freighters, dramatically increasing shipping costs. North of Boston, the Ipswich River has gone dry in five of the past eight years. In 2007, the hamlet of Orme, Tenn., ran out of water entirely, forcing it to truck in supplies from Alabama.

Droughts make matters worse, but the real problem isn't shrinking water levels. It's population growth. Since California's last major drought ended in 1992, the state's population has surged by a staggering 7 million people. Some 100,000 people move to the Atlanta area every year. Over the next four decades, the country will add 120 million people, the equivalent of one person every 11 seconds.

More people will put a huge strain on our water resources, but another problem comes in something that sounds relatively benign: renewable energy, at least in some forms, such as biofuels. Refining one gallon of ethanol requires four gallons of water. This turns out to be a drop in the bucket compared with how much water it takes to grow enough corn to refine one gallon of ethanol: as much as 2,500 gallons.

In the United States, we've traditionally engineered our way out of water shortages by diverting more from rivers, building dams or drilling groundwater wells. But many rivers, including the Colorado and the Rio Grande, already dry up each year. The dam-building era from the 1930s to the 1960s tamed so many rivers that only 60 in the country

remain free-flowing. Meanwhile, we're pumping so much water from wells that the levels in aquifers are plummeting. We're running out of technological fixes.

Some dreamers gaze upon distant sources of water and imagine that the problem is solved. Plans to divert water from rivers in British Columbia or tow icebergs from Alaska periodically arise. An entrepreneur in Colorado, Aaron Million, recently proposed a \$4 billion, 400-mile pipeline to transport water from the Flaming Gorge Reservoir, located on the Green River in Wyoming and Utah, to Denver and Colorado Springs. But the dreamers tend not to address the immense costs, significant environmental objections or regulatory nightmares associated with such grandiose proposals.

More viable solutions include desalination of ocean water, reuse of municipal waste and aggressive conservation strategies. But none of these is a cure-all. Desalination is expensive, burns energy and generates a thorny waste problem. Nor is reclaiming water -- that is, reusing water from the sewage system -- a silver-bullet answer to the crisis. Aside from the major "yuck" factor associated with the idea of potable toilet water, it's also quite expensive, requiring a set of pipes that is completely separate from the drinking-water system.

Conservation does work. In places such as San Antonio, Albuquerque, Tucson and Long Beach, Calif., aggressive conservation programs have reduced consumption dramatically. But it's not enough.

We need a new water policy in the United States. Americans do not pay the real cost of the water that we use. In fact, we don't pay for water at all. The check that citizens write to their municipal water department or private water company covers only the cost of service, plus a small profit for the private company. There is no charge for the water itself.

Last summer, as the price of gas inched up over \$4 a gallon, Toyota dealers couldn't keep fuel-efficient Priuses in stock. We should apply that pricing lesson if we want to conserve water, using increasing block rates to discourage profligate water use. Tucson does that and adds a surcharge for excessive use in the summer, when water mostly goes to fill swimming pools and irrigate landscaping.

The idea of charging for water offends many people who think that would be like charging for air. Is it immoral to extract fees for an essential resource? Precisely because water is a public -- and exhaustible -- resource, the government has an obligation to manage it wisely.

Think of our water supply as a giant milkshake, and think of each demand for water as a straw in the glass. Most states permit a limitless number of straws -- and that has to change.

The West, one of the thirstiest parts of the country, is developing a system that should lead the way: the use of market forces to reallocate water. In eastern Oregon, along the Middle Fork of the John Day River, the Oregon Water Trust persuaded third-generation ranchers Pat and Hedy Voigt to turn off their irrigation system each year from July 20

until the end of the growing season. The 6.5 million gallons per day that would have been diverted to grow alfalfa now augment river flows and improve the habitat of endangered salmon and steelhead trout. The \$700,000 paid to the Voigts allowed them to make substantial on-farm improvements.

Taking their straw out of the glass is one step toward keeping us from getting parched.

Robert Glennon is a professor of law at the University of Arizona and the author of "Unquenchable: America's Water Crisis and What to Do About It."

World News 08/24/09

Once a marvel, Soviet-era dam becomes emblem of Russia woes

Times of Malta [Linked here](#)

By Alissa de Carbonnel, AFP

It was a Soviet engineering marvel, a concrete monolith soaring above the canyon, harnessing the might of the Yenisei River to generate power for a swath of southern Siberia.

Today, the dam forming the backbone of the Sayano-Shushenskaya hydroelectric plant is an equally potent symbol of decline, a vital energy source transformed into a watery graveyard and painful reminder of Russia's infrastructure woes.

"We never imagined something like this could happen," said Nina Moskvitinka, 62, a resident of the town of Cheryomushky where many of the station's many hundreds of employees reside.

She recalled the town's pride when construction began in the 1960s on the plant, Russia's largest and among the most powerful on earth with capacity of 6.4 million kilowatts an hour, three times that of the fabled US Hoover Dam.

"It is frightening, of course. But we have to bury our fear," Ms Moskvitinka said. "What would we do without the plant? It is the heart of the region."

That heart however failed spectacularly when a technical mishap during repairs triggered a surge of water pressure that ruptured a generator, destroyed retaining walls and sent water flooding into the turbine hall. A large portion of that hall, at the base of the dam, is now a yawning cacophony of twisted metal, ruptured pipes and fractured slabs of concrete poured when the Soviet Union was at the zenith of its technical prowess. And much of it is under as much as 20 metres of water, where the bodies of 56 plant workers still missing after the accident may be located.

Nineteen people have been confirmed dead in the accident.

"The weight of the water was so heavy and so intense that in mere minutes it surged up 20 metres," said Andrei Mitrofanov, the plant's head engineer who is now helping direct search and rescue efforts.

"It was such a powerful blow," he said, pointing upwards to where there was once a ceiling above the station's turbine room.

"I cannot describe it anymore. I don't want to think about it."

His words are almost inaudible above the screech of electric saws slicing through heaps of metal, part of the effort by 2,000 helmeted search and rescue workers to locate survivors, salvage corpses and clean up the surreal mess.

Prime Minister Vladimir Putin acknowledged that the catastrophe at the Sayano-Shushenskaya hydroelectric plant represented a much more extensive problem with the infrastructure Russia inherited from the Soviet Union. "There is a need to conduct serious inspections of all strategic and vitally important objects of infrastructure," Mr Putin said at a government meeting in Moscow last week.

"The recent tragic events at the Sayano-Shushenskaya hydroelectric plant showed with all clarity how much more we should do to increase reliability of technical constructions on the whole."

But as rescuers continue their work at the stricken plant, water continues to flow unchecked through the wrecked and now silent turbines and officials say it will be several years before the facility can be fully repaired.

Three rescue boats ply slowly through the lake formed at the foot of the 245-metre dam, fielding teams of divers who have been searching round the clock for survivors in the near-freezing water.

"They had no safety plan," said Natalya, one of around 1,500 local residents who turned up in a Cheryomushky public square for the funeral of six workers killed in the disaster.

"People did not know where to run. It is a terrible situation and we will not forget it soon."

As investigators begin to probe the technical reasons for the accident, witnesses and survivors recount their own experiences.

One man says he was at the plant the moment the accident occurred and regained consciousness only to find himself washed up along the riverbank several kilometers downstream from the dam.

Another says he saw an "elephant-sized" rotor weighing several tonnes burst through the thick steel encasing of the wrecked turbine and fly into the air, followed by a wall of water that came crashing down into the chamber. Another local woman present at the funeral, Lyuba Odeyeva, said her son Igor, an employee at the station, was on duty when the accident occurred but declined to attend the ceremony in order to help with the search effort.

"He swam out with three others," Ms Odeyeva explained. "They were in bad shape after the cold water. But he only took the time to come home and have a shower before going back to work to assist in the search," she said.

Soviet-era banners still standing along the road to the Sayano-Shushenskaya plant boast with communist-period triumphalism of what was then the facility's state-of-the-art technology and extraordinary power-generating capacity.

Top officials on the scene this week however, notably Emergency Situations Minister Sergei Shoigu, are only able to offer reassurances that the once-great power station will eventually be restored to its former glory. They have not however, explained to the satisfaction of inhabitants of the region served by the plant, how the energy shortfall will be made up in the meantime without a dramatic increase in electricity prices.

World News 08/24/09

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Regional News 09/14/09

Eyes Turn to Mexico as Drought Drags On

New York Times

By RANDAL C. ARCHIBOLD

[Linked here](#)

YUMA, Ariz. — The Southwest drought has reached the point where even drain water is coveted.

Beginning nearly 40 years ago, the briny runoff from the "salad bowl" of southern Arizona, some of the most productive farmland in the nation, has been channeled into an arid plain of the Sonoran desert in Mexico.

It is an engineered solution to the vexing problem of keeping the nearby Colorado River free of agricultural wastewater too heavy in salt compounds for drinking water and other uses. An accidental result south of the border has been a thriving man-made wetland, the largest in the river's delta, a key stopover for migratory birds and home to a bounty of endangered and threatened species.

But now the protracted drought in the Southwest has led water managers to rethink the possibilities for the wastewater, placing the preservation of the wetland, the Ciénega de Santa Clara, at the center of a delicate balancing act between the growing thirst of California, Nevada and Arizona and the delta's ecology.

The biggest challenge involves a plan to take some of the wastewater, purify it at a desalination plant and direct it to other uses under a treaty that proportions the Colorado River among the Western states and Mexico.

The desalination plant, here in Yuma, about 30 miles north of the Ciénega, is a \$256 million federal facility that although completed 17 years ago, has never run beyond two brief trial periods. It has been long maligned as among the federal government's biggest white elephants, a plant essentially mothballed from the start by budget and technical difficulties and the vagaries of the Colorado River supply.

But so pressed is the region for water that the plant is getting another look. The water the plant could produce — about 100,000 acre feet per year, enough to supply the needs of a half-million people — would allow Western states to preserve that quantity upriver for their use rather than send it to Mexico, as is done now to fulfill treaty requirements.

Like a family tired of fighting at reunions, the effort to revive the plant has brought a concerted effort by the United States, Mexico and some environmentalists on both sides of the border — normally acrimonious over big water decisions — to get along.

A pact among the governments, environmental groups and water agencies calls for a test run of the plant at one-third of its capacity while substituting the lost water flows to the Ciénega through well water and other means.

"This is huge," said Jennifer Pitt of Environmental Defense, a group helping to negotiate the agreement and not often complimentary toward big water interests. "This is the first time anything like this has ever happened."

But other environmental groups are wary, even quietly exploring the possibility of bringing the test to a halt. The government is expected to make a final decision on the test in the coming weeks, with a start date projected early next year.

Critics voice skepticism that the water agencies would make long-term commitments to protect the Ciénega and bristle at the fact that the United States has completed an environmental review of the desalting project without a detailed study of the environmental consequences on the Ciénega.

The United States, through the Bureau of Reclamation, which operates the plant and oversees the distribution of Colorado River water in the West, maintains that there is no legal obligation to do so because the Ciénega is in Mexico.

That environmental review, released Aug. 26, concluded that the plant would pose no significant harm to the environment around it.

"The failure of that plant to run for many years has allowed this tremendous wetlands to survive," said Kieran Suckling, executive director of the Center for Biological Diversity, a Tucson-based environmental group. "To put that water at risk is of tremendous concern."

Although they decline to make any formal long-term commitments to protect the wetland without the results of the test, United States water managers said in interviews that they would like to maintain them.

“This is starting to put pressure on everybody to resolve the issue of the Ciénega and keep the Ciénega in water,” said Pat Mulroy, general manager of the agency that supplies Las Vegas’s water. “There is a little pull and tug to see how much water the Ciénega needs. There is an assumption it needs all the water currently going there and an assumption we have to replace it in its entirety. Somewhere in there is probably a middle road.”

The plant would draw briny water from an agricultural drain that runs next to it on its way to Mexico, providing the wetland’s lifeblood. The drain was built in the early 1970s as a temporary solution to a problem that severely strained relations between the United States and Mexico.

On its 1,450-mile journey from the Rockies to the Gulf of California, the Colorado River decreases in might as Western states tap it, while increasing in salt compounds, partly because of runoff from rocks and soil but also from the waste of some of the largest farming operations in the world.

Mexican farms downriver began suffering and, after heated negotiations, the United States agreed to improve the quality of the water delivered to Mexico by desalinating some of it at the border.

While the plant was being planned and built, the federal government attacked one of the main culprits of the salt problem, by diverting farm wastewater near Yuma south onto sparsely populated land in Mexico.

End result: the Ciénega.

At first blush, the Ciénega seems run of the mill, tule grass the height of a person or taller emerging from a labyrinth of streams and ponds under a brick-oven sun.

But listen closely, Juan Butrón Méndez, a Mexican naturalist advised one recent morning. A trilling sound like a referee not blowing hard enough on his whistle. A willow flycatcher, one of the endangered birds that call this wetland home, was beckoning from the weeds.

“That is something you may not hear anymore if the United States is not careful,” Mr. Méndez said, standing at the edge of the wetland, whose other endangered residents include the Yuma clapper rail and desert pupfish.

Environmental groups, with researchers from the University of Arizona, have begun a more detailed study of the Ciénega, to understand better its water needs and ecology. Every month, researchers from Arizona and Mexico head out in boats to plant and check monitors and other equipment among the thick grass and turbid water.

“If we lose this, we don’t know what will happen to the birds,” said Francisco Zamora Arroyo, a geographer with the Sonoran Institute, a Tucson-based nonprofit organization, who studies the Colorado River Delta. “Some will be able to reach other marshes, some won’t.”

But Mr. Zamora, on a rocking skiff helping colleagues plunge measurements into the swamp, said he sensed a shift in attitude on both sides of the border.

“This comes at a time when we have a lot of hope,” he said. “We have been doing a lot of research in the last 10 years here. At least this time there is a dialogue.”

Regional News 09/18/09

Interior official: Dry climate puts pressure on Colorado River

Feds to study use of the Colorado

By GARY HARMON

The Grand Junction Daily Sentinel

[Linked here](#)

[Reclamation press release](#)

Population growth, drought, changing environmental needs and climate change are posing new issues in managing the Colorado River Basin.

To deal with them, the U.S. Department of the Interior is conducting a water-supply and demand study of the basin from Wyoming and Colorado to California, an Interior Department official said Friday at the Colorado River District’s water seminar.

The exact form of the study will be shaped by the U.S. Bureau of Reclamation and a variety of stakeholders from around the basin, said Anne Castle, assistant secretary for water and science.

“We all know that every drop of the Colorado River is allocated,” Castle said.

That makes it all the more important to put the water in the river to the best use as the population of people dependent on it grows and the amount of water it carries shrinks as a result of drought and climate change.

About 25 million people from Denver to Los Angeles depend on the river for water.

The Bureau of Reclamation will fund \$1 million, and various participating agencies will contribute money or in-kind services.

“The Colorado River Basin states are making great strides in working together to address our common challenges,” said Harris Sherman, executive director of the Colorado Department of Natural Resources. “We need to be pro-active in developing solutions, and this study is an important step in that direction.”

Castle, who lived for a time in the 1970s on Orchard Mesa, most recently was a partner in the Denver law firm of Holland & Hart.

In her new position, she oversees Reclamation and the U.S. Geological Survey.

The Interior Department also will study the Yakima River Basin in south central Washington and the Milk and St. Mary river systems in north central and southern Montana, Castle said.

Regional News 09/20/09

Feds: Not Enough Green River Water For Pipeline

BEN NEARY

Associated Press Writer [Linked here](#)

CHEYENNE, Wyo. (AP) - The U.S. Bureau of Reclamation's initial assessment of how much water could be diverted in coming decades from the Green River basin in Wyoming is far less than the amount a private entrepreneur has applied to draw for a planned pipeline to Colorado, agency officials said.

Developer Aaron Million, of Fort Collins, Colo., has proposed building a private pipeline to carry up to 250,000 acre feet of water a year from the Green River. He proposes to move 225,000 acre feet to Colorado's Front Range and 25,000 acre feet to eastern Wyoming.

An acre foot is about 325,000 gallons. Million's \$3 billion proposal has drawn fierce opposition in southwestern Wyoming. Sweetwater County and the cities of Green River and Rock Springs are pooling hundreds of thousands of dollars to fight the project, citing concerns about its effect on fishing and recreation in the area.

The U.S. Army Corps of Engineers is working on an environmental impact study on the likely effects of building the pipeline. Officials say the study should determine exactly how much water is available.

The Bureau of Reclamation, which manages Flaming Gorge Reservoir, conducted a preliminary study in early 2007 in response to Million's proposal to draw water from the reservoir and the river upstream. It pegged the basin's annual water availability at 85,000 acre feet less than what Million proposes to draw.

The study found that up to 165,000 acre feet of water could be drawn from the reservoir each year through 2049 while still allowing enough water to generate hydropower and to meet the needs of endangered fish species downstream.

Drawing 165,000 acre feet a year over 40 years would draw the level of Flaming Gorge Reservoir down from its current elevation of 6,030 feet above sea level to just above 5,900 feet, the study found. According to bureau figures, the reservoir has a surface

area of nearly 30,000 acres when its elevation is at 6,000 feet and its surface area would drop to just under 11,000 acres at the 5,900 foot level.

After 2050, as development in Wyoming increases, the bureau study projected Flaming Gorge Reservoir could sustain an annual diversion rate of 120,000 acre feet. The agency is updating that draft analysis, and agency officials say their projections of the amount of available water may well go lower.

Malcolm Wilson, chief of the Water Resources Group for the Bureau of Reclamation in Salt Lake City, said the bureau's draft study doesn't support Million's plans.

"I think Mr. Million's aware of our numbers, and we're not sure where he gets his," Wilson said. "Certainly what we saw in this study, as you can see, does not support his numbers. But maybe he has something else."

Increased development in Wyoming, climate change and the needs of endangered species downstream all could reduce the agency's final conclusions of how much water would be available for the pipeline, said Dave Trueman, head of the Bureau of Reclamation's Resources Management Division in Salt Lake City.

Million said he believes the bureau's draft water availability report is extremely conservative. He said his own consulting engineers have determined that the Green River basin can support the pipeline project.

"I think the important thing from the public's standpoint is that there's a major surplus of water in the system, above the needs of endangered species, boating and all those things," Million said Wednesday. "And that will either be proven out, or not, in the (environmental review) process."

Million said the amount of water he applied for at first is not an absolute, but an amount he used to start the application process. He said he's considering scaling back his application for water, but hasn't done so yet. He has said that he would cancel the project if its environmental impacts couldn't be mitigated.

Although Million is seeking to draw water in Wyoming, the water itself would come from the state of Colorado's share under the Colorado River Compacts — formal agreements among Western states over how to allocate water on the river system.

Jeff Fassett, a former Wyoming state engineer, is consulting with Million on the diversion project. He said the amount of water available for the pipeline would decrease as Wyoming uses more of its share of water on the Green River. Million anticipates being able to divert higher amounts of water until it's needed elsewhere, Fassett said.

Fassett said that project developers believe that 250,000 acre feet of water per year, "would certainly be available for a great number of years."

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Regional News 09/23/09

Colorado River and U.S. Bass Sexually Confused and Polluted

Dick Kamp/Wick Communications Environmental Liaison [Linked here](#)

A nationwide study of sexual fish aberrations by the US Geological Survey (USGS) found that 40% of smallmouth bass and 1/3 of largemouth bass sampled in the Colorado River had male organs with partially developed female organs inside. This phenomenon, along with occasional female organ growth in males, is called "intersex" and it can be caused by various pollutants, drugs, and cosmetic and household products that impact hormones activity in animals and humans that are collectively called endocrine disruptors or endocrine active compounds (EACs).

There was no consistent linkage in the study between intersex occurrence and, mercury, pesticides, and other metals and chlorinated pollutants monitored in the fish and rivers nationwide and it made no guesses as to why the sexual aberrations occurred where they did. Some of the highest intersex percentages were found in the southeastern U.S.

3080 fish at 111 sites nationwide were examined and all had contaminants in their bodies. Five of the sampling sites along rivers found no detectible contamination. A third of all male smallmouth bass and a fifth of all male largemouth bass were intersex.

40% of largemouth bass examined at Imperial Dam and at the Gila River in Hayden were intersex. 70% of smallmouth bass in the upper Colorado in the Yampa River were intersex. Among other species examined, the only intersex carp found nationwide was at Willow Beach, below Lake Mead. One intersex channel catfish was found in the lower Colorado basin in the Gila River at Phoenix, and one at each of three sites in the upper Colorado.

Lead author of the report, JoEllen Hincke, of the USGS Columbia Missouri Environmental Research Lab said that the report "is the first synthesis of USGS efforts to measure contamination in water, fish and intersex occurrence." The Colorado River data was from 2003, and nationwide it covered the period 1995-2004.

The US Center for Disease Control, and governments worldwide, have gathered substantial evidence that human health is impacted by exposure to hormone-disrupting chemicals. Pregnant women and babies, particularly boys, are considered at highest potential risk but serious conditions affecting women such as infertility, ovarian damage, and adult male hormonal disruption are considered to be likely impacts of the chemicals.

Wastewater discharges into sources of drinking water are one major pathway of contamination that may include bodily discharges of concentrations of chemicals or from pollutants themselves being discharged into surface and groundwater.

USGS Columbia lab biologist Diana Papoulias, has been studying fish exposure to two common hormonal disruptors in the lab and said that very low exposure of 2-5 parts per trillion have caused changes in fish. She added that differences in age, water temperature a large variety of pollutants could be involved in fish intersex occurrence that was first encountered in the 1930s.

Papoulias points out that some of the chemicals present in consumer products are of high enough concern in European Union, Japan and the UK that they are sometimes prohibited or are closely regulated for discharges. "One could make the case that biological monitoring could include placing fish in cages below major sewage discharge points to waterways to see how they are affected," said Papoulias.

The Colorado River Regional Sewage Coalition CRRSCO has been concerned with the presence of endocrine disruptors, particularly since Colorado River water is consumed by millions in Arizona, Nevada, and California. One member of CRRSCO, Southern Nevada Water Authority (SNWA) has been testing for chemicals in Lake Mead and Las Vegas drinking water. Monitoring has shown that levels of a number of endocrine disruptors exist in drinking water for Las Vegas at substantial percentages of levels that are detected in Lake Mead near the sewage outfall. For example, the popular insect repellent DEET and the herbicide atrazine have been detected (at low unregulated levels in parts per trillion) when sampled in both the lake and potable Las Vegas drinking water.

SNWA is also assisting Lake Havasu City Water Resources Coordinator Doyle Wilson to sample for endocrine disruptors in Lake Havasu as well as in water supply wells and a huge sewage storage repository 2 1/2 miles from the lake constructed within the last two years. Doyle said that his principal concern with the USGS study is that the fish data is already dated.

Doyle added that CRRSCO is pinning some of their hopes for future monitoring of endocrine disruptors and many pollutants on the 'Lower Colorado River Protection Act' introduced July 31 by Rep Raul Grijalva (D-Az). The bill would create and implement an EPA-overseen long term plan to protect water quality in the lower Colorado prevent and eliminate pollution with continuous ecosystemic monitoring.

Regional News 09/23/09

Climate skeptics a challenge for water planners

Brent Gardner-Smith
Aspen Daily News Staff Writer [Linked here](#)

A growing list of studies show that global climate change will mean less water in the Colorado River, but varying perceptions about climate change are a hurdle to making decisions about future water supplies.

That was one message delivered Tuesday evening in Aspen by Dr. Eric Kuhn, general manager of the Colorado River Water Conservation District. Kuhn spoke at the Aspen Global Change Institute, which is hosting a workshop this week to explore how climate scientists and water managers can provide better information to government decision makers.

Kuhn cited a survey done six months ago by the Rocky Mountain Climate Organization of people in the seven states that have a stake in Colorado River water, including Colorado, Utah, Wyoming, Arizona, New Mexico, California and Nevada.

The survey asked residents of those states, "Is climate change an established reality or an unproven myth?"

People in Colorado are split 47 percent to 47 percent on the question.

In Wyoming, only 35 percent of people think climate change is "an established reality," while 62 percent of Californians think it is.

Seventy-four percent of Democrats in those seven states think climate change is a reality, but only 25 percent of Republicans do, the survey found.

Kuhn said another survey found that in the 15 Western Slope counties that make up the Colorado River District, 83 percent of Democrats feel climate change should be given a high priority, while only 40 percent of Republicans felt the same way.

Yet Kuhn said evidence continues to point to a future with hotter temperatures and less water in the Colorado River.

He cited a recent study by the Colorado Water Conservation Board that clearly stated there would be a decline in runoff for most of the Colorado River basin by the mid-21st century.

"It is simple and very straightforward," Kuhn said of the CWCB finding. "You think we should be able to do something based on the advice, but we are not quite there."

A recent preliminary water supply study by the CWCB showed that by 2040, there would likely be an 8 percent reduction in average annual runoff in the Colorado River above Grand Junction. And that the runoff will likely come a week earlier.

"Science is never going to tell us how much water is going to be in the Roaring Fork to the nearest cubic foot per second in December 2020 or 2021, but it is going to tell us there may be less," Kuhn said. "So when do we start making a decision based on evidence that is pretty clear, and pretty overwhelming, yet there is a lot of uncertainty?"

Kuhn said in his position at the river district he is non-political, but also said he is not shy about pointing out how political differences are a hurdle to developing sound water policy.

He said "there is not yet a public consensus on climate change and whether we need to do anything about climate change.

"There may be in some communities like Aspen or Glenwood Springs, where I live, but there is not in places like Grand Junction. There still is a political divide. And if we don't talk about it, we won't bridge that political divide," Kuhn said.

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Regional News 09/24/09

Arizona's water future is cloudy, worried experts agree

By Tom Beal

ARIZONA DAILY STAR [Linked here](#)

Tucson, Arizona

Arizona's water future won't be like its past, and the past is bad enough.

Water managers only recently came to terms with the fact that their predictions of future water supply were based on incomplete historical records that did not reckon with periodic decade-long droughts and at least one that lasted half a century.

At a conference of water and climate scientists put on by the University of Arizona on Wednesday, water managers from Arizona's major cities said the future seems even more uncertain with predictions that climate change will further reduce flow from Arizona's watersheds.

New sources of water will be needed, but they won't be available in time for the coming crunch, said David Modeer, general manager of the Central Arizona Water Conservation District.

"In the West, it's pretty much uncharted territory once you move closer to that abyss of not enough water," Modeer said.

Modeer, former director of Tucson Water, said he didn't think the Colorado River, which supplies 1.5 million acre-feet of water to Arizona communities each year, had a supply problem as recently as 1998.

A 10-year drought and better studies of the hydrological record made it apparent that the flow in the Colorado was historically less than what is promised to the states that border it. "We know it's over-allocated," he said.

Drought and a better understanding of the historical record have changed the game in Arizona's other major watershed.

"Things are upside-down," said John Sullivan of the Salt River Project, which has supplied Phoenix-area farms and communities with water from the Salt and Verde rivers for 106 years. "There are things going on. What it is, I'm not sure."

Sullivan said SRP has had to cut allocations to its customers only three times in its history — but two of them occurred this decade during the extended drought. Sullivan said the SRP commissioned a tree-ring study of the watershed, and researchers at the University of Arizona uncovered a water past much like that of the Colorado — periodic droughts of 12 to 13 years and one in the 1500s that lasted 50 years.

The water managers appeared at the annual meeting of SAHRA (Sustainability of Semi-Arid Hydrology and Riparian Areas), which hosted the event in conjunction with Biosphere 2, the Water Sustainability Program and the Institute of the Environment.

The conference question was how to plan for a future when "stationarity" is dead.

Stationarity, said U.S. Geological Survey senior scientist Julio Betancourt, allows you to predict future natural events "within a fluctuating but well-defined variability." That notion died, he said, with the realization that climate change makes the future unpredictable.

Sharon Megdal, who moderated the panel on the state's water future, said she liked Yogi Berra's definition: "The future ain't what it used to be."

In an earlier presentation, Dennis Lettenmaier, a professor of hydrology at the University of Washington, noted that predictions for reduced flow in the Colorado River by 2050 ranged from 6 percent to 40 percent, depending on the climate models used, and called for better targeted studies of the Colorado's watershed.

"Forecasts are not useful to us. Forecasts are wrong," said Tucson Water's Ralph Marra. "We don't have a good sense of what the future range of credible possibilities is."

Marra, the utility's water administrator, said Tucson Water must plan for a wide range of scenarios. He called for more and better science and for cooperation among water users.

Modeer and Tom Buschatzke of the city of Phoenix also warned of an additional price for climate change. The CAP moves its water uphill to Phoenix and Tucson with energy from a coal-fired plant in northeastern Arizona. A carbon tax could add up to \$200 an acre-foot to his water bill, said Buschatzke. That would trigger a 13 percent rate increase on top of the regular annual increases, he said. "There will be some City Council people twitching," he said.

Contact reporter Tom Beal at 573-4158 or tbeal@azstarnet.com

Regional News 10/12/09

RENEWABLE ENERGY: Agriculture and algae coexist uneasily in Imperial Valley

(ClimateWire, 10/12/2009)

Debra Kahn, E&E reporter

CALIPATRIA, Calif. -- With 360 days a year of pure, unclouded sun, California's Imperial Valley has the potential to become the Silicon Valley of renewable energy. Assuming, for example, that a technology based on extracting oil from algae proves itself on a commercial scale, this place has much of the right stuff.

It has an overabundance of labor. The arid region bordering Mexico has a 24.5 percent unemployment rate. Of those who are employed, 15 percent work in the agriculture industry, which exists thanks to 1,500 miles of canals and enormous, historic allotments of river water. The main crops are feedstocks like alfalfa and hay and vegetables for human consumption, like lettuce, onions and sweet corn.

"Imperial ranks dead last in terms of economic vitality," Brian Brady, general manager of the Imperial Irrigation District, told potential investors and researchers from China, India, Australia, Spain, France and the United States last week. "We are totally motivated to bring in industry, particularly green industry."

But the key question mark is water. Can the Imperial Valley achieve its goal of becoming the renewable energy capital of the United States while maintaining its farmland?

The challenge for county officials lies in balancing the existing agriculture industry and its defense of entrenched water rights with the desire to draw new jobs in potentially water-heavy industries.

Farmers are leery of their new neighbors. A number of algae companies sprouting up in the area 100 miles east of San Diego are trying to scale up their operations to produce biofuels in mass quantities. While they say they plan to move to wastewater, salt water and other brackish sources, like the nearby Salton Sea, most demonstration and pilot projects are using fresh water, to better identify the hardiest, most oil-rich algae strains. Open-pond operations like Biolight Harvesting also must contend with evaporation rates of up to 5 millimeters per day, or 7 acre-feet a year.

Imperial County is willing to put its water where its mouth is. The Imperial Irrigation District recently approved an allotment of 25,000 acre-feet per year for renewable energy installations over the next five to 10 years, with an additional 75,000 acre-feet possible after five years. That's out of 3 million acre-feet total in water deliveries from the Colorado River -- water rights secured almost a century ago, of which agriculture currently uses 97 percent.

Brady said water was a top concern for foreign investors and businesses. "When we go to China, one of the first questions is, 'Are you sure there's water?'" he said. "We're

really fortunate this allotment off the Colorado was secured way back in the '20s. We're committed to it not changing."

The irrigation district conducted workshops with farmers to gain support. But some are still leery of renewables' effect on land and water.

"Water flows where the money is," said Heidi Kuhn, a cattle and dairy farmer who joined researchers, investors and algae growers on a tour of the valley last week. "If algae farming produces more money than commercial farming, you will see water go to algae farmers."

Tough economic decisions ahead Kuhn warned that farmers might be prickly neighbors. "Stick to the marginal land," she said. "Use our manure; help us deal with the salt.

"If we could look to you as partners in reclaiming dairy runoff, we'd welcome you."

One of the industry's leading scientists, Scripps Research Institute biologist Stephen Mayfield, espoused the same free-market attitude with respect to land-use policy.

"Although it's great for us to sit here and say we're not going to compete with water or food, at \$30,000 an acre, that's an economic decision farmers are going to have to decide on their own," he said at last week's Algae Biomass Summit in San Diego, citing estimates from the University of California, Berkeley's Energy Biosciences Institute. "This is America, it's called capitalism, and these decisions are going to be made by someone other than you and I."

In addition to its burgeoning algae farms, Imperial Valley has 17 geothermal plants currently operating and at least 30 other renewable projects in the pipeline. Investor-owned utility San Diego Gas & Electric is building a 500-kilovolt transmission line, known as the Sunrise Powerlink, to the area and expects to use it to meet a state renewable energy target of 33 percent by 2020.

Stirling Energy Systems, which is planning to start construction next year on a 750-megawatt concentrated solar thermal plant in the Imperial Valley, skirted the water issue by using treated wastewater from the town of Seeley. It agreed to pay for an upgrade of the town's wastewater treatment plant in exchange for the water. Overall, the plant will use 33 acre-feet of water annually, low by solar thermal standards, a company spokesman said.

"This isn't agricultural land, and we're using 1,000 times less water than some of our competitors," said Sean Gallagher.

LR Letter 10/14/09

Living Rivers protests water right transfers for proposed nuclear power plant at Green River

[Press Release](#)

[Click here](#) to read letter of protest to transfer San Juan County water rights to Emery County for proposed nuclear power plant near Green River and filed on October 14, 2009.

[Click here](#) to read letter of protest to transfer Kane County water rights to Emery County for proposed nuclear power plant near Green River and filed on November 4, 2008.

For more information visit [Uranium Watch](#)

The nuclear power plant is a project of [Blue Castle Holdings](#).

News items

[Salt Lake Tribune - 10/12/09](#)

[Salt Lake Tribune editorial board - 8/28/09](#)

[Moab Times-Independent](#)

[Grand Junction Sentinel of 10/21/09](#)

[Deseret News of 10/21/09](#)

Regional News 10/19/09

New storage eyed as Colorado confronts more people & less water

By Allen Best and special to the Summit Daily News

With demographers forecasting 35 percent more people in Colorado by 2035 and climate scientists predicting 15 percent less water available in the Colorado River Basin by mid-century, something has to give.

More and more, public officials, business groups and environmental organization have been talking about additional dams and reservoirs to augment those built in the mid-20th century.

"The water inheritance is running out," said Josh Penry, the minority leader in the Colorado Senate, in a speech at the summer meeting of the Colorado Water Congress, a consortium of water providers. "Colorado needs to embark on a new round" of storage construction.

“We study too much. We analyze too much,” added Penry, who is from Grand Junction and a Republican candidate for governor.

Representatives of environmental groups concede the need for additional storage but also call for restraint.

“There are projects that have significant adverse environmental impact that we could not support,” said Melinda Kassen, managing director of the Western Water Project for Trout Unlimited. “And there are projects that have substantially fewer environmental impacts that we can support,” she said, if mitigation measures are included.

Hovering over these conversations is the ghost of Wayne Aspinall. A one-time schoolteacher and lawyer from the fruit orchards of Palisade, Aspinall possessed neither good looks nor a good speaking voice. He did have a solid command of legislative techniques and an ardent belief in the need to harness and regulate the rivers of the Rockies.

Serving in the U.S. House of Representatives from 1949 to 1973, Aspinall helped obtain authorization and federal funding for a series of major dams in the upper Colorado River Basin. Utah's Lake Powell was the most massive, but a trio of reservoirs on the Gunnison River also resulted from his legislative perseverance. Today, they are collectively designated as the Aspinall Unit.

Growing populations, pending crisis But if Westerners saw the yoking of rivers into submission as the major task of the mid-20th century, today a more nuanced challenge exists. The limits of abundance have become more apparent.

Most, if not all, of the best dam sites have been taken. Little of the reliable water supplies remains unspoken for, and in those few unclaimed instances — such as on the Yampa River of northwestern Colorado — the water is far from population centers.

Coloradans in the future, as is already the case, can be expected to congregate along the urbanized Front Range corridor. More than three-quarters of the state's residents currently live in a narrow swath less than 200 miles long. The State Demographer's Office projects that the population, now at 5 million, by 2035 will nudge 7.8 million — an increase roughly the existing size of metropolitan Denver-Boulder.

Even more staggering population growth has been projected by 2035 for what is called the Colorado River system, an area that includes Denver, Salt Lake City and Los Angeles. The existing population of 24 to 30 million people will grow another 12 to 15 million people. Imagine Las Vegas 11 times over.

In contrast to this uphill climb of population, climate scientists see a downward slope for water. Temperature is the major driver.

Computerized simulations differ substantially whether precipitation will increase or decrease. Further, existing precipitation patterns could be altered as increased planetary heat alters flow of the jet stream. In other words, changes in Vail and Telluride might not be uniform.

There's more certainty about increased heat. Rising temperatures will produce shorter winters, more evaporation and transpiration, and a substantial reduction of total flows in the Colorado River. Scientists in the last two years have settled on a 15 percent reduction as a central figure.

"We are expecting a 39 percent increase in population and, if you want an average, a 15 percent reduction in supplies," said Taylor Hawes, of The Nature Conservancy, describing the seven-state Colorado River Basin.

"By most standards, that's a crisis."

Managing uncertainty planning is the prospect of drought. Colorado had several significant droughts in the 20th century, but all are overshadowed the mega-droughts of the distant past. Studies

of tree rings across the Southwest conducted by Connie Woodhouse of Arizona State University and other dendrochronologists show clear evidence of droughts roughly 1,000 years ago that lasted up to three decades.

The parched summer of 2002, a time of roaring wildfires near Denver, Durango, and Glenwood Springs, caught water managers by surprise. Levels in Lake Powell dropped precipitously in 2003, and by late 2004 had left bathtub rings two-thirds below the high-water mark. Many wondered if the reservoir might actually drop to a dead pool, unable to generate any electricity.

Along Colorado's Front Range, the situation looked equally bleak. Had it not been for a miraculously wet and heavy snowstorm in March 2003, cities and farmers might have faced another withering summer, hot and dry.

Water managers broadly embrace the theory of human-caused global warming. Their meetings for the last several years have focused on the sharp warnings coming from climate scientists.

"The science is all basically pointing in the same direction," says Eric Kuhn, general manager of the Colorado River Water Conservation District.

But if all signs point toward hotter and drier, great uncertainty remains. Faced with that uncertain hydrological future, Marc Waage, manager of water resources planning for Denver Water, says he has been "scratching my head for the last two years" about how to create a long-range water plan.

Before, water planning was a lot easier. There was always population growth, of course, but planners assumed a worse-case scenario that resembled a previous drought. Colorado's documented worst drought came in the mid-1950s — about the time Wayne Aspinall was proposing to dam the Gunnison, San Juan, and Green rivers.

Now, water planners realize much more serious droughts are possible and that even the average amounts of water will be less. Runoff will occur weeks and perhaps months

earlier, leaving to much longer, hotter and drier summers. Combined with population growth, all this suggest that the existing water infrastructure may be inadequate.

The elephant of Colorado Colorado's big question mark remains the urban Front Range corridor, especially Denver's southern suburbs that overwhelmingly rely upon underground water that has become steadily more difficult to extract.

Prairie Waters Project, a major new diversion project to be completed in 2011, will draw water from the South Platte near Brighton several dozen miles south for use in Aurora, located on the eastern flanks of Denver. Short as this pipeline is, this project is expected to cost nearly \$700 million.

Far more ambitious projects have been conceived. The most spectacular, proposed by former Montrose farmer Aaron Million, would draw water from the Green River near Rock Springs, Wyo., and pipe it along Interstate 80 and then down to the Front Range.

More recently, a rival plan employing the same idea has begun to emerge from a consortium of water providers in Denver's southern suburbs.

Another so-called "big straw" would draw water from the Yampa River west of Craig. That idea comes from the Northern Colorado Water Conservancy District, the agency responsible for the Colorado Big Thompson project. The project, which takes water Grand Lake to Estes Park, was described by Telluride native and historian David Lavender as a "massive violation of geography."

These big straws have mostly been painted as saviors of agriculture. The thinking is that without further Western Slope diversions, the cities will end up buying farms for water.

But does the water exist?

Whether Colorado actually has sufficient water under the treaty apportioning the Colorado River Compact is open for debate. Kuhn, for example, has long suggested that Colorado has no more than a few hundred-thousand acre-feet of unallocated water. A study to be completed later this year by the Colorado River Water Board hopes to answer with greater certainty just how close Colorado is to the last drop.

Another set of studies will attempt to push the science of climate change even more rigorously. Tapping the expertise of scientists assembled in the federal laboratories at Boulder, the studies hope to provide a better idea of how much water may exist in a hotter and drier future.

The focus naturally is on the Western Slope, where three-quarters of Colorado's water originates, mostly in the form of snow. The studies will also attempt to predict how much precipitation regimes will change between basins — the San Juan, for example, as distinct from the Eagle.

While this gets sorted out, a set of parallel discussions has been occurring among the state's major river basins. The intent of these roundtables is to reach some larger

consensus about water allocations, perhaps similar to the compacts that govern the Colorado River.

Friction If the roundtables have improved dialogue, friction has occasionally flared. Disagreement was evident in one exchange at last month's meeting of the Colorado Water Congress. Pitkin County Commissioner Rachael Richards complained that Western Slope water had not been given its due in generating revenue in Colorado's second largest economic, tourism and recreation.

She got pushback from Rodney Kuharich, director of the South Metro Water Supply Authority. Aspen, he observed, seem to have done quite well despite the diversion of waters from the Roaring Fork River and its tributaries that began decades ago. Resorts on the Western Slope, he said, have benefited handsomely from customers drawn from along the Front Range.

As for additional storage, future reservoirs will likely be smaller but perhaps at higher-elevation locations, to minimize evaporation. But whereas the reservoirs of Aspinall's day were all about commerce, today they will be judged against a greater matrix of considerations.

Hawes, of the Nature Conservancy, said her group believes that decisions about storage should be guided by multiple uses, "so that the environmental is part of the planning and not an afterthought."

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OPINION Quillen: The politics of storage

By Ed Quillen The Denver Post POSTED: 10/25/2009 01:00:00 AM MDT

Granted, it's early to be paying much heed to next year's gubernatorial campaign, but there are already candidates out stumping. Among them is Josh Penry, a Republican state senator from Grand Junction.

Last summer, he told the Colorado Water Congress that our "water inheritance is running out," and we need to "embark on a new round" of building reservoirs.

If this sounds familiar, it's likely because you remember the Great Drought of 2002, followed by the Resounding Defeat of Referendum A in 2003.

By the fall of 2002, after some dry years, many Colorado reservoirs set record lows. You could drive for miles along Blue Mesa Reservoir, west of Gunnison, and instead of seeing static stored water, you'd see the river flowing toward a greatly shrunken pool. Some towns banned all outdoor water use. Ancient cottonwoods died along dry ditches.

Faced with such dismal scenes, Gov. Bill Owens promoted Referendum A, which would have authorized \$2 billion in bonds for new water storage. Although most prominent Republicans supported it (Scott McInnis was the rare exception), Referendum A failed in every one of our 64 counties.

Coloradans could see the obvious six years ago. We didn't have a shortage of storage, given all those shriveled reservoirs that had ample room for more water; we had a shortage of water.

It is possible to imagine that Colorado had built even more storage way back when, and that in the last really wet year, like 1983, the state stored every possible drop.

But it is impossible to believe that this 1983 water would have been available 20 years later. With that much water stored and available for distribution, developers would have found uses for it. We'd have had more residents to suffer the drought. That's how water works here.

Even so, we may need more storage because problems loom for our natural storage system — mountain snowpacks that accumulate over the winter then melt to provide water through the summer.

There's climate change. If average temperatures are rising, then the snow will melt sooner in the spring. The water won't sit around in a snowbank until August, but will be gone by June.

On a peak west of Salida sits a snow formation called the Angel of Shavano. Old tourist guidebooks say the Angel is at her best around Independence Day. These days, she peaks around Memorial Day, and frequently vanishes before July 4.

Another factor is dust. The more we disturb the natural ground cover, the more dust there is in the air. When it settles on snow, it makes a dark surface that absorbs more solar radiation. A researcher at the University of Utah found that dust layers caused the snowpack to melt 45 to 48 days earlier this spring.

And there's logging. If shade-providing canopy trees are removed, the snow melts faster in the spring and the water won't be there as summer wears on. This affects Colorado's oldest water right, the 1852 San Luis People's Ditch.

So like it or not, we'll likely need some more storage. Where to get it? We could start by maintaining what we've already built. According to the state engineer's office, which inspects dams, Colorado has lost 117,650 acre-feet of storage because of decrepit dams; they lose reservoir capacity because it's unsafe to put in as much water as the dams were designed to hold.

This seems like a good way to increase storage, even though it could deprive Penry of a chance to cut a ribbon when some pleasant mountain valley gets drowned.

Contact Ed Quillen at ekquillen@gmail.com.

LR Press Release 10/20/09

Living Rivers and Uranium Watch protest water rights transfer for proposed nuclear reactor

October 20, 2009

For immediate release

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Living Rivers (LR) and Uranium Watch (UW) protested the San Juan County Water Conservancy District (SJCWCD) request to transfer water from the San Juan River to the Green River for a proposed nuclear reactor.

On October 14, 2009, LR and UW joined others, including the Grand County Council, U.S. Fish and Wildlife Service, and Green River ranchers and farmers in questioning the advisability of approving the transfer of 24,000 acre-feet of water, based on a number of environmental and regulatory concerns. SJCWCD lease the water to Transition Power Development LLC—now Blue Castle Holdings Inc. (BCH).

BCH seeks to accumulate assets, including rights to water in the Green River, in order to license the site for the reactor on land that Emery County has leased from the Utah School and Institutional Trust Lands Administration for an industrial park.

BCH press releases (www.bluecastleproject.com) claim that BCH already owns the site for the reactor. This is not true. According to the Emery County Economic Development Director, BCH has not purchased the site and does not have a purchase option. "One can only wonder why BCH feels that they must lie to the press, the public, and their investors about the ownership of the property for the proposed reactor," says Sarah Fields, UW Program Director.

BCH has also leased 29,600 acre feet from the Kane County Water Conservancy District, for a total of 53,600 acre feet of water that would be used for the proposed reactor. The State Engineer, Division of Water Rights, will hold hearings on the protests of both water rights change requests, in the spring of 2010 at the earliest.

There are a number of important reasons why the Division of Water Rights should reject the application to use water from the Green River. Significantly, there was no information in the water right change application that would provide a basis for the required determinations by the State Engineer. There are questions about the projects economic feasibility and whether BCH has the financial resources to complete the

proposed reactor, especially since BCH does not appear to be the one who will actually construct and operate the reactor.

In a time of increasing water scarcity, the availability of water and negative impacts to the endangered and threatened fish species are primary considerations. The US. Fish and Wildlife Service and others are concerned that reducing water quantity in the Green River will result in diminished habitat for endangered species and cause three threatened species being listed as endangered. FWS partners with state and federal agencies to develop and implement conservation plans for fish recovery in the Colorado River Basin.

Also, the seven states of the Colorado River Basin and the Bureau of Reclamation will soon begin a process of determining a water budget for the Colorado River water supply—a program called the Colorado River Basin Study. John Weisheit, Conservation Director of Living Rivers, believes, "The State Engineer should wait for the completion of this study in order to help protect applicants and existing water right holders from future economic burdens based on future water supply uncertainties."

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Additional information

<http://www.uraniumwatch.org/bluecastle.htm>

Regional News 10/26/09

For farm-water rights, planners ready to deal

Agreements help farmers economize, saving water for cities later

By Shaun McKinnon - Oct. 26, 2009 12:00 AM

The Arizona Republic

MARICOPA - The water to grow cotton, wheat and cantaloupes in Dan Thelander's fields doesn't flow down open ditches or spurt from sprinklers or drip from tiny emitters poking up from the cultivated soil.

Thelander pumps the water directly to the roots of the plants through miles of black plastic drip tape buried beneath the ground. The system all but eliminates losses to evaporation or surface runoff and reduces the total amount of water needed for the crops.

The drip tape wasn't cheap to install and required expensive upgrades to tractors, but Thelander believes the investment will pay off, in part because of an agreement that promised a steady supply of water until at least 2030.

The deal, which includes a dozen or more water districts, in effect sets aside water for future growth in Maricopa, Pinal and Pima counties. It follows a well-worn pattern in

Arizona of shifting water from agricultural uses to cities, a pattern that helped Phoenix convert thousands of wide-open fields into a sprawling metropolitan area.

What's different about this agreement is that instead of allocating the water among the cities now, it allows growers to remain in business without feeling as much pressure from thirsty cities.

"It doesn't make any sense to take land out of production just to set aside water for development that won't occur for 20 years," said Brian Betcher, general manager of the Maricopa-Stanfield Irrigation & Drainage District, which serves Thelander's operations. "We needed an orderly transition."

Agriculture as an Arizona industry has been in transition since the 1970s, when rows of new homes started replacing rows of cotton and citrus. Although farms still contribute as much as \$9 billion to the state's economy, the business lacks the power it held when it first claimed the largest share of Arizona's water.

Few people believe there will ever be another large-scale turnover of farmland to homes and business like the one that transformed Phoenix over the past 50 years, but it's likely the water used by agriculture will play a role in meeting Arizona's future water needs.

How that happens will depend on what kind of water is on the table. Irrigation districts along the Colorado River hold rights that are all but impossible to pry loose unless the farmer wants to deal.

Such a deal could look like an ongoing pilot project in Yuma, where the U.S. Bureau of Reclamation offered farmers money to take land out of production for a growing season. The water the farmers didn't use would then be banked in Lake Mead as a hedge against future shortages.

Just one small water district signed on for the test, and participation has been spotty, in part because crop prices were higher for several years than the money offered by the bureau. If crop prices drop below the government's offer, more farmers may decide to cash in.

Farm communities fear the effect on the regional economy if too many growers take the deal. When a farmer fallows ground, he needs fewer workers, buys less seed and consumes less fuel.

The less-abrupt option is unfolding in Pinal County, where the irrigation districts gained a steady supply of water from Central Arizona Project canal in exchange for an expiration date.

A sweeping Indian water settlement in 2004 set aside 400,000 acre-feet for farmers in the three counties the canal serves. The pool will shrink slowly until 2030, when the guarantee expires.

"The overall settlement helped keep our water affordable," said Thelander, who works about 4,000 acres mostly in Pinal County. "It's allowed us to stay in business. Had we

not had the settlement, the cost of water could have been roughly twice as high as it is now. It would have been very difficult to keep our farm growing."

The price of CAP water isn't insulated from outside factors. Costs could rise, for example, as a results of proposed environmental controls at the Navajo Generating Station, the Page power plant that supplies electricity to move water from the Colorado River to the farms. A sudden spike could force growers to back away from the supply.

Still, the relative certainty of the water was equally important. Before the agreement, Pinal farmers drew water from the CAP canal, but with no firm promises of how long the supply would last.

With the deal in place, farmers have invested in equipment that helps stretch water supplies, such as drip systems or laser field leveling, which also reduces runoff. Some irrigation districts have signed deals with cities to store water underground in exchange for price breaks on the CAP water.

Those measures could also help growers who stay in business beyond 2030. If cities begin claiming the CAP water, many agricultural users will resume pumping groundwater, as they did before the canal began delivering Colorado River water. With less groundwater available, they will need to use it more efficiently.

"There's a better understanding of the value of the water," Betcher said. "Sure, ag uses a lot of water, but all of that water, if it's used wisely, goes back into the economy."

What's happening in Pinal County probably can't be duplicated because growers in other areas hold more-secure rights to the water. If cities want the water, they will likely face a steep price tag.

Because of the recession, the demand for more water may not grow as quickly as planners once thought, which could buy Pinal growers even more time. Some experts say that time could give cities a chance to rethink their priorities.

"We could talk about to what degree agriculture could be our open space and a backup water supply in a drought," said Jim Holway, a former state water regulator who now works on water issues for the Sonoran Institute and the Lincoln Institute of Land Policy.

"Maybe we keep agriculture in Pinal. The water's there, the plumbing's there, we get open space and we recharge the aquifers," Holway said. "If we could take the current downturn to stop and think, we might come out of it more thoughtful about what our growth means."

Regional News 10/31/09

State water agency: Cut would hurt rural areas

By Shaun McKinnon - Oct. 31, 2009 12:00 AM
The Arizona Republic

Projected state budget cuts would all but end Arizona's efforts to secure long-term water supplies, water officials say, a loss that would devastate rural communities already struggling to meet demands.

In a budget scenario requested by the governor, the Department of Water Resources says it would also eliminate its statewide drought and water-conservation programs, cutting off aid to towns and cities at a time when dry conditions have deepened again.

In all, the water agency would be forced to lay off nearly half of its workforce and cut most programs not required by state law.

Gov. Jan Brewer has asked agencies to outline the effects of a 15 percent budget cut. She says deep cuts will be needed if lawmakers decide there is no other way to close the state's spending gap.

"It eviscerates us," said Herb Guenther, the department's director. "We currently have a lot of things on our plate that are very critical to the well-being and prosperity of Arizona's future. There are places with water deficits now, where supplies are inadequate. It's very troubling."

The state faces a \$1.5 billion deficit in the current fiscal spending plan. New estimates say that gap will widen to \$2 billion.

Guenther said the cuts to his agency, \$2.7 million from a 2010 budget of \$18.2 million, would affect every function. As many as 86 people could lose their jobs, cutting the department's workforce from 177 to as few as 91. Lost would be programs that support riparian protection, track river flows, measure groundwater levels and chart unsafe dams.

The department would continue to regulate water in Phoenix, Tucson and other so-called active-management areas, or AMAs, established by state law. In those areas, communities and developers are required to submit proof of a 100-year water supply before building new homes.

But most work with rural communities would abruptly end, leaving those areas with no help to manage existing water supplies and secure sources for the future.

"Rural Arizona, they're on a more critical path than the AMAs," Guenther said. "We've got whatever's left of 100 years to play with in the cities, but you've got a lot less than that in areas like Prescott, areas like Cochise and Yavapai counties. They're already short of water, and they're living on borrowed time."

The department has provided professional support for resident-planning groups that work within watersheds, areas where water use is almost entirely unregulated by state law. In most of rural Arizona, for example, developers can build homes without proving adequate water supplies.

"We have no other place to go," said Jan Holder, executive director of the Gila Watershed Partnership, which works on water issues in east-central Arizona. "The department has been critical for us. They were the ones who convinced us to start doing planning in our area. We don't even know how much water we have under the ground, and now, all of this is being taken away. It's outrageous."

The department increased efforts in recent years to map rural Arizona's water resources and figure out how much water exists in aquifers. Such information can help better plan future use and ensure that communities don't exhaust underground supplies.

"We need more info about our aquifers in order to manage them better, but we can't do it on our own," said David Newlin, watershed-projects director for the Holbrook-based Little Colorado River Watershed Coordinating Council.

"The people who have water rights want to be certain what those rights are going to be there for a long time in the future," Newlin said. "Otherwise, they will lose investments and opportunities for growth. People need that certainty."

Among the cuts identified in the budget plan:

- The department's legal division would be reduced. Guenther said that could put the state at a disadvantage as negotiations continue with the Navajo and Hopi tribes over historic water claims. The cuts could also set back efforts to settle water rights on the Gila River system, which includes wide areas of the state.
- Additional money would be swept from the Arizona Water Banking Authority, which buys excess Colorado River water and stores it underground for future use. The water-banking fund has been all but emptied in the past several budget cycles.
- The drought and conservation offices would be closed because they are not mandated by law, Guenther said. The programs were created by then-Gov. Janet Napolitano during a series of record-dry years, and they have helped the state monitor drought conditions and help communities better prepare for dry spells and develop conservation programs.

Guenther acknowledged that he can't point to as many immediate effects from the budget cuts as some agencies, but he said that doesn't diminish the department's role. Many issues are likely to grow more complicated, such as the demand for more water on the Colorado.

"Our process is long-term," he said. "We've got some challenges that are just huge, and you're not going to resolve them overnight."

Regional News 11/08/09

Scientists rip lawmakers over climate change

Sunday, November 08, 2009
Associated Press

[Click here](#) to see appearance in Arizona Daily Sun and [original story](#) in Salt Lake Tribune.

[Letter](#) by BYU earth scientists.

[Click here](#) to read "Climate Skeptics Call on BYU Scientists to Apologize"

PROVO, Utah (AP) -- A group of scientists from conservative Brigham Young University has criticized state lawmakers over their recent handling of the climate change issue.

The 18 scientists rebuked legislators in a letter sent Oct. 26, five days after the Public Utilities and Technology Interim Committee heard from Roy Spencer, an Alabama climatologist who doubts human activities are largely responsible for climate change. The scientists criticized lawmakers for giving the "fringe" position of Spencer equal weight to that of the broad, scientific consensus that climate change is occurring largely because of human activities.

"We have no specific political agenda to support but agree that whatever action is taken, it should be informed by the best available scientific evidence," the scientists wrote. "We encourage our legislators not to manipulate the scientific evidence to suit any political agenda."

The 18 Ph.D.s at the Mormon church school specifically refuted Spencer's claim that his critics have ignored natural cycles. The scientists called that assertion "patently false," saying natural climate variability has been extensively studied.

They also took issue with Spencer's allegation that researchers were simply "jumping on the climate-change bandwagon for prestige and monetary gain."

"When members of the Legislature give this kind of testimony too much weight, it puts all of us at risk by promoting poorly informed decisions," the letter says.

Rep. Christopher Herrod, a Provo Republican and committee member, said the scientists misunderstood Spencer's science.

"The more they say there is consensus, the more they lose credibility," Herrod, a real estate developer and entrepreneur, told the Salt Lake Tribune.

"There is no consensus. Send us a study that addresses all the points that were made. (Without that) they are hurting their case," he added.

The scientists said they agreed with the scientific consensus, but noted that their political views vary, as do their ideas about "how society ought to respond to threats posed by a warming climate."

Summer Rupper, a BYU climate scientist, led the letter-writing effort.

Information from: The Salt Lake Tribune, <http://www.sltrib.com>

World News 11/10/09

Las Vegas Gambles With an Uncertain Water Future

By LAUREN MORELLO of ClimateWire

[Link to New York Times](#)

BOULDER CITY, Nev. -- Straddling the border between Nevada and Arizona, the Hoover Dam is a symbol of human engineering might.

For more than 70 years, its massive walls have tamed the flows of the Colorado River, fueling the growth of cities like Las Vegas that depend on it to supply water and power from its generating station.

But these days, what's most striking is the lack of water stored behind the dam's concrete arch. A thick white band of mineral deposits marks the walls of Black Canyon above the water line. Locals call it the "bathtub ring." It's where the water used to be, before the start of the current decade-long drought.

For officials charged with keeping water flowing to Las Vegas and other Colorado River communities, the bathtub ring isn't a curiosity. It's yet another reminder that worries about climate change are reshaping their future.

"Around 2002, we really began to look at whether this was one of those traditional droughts the Colorado River has experienced -- or are we looking at something very different?" said Patricia Mulroy, general manager of the Southern Nevada Water Authority.

Spring warming is coming earlier and harder, evaporating mountain snowpack that feeds the river and its two main reservoirs, Lake Mead and Lake Powell.

Mountain snowpack evaporates

"In two weeks in April, we lost the equivalent of 14 feet of Lake Powell in snowpack," said Mulroy. "So it's a pretty daunting and disconcerting reality that we're beginning to get our heads around."

Mulroy is not alone. Across the United States, water managers are beginning to grapple with climate change. And it's changing the way they think about almost everything.

For the utilities that supply the nation's drinking water, one of the first casualties is the idea that the conditions of the past can predict the future, said David Behar, deputy to the assistant general manager for water at the San Francisco Public Utilities Commission.

"It's a game changer for water managers," he said. "It takes the variability that we understand, and can live with, and amplifies it by an order of magnitude."

For planners who are used to taking the long view -- constructing expensive infrastructure that's expected to last 30, 40, 50 years, or even longer -- climate change is changing their rules, introducing new and hard-to-define levels of risk.

"You have to plan decades ahead, in terms of water supply and source water needs," said Dan Hartnett, director of legislative affairs for the Association of Metropolitan Water Agencies. "It's too late if you wake up one morning and the tap runs dry."

A tale of tree rings and 'Sin City'

Walking along Las Vegas Boulevard, it's hard to believe Sin City is facing a water crisis. The dancing fountains at the Bellagio Hotel and Casino spring to life every half-hour, captivating tourists who gather to gawk.

The nearby Mirage features a lagoon complete with towering waterfalls and a fake volcano. And on a hot summer's day, visitors who find the scorching desert sun discomforting can still have their drinks outside at bars equipped with machines that cool the air with a fine mist.

But those are illusions. For Mulroy, it is Lake Mead that tells the tale of Las Vegas' water future. The reservoir's water level fell this summer to its lowest point since 1965, when officials diverted Colorado River flows to fill the newly constructed Lake Powell. By late August, Lake Mead's elevation hovered at just 1,092 feet above sea level.

Under the complex system of allotments that governs how Colorado River water is distributed to seven U.S. states and Mexico, that leaves just 17 feet of wiggle room before the Southern Nevada Water Authority must, by law, begin seeking alternate sources of water.

If the lake dips to 1,050 feet, the Hoover Dam's hydroelectric power plant will shut down and Las Vegas will have to begin weaning itself off the river. It's hard to tell how soon Lake Mead could hit this ominous milestone.

The pact that governs the Colorado's supply was negotiated early last century, one of the wettest periods in the past 1,200 years, based on climate records drawn from tree rings across the southwestern United States. Many scientists say it's nearly inevitable that the region will become drier, moving closer to the historical average.

Right now, the best climate models predict a drop of anywhere from 5 to 25 percent in the mountain runoff that supplies the Colorado by midcentury. But a recent study by researchers at the University of Colorado suggests that the decisions water managers

make can -- temporarily -- blunt the effects of climate change and continuing population growth.

Bigger mission looms for the wastewater patrol

Under the harshest scenario, in which climate change reduces the runoff that feeds the Colorado by 20 percent midcentury, water managers could cut the risk that the river's reservoirs would run dry by as much as one-third. But they would have to take aggressive steps to cut releases from Lake Mead and Lake Powell in times of drought.

"Until 2026 or 2027, the risk is pretty low ... something water managers can plan for," said the study's lead author, Balaji Rajagopalan, a hydroclimatologist. "But after 2027, through 2050 -- that's when the risk pretty much explodes."

Kevin Perry isn't thinking about the Colorado River's future as he deftly navigates Las Vegas' sprawling web of gated communities and fresh tract houses, symbols of the bygone '90s boom. He's looking for scofflaws.

Perry is part of the Las Vegas Valley Water District's wastewater patrol, looking for businesses and homeowners with sprinklers spraying the sidewalks and streets along with their plants, or evidence that a utility customer is violating the summer ban on midday watering.

The wastewater patrol, more than a decade old, is part of the Southern Nevada Water Authority's efforts to conserve water, which also include recycling wastewater that flows from household drains and a popular new program that pays customers to replace grass with less thirsty trees and plants.

"People like their landscapes to look like where they came from," he said. "They come from somewhere that's far greener, where rain takes care of their needs, and when they get here, they want to green it up."

But converting that greenery to something more appropriate for a city that gets an average of just 4.5 inches a year of precipitation comes with a price. The success of the turf removal program, combined with the local effects of the national economic recession, has reduced the utility's revenues at a time when climate change is prompting new investments in infrastructure.

Preparing the 'third straw'

The water authority has embarked on a massive construction project to build a new intake pipe to pull water from Lake Mead. Known locally as the "third straw," it will ensure the utility can siphon water if the lake level dips below an elevation of 1,000 feet, rendering two existing intakes useless.

SNWA is also seeking permission to build a controversial \$3.5 billion pipeline to transport groundwater from rural eastern Nevada, a plan that has drawn ire from ranchers and environmental groups and is currently tied up in court.

"Right now is the perfect storm," Mulroy said in late August. "You have a daunting drought in the Colorado River that is forcing us to spend \$800 million to build a third intake we never anticipated having to build, which is an excruciatingly difficult construction project. And you have connection charges that were 57 percent of the revenue for our capital funding plan that evaporated. And you have to balance the two, but you have to build the third intake. You don't have a choice ... not without endangering the community as a whole."

If a recent study by two water utility trade groups is correct, Las Vegas' spending could be just an opening wager in a game of climate change poker.

The report, by the Association of Metropolitan Water Agencies and the National Association of Clean Water Agencies, estimates that the United States' drinking water and wastewater utilities will spend \$448 billion to \$944 billion between now and 2050 to adapt their infrastructure and operations to cope with the shifting climate. This estimate, large as it is, doesn't include big societal costs likely to spring from climate-induced changes to the nation's water supply, including impacts on ecosystems and public health.

Living with uncertainty

While the fate of America's energy and transportation systems has dominated the country's climate debate, water utilities have begun making their case on Capitol Hill and in academic circles. "Water utilities, right now, feel like we're going to be among the first sectors affected by climate change," said Marc Waage, manager of water resource planning at Denver Water.

Just two years after AMWA's climate committee met for the first time, between a fifth and a quarter of the group's members serve on the panel. Utilities joining in the climate discussion run the gamut from rural to urban, small to large, east to west, said Erica Brown, AMWA's director of regulatory affairs and scientific program development.

Their concerns range from climate-driven drought to an increase in extreme rainstorms that can overwhelm sewers and impair water quality. "In places like Arkansas, politically, people might not want to talk about climate change," she said, "but you talk to our members there and they say, 'Yeah, we see changes in our watershed. We're aware of this.'"

Meanwhile, a group of larger urban systems -- including Las Vegas, New York, Denver, Seattle and San Francisco -- has formed the Water Utility Climate Alliance. The group is less than 2 years old, and its members' general managers meet every three weeks via conference call as they pursue an aggressive research strategy. WUCA is finishing two white papers: one examining the latest science on how climate change will affect the water cycle, and a second that examines strategies for making decisions in the absence of precise information about what the future will look like.

Said Behar, the San Francisco water official who serves as WUCA's staff chairman, "We're not able to get as specific climate information as we'd like, but we still think that

we are facing a need to make decisions about infrastructure -- in some cases, expensive decisions about infrastructure -- in the context of uncertainty."

What that means is that some timeworn practices in the water business "have to be challenged," concluded Mulroy, Las Vegas' water chief. "I think it's a conversation for the country that's almost unavoidable. ... The worst case, as far as I'm concerned, is if we are surprised by the magnitude of climate change. We can't move fast enough."

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Regional News 11/28/09

Paying for water with power

by Ryan Randazzo
The Arizona Republic
[Linked here](#)

Salt River Project is the largest water supplier in the region, delivering the state's most precious resource from the Salt and Verde rivers to people in the Valley.

Delivering water, however, is not a lucrative business.

SRP lost more than \$33 million in its last fiscal year that ended in April providing water in the desert to farmers and the 10 cities across SRP territory.

That's the smallest loss in several years.

SRP has a financial crutch - electricity - that allows it to provide water for about one-fifth to one-third the actual cost, which benefits farmers and cities such as Phoenix that use the water.

Farmers and cities paid SRP \$14 million in water assessments in fiscal 2009, but it cost SRP \$47 million to deliver all the water. Electricity customers picked up the \$33 million difference.

SRP was set up to ensure a reliable water supply for the Valley, and the electricity it generated - at first as a side benefit - helped Arizona develop during the past 100 years. But use of power revenue to fill the gap between what it costs to deliver water and its price to customers is drawing more attention as SRP's electricity prices rise.

Some observers question the need to subsidize water, especially in a time of frequent electricity-rate increases. Also, they say, low prices encourage wasting water, and higher prices would prompt conservation.

Century-old policy Using electricity revenue to support water dates to 1909, when energy generated at the Roosevelt Dam first was sold to help pay off the dam.

Eventually, SRP took over operations at Roosevelt from the federal government and built three more dams downstream, all producing electricity and storing more water.

Without the ability to store water, and to sell electricity to pay for it, it is unlikely Arizona would have developed as it has, SRP officials said.

"There is a long history of the water side relying on the electricity," SRP Vice President David Rousseau said.

But SRP has raised electricity prices 12 times since 2002, four times for base prices and eight times for the cost of power-plant fuel.

The most recent base-price increase was offset by the declining price of natural gas that customers pay.

And SRP customers could see a recently postponed 11.4 percent electricity base-rate increase come up again this spring.

Paying for water SRP, actually a political subdivision of the state, contracts with a private entity, the Salt River Valley Water Users' Association, to manage its irrigation system. They essentially operate as one.

SRP is not set up to profit from providing water. Delivery is more of a public service to the landowners in its territory that have the water rights.

Last year, SRP residential electricity customers, who generate most of the revenue, paid an average of \$17.60 each for the cost of water delivery. Businesses paid an average of \$113.45 each, and industrial customers averaged \$892 to support water, according to SRP.

Over the past five years, all electricity customers combined paid, on average, \$200 each to fund water delivery.

SRP officials said in a written response to questions that they oppose describing electricity revenue as being used to support water operations. It gives an "incomplete" picture of the issue, they said.

Most of the money electricity customers pay goes toward their electrical service, and about 1.4 percent of the money from electricity customers funds water operations, according to SRP. In 2004, 3.9 percent of the revenue from electricity went to water operations.

The amount changes year to year depending on water-system expenses such as pumping groundwater and buying water from other providers, including the Central Arizona Project.

Not only was this financial arrangement laid out in a Reclamation Act amendment in 1906, but over the years, Congress, the Arizona Supreme Court and state Legislature all have acknowledged the concept of using one resource to pay for another, SRP lawyer Jane Alfano said.

"Over time, this concept became integral to all reclamation projects which generate electricity," she said.

Critics acknowledge how the concept helped the Valley grow but contend that the water users should no longer be supported by electricity.

"We object to the subsidy on behalf of electricity ratepayers," said Tim Hogan, executive director of the Arizona Center for Law in the Public Interest, which frequently questions the necessity of SRP's electricity rate increases.

"It makes no sense to me to take water - what SRP continually tells us is our most precious resource - and subsidize it so people are encouraged to use more of it," he said.

Political decision SRP's management and political leaders decide the balance between the price of water and the price of electricity.

"The amount of contributions in aid of water is a fair target," SRP General Manager Richard Silverman said. "But you are getting into 100 years of how SRP is set up."

SRP is run by a board of 14 directors and a president and vice president who are elected by landowners in SRP territory. Silverman answers to those elected officials.

Landowners' votes are weighted depending how many acres they own.

That voting system gives an advantage to farmers who own large parcels of land. The SRP president, vice president and several board members come from farming families.

Low water prices benefit everyone, not just farmers, SRP officials said.

SRP delivers raw water to cities that treat it and deliver it to their residents for a fee, and those fees are lower thanks to the support from electricity.

The average electric bill for SRP home and apartment customers is about \$130 a month, while the average single-family home in Phoenix pays about \$30 a month for water, not including wastewater, solid-waste disposal and other charges on those bills from the city.

Whenever SRP raises electricity rates, it usually raises water assessments by the same percentage, Silverman said. But even with recent rate hikes, the water rates are not covering expenses.

Hogan said water users, including farmers, should pay the full price for their water and not be subsidized by electricity customers.

"This is irrigation water," Hogan said. "Who is going to stop taking irrigation water? It's so cheap, you could easily recover that (cost) from water users and it won't be a huge leap."

Conservation at issue SRP charges more money for electricity during certain times to encourage customers to conserve power. But Silverman said that charging more for water deliveries would not encourage people to conserve water.

He said that wouldn't work because the cities already mark up the price of water so much from SRP's rates.

For example, SRP provides water for about \$14 an acre-foot (325,851 gallons). The city of Phoenix treats the raw water and prices it at about \$867 to \$1,377 an acre-foot.

The city charges much more because it must treat and deliver the water, and build and maintain all the equipment that requires.

The cost of raw water from SRP and the Central Arizona Project is less than 10 percent of the expense of the city's water operations, said Steve Rossi, Phoenix's principal water-resources planner.

"The raw water from SRP is not a consequential amount," he said. "If they have an increase in that, it is something that has to get pushed out in our capital budget."

SRP critics said that people living in the Valley need both power and water, and that paying the true price for resources encourages people to use only what they need.

"I see no justifiable reason for one class of customers - electric - to subsidize another class - water users," said Amanda Ormond, a former Arizona Energy Office director who runs a Tempe energy consultancy and ran unsuccessfully for a seat on the SRP board in 2008.

"Keeping water rates below their actual costs just encourages consumption of a precious resource," Ormond said. "This practice should have been discontinued long ago."

SRP promotes water-saving devices, including low-flow nozzles for washing restaurant dishes, and advertises conservation.

But SRP officials said that conservation, in fact, is not their responsibility.

"Water conservation is the responsibility of the cities," said John Sullivan, associate general manager of the SRP water group.

Sullivan said SRP has never tried to break even on water operations without money from the electricity business.

"It would be difficult," he said.

Silverman said that someday the water subsidies could be eliminated, given recent debates over SRP's electricity prices that caused postponement of a rate hike and the increased scrutiny on its budget.

"There could be a time in the future when that could occur," Silverman said. "Our obligation to support water is discretionary."

Regional News 12/02/09

Water, economy: Uncertainties delay farmers' planting plans

California Farm Bureau Federation

By Ron Miller

[Linked here](#)

How does a farmer make planting plans for next year when no one knows if or how much irrigation water will be available? And will the economy begin to grow again? As they await answers to those questions, farmers and ranchers all over California have put off making their crop plans as long as they can, hoping for some solid information about water allocations and the economy.

Mike Young farms in several Kern County locations and obtains most of his irrigation water from the State Water Project. He said he plans to wait as long as he can before he makes decisions about what to plant on his vacant land. He knows he needs to provide water to his permanent crops of cherries, pistachios and almonds, and has some well water.

"After three years of pumping, the quality of that water isn't that great," said Young, who is immediate past president of the Kern County Farm Bureau.

He said at this time of year, he usually negotiates for bank loans and contracts to grow crops on his vacant land, where he typically raises tomatoes, cucumbers and lettuce. But he said it's difficult to obtain a loan or a contract when lender and processor are not certain there will be water to produce a crop.

Other farmers face similar quandaries.

Fresno County Farm Bureau President Dan Errotabere said he has to make decisions now regarding fall planting of crops.

"Garlic is one," he said, "We're on drip irrigation now, so we can manage pretty well, but it's another year of heavy groundwater pumping that I'm a little concerned about."

Errotabere farms within the Westlands Water District, where farmers saw supplies from the federal Central Valley Project cut to just 10 percent of contract amounts this year.

He usually plants cantaloupes in the fall, but isn't certain he will have enough water this autumn. Ground preparation for planting tomatoes next spring needs to be done before rains come, to avoid trying to do the work in mud. He said he hopes he and other farmers on the CVP get a decent water allocation next season, so they can reduce groundwater use.

Errotabere said he hopes to maintain the same cropping pattern in 2010 as this past season but, he added, "that also includes 1,200 acres being fallowed," a third of his ground within the Westlands Water District.

"I hope it won't be that difficult again, but we're prepared if we have to fallow, we have to fallow," he said.

Merced County farmer Pat Borelli has about 120 acres of ground in the CVP service area. He's planted winter oats and hopes there is enough rain to get a crop without irrigation.

"That's about it," he said, "Last year, I worked the ground to plant cotton and then learned I wouldn't have enough water, so I planted 20 acres of beans," which require less water.

If there is water available, he said he could plant beans again after the oats are harvested, planting as late as June.

Merced County Farm Bureau President Peter Koch said the east side of the county has adequate water. Irrigation districts in that part of the county obtain water that does not have to go through the delta and thus avoids restrictions to protect endangered species.

Farmers in that region are able to plan now about how to use their ground next season.

San Diego County Farm Bureau Executive Director Eric Larson said farmers in his county are not planning any crop production expansion this year. He noted that part of the region's water supply comes from the Colorado River, "so it is a little more secure." However, with the weak economy farmers do not anticipate any demand increase.

Irrigation water in San Diego County is among the most expensive in the state. Farmers already know they will receive a 20 percent reduction in their allocation if they buy discounted water, and a 13 percent reduction if they purchase water priced at the regular rate.

Uncertainties about irrigation water supplies also exist in Northern California.

Rice farmer David Dumars, who farms in Yolo and Colusa counties, said he had to leave his land in Yolo County fallow last season because he had no irrigation water allocation. Although he raised a good crop on his Colusa County land, he said he's not certain what the water allocation for next year might be. That makes planning difficult.

Former Glenn County Farm Bureau President Mike Vereschagin also expressed concern about what irrigation water allocations might be for next year. As a member of the Orland-Artois Irrigation District board of directors, he reported that board has not

received any allocation information from the Central Valley Project. Vereschagin said he irrigated his prune and almond orchards last summer by supplementing surface water with water from wells on his land.

"Last year, I had a couple wells go dry," he said, adding that he and all farmers hope for a wet winter to help replenish diminishing groundwater supplies.

However, even a wet winter may not provide much added irrigation water in some regions, because of Endangered Species Act requirements. Those rules and resulting court decisions require operators of both state and federal water projects to reserve more water for delta smelt, salmon and other species.

Fresno County farmer and Westlands Water District spokesperson Sarah Woolf said, "The Bureau of Reclamation (which operates the CVP) has estimated that even with the heaviest rainfall, the highest numbers that we could get would be 40 percent of our water supply allocations."

That equals about 400,000 acre-feet and district farmers need about 750,000 to 800,000 acre-feet to be farming two-thirds of district ground, she said.

"We don't think even with record rainfall we could get anywhere near that," Woolf said.

The CVP said the water year started Oct. 1 with five key reservoirs at 39 percent capacity. The 4.4 million acre-feet available compares with the 15-year average for that time of 6.7 million acre feet, or 59 percent of capacity. That is better than the 3.9 million acre-feet in storage last Oct. 1 and far better than 1977—the driest year on record—when reservoirs held only 1.1 million acre-feet of water.

Woolf said the CVP historically announces its first water allocation about mid-February.

"However, in years past we've had a pretty good ability to guess the range of where the allocation may be, based on what was in the reservoirs and if we added rainfall to that," she said. "What is different this year is we are coming off a zero and then to a 10 percent water allocation."

She added that western San Joaquin Valley farmers know that, because of the regulatory limitations, regardless of what's in the reservoirs they could be at zero again.

North Coast counties have a different problem.

"Most of our farmers irrigate with well water," Humboldt County Farm Bureau Executive Director Katherine Ziemer said. The 35 to 40 inches of rain that the region receives in an average year replenishes the water table. And a dam on the Mad River, built in the 1960s by the Humboldt Bay Municipal Water District, creates Ruth Lake, which is currently overflowing with water.

Two pulp mills that used millions of gallons of water and provided 40 percent of the district's revenue closed. The district's urban and agricultural customers may see higher rates, as the district tries to cope with a 40 percent revenue loss.

Because of the reservoir location on the Mad River, there is no economical way to transport the water to dry locations elsewhere in the state.

(Ron Miller is a reporter for Ag Alert. He may be contacted at rmiller@cfbf.com.)

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Regional News 12/02/09

Court refuses to tell state to return CAP funds

By Howard Fischer
CAPITOL MEDIA SERVICES
[Linked here](#)

PHOENIX — The Arizona Supreme Court refused Tuesday to order the Legislature to give back money it took in Central Arizona Project funds.

Without comment, the justices rejected a plea by attorney Robert Lynch that the court rule the raids on funds of the Central Arizona Water Conservation District, which administers CAP operations, were illegal. Lynch argued the cash was legally off-limits to lawmakers.

Tuesday's move does not end the matter. It leaves Lynch and the CAWCD board with the option to try again, this time filing the case at the bottom of the legal system, in Maricopa County Superior Court, rather than with a direct claim to the state's top court.

Lynch said the board has not yet decided what to do next.

Lawmakers took a total of \$13.9 million from the district to balance both prior and current state budgets. Lynch, however, asked the high court only for the return of the most recent \$5.4 million taken, as lawmakers had already spent the other cash.

The money at issue actually was part of the money Arizona is getting from Nevada in exchange for being able to use some of Arizona's share of Colorado River water that this state does not need but Nevada needs now and will for years to come.

The cash, said Lynch, is supposed to be used for Arizona to "bank" its excess allocation, above and beyond what both states now need, in underground storage. The idea is to be able to tap those supplies in future years when demand in Arizona exceeds our allocation of Colorado River water.

Lynch said those dollars are being held in trust and, therefore, are off-limits to a legislative raid. Legal issues aside, he said lawmakers, in taking those funds, could leave the state short of the water it needs in the future.

LR in the News 12/12/09

Salazar calls for more Grand Canyon flooding

by Felicia Fonseca
Associated Press Writer
December 12, 2009 12:00AM

FLAGSTAFF, Ariz. - Interior Secretary Ken Salazar is calling for more humanmade floods to be released from Glen Canyon Dam into the Colorado River in an effort to protect wildlife and archaeological sites.

The flooding builds up sandbars and beaches along a 277-mile stretch of the river as it runs through the Grand Canyon. Salazar announced this week that his department would head up an effort to determine when and how high-flow experiments should be conducted.

"We must find a way to protect one of the world's most treasured landscapes - the Grand Canyon - while meeting water and clean energy needs in the face of climate change," Salazar said in a video message to the Colorado River Water Users Association in Las Vegas this week.

The operation of the dam built more than 40 years ago has been controversial.

Since 1963, Glen Canyon Dam has blocked 90 percent of the sediment that provides habitat for plants and animals, beaches for campers and river runners and helped protect archaeological sites from erosion from the downstream Colorado. Several endangered species of fish have declined in numbers.

Environmentalists have decried the high-flow experiments as meaningless without a plan for more steady flows and say the flooding better serves the interests of hydropower than natural resources.

The last high-flow experiment in 2008 sent torrents of water from the dam on the Arizona-Utah line for 60 hours to mimic natural flooding. The results were short-lived, though, and newly built-up sandbars eroded within months.

Compounding the erosion is the practice of sending more water through the dam in the daytime to maximize power generation, then trimming output at night.

The sediment provides a habitat for plants and animals, builds beaches for campers and river runners, and helps protect archaeological sites from erosion and weathering.

John Weisheit, conservation director for the Moab, Utah-based conservation group Living Rivers, said the plan won't work. Aside from getting rid of the dam, the next best thing would be to adjust the flows from the dam to restore the once muddy and warm river that was an ideal habitat, he said.

Salazar must determine if the Grand Canyon or "a few kilowatt hours" is more important, Weisheit said.

The plan for high flows would be developed partly on reports from the U.S. Geological Survey on the effects of the 2008 flood due out next month.

Salazar said high flows could be triggered partly by the sediment deposited when tributaries of the Colorado River downstream from the dam flood. That happens on average every one to two years, said John Hammill, chief of the USGS's Grand Canyon Monitoring and Research Center.

At that rate, it could take more than 30 years to build up sediment to levels existing before the dam was constructed, Hammill said. Keeping flows as low as possible after a manmade flood would help conserve the sandbars, but that flow regime would cut the amount of hydropower produced from the dam, he said.

"Finding that balance has always been a difficult task," he said.

Regional News 12/12/09

Judge rules against landmark 2003 state water pact

If the tentative ruling is upheld, the agreement aimed at reducing California's reliance on Colorado River water would be voided.

By Bettina Boxall

[Link to story](#)

A state judge appears poised to throw out a landmark pact involving California's use of Colorado River water.

If upheld, Thursday's tentative ruling by a Sacramento County Superior Court judge would unravel a complex 2003 agreement that put the state on a timetable to reduce its reliance on the Colorado River.

Brokered by federal, state and regional officials, the deal also established a program of farm-to-city water sales that are playing a growing role in Southern California's water supply.

"It's very serious," said Jeffrey Kightlinger, general manager of the Metropolitan Water District of Southern California. "There will be appeals. It's going to be some time before we know what it all means and what the impact is."

Ironically, the action comes in a case in which Judge Roland L. Candee was asked to validate the agreement.

Examining the 13 contracts that make up the deal, Candee focused on those involving a state commitment to help fund restoration of the Salton Sea in Imperial County.

The judge concluded that the language amounted to a blank check in which the state was promising to fund restoration, even if it cost billions. Such an open-ended pledge, Candee found, violated the state Constitution.

"The court has no ability to sanction a way to contract around the Constitution," the 27-page ruling states. "It is clear to this court that if this contract language is validated, executive agencies of the state can contract for amounts well over the constitutional debt limit."

Concluding that all the agreements were linked, he invalidated the other contracts as well, even though he seemed to have no quibble with them.

"It certainly was not what we expected," said Kevin Kelley, spokesman for the Imperial Irrigation District, which launched the court action. "While it's clearly a cause for concern in the Imperial Valley, it's also of great concern to Southern California."

Candee set a Dec. 17 hearing for arguments on his tentative ruling, and water officials said this week's opinion was not the final word. "It is not the end of the story," said Dennis Cushman, assistant general manager of the San Diego County Water Authority. "The water is continuing to flow."

San Diego is one of the major beneficiaries of the 2003 agreement, which allows the water-rich Imperial district to sell some of its Colorado River supplies to the authority. Combined with another arrangement, the San Diego region this year is getting nearly a quarter of its supplies through transfers under the accord. Those water sales are scheduled to increase over the years.

The transfers and Salton Sea restoration are intended to help lessen California's dependence on the Colorado River.

For decades the state took more than its legal allotment in the form of surplus deliveries. It agreed to phase out that surplus use over a period of years to free up supplies for other states on the river.

The pact also called for the state to help pick up the tab for restoration of the Salton Sea, an important stop for migrating waterfowl that is fed by irrigation runoff. The water transfers will eventually decrease that runoff, raising the salinity of the sea and compounding its environmental problems.

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OpEd 12/27/09

State of water depends on the Colorado River

Las Vegas Sun

Pat Mulroy

Sunday, Dec. 27, 2009 | 2:01 a.m.

[Linked here](#)

In the coming decade our primary water source, the Colorado River, will have more years with less water than years with more water. Still, I'm optimistic that Las Vegas will be ready for whatever nature throws our way.

If the drought gets very severe in the Colorado River Basin, water should become a national topic, and we'll be talking about retooling the nation's water supply as a whole. A lot depends on whether there's a larger national solution or if Southern Nevada has to take care of itself.

By 2020 I think we will have developed partnerships with Mexican entities for desalination plants and exchanging water on the Colorado River.

As far as the pipeline to bring water from Northern Nevada to Southern Nevada, you tell me what the hydrology in the Snake Valley Basin looks like in 2020 and I'll tell you if we're going there. If Southern Nevada has to fend for itself, I think we'll have no choice but to develop that water supply. We can't desalt our way out of this problem; the solution has to be larger and more dramatic.

As long as water supplies on the Colorado River stay relatively stable, Southern Nevada has lots of opportunities for water exchanges and desalination. But if climate scientists' worst-case scenario on the Colorado River were to materialize and lake levels were to drop significantly, this conversation would change dramatically.

If we see a real downturn in the hydrology, then I'm not sure we have a choice but to begin pursuing the in-state pipeline.

We'll have our third intake at Lake Mead finished in 2013, and that will give us access to better-quality lake water for most of the next decade. Plus, the chances are pretty high that the lake will drop below the level of our two existing intakes, so the third intake will guarantee our access to water for the foreseeable future, barring some catastrophic event.

Water quality is going to continue to be important. Right now we have top-of-the-line treatment facilities. Very few places do this level of treatment on water. But we're not going to keep every little thing out of the water all the time. The desire of some groups to have water with absolutely nothing in it is going to run afoul of available technology. We can't use reverse-osmosis to treat every drop of water that comes into this community. It would cost billions of dollars of investment and it wouldn't mean a drop more water or impact public health.

Regardless, water prices are going to go up gradually in the next 10 years. They have to. I don't know how you avoid it. Whether it's desalination or new water treatment technology or increased conservation, you're going to see prices gradually nudge up.

I think we'll continue to see more conservation. I think the community would resist stricter rules on turf, but there's still a lot of unnecessary turf that can be removed and lots of improvements that can be made. Irrigation technology is going to improve, allowing us to use less water to maintain landscaping in a desert environment. And I see the green building community coming around to crediting us for our water recycling program instead of pushing gray water systems, which don't create a single new drop of water. The only way I see us having to enact more stringent conservation measures would be in case of a resource crisis.

Ten years is a very long time, and I've seen lots of changes occur within a 10-year period, so I think a lot hinges on whether or not the hydrology in the basins really gets bad.

Pat Mulroy is the general manager of the Southern Nevada Water Authority.

Regional News 01/04/10

Energy Alley a special series by the Grand Junction Sentinel

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LR Press Release 01/08/10

Protest Hearings on Water for Nuclear Reactor to be Held January 12 in Green River, Utah

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FOR IMMEDIATE RELEASE

January 7, 2010

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Protest Hearings on Water for Nuclear Reactor to be Held January 12 in Green River, Utah

On January 12, 2010, the Utah Division of Water Rights will hold hearings on the protests of the withdrawal of water from the Green River for a proposed nuclear power plant a few miles west of the City of Green River, Utah. The hearings start at 9:00 a.m. at the John Wesley Powell Museum, 1765 East Main, Green River, Utah.

Living Rivers (LR) and Uranium Watch (UW), along with individuals, organizations, and government representatives will participate in the hearings as parties. The parties include the Grand County Council, U.S. Fish and Wildlife Service (USFWS), Green River ranchers and farmers and a river recreation company, Grand County citizens, Red Rock Forests, HEAL Utah, Center for Biological Diversity, the Uintah Water Conservancy District, Utah Rivers Council, and the Sierra Club.

The hearings will consider the applications by the Kane County and San Juan County Water Conservancy Districts to change the use, place of use, and points of diversion for 53,600 acre feet of water (about 47 million gallons per day) for the reactor planned by

Blue Castle Holdings, Inc. (formerly Transition Power Development LLC). Blue Castle Holdings Inc. (BCH) intends to site the reactor on Utah School and Institutional Trust Lands Administration land that has been leased to Emery County for an industrial park. Although BCH news releases (www.bluecastleproject.com) state that BCH owns the proposed site, BCH has not purchased the land.

The requirements for approval of an application for a new appropriation or a change are found at Utah Code 73-3-8:

http://le.utah.gov/~code/TITLE73/htm/73_03_000800.htm

According to Section 73-3-8, it shall be the duty of the state engineer to approve an application if:

- There is unappropriated water in the proposed source.
- The proposed use will not impair existing rights.
- The proposed use will not interfere with the more beneficial use of the water.
- The proposed plan is physically feasible.
- The proposed plan is economically feasible.
- The proposed plan will not be detrimental to the public welfare.
- The applicant has the financial ability to complete the proposed works.
- The application was filed in good faith and not for purposes of speculation or monopoly.
- The appropriation will not unreasonably affect public recreation.
- The appropriation will not unreasonably affect the natural stream environment.

BCH seeks to accumulate assets, including rights to water in the Green River, in order to develop a "shovel ready" site. There is no information available about who would construct and operate the reactor, where the billions of dollars necessary for such a project would come from, who would purchase the electricity, who would use the electricity, or how, exactly, this very complex project would come together.

Sarah Fields of Uranium Watch says, "This is clearly a speculative venture, which is not permitted when water is appropriated for use in Utah."

There are serious questions about whether the proposed plan is physically and economically feasible. The applicant is supposed to have the financial ability to complete the proposed works; but at this time, the entity that would build and run the proposed reactor is not known. For some reason the DWR has not requested additional information, nor initiated a study of the impacts of the withdrawal of the water to supply the operational and safety related needs of the reactor.

The use of the water would impair existing rights on the Green River, impact public recreation, and damage the natural stream environment. In a time of increasing water scarcity, the availability of water and negative impacts to the endangered and threatened fish species are primary considerations. The USFWS, Center for Biological Diversity, Western Resource Advocates and others are concerned that reducing water quantity and water quality in the Green River will significantly diminish habitat for endangered species and cause three threatened species to be listed as endangered. WRA is a member of the Upper Colorado River Endangered Fish Recovery Program. The program is a collaborative effort with members from four states, federal agencies, and representatives from water users and conservation groups. WRA has requested that the DWR deny the applications or postpone any decision until DWR develops

modeling related to the impacts of the potential depletions on Recovery Flows for endangered and threatened fish in the Upper Colorado River Basin.

John Weisheit of Living Rivers, says, "The Colorado River basin has no water to give anymore. Climate change has already depleted the streamflow of the Colorado River from 15 to 14.1 million acre-feet, and by mid-century streamflow may be a mere 12 million acre-feet."

UW and LR are concerned about the lack of data and information in the applications. The DWR and the public have not been given any of the financial and environmental information that is necessary for the State Engineer to make informed decisions regarding the significant regional impacts of this proposal.

More information: <http://www.uraniumwatch.org/bluecastle.htm>

To read the latest document on climate change and the Colorado River, please visit these sites:

http://www.colorado.edu/current_projects/CO_River/rcn_strmflw_corvr.html

[Hydrology and climate journals](#)

<http://www.onthecolorado.com/resources.cfm?mode=section&id=Hydrology%20I>

Regional News 01/19/10

Water experts cautious on CAP

Tony Davis Arizona Daily Star
Tuesday, January 19, 2010 12:00 am
[Linked here](#)

Arizona could face its first Central Arizona Project shortage in 2012, CAP officials said two weeks ago, if this year's Colorado River flows into Lake Powell are as low as forecast - 78 percent of normal - and if next year's river flows are also low.

The shortage would take away less than one-fifth of the CAP's supply, and wouldn't affect cities such as Tucson except for water that the city now sinks into basins for recharge. Full-fledged municipal CAP shortages aren't forecast until 2025.

The Star interviewed six water experts about how people and governments in Arizona are likely to respond to the threat of a shortage:

1. Chris Avery, chief water counsel, city of Tucson: "It will not cause any major changes at the city level. A shortage was much more likely in spring 2006 when Lake Powell was at 33 percent full. We've been trying to make sure that our Colorado River allocation is protected from shortage, so when a shortage hits municipal and industrial users, at that point we are hoping we have enough water stored in the ground in our active

management area to have a backup available. ... We've been concerned about a shortage for a long time. Nobody has been asleep on the wheel on Colorado River issues." 2. Bruce Gungle, Tucson environmentalist, member of city/county Water and Wastewater Study Oversight Committee and a Pima County planning and zoning commissioner: "The committee felt fairly comfortable with Tucson Water's actions on behalf of the community. ... I think it would be premature to act on more aggressive conservation measures. The steps they are asking at this time, given what we know, are adequate. We need to see how things unfold before further steps are taken."

3. Tom McCann, assistant general manager for operations, planning and engineering for the Central Arizona Project: "I would suspect that the type of shortage that we might face in 2012 would generate some media attention but would be unlikely to have any significant impact on municipal water use. ... The looming threat of shortage was not significant enough to stop the state from forcing the layoff of 47 employees at the Department of Water Resources on Jan. 7, more than 25 percent of the department's entire work force."

4. Herb Guenther, director, Arizona Department of Water Resources: "It's something we've been preparing for for some time. We knew that either because of continued overuse, since the Colorado River was overappropriated, and as the Upper Basin grows into their authorized use ... that the water is not going to be there. Based upon the dendrochronology of the tree rings, there will be extended periods of drought we haven't seen in modern history. A shortage in 2012 would be a reminder of how fragile the system is, and we had better accelerate while we still have the opportunities to do initiatives to augment the system with weather modification and desalination."

5. Val Little, director, Water Conservation Alliance of Southern Arizona: "It's definitely already had an impact. I think there's a cumulative effect. Every time there is a newspaper article or a TV story about water levels or shortages, even though people don't understand the details, like a marketing campaign, it does register. Even before the recession started, we were seeing a steady ratcheting down of water use. We have a way to solve the problem. It is just going to cost a lot of money. When people start seeing the cost of desal (desalination), I think they will quickly turn to saying, 'OK, I will use a lot less.' "

6. Sharon Megdal, director, University of Arizona Water Resources Research Center: "I think it will have a significant impact on peoples' thoughts on water supply - that they understand that shortages are real, not something just talked about. Not long ago, people said, 'We know there will be shortages, but not this soon,' so it's earlier than people expected. I think it's important for people not to become alarmed about the magnitude of the shortage that could occur. We could end up having significant storms that help the runoff. But I think people have to be tuned into the fact that we are the lowest priority on the Colorado River and that has implications for us. People are trying to do something about it and stay ahead of the curve. People need to be vigilant. I think people are."

DID YOU KNOW

The Central Arizona Project is a 336-mile collection of pipelines and canals pumping Colorado River uphill from Lake Havasu, in Western Arizona, south and east to Tucson. Its supply is dependent in part on the storage levels in Lake Powell.

The CAP is expected to run short at times in part because the Colorado River is overallocated among seven states: Arizona, California, Colorado, Nevada, New Mexico, Wyoming and Utah.

If the river does run short, the CAP is last on the priority list for water deliveries from the river, under the 1968 law that authorized the \$3.6 billion project's construction.

Contact reporter Tony Davis at 806-7746 or tdavis@azstarnet.com

Regional News 01/20/10

Colorado pipeline proposal stirs water fears

Green River » Entrepreneur would tap flow before it reaches Utah.
By Brandon Loomis for The Salt Lake Tribune

[Linked here](#)

Seedskaadee National Wildlife Refuge, Wyo. » A big gulp of the little stream that splits these sagebrush prairies might take a \$3 billion detour across the Great Divide and into Colorado's bullish future.

It's one former Utah ranch boy's dream to build a 400-mile pipeline to water the booming Denver suburbs, and beyond to Pueblo, with the glacial and snowmelt waters that course through Wyoming's Green River.

In an audacious test of the Western axiom that water flows toward money, Fort Collins, Colo., entrepreneur Aaron Million wants to tap this Colorado River tributary just downstream from here and send it to faucets in neighborhoods that don't yet exist.

"We certainly don't want to impact the Green River," says Million, who spent his youthful summers shoveling mud to open and close flood-irrigation canals to his grandfather's melon farm in Green River, Utah.

His plan worries Utah and Wyoming officials, who don't dispute that Colorado has a legal right to the water under the Colorado River Compact. They never expected their neighbor to take its share from a river that they consider money in their water banks, but rather thought the diversion would come from the Colorado River to the south.

Million wants to sell up to 250,000 acre-feet, or 81 billion gallons, a year. It's enough to supply perhaps a quarter of Colorado's projected new needs if its population doubles to 10 million as predicted by 2050.

He insists it won't harm boating, fishing, four endangered Utah fish or other states' legal rights to Colorado River Basin flows. And here at Seedskaadee, he sees no reason why

two downstream diversion pipes -- on the river and in Flaming Gorge Reservoir -- should threaten a delicate and dying cottonwood oasis for eagles, ospreys and moose. Ripple effect » Up and down the watershed, doubters fear all of those resources and rights are at risk. They're flooding the U.S. Army Corps of Engineers with critical or skeptical comments as it reviews Million's pipeline proposal with a federal environmental impact statement.

"That river is so quickly impacted by [changing] water conditions," says Mark Forslund, a Heber City fly-fishing guide who has floated the Green here for a dozen years.

Unlike lower stretches, he says, the upper Green is shallow, with no holes to hide fish. When flows shrink in winter, fish die. In summer, the water gets hot.

These are conditions that steel the monstrous brown trout and make valiant fighters of the rainbows and native cutthroats, he says. Tinkering with flows from the Fontenelle Dam, above the refuge, could doom them.

The Corps of Engineers is reviewing Million's proposal to take water from just 200 yards downstream of the refuge boundary. Million now says he'll consider a diversion downstream in siltier waters below the city of Green River, Wyo.

Moving it lower is better, Seedskaadee Refuge Manager Carl Millegan says, but won't fully protect the refuge. Draining the river -- perhaps taking as much as half of its lowest winter flows -- will hinder fish migrations from Flaming Gorge. Kokanee salmon, a major source of nutrients for the refuge's other fish and birds, might not swim up to Fontenelle to spawn and die as they do now, he says.

"I can't see how they'd make it," he says while standing on a cutbank and watching one of the refuge's seven eagle nests on a tree across the ice.

Wherever the pipeline starts, Millegan fears, it could require adjusting Fontenelle Dam's releases and stemming spring floods that scour the riverbanks and help new cottonwoods sprout.

Millegan's view north across the sagebrush finds the ice-capped granite of the Wind River Range, source for both the river and uneasiness about its future. The glaciers there, including seven of the 10 largest in the American Rockies, are shrinking. It's just one reason scientists throughout the Colorado River Basin worry that climate changes will drop water levels well below what the states divvied up on paper with the 1922 compact.

"Whether you believe in climate change or not, every year around here is a struggle" for adequate flows, Millegan says. So far this winter's snowpack in the Winds is about half the historic average.

The glaciers have shrunk by a third or more since 1970, according to Craig Thompson, an associate professor of earth sciences and engineering at Western Wyoming Community College. He and faculty colleague Charlie Love, a geologist, have studied the glaciers since 1985.

The glaciers help maintain year-round flows, Thompson says, because they release meltwater late in the summer and fall, when winter snows are gone. When they disappear, he expects, the year-round supply for Denver or any other big pipe evaporates.

Corralling the river also could degrade municipal supplies here, Thompson says, because lower flows mean higher salinity in this mineral-rich valley. Water into money » All this for private gain?

At current Colorado water prices, Thompson figures the Million Conservation Resource group could make \$250 million a year on the water.

"It looks like a project where Million gets to turn millions into billions," he says, "and Wyoming gets to bear the impacts."

Million views his plan more like his great-grandfather might have, back when he built one of the river's earlier irrigation ditches.

"Water in the Western United States was developed privately, initially, by the farm and ranch and mining communities," he says. It wasn't until later that the federal government stepped in, he says. His pipeline is a return to the principle of private capital serving public demand.

"That's how America was built," Million says.

Utah has long expected the Green River would supply its remaining Colorado Basin right of about 400,000 acre-feet, Assistant State Engineer Matt Lindon said. Million's pipeline is a threat.

"That's less water that Utah has to deal with," Lindon says, noting the state already must let half of the river's water drift on to entitled states downstream.

The U.S. Bureau of Reclamation, which manages the river's reservoirs and dams, has told Million and the Corps of Engineers that there's not 250,000 acre-feet a year to spare in Flaming Gorge.

After reserving Wyoming's and Utah's remaining undeveloped water rights and providing mandated minimum flows for endangered pikeminnows, humpback chubs, bonytails and suckers, the agency has estimated the reservoir has 165,000 acre-feet to spare.

Government hydrologists are running new models to double-check that estimate, said Beverley Heffernan, environmental chief for the bureau's Provo office.

"We really think that that number is pretty close to the ballpark," she says. Penciling out » Million is unfazed.

He can build the pipeline with up to \$3 billion in private financing, he says, if he gets 140,000 acre-feet or more. Despite the loud and broad criticism -- including condemnation by the Green River and Laramie city councils in Wyoming -- Million

believes the project is on course. After all, he notes, Colorado has an absolute right to the water.

"We have found no fatal flaws," he says.

Million must show who will buy his water before the environmental review continues. His deadline to produce a list of users to the Corps of Engineers is today. He says he has that list ready, but critics wonder why anyone would sign on without a firm supply and rates in place.

To get a permit to alter wetlands, Million also will have to prove his plan jibes with the Clean Water Act. That means the corps must determine it's the least damaging plan that can reasonably meet the need. The corps is investigating that question, project manager Rena Brand says, and whether in fact Front Range growth is likely to require so much water.

University of Arizona law professor Robert Glennon sees many obstacles in Million's way, "not the least of which is the Rocky Mountains." Farmers and small towns in western Colorado won't want the Front Range to soak up all of Colorado's rights. Further political complications come from Front Range citizens and water districts who "won't want Aaron Million to hold all of the cards."

Glennon's 2008 book, *Unquenchable: America's Water Crisis and What To Do About It*, groups Million with a host of grand-scheming "water alchemists" who, he writes, "gaze at the Mississippi River, the Columbia River, icebergs in Alaska, and rivers in British Columbia and wistfully imagine the problem is solved."

Still, he says, if Million secures real municipal and agricultural customers, the interstate compact's so-called "law of the river" is with him.

"Sometimes," Glennon says, "dreamers pull off their dreams."

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Colorado River Compact - annual water rights by 7 states and Mexico:

- » Mexico, 1.5 million acre-feet
- » California, 4.4 million acre-feet
- » Arizona, 2.85 million acre-feet
- » Nevada, 300 acre-feet
- » Colorado, 3.9 million acre-feet*
- » Utah, 1.7 million acre-feet*
- » Wyoming, 1 million acre-feet*
- » New Mexico, 850,000 acre-feet*

* = The amounts of water for the 4 states of the Upper Basin, which are estimates based on an annual percentage of shares for 7.5 million acre-feet, which nature has yet to produce. As of 2007, the upper basin annual average yield is presumed to be only 5.75 million acre-feet. Since Year 2000, this amount has decreased to about 5 million acre-feet.

Regional News 01/24/10

Green River nuclear power proposal sparks big questions

State water engineer must determine if plan is economically feasible.

By Christopher Smart

The Salt Lake Tribune

Salt Lake Tribune

Updated:01/24/2010 05:22:56 PM MST

A fledgling company's plan to build a 3,000 megawatt nuclear power plant near the Green River in eastern Utah is generating more questions than answers. What would happen to the spent nuclear fuel from the two-reactor plant proposed by Utah-based Blue Castle Holdings?

If the Utah Division of Water Rights deems there is enough water in the Green River for the plan, what happens to 50,000 acre feet of water required each year to cool it?

Who would get the electricity generated by the plant? And last, but not least, is the proposal economically feasible, or would it require federal loan guarantees and tax incentives? And are those means available?

Spent fuel » The spent fuel rods would remain at the proposed site, which is about 5 miles northwest of the small Emery County town that takes its name from the river that runs through it.

Should the Green River plant be built -- a fast-track scenario would put it online in 2020, although historically such projects have taken longer -- spent radioactive rods would be stored in dry casks on a 1.5-acre pad at the plant, said Blue Castle CEO Aaron Tilton.

Although the federal government has struggled for decades to establish a storage site at Yucca Mountain, Nev., it is questionable whether the controversial facility will ever open. The casks could be safely stored at the Green River plant for 100 years, say Blue Castle officials.

The waster's fate » Unlike some nuclear reactors, all the water that would be used annually by the plant -- equal to the capacity of East Canyon Reservoir -- would be given off as steam after cooling the nuclear reactor.

It's unknown as this point which of five reactor designs certified by the federal Nuclear Regulatory Commission would be built by Blue Castle. Some of those designs return heated water to its source.

John Flitton, an attorney representing HEAL Utah, an environmental organization protesting the state water application, argues that 50,000 acre feet is a significant amount for arid Utah and not the best of use of a resource that already may be over-allocated.

Flitton is among dozens of individuals and organizations, including the U.S. Fish and Wildlife Service and the federal Bureau of Reclamation, that are protesting the proposed water diversion.

During 2002, the Green River's second-driest year on record, the proposed 50,000 acre feet would have been equivalent to 10 percent of the river's total flow. But in an average year, the volume required for the plant would be less than 2 percent of the river's water. (An acre foot --- 365,000 gallons -- is enough to supply two typical households for one year.)

During dry years, there may not be enough Green River water to go around, Flitton said. "For water users up and down the Green River, it's not a pretty picture."

But Blue Castle officials counter that 2002 was a "once-in-100-years" occurrence and a planned 2,000-acre foot reservoir on site would mitigate such shortfalls. The planned lifetime of the reactors is 40 to 60 years, after which they would be dismantled.

Construction of the plant depends, at least initially, on whether the Utah Division of Water Rights approves diversion applications by Kane and San Juan counties, which have agreed to lease water to Blue Castle.

"It's one of the very most complicated applications the state engineer will ever work on," said John Mann, assistant state water engineer.

Paying for the plant » The decision hinges on criteria beyond how much of the Green River is already allocated for other water rights or potential environmental impacts. Among them, according to Utah law, is whether the project is economically feasible.

That goes to potential investors and where the electricity would be sold. Presently, Tilton concedes, none of the plant's \$16 billion to \$20 billion construction cost is in hand. Rather, Blue Castle plans to secure the Green River water, then obtain a license from the NRC before it begins to raise money to build the plant.

Nils Diaz, a former chairman of the NRC and a minor stake holder in Blue Castle, said the "step-by-step process" is necessary to reduce financial risk for investors. "No major financial commitments will be made without a [NRC] license."

The issue is further complicated, however, by the fact that Utah law disallows water diversions "for purposes of speculation." That means the state water engineer must

determine whether Blue Castle's multi-faceted, 10- to 20-year business plan makes financial sense in a growing and shifting energy market.

"Some of this stuff is on the subjective side," Mann conceded.

But Jerry Olds, a former state water engineer who is now a consultant for Blue Castle, said the Division of Water Rights does not have to prove beyond a reasonable doubt that the nuclear plant is financially viable.

But rather, "Is it reasonable to believe the applicants have the ability to move the project forward?" Blue Castle officials are optimistic, according to Diaz, because nuclear power plants "are big money makers" and a streamlined NRC licensing process makes them more advantageous for investors.

Supply and demand » The West will be in need of new power sources in the coming decades, Blue Castle officials say. They plan to sell up to 50 percent of the electricity in Utah.

Nuclear power will be at the forefront of the nation's power base, they say, because it doesn't put CO2 into the atmosphere, like coal-fired plants.

Nonetheless, Diaz conceded that the upfront capital cost has to be overcome.

Those construction costs could keep Blue Castle from becoming a reality, said Christopher Paine, nuclear program director at the National Resources Defense Council. Like other nuclear power projects, the huge expense and risks mean banks and other private investors likely won't buy in. That leaves taxpayers to underwrite the plant in federal loan guarantees.

Selling electricity in the West is competitive, Paine noted, because there are many sources, including hydro power.

And the future will include power from wind, solar and geothermal plants.

"It sounds like a high-risk project if they're counting on [electricity] sales in a competitive market," he said of the Blue Castle project. "If federal loan guarantees are not available, it's going nowhere."

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OpEd 01/25/10

Big Gulp

Forget the Green River pipeline

Tribune Editorial

Salt Lake Tribune

Updated:01/25/2010 05:28:32 PM MST

[Linked here](#)

A guy named Million wants to spend billions to pipe part of Wyoming's Green River 400 miles to Denver and beyond. But as global warming threatens the flows in the Green, it would be foolhardy to suck great gulps of water from the stream. To sustain both wildlife and humans, the waters should be left alone.

Aaron Million's idea is to pull up to 250,000 acre-feet of water annually from the Green at two points. One would be Flaming Gorge reservoir, the other would be a point upstream, perhaps just below the Seedskeadee National Wildlife Refuge in Wyoming or maybe closer to the town of Green River (Wyoming, not Utah). He would develop the water with \$3 billion in private funds, then sell it to thirsty Coloradans in the suburbs of Denver and points south. Many of these folks may not live there now, but the population of Colorado is projected to double to 10 million by 2050, so Million is sure the water will be needed. It's a variation on "if you build it, they will come."

Colorado is entitled to develop the water within its allocation under the Colorado River Compact of 1922 and succeeding laws of the river.

It's a scheme worthy of William Mulholland, the engineer who ravaged Southern California water resources for the City of Los Angeles early in the 20th century. But today such thinking is outdated, or at least it should be. One reason is that everyone has seen the environmental devastation in the Owens Valley and elsewhere created by Mulholland's projects and others like it.

The Green is fed by the snows and glaciers of the Wind River range, but those glaciers are shrinking. When they're gone, the winter flows of the river will fall, placing greater pressure on the fish, birds and other wildlife that rely on the river and on the humans who use it, including folks from Green River, Wyo., to Green River, Utah, and farther south to Las Vegas and Los Angeles.

The Colorado River Compact allocates the water in the river, and while it is true that portions of Utah's and Colorado's allocations remain undeveloped, it is doubtful that they should be. The reason is that the compact allocations were based on a historically wet cycle in the river, and it is improbable that the river can supply all of the water that has been allocated, particularly in light of climate change.

So the more sensible thing to do is for the people of the West to better adapt to their arid environment and use less water.

Developing ways to pipe water that probably won't be there in the future just doesn't make sense.

Regional News 02/11/10

Arizona quits Western climate endeavor

by Shaun McKinnon - Feb. 11, 2010 12:00 AM
The Arizona Republic

Arizona will no longer participate in a groundbreaking attempt to limit greenhouse-gas emissions across the West, a change in policy by Gov. Jan Brewer that will include a review of all the state's efforts to combat climate change.

Brewer stopped short of pulling Arizona out of the multistate coalition that plans to regulate greenhouse gases starting in 2012. But she made it clear in an executive order that Arizona will not endorse the emission-control plan or any program that could raise costs for consumers and businesses.

State officials said the policy shift was rooted in concerns that the controversial emissions plan would slow the state's economic recovery. Brewer says the state should focus less on regulations and more on renewable energy and investments by businesses that can create green jobs.

The governor also ordered the Arizona Department of Environmental Quality to take another look at stricter vehicle-emissions rules set to take effect in 2012. Automakers said the rules, based on those adopted by California, would raise the cost of a new car significantly.

The governor's order is another blow to the Western Climate Initiative, a group of seven states and four Canadian provinces that joined forces in 2007 after growing impatient with the federal government to address climate change.

The coalition agreed to implement a regional "cap and trade" system, which limits how much pollution companies can emit, then allows them to buy and sell pollution credits.

Supporters say the system lets the marketplace make polluting more costly, encouraging emitters - factories, power plants and others - to clean up more quickly. So far, California is the only U.S. state in the Western coalition prepared to start the program on schedule in January 2012. The recession and political opposition has slowed legislation to implement the rules in other states.

The Western group is one of several state-led coalitions formed to regulate greenhouse gases. A group of Northeastern states is in the second year of its cap-and-trade system, one that only regulates electric utilities.

A federal plan has stalled in the Senate and is unlikely to move anytime soon. Arizona's chief environmental regulator said Brewer's order, which was signed last week without fanfare, should be seen as a step forward in Arizona's attempts to foster renewable energy and green jobs.

"Arizona needs a green-and-grow approach rather than a cap-and-trade approach," ADEQ Director Benjamin Grumbles said. "We can make environmental and economic progress, and we can do it by staying engaged and creating green-job opportunities."

Brewer ordered the state to continue converting its vehicle fleet so that by January 2012, all vehicles used by the state are hybrids, meet low greenhouse-gas emission standards or use some form of alternative fuel.

The governor also said Arizona can remain active with the Western coalition by exploring policies related to solar power and other renewable energy sources, growth policies that limit pollution or steps to adapt to the changing climate.

"It's very important for the state to stay engaged, to be at the table, but it's also important to convey clearly our position on how to make progress," Grumbles said.

"Right now, given the economic downturn, given the complexity of the cap-and-trade scheme being developed, we're not going to be supportive of it."

Arizona joined the effort under its previous governor, Janet Napolitano. The states involved agreed to the cap-and-trade idea, but each would have to implement the rules at its own state level.

Brewer said legislative approval would be required for Arizona to participate in the regional cap-and-trade plan. The Legislature has attempted several times to dismantle the state's climate-change programs and forbid its participation in the cap-and-trade system. Leaders said Wednesday that lawmakers are unlikely to reconsider their positions.

"I do not believe they would," said Sen. Carolyn Allen, R-Scottsdale, a member of the Senate's Natural Resources, Infrastructure and Public Debt Committee. "But this Legislature is full of surprises."

Environmental groups expressed disappointment at Brewer's decision. Arizona had been a founding member of the Western climate group and had signed on to the cap-and-trade blueprint released in September 2008.

"I think it's embarrassing for the state of Arizona," said Sandy Bahr of the Sierra Club in Phoenix. "It demonstrates a real lack of understanding of how significant of a threat climate change is to the state. We ought to be standing at the front of the line to look at solutions."

Diane Brown, executive director of the advocacy group Arizona PIRG, said Arizona doesn't have to abandon other policies that could help reduce global-warming emissions, such as efforts to increase energy efficiency and reduce vehicle pollution.

"It is important for Arizona to remain at the table with colleagues in other Western states," she said. "A number of policies can still take place to reduce global-warming emissions and, in a state with increasing population, it's particularly important to get ahold of the situation."

Republic reporter Casey Newton contributed to this article.

Regional News 02/21/10

Abatti OK with no Quantification Settlement Agreement

By DAVID STEFFEN, Staff Writer
Imperial Valley Press Online
[Linked here](#)

Saturday, February 20, 2010 11:52 PM PST

Imperial Irrigation District Director Michael Abatti said he believes the Quantification Settlement Agreement drains district water at the benefit of the coastal cities.

He said he has no objections to Superior Court Judge Roland Candee's recent ruling that invalidates the QSA.

"If they want to call off the QSA, that's fine," Abatti said. "It should be less water, more money and for a shorter period of time."

Water users on the coast should and would accept higher water rates under any new water transfer, he said. He said desalination is another option at \$700 per acre-foot of water.

"They pay \$3 a gallon for gasoline, and they haven't stopped paying for that," he said.

Abatti said those who crafted the QSA would not be well-suited to prepare any future water transfers.

"They can't fix the problems with the same minds that created them," he said.

Abatti said the Imperial Valley needs to protect the water that it first began using when it brought water from the Colorado River to the Valley.

"We are kings on the river on our priorities and privileged rights with the law of the river," Abatti said in reference to the Imperial Valley. "We should respect those rights that were developed and fought for by our past generations and forefathers and defend those as my oath requires me to."

The Valley's claim to Colorado River water is the basis of his statement about "the kings of the river," he said.

"I consider ourselves the kings of the river because we have the biggest entitlement in California," he said.

Abatti said a lack of urban planning on the coast led the water agencies there to need more water and they should not impose on the Valley for it.

“The other parties brought this thing into the Valley with demands,” Abatti said about the 2003 QSA signing. “It was their lack of planning that resulted in a crisis of ours.”

Abatti also said he did not think the federal government would take over IID. He said he doubted the federal government would take over IID’s water rights, either.

“I don’t know if they could, as long as we’re beneficially using it, which we’ve been doing for the past 100 years,” Abatti said.

Demands were made in 2003 before the QSA was signed, Abatti said, and he cited documents from members of Congress about the matter. He said the big cities have been demanding the water.

“They’re demanding we give them resources to make them a better place, but at the same time we need to continue to grow and be a better place for it,” he said.

Among the positive uses of water would be renewable energy in the Valley, he said.

“Geothermal, solar — these need to be developed,” he said. “We’re a hotspot. It’s going to be good for the Imperial Valley’s economy and for the state and the West to meet their required mandates for renewable efforts.”

The QSA, while serving a beneficial purpose for the coastal cities, infringes on the Valley’s water rights, Abatti said.

“The QSA is a good deal for everyone outside Imperial County lines, but it’s a bad deal for everybody inside Imperial County lines,” he said.

>> Staff Writer David Steffen can be reached at 760-337-3452 or dsteffen@ivpressonline.com

Regional News 03/15/10

Research: Water imports no shield against drought

The fates of the Colorado, Arkansas river basins are intertwined, researchers find.

[Linked here](#)

By CHRIS WOODKA

THE PUEBLO CHIEFTAIN

Simply bringing water from the Colorado River to the Arkansas River basin in Colorado does not improve protection against drought.

The surprising finding was shared last week at the Arkansas Basin Roundtable by climate researchers from Western Water Assessment, a hybrid agency that combines Nation Oceanic and Atmospheric Administration and University of Colorado resources.

Western Water is studying future water projections for the Colorado Water Conservation Board.

“It has always been thought that if you are bringing in water from both sides of the Continental Divide, you have protection. That is not the case,” said Jeff Lukas, of Western Water. “While they vary from year to year, the dry years and wet years in both basins show a strong correlation.”

The two driest years on record in both basins were 1977 and 2002, and the record of imports into the Arkansas River basin bears out Lukas’ depiction of drought protection — or the lack of it. Other than 1987, when little water was brought over in the Fryingpan-Arkansas Project simply because there was no place to put it, 1977 and 2002 produced the least imported water for the Arkansas Valley. In other words, there wasn’t much water available on the other side of the mountains either.

In 1977, the Fry-Ark Project was just getting ramped up, and Lake Pueblo was still filling. Imports, however, dropped to just 11,400 acre-feet, or less than one-third of the typical year at the time because 1977 was the driest on record for the Western Slope.

In 2002, Fry-Ark flows through Boustead Tunnel totalled just 13,200 acre-feet, or about one-fourth of the long-term average. Basinwide, in 2002, imports totalled just half of the long-term average at 67,224 acre-feet, with projects like Twin Lakes, Homestake and Board of Water Works diversions pulling in every drop available.

The year 2002 was the driest on record for the Arkansas River basin, and second-driest on the Colorado River.

“We only have 104 years of data, but we can look at tree rings and see what happened in the past,” Lukas said.

The news doesn’t get any better when peering at those tree rings.

Scientists are able to correlate the width of bands in tree rings to climate conditions with some certainty, based on comparing the data gleaned from them to observed weather conditions in modern times.

The correlation is strongest, dead-on actually, for dry years.

In the past 500 years, the period of record for tree rings in both basins, there have been about eight annual droughts as severe as 1977 and 2002. All show both basins were equally affected.

“They’re showing the same extreme low-flow years,” Lukas said.

More ominous are long-term drought periods in Colorado, some lasting up to 60 years.

In the Arkansas River basin, the longest period of prolonged drought in recorded years was from the 1950s through the ’70s. While there were wet years and even drier years in the 1930s, the average was far below normal. By comparison, the 1980s and ’90s

were the wettest years since the 1910s and '20s, and the past decade has been relatively average.

The Colorado River basin as a whole — it stretches over seven states — saw its lowest recorded flow period in a century in the first decade of this century. However, its performance in Colorado has essentially mirrored the Arkansas River basin. While there is much more water available every year in the Colorado River basin, its wet and dry years come at the same time as the Arkansas River basin.

The tree-ring data show that has been true for 500 years. Worse than that, the recorded history of the basins has not produced a prolonged dry period like those seen in the past, Lukas said.

“From the past record, in the next 100 years, we should anticipate droughts of more severity,” Lukas said.

The trends observed by climate watchers are more than just scholarly pursuits. They have played a prominent place in real-world water decisions.

The Pueblo water board last year bought 27 percent of the shares on the Bessemer Ditch to reduce its reliance on transmountain water.

The water within the Arkansas River basin would not be subject to the same pressures as imports. California, Arizona and Nevada rely on Colorado River flows both for population and producing electricity, and Colorado water providers on the Front Range fear a call on the river.

Front Range water users have invested in studies aimed at projecting long-term climate trends to incorporate in their ongoing planning.

Entrepreneur Aaron Million has argued that the Upper Green River basin in Wyoming would provide a different climate cycle for Colorado to tap into in making the case for his proposed Flaming Gorge pipeline.

There is a large deal of uncertainty over future climate.

Nearly all climate models agree Colorado is headed into a warmer period in the next 50 years, a rise in average temperature of 4 degrees Fahrenheit, that will at least increase water demand.

The models cannot agree on the trend for precipitation — tracking them on a graph looks like a mess of multicolored spaghetti — because Colorado is located 1,000 miles from its primary water source, the Pacific Ocean, said Joe Barsugli, Lukas' colleague at Western Water.

Slight changes in the weather could mean big impacts on water, he added.

Overall, about 10 million acre-feet of water flow out of Colorado every year, while human diversions total about 5 million acre-feet.

In terms of precipitation, that equates to a total of 3 inches over the state's entire area. The average precipitation on the Eastern plains and foothills is between 14 and 20 inches, and twice that in the mountains. The rest of the water soaks into the ground, evaporates or is used by natural vegetation, Barsugli explained.

Barsugli showed worldwide models that indicated the past winter has been colder in nearly all of the United States, but warmer in almost every other part of the world. The past 40 years, globally, have been among the warmest on record and, yes, greenhouse gases are really increasing at alarming rates — whatever the cause.

Long-term warming will affect the quantity and quality of water that is available in Colorado, regardless of precipitation variability, he added.

"Climate change is much more variable in the local areas," Barsugli said, adding that a new assessment that will be published in the next few months is among the first to look at the Arkansas River basin. "You have to look at the bigger picture, but there is not one correct climate model. It's important to compare the models."

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LR in the News 04/09/10

Utah's first N-plant won't float without water rights

By Rachel Waldholz
Salt Lake Tribune

The former uranium boomtown of Green River sits along I-70 in eastern Utah, 100 miles from the closest city. Now it may become the Western outpost of America's nascent nuclear renaissance. Blue Castle Holdings, a three-year-old, politically connected startup, wants to build a nuclear power plant there -- Utah's first, and the first in the West since 1987.

Nuclear power has recently gained cachet -- and the backing of the Obama administration -- for its potential to help avert climate change. Nuclear generation emits a fraction of the greenhouse gases of coal or natural gas generation, and provides a steadier energy supply, at a larger scale, than solar or wind arrays. In January, President Obama made nuclear power the center of his "clean energy" agenda in his State of the Union speech. Two days later, he announced a commission to study nuclear waste solutions, and proposed tripling federal loan guarantees for new plants to \$54 billion.

The Green River proposal has sparked intense skepticism. Critics ask where the funding will come from, where the electricity will go, and, of course, what will happen to the waste. But the first hurdle is more immediate. In the Utah desert, this possible climate change solution is colliding with one of its projected consequences: water scarcity.

Blue Castle needs some 50,000 acre-feet annually -- enough water to supply up to 100,000 homes -- to cool the reactors of its proposed 3,000-megawatt plant, which would produce enough electricity to power nearly 3 million households. In 2007, the company struck a deal to lease 53,600 acre-feet from Utah's San Juan and Kane counties, which are about 150 miles south of the proposed reactor site. Blue Castle has applied to move the counties' diversion points upstream, onto the Green River, from their current locations on the San Juan River and Lake Powell. Aaron Tilton, Blue Castle's CEO and a former Utah state legislator, believes the Green, the Colorado's major tributary, has enough water for the project; in an average year, he says, the plant would lower the river by less than 2 inches.

But the plan has drawn protests from local farm, health and recreation interests, environmental groups, the U.S. Fish and Wildlife Service and the Bureau of Reclamation. "Our main concern is that the water really isn't there," says John Weisheit, conservation director of the nonprofit Living Rivers in Moab. A 2009 study by the National Oceanic and Atmospheric Administration cites estimates that over the next 50 years, the Colorado River system could lose between 6 and 20 percent of its total volume to climate change-induced drought. Fish and Wildlife, the BOR and the Utah Division of Water Resources want the state engineer to wait for the results of several studies on future water levels in the Green River and across the Colorado Basin before allocating any more rights.

If more water is taken from the river, the agencies may not be able to keep stream flow high enough to protect several species of rare and endangered fish, says Wayne Pullan of Reclamation's Provo office.

And if the Green River drops, Blue Castle would have early rights to what remains: While San Juan's rights are junior (2001), Kane County has 1964 rights to 29,600 acre-feet. That places it ahead of many rights holders, including Reclamation's Central Utah Project, which supplies water to much of the Wasatch Front. Pullan says that in a drought, calls from such senior rights could short the project's users, including Salt Lake City.

This is part of a much larger tangle. If Utah develops just 360,000 more acre-feet of Colorado Basin water, it will hit its limit (1.4 million acre-feet) under the Colorado River Compact. But it has handed out paper rights to an additional 1.1 million acre-feet. All those rights holders, like Kane County, still have the right to develop. But Utah will have no excess water to supply them, and so water will be rationed by priority date across the state. In that context, Blue Castle's request is nothing to sniff at. It's a seventh of the water Utah has left.

At times, the Blue Castle proposal looks like a water right in search of a project. Kane County has five more years to prove it is putting its water rights to "beneficial use," or risk forfeiting them, according to Mike Noel, executive director of the Kane County Water Conservancy District. By leasing the water to Blue Castle, the county hopes to meet its deadline -- and earn \$1 million a year once the reactors are constructed. (San Juan County would earn \$800,000 annually.) Noel, a Utah state representative from

Kanab, is the project's unofficial godfather. He was hunting for a use for Kane County's water while serving on the same committee with then-Rep. Tilton.

Even if Blue Castle does get its water rights, though, it's unclear whether the project will ever materialize.

Nuclear power plants require immense up-front funding: at least \$100 million for the Nuclear Regulatory Commission's application process, which could take five to seven years or longer. Estimates for the cost of building the reactors range between \$7 billion and \$15 billion.

And there is the never-ending question of what to do with the high-level nuclear waste -- especially since the Obama administration has essentially pulled the plug on the Yucca Mountain repository.

This story originally ran in the March 1, 2010 issue of High Country News (hcn.org).

Regional News 04/15/10

Below-average runoff predicted for Farmington (San Juan River)

By Steve Lynn The Daily Times

Posted: 04/15/2010 12:00:00 AM MDT

[Link](#)

FARMINGTON — Below average snowpack in southwest Colorado's San Juan Mountains means less spring runoff for northwest New Mexico rivers, according to the National Weather Service.

Snowpack in the San Juans recently has fallen below average for this time of year, said Bryon Lawrence, service hydrologist for the National Weather Service in Grand Junction, Colo.

The amount of water contained in snow-pack around southwest Colorado rivers, including the San Juan and Animas rivers, has fallen to about 88 percent of average.

The weather service predicts the San Juan River will flow at 70 to 90 percent of its normal volume during the runoff period from April through July, Lawrence said.

In Farmington, the Animas River is expected to run at 3,600 cubic feet per second during the height of the spring runoff period sometime between Memorial Day weekend and mid-June. The volume of the river normally peaks at 4,900 cubic feet per second.

By contrast, Lawrence said last year's peak flow in the Animas River was measured at 5,170 cubic feet per second May 13.

"If we get a really long period of warm weather combined with rain and high freezing levels and high snow levels, then snow is going to melt quicker and we're going to be getting more water through the rivers, and peak flows are going to be higher," he said.

He added that recent storms that have coated the snow on peaks with dirt could hasten snow-melt. The dirt will help the snow absorb heat from the sun; snow normally reflects sun rays.

However, not as much dirt has settled in the high country this year versus last year, he said. The soil in northeastern Arizona and southeastern Utah has retained moisture. The weather service believes those regions are the source of the dirt.

Northwest New Mexico received about 150 percent of average precipitation this winter enhanced by a strong El Niño weather pattern, said Todd Shoemake, a meteorologist for the National Weather Service in Albuquerque.

"We haven't really seen the runoff process really start to kick off in full swing just yet," Shoemake said.

He explained that temperatures were below normal in March and only in the last couple weeks has the region seen higher temperatures.

"As far as the timing of the onset of the spring melt, it's probably running a little bit behind where it normally would," he said. "We haven't really seen much of an up-tick in any of our river gauges."

The amount of runoff affects the city of Farmington's water supply, said Jeff Smaka, the city's Public Works department director.

The city pumps water April through October from the Animas River into Farmington Lake.

Steve Lynn: slynn@daily-times.com

Regional News 04/19/10

Iconic Status Can't Spare Grand Canyon From Myriad Threats

Greenwire article in New York Times

April 19, 2010

April Reese

[Linked here](#)

[PDF archived here](#)

OpEd 04/20/10

Colorado River water policy faces an age of limits

By Dan McCool
Salt Lake Tribune

Change comes hard to Western water policy. The Prior Appropriation Doctrine, interstate compacts, groundwater law, the "law of the river" -- all of these seem set in stone in the minds of the region's policymakers.

Of course, the West's rivers aren't bound by such a static existence. Indeed, they are changing in fundamental ways, opening a wide chasm between our water policy and our water sources. This is particularly true for the Colorado River Basin.

Climate scientists are predicting a 10-to-30 percent reduction in flow for the Colorado -- a stark contrast to the rosy assumptions that underlay the Colorado River Compact when it was signed 88 years ago. Researchers from the Scripps Institution of Oceanography recently predicted that Lake Mead and Lake Powell have a 50 percent chance of going dry by 2021. These days, Lake Mead is at 45 percent capacity and Lake Powell is at 57 percent.

Farther south, water shortages are predicted for northern Arizona communities, including Flagstaff, by 2050. The Central Arizona Project, which provides water to Phoenix and Tucson, may run short of water as early as 2012.

And farther downstream, Mexico is looking at a disaster along its stretch of the river due to inadequate flows, prompting one Mexican official to declare, "We are clearly on a collision course with a catastrophe," according to The Los Angeles Times.

Then there are the numerous environmental problems in the basin. Six aquatic species are threatened or endangered, though the invasive quagga mussels are doing just fine. The river corridor in the Grand Canyon, deprived of sediment and choked with tamarisk, is dying; the river's delta is already on its deathbed. The Colorado is plagued by water quality problems, especially salinity, perchlorate rocket fuel, runoff from agriculture and inadequate sewage treatment.

The shortage of surface water has pushed some communities to mine groundwater. Communities as diverse as Tucson, Las Vegas and Cedar City are experiencing subsidence because of their excessive withdrawals of groundwater.

The sediment that once was the lifeblood of the river now forms a giant plug at the junction of Cataract Canyon and Glen Canyon. It is simply a matter of time before Lake Powell becomes the world's largest mud catchment, rendering the 710-foot-tall dam useless.

Water shortages in the Lower Basin will be greatly exacerbated by proposals to build giant pipelines. Las Vegas, which gets 90 percent of its water from Lake Mead, wants to

build a \$4 billion pipeline to central Nevada to pump groundwater from beneath several valleys in the Great Basin. This 300-mile pipeline is likely to lower groundwater levels, threatening a national park, national wildlife refuges, an Indian reservation, and local ranchers and farmers. The resulting loss of surface flora is not just a cosmetic problem; it could result in huge dust storms that blanket Salt Lake City. St. George, sort of a Las Vegas wannabe in terms of growth rate (but without the sinful fun), wants to build a billion-dollar pipeline that sucks water out of Lake Powell -- despite the imminent demise of the lake. In the Upper Basin, Aaron Million, with dreams to match his name, wants to build a 560-mile pipeline from the Green River to Colorado's Front Range and divert 250,000 acre-feet.

Plus, the city of Denver wants to dramatically increase the water it pumps out of the Colorado River Basin, and the state of Wyoming recently created a new state "Dam and Reservoir Section" to investigate the feasibility of new diversions on the Green River.

These grandiose schemes for new diversions are not "the way of the future," but rather the last gasp of a dying water ethos. The myriad problems of the Colorado River point to one inescapable conclusion: Western water policy is hopelessly, irrevocably unsustainable. Policies that once created stability are now an albatross, preventing the West from making fundamental changes in the way it allocates and uses its water.

It is time for a new era in water management. The first step requires dispensing with the absurd notion that infinite growth can take place in a region with severely constrained resources.

The second step is to realize that agriculture, which uses the lion's share of the river, is going to take a big hit. Many of the crops grown in the basin are low value, such as hay, or are commodity crops that are already over-produced in the United States.

And the third step requires improving the quality of the water by forcing all polluters to clean up their mess. That includes agriculture, mining and municipalities with inadequate urban treatment. These changes will not be easy -- it's like prescribing a root canal for an entire region without offering nitrous oxide. But the longer we wait, the more difficult it will be to make the transition to a policy that meets the reasonable needs of cities, a service economy and the age of limits.

Dan McCool is a contributor to Writers on the Range, a service of High Country News (hcn.org). He is a political science professor and director of environmental studies at the University of Utah.

World News 04/22/10

Sipping from the Third Straw

Sipping from the Third Straw

[Water Canada](#)

Posted on 22 April 2010 · Written by Kerry Freek

Patricia Mulroy addresses a rapt WaterTech audience this afternoon.

“I’m not here to steal your water,” joked Patricia Mulroy as she took the stage this afternoon.

Funny she should say so. This year’s WaterTech, taking place in Banff, isn’t too far from Calgary, which is currently experiencing its own water shortage.

Mulroy is the general manager of the Southern Nevada Water Authority (SNWA), and, although she jests, water shortages are no joke to her. “The ten-year drought in the Colorado River has been devastating,” she said.

Southern Nevada relies on the tired, rapidly depleting Lake Mead for 90 per cent of its water (the other 10 per cent comes from groundwater). In just ten years, Mead’s elevation levels have dropped from approximately 1,225 to just over 1,080 feet—and they’re expected to be lower. “At 1,050 feet, we’ll see the end of the Hoover Dam,” said Mulroy.

Already it has two intakes to serve two million residents and 40 million annual visitors, but, due to Mead’s condition, Las Vegas’ first intake may soon be out of business. The SNWA has had no choice but to begin construction on a third “straw” at a lower elevation. The estimated cost? About US\$800 million, including a \$25-million tunnel boring machine. Despite the expense, said Mulroy, “failure is not an option.”

Not only is the first intake at risk, but now they face a new challenge: quagga mussels. The second intake (built in the mid-90s at elevation 1,000 feet) has been infested by this invasive species, she explained, showing images that make a Great Lakes-dweller like me shudder in fear.

In a chat prior to her talk, I asked Pat Mulroy if there were ever any other options for Las Vegas. “There were no other projects. The only other alternative is to diversify where the water comes from, and that’s the next iteration. It’s not as if you could look at alternatives,” she said. “We’re racing the clock.” Prior to beginning work on the third intake, they upgraded pumps on the second to higher capacity to ensure that they’d get through the summers of 2011 and 2012 if the drought beats the completion of the third.

When did real change start to take place? “We transformed everything in 2003,” she said. “We now recycle 100 per cent of all wastewater—whether it goes directly to a reuse facility and is delivered to parks and golf courses, or large tertiary plants that return the flow to Lake Mead. For every gallon of water we put back into Lake Mead, we

can take out an additional gallon over our allotment. Since we can convert all our reuse water, we can increase our diversions to Lake Mead. Everything is reclaimed.”

What is Las Vegas doing to promote water conservation? They have a number of incentive programs, Mulroy told me. For example, for each square foot of grass removed from properties, customers receive US\$1.50 per square foot. They’re also encouraged use desert-appropriate landscaping plans. “To date we’ve spent over US\$130 million rebating to our customers to take turf out,” said Mulroy.

New construction must not have new grass; it must be desert landscaping. If customers want a fountain, they have to remove enough turf to equal 50 times the amount of water that the fountain would use in a year. Everyone is on a strict permanent watering schedule—they even have water cops, Mulroy told me. “We have a hefty fine schedule. You’re fined for every day you violate—if we see water running off your property, or you water on the wrong day, or you have a broken sprinkler head... we’re there to get people’s attention.

Our water enforcement is going out to educate people.” I asked Mulroy how the water shortage and restrictions have changed the behaviour of Las Vegas residents.

“We’ve seen a huge paradigm shift,” she said. “We’ve been able to save 26 billion gallons of water. We drove our per capita consumption down from 365 down to 240 and have set a new goal of 199, and that’s diversion, so it will be way down there by the time we get to 199.”

The Bureau of Reclamation expects that Lake Mead will rebound “somewhat” over the next two years. What does Mulroy think about these claims? “I love it when they say those things because they’re predicting next year’s snowfall,” she said. “They want this [drought] to end just as much as we do. But those kinds of pronouncements are very annoying because they’re not borne in reality. You have to hope for the best and plan for the worst.”

LR Letter 04/26/10

Tar Sands Strip Mining in the Uinta Basin

[Letter to Utah Division of Oil, Gas and Mining](#)

13 page pdf file with working hyperlinks to references, photos, press, and helpful information.

[Letter of response from Utah Division of Oil, Gas and Mining](#)

[Additional letter of response from Utah Division of Oil, Gas and Mining](#)

[Confirmation of informal hearing from Utah Division of Oil, Gas and Mining](#)

[Response of informal hearing from Utah Division of Oil, Gas and Mining](#)

[Appeal to Board of Utah Division of Oil, Gas and Mining](#)

[Click here](#) for story in Reuters.

[Click here](#) for story in Moab's Times-Independent.

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Regional News 04/27/10

West slope water interests aim to keep Colorado River power plant

[Click here](#) to read Ski-Hi Daily News article

Regional News 04/29/10

Southern Nevada Water Authority hails benefits of far-flung projects

By HENRY BREAN

LAS VEGAS REVIEW-JOURNAL

[Linked here](#)

Southern Nevada Water Authority officials Kay Brothers, far left, and Bill Rinne take part in a tour Wednesday of a new reservoir in the California desert near the Mexico border. The authority helped pay for the structure in exchange for Colorado River water.

Southern Nevada Water Authority officials traveled to the desert near the Mexico border Wednesday to celebrate two projects they helped pay for even though they are hundreds of miles outside their service area.

The projects, which grew from interstate collaborations that seemed inconceivable just over a decade ago, should help squeeze more water out of the drought-stricken Colorado River.

Wednesday's tour began along the All-American Canal in California, where a new reservoir will soon begin capturing river water that would otherwise flow into Mexico but not count against that country's river allocation.

The water authority picked up roughly 80 percent of the cost for the \$172 million reservoir. In exchange, the authority will be allowed gradually to take an extra 400,000 acre-feet of water out of Lake Mead over the next 25 years as conditions on the river system permit.

One acre-feet of water is enough to supply two average Las Vegas homes for one year. The 300,000 acre-feet Nevada gets from the Colorado River each year is used to supply about 90 percent of the water used in the Las Vegas Valley.

Municipal water purveyors in Arizona and California also bought into the so-called Drop 2 Reservoir, which the U.S. Bureau of Reclamation hopes to begin operating in July.

Lorri Gray-Lee is director for the bureau's lower Colorado River region. She said that a decade ago she never could have talked the region's water managers into paying millions of dollars for such a reservoir.

"They would have laughed me out of the room," she said.

Water authority chief Pat Mulroy said the drought on the Colorado has changed that. It has forced the states that share the river, and the municipal and agricultural interests within those states, to work together in ways they never did before.

It also has led major water purveyors such as the authority to invest directly in far-flung projects such as Drop 2 and a water desalting plant that is now being brought out of mothballs in Yuma, Ariz.

"And our next investment, if you want my prediction, will be in Mexico," said Mulroy, who was in Yuma on Wednesday to mark the reopening of the desalting plant. "So we'll even be leaving the United States and investing in the nation of Mexico."

Specifically, she said Nevada could one day help fund the construction of ocean desalting plants along the Mexican coast in exchange for a share of that country's Colorado River water.

The water authority could also buy into some future program that would pay farmers in Mexico to fallow crops temporarily that would otherwise use water from the Colorado.

Seven states and Mexico share water from the Colorado River under compacts dating back nearly 90 years.

The Yuma Desalting Plant will begin a one-year pilot program next week to test its ability to clean salt from agricultural runoff and deliver the water to Mexico.

The pilot run is expected to produce about 29,000 acre-feet of desalted water and allow an equal amount of Colorado River water to be kept in Lake Mead.

The authority will pay more than \$2 million, or about 10 percent of the cost for the pilot run, in exchange for about 10 percent of the river water the plant's operation is expected save.

Contact reporter Henry Brean at hbrean@reviewjournal.com or 702-383-0350.

Regional News 05/04/10

Experts predict 'mediocre' runoff for Colorado

JOHN GARDNER

GLENWOOD SPRINGS CORRESPONDENT

[Linked here](#)

GLENWOOD SPRINGS — The spring runoff season is an exciting time for hydrologists.

"This is our favorite time of year," said Bryon Lawrence, a hydrologist with the National Oceanic and Atmospheric Administration office in Grand Junction. "Because this is when things start to happen."

However, Lawrence is not too excited about the spring runoff season this year due to a lack of snow accumulation this winter. He said that this year is shaping up to be a "mediocre" runoff year at best.

"The snowpack has been considerably below normal, and we are not expecting a really good runoff this year," he said.

As of Monday, the Colorado River basin was reportedly at 90 percent of year-to-date precipitation average, according to the Natural Resources Conservation Service.

The recent snowstorms have helped bring the precipitation levels up slightly, but they have not added much to the snowpack, according to Dave Merritt with the Colorado River Water Conservation District.

"They've helped somewhat, but it hasn't changed things much as of [Monday]," he said. "We are still looking pretty dry despite what we are seeing. It hasn't done that much to the snowpack."

According to Merritt the area from Grand Lake to Grand Junction remains at 78 percent of average snowpack levels. And statewide, Colorado is at 84 percent of average, he said. Western Colorado is currently at 80 percent of annual snowpack.

The low snowpack will result in a less-than-average runoff, Lawrence said.

According to the National Weather Service, the Colorado River peaked on May 21 in 2009, running at 10,000 cubic feet per second (CFS) at Dotsero. The average peak runoff for the Colorado River at Dotsero is 9,425 cfs. The weather service predicts the peak runoff to be well below the 2009 levels, at only 4,500 cfs this year at the same location.

Lawrence expected the peak runoff not to occur until the end of May, or even as late as June 20. However, that is the typical time frame for the peak to occur, he said.

The National Water Information System real-time water flows used by the U.S. Geological Survey reported the Colorado near Dotsero at 1,360 cfs on Monday.

In comparison, this year the Roaring Fork River basin is currently at 95 percent of average for precipitation. The Roaring Fork's peak flow is expected to be about 4,200 cfs, just 300 cfs less than experts are expecting for the Colorado River. However, that is still well below the average peak runoff of 6,150 cfs for the Fork.

Of course, predicting the peak runoff flow is a very slippery slope.

"It's really difficult to know the day you will see peak flow because it all depends on weather conditions," Lawrence said.

With warmer weather, peak runoff will occur much more quickly than with lower temperatures.

According to the Bureau of Reclamation, dry conditions for the Upper Colorado River Basin have persisted in 2010. According to the bureau's website, the Climate Prediction Center estimates that temperatures for May, June and July in the Upper Colorado River Basin are expected to be above average, increasing the pace of runoff. However, precipitation is also expected to be above average for the same time period.

But it may not be enough to bring levels up to sufficient amounts.

"It's a little too late," Lawrence said. "It's going to take a lot more to make up that deficit, even with what we've had."

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<http://www.aspentimes.com/apps/pbcs.dll/article?AID=/20100504/NEWS/100509969/1058/rss&template=printart>

Regional News 05/06/10

Ariz. desalting plant begins operation, replacement flows for wetland secured

April Reese, E&E reporter

The Bureau of Reclamation this week flipped the switch on the dormant Yuma Desalting Plant in Arizona, launching a yearlong test to determine whether the 18-year-old facility can finally live up to its promise to help solve the Colorado River Basin's water supply challenges.

The pilot run, which began Monday, will also be a test of a landmark agreement involving the United States, Mexico and a coalition of environmental groups to protect a vast Mexican wetland that depends on the salty agricultural runoff that will now be diverted to the plant, where it will be cleaned and released into the Colorado River.

The \$250 million plant was built in 1992 to help meet treaty obligations requiring the United States to send 1.5 million acre-feet of clean Colorado River water to Mexico each year. But nine months after signing the treaty, plant managers shut down the

facility after a flood damaged an intake canal. Ample flows in the Colorado River Basin in the ensuing years rendered the plant unnecessary.

Now, with a prolonged drought parching the Lower Colorado Basin -- and with Arizona, Nevada and California scrambling to avoid water shortages amid rising demand -- the plant has taken on renewed importance (Land Letter, March 22, 2007). Water providers are hoping that the pilot project, which will treat 29,000 acre-feet of runoff from Arizona farms and discharge the cleaned water into the Colorado River just above the U.S.-Mexico border, will demonstrate that the plant can be operated on a long-term basis.

With the plant helping to meet the United States' treaty obligations to Mexico, Reclamation can leave more water upstream in Lake Mead for use by domestic users, including California's Metropolitan Water District, the Southern Nevada Water Authority and the Central Arizona Water Conservation District.

The three entities, which are helping to pay for the \$23 million pilot project, will receive water credits in Lake Mead to help slake the thirst of Las Vegas, Phoenix, Los Angeles and other cities during the pilot run.

The Bureau of Reclamation this week launched a 365-day pilot run of its Yuma Desalting Plant near Yuma, Ariz. If successful, the plant could be restored to full capacity, providing water for municipalities in California, Arizona and Nevada. Photo courtesy of BuRec. "Drought, population growth and the impacts of climate change on water in the Southwest have increased the stress on the Colorado River," said Anne Castle, assistant Interior secretary for water and science, in a statement. "These collaborative undertakings ... exemplify the types of partnerships needed to stretch available supplies to meet both current and future water needs."

Angel Santiago, vice chairman of the Metropolitan Water District's board of directors, said the project "will be critical in conserving supplies for future use," particularly given current drought conditions in California.

The amount of water each entity receives will correlate with its financial contribution to the project. The Metropolitan Water District will pay 80 percent of the cost in return for 80 percent of the water. Arizona and southern Nevada will each get a 10 percent share. In all, the three entities will pay for about \$14 million of the pilot run's cost. The federal government will pay the \$9 million balance.

The plant will run at one-third capacity for 365 days, which could be spread across 18 months depending upon how often the plant needs to be taken offline for maintenance or evaluation, said Jennifer McCloskey, area manager for Reclamation's Yuma, Ariz., office.

BLM conducted a 90-day demonstration run at 10 percent capacity in the spring of 2007 but concluded that a longer test was necessary to determine whether the plant could be operated on a long-term basis. That test run showed encouraging results, McCloskey said, adding that she is optimistic that the plant will prove its mettle in the new, bigger pilot run.

"My confidence level for the operation as a pilot run is very high," she said. "All the work was done up-front, in the planning stage, and now it's just smooth sailing."

Protecting the wetland

Ecologically, however, it remains to be seen whether Reclamation can operate the plant at one-third capacity while still protecting the Cienega de Santa Clara, a vast wetland south of the border.

The closure of the plant, located about 5 miles west of Yuma, Ariz., resulted in an incidental ecological benefit for the wetland. Highly saline agricultural runoff that would have been diverted for treatment was rerouted into the Colorado River Delta, bypassing the Lower Colorado River and expanding the Cienega de Santa Clara to 40,000 acres.

Concerned that the reopening of the plant would destroy the Cienega, which has become an important stopover for migratory birds and provides habitat for 95 species, environmental groups fought the proposal for years. But under the new agreement, parties on both sides of the border will provide 29,000 acre-feet of replacement water to make up for the loss of high-salinity flows to the wetland.

A pair of environmental groups -- Environmental Defense Fund in the United States and ProNatura Noroeste in Mexico -- have purchased water rights from Mexican farmers, freeing up irrigation water. The United States has committed to diverting excess water from the Colorado River during rainstorms to the wetland. Mexico has not yet revealed how it plans to meet its obligations under the agreement.

Jennifer Pitt, a senior resource analyst for Environmental Defense who has worked for years to protect the wetland, said she believes the agreement will ensure that the wetland stays wet while the desalting plant is in operation over the next year or so.

"To me, not only have we achieved important protection, but it's also the first time the U.S. or Mexican governments have, separately or together, sent water resources to an environmental resource in the delta," she said. "That is a really good turn of events, and demonstrates that it can be done -- there's a spirit of cooperation that hasn't been there in the past."

"Two years ago, we didn't dream of this," added McCloskey, the Reclamation manager. "We didn't know this could be done."

That cooperation could also help provide a foundation for future agreements if the plant is fully restored, Pitt and McCloskey said.

But another Lower Colorado River project designed to stretch water supplies in the basin could complicate future efforts to secure water for the delta.

Along with the Yuma Desalting Plant pilot run, Reclamation is also constructing the \$172 million Drop 2 storage reservoir project, located in Southern California about 30 miles west of Yuma. That project will store excess water flowing down the Lower Colorado River during rain events for use by the Imperial Irrigation District.

While that project, like the desalting plant, will allow Reclamation to leave more water in Lake Mead for cities, it will capture the same water that Reclamation is now using to help replenish the Cienega de Santa Clara during the pilot run of the plant.

McCloskey said the Drop 2 reservoir system is complex and it is unclear whether it could be operated to allow for releases to the wetland. "We'd have to think a lot more about it," she said. "We have a lot to learn about how we're going to be able to use Drop 2."

Thanks to recent heavy rains, Reclamation has already met its requirement to send about 10,000 acre-feet to the Cienega to offset the loss from the desalting plant's pilot run, she added.

"We knew once we got Drop 2 completed it would be harder to fulfill our commitment," she said. "But we've had several rain events, and we've already sent the whole amount that the U.S. was required to send."

The water promised by environmental groups and Mexico will be sent to the wetland at a later date during the pilot run, she added.

Looking ahead

If the pilot run is successful, and Reclamation decides to bring the plant online full-time, environmentalists will watch closely to make sure the wetland is fully protected, Pitt said. "If they're going to continue to run the plant, there are a lot of issues to be examined," she said. "I think EDF and our conservation partners will be adamant about making sure the Cienega is protected in the future."

But the Yuma Desalting Plant's long-term cost-effectiveness remains largely unknown. Even if the pilot run at one-third capacity is a success, McCloskey said making the necessary improvements to allow the plant to operate at full capacity would be costly. For example, she said, all of the plant's piping would need to be replaced.

"There's a pretty big capital investment that would need to be made just to address the wear and tear and aging," she said. "I don't know where that money would come from, so that's a pretty big hurdle to wade through in terms of the plant's future."

Reese writes from Santa Fe, N.M.

LR Letter 05/17/10

EA for Green River Pumping Project

May 17, 2010

Mr. W. Russ Findlay
Fish and Wildlife Biologist, PRO-773
Bureau of Reclamation, Provo Area Office

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Subject: Draft Environmental Assessment and Biological Assessment for the
Green River Pumping Plant Project

Dear Mr. Findlay

Thank you for this opportunity for Living Rivers and Center for Biological Diversity to provide comments concerning the Environmental Assessment and Biological Assessment for the Green River Pumping Project.

Our members and staff are concerned about the impairment of critical habitat for endangered species of the Colorado River basin, namely bonytail chub, humpback chub, razorback sucker and Colorado pikeminnow. We regard the river reaches between Flaming Gorge Dam and the Confluence with the Colorado River as the best hope for their recovery, since the mainstream is nearly free-flowing for over 425 miles.

We are also concerned about the 50% decline in the populations of threatened fish species of the Upper Basin, namely bluehead sucker, flannelmouth sucker and roundtail chub. Declines in the populations of threatened and endangered fish species, especially bonytail chub and razorback sucker, indicate that the Upper Basin Recovery Program is not successful despite 32 years of activity. The next 32 years are not likely to be productive either, considering depletions in the Upper Basin will increase in-step with streamflow reductions due to persistent drought and climate change.

Until the endangered fish species are delisted, we respectfully request that all proposed water contracts with the Bureau of Reclamation be suspended. This request is reasonable and prudent considering the two-year Basin Study Initiative now underway by Reclamation and the seven basin states, which will attempt to address the acknowledged, system-wide imbalances of supply and demand. Until the imbalances are mitigated, it is highly likely that legal challenges in the basin will occur over water rights, water quality, and endangered species.

Need and purpose for a basin-wide Programmatic Environmental Impact Statement

We insist that the Department of Interior and its agencies implement a basin-wide Environmental Impact Statement immediately. The key aspect of the study should address the recovery of endangered fish. In so doing, Interior will simultaneously solve the issues of water quantity and quality for both basins and

Mexico.

Specific Concerns for Critical Habitat in Reach Three of Green River

There are both existing and proposed water withdrawals below the US Geological Survey gage at Green River, Utah that do not have contracts with Reclamation for water from Flaming Gorge Reservoir. The critical habitat for endangered fish in Labyrinth and Stillwater Canyons is defined as having low gradient with massive amounts of sediment that create ideal slack water nurseries for endangered fish. However, we have observed on river trips in Labyrinth and Stillwater Canyons that sandbar habitats can entrap juvenile fish, which increases mortality, when the river level drops due to intense evaporation and irrigation in July and August.

We think it is necessary for Reclamation and US Fish and Wildlife Service to make a proper determination of what the summer minimal instream flows should be for Labyrinth and Stillwater Canyons to eliminate mortality caused by increased depletions. We also suggest that the USGS install a gage above Canyonlands National Park so that the instream flows can be properly monitored for compliance. Mineral Bottom at River Mile 52 comes to mind as a potential locality for this stream gage for reasons of accessibility by road.

We also suggest that Tusher Wash Diversion Dam above Green River, Utah be replaced with a dam that allows safe passage of fish and river boats. We also suggest that the diversion have a sophisticated screening device to keep eggs and juvenile fish from being stranded in irrigated fields. This dam was initially constructed with cottonwood cribs filled with rocks and the integrity of the dam is questionable considering the age of the facility.

Thank you again for this opportunity to comment. If we can be of any assistance, please do not hesitate to contact us.

Sincerely yours,

John Weisheit
Conservation Director
Living Rivers

Robin Silver
Board of Directors
Center for Biological Diversity

[Letter is archived here](#)

Regional News 06/20/10

Development in Colorado going with the flow of water deficit

By Bruce Finley

The Denver Post

POSTED: 06/20/2010 01:00:00 AM MDT

[Linked here](#)

Click on image to enlarge Colorado River water consumed yearly for agriculture and by the 30 million Westerners who rely on it now exceeds the total annual flow.

A growing awareness of that limited flow is leading to increased scrutiny of urban development — especially projects that require diverting more water to the east side of the Continental Divide.

"We're no longer in a surplus situation," said Bill McDonald, the U.S. Bureau of Reclamation's deputy commissioner for policy and budget. "The teeter-totter has tipped."

Federal data show that the average annual use of Colorado River water (15.4 million acre-feet) has surpassed the average annual supply (14.5 million acre-feet) in the river.

Factor in climate change — state officials project a 10 percent or greater reduction in water available — and the specter of scarcity looms even higher.

"We actually have run up against what the river provides," said Bart Miller, water program director for Western Resource Advocates, a law and policy firm. "Our choices moving forward have to be very careful ones. Brand new uses are going to have to be displacing other uses."

Colorado still doesn't use all of its 3.88 million acre-feet allotment under the interstate compact that governs use of the river. An acre-foot contains 325,851 gallons, enough to sustain two families of four for a year. State officials are trying to calculate the unused share. Estimates range up to 300,000 acre-feet.

"Just because the Colorado River as a whole is overused" doesn't necessarily prevent development in Colorado, said Eric Kuhn, manager of the Colorado River Water Conservation District. "The lower states (California, Nevada, Arizona) are using far more than the upper states."

Yet authorities here increasingly ask questions.

This month, the U.S. Army Corps of Engineers stepped up scrutiny of Denver Water's proposed diversion from upper Colorado River tributaries through the Moffat Tunnel to an expanded Gross Reservoir. Federal engineers demanded more data to evaluate environmental impacts.

The American Rivers advocacy group recently cited Denver's project in designating the upper Colorado the nation's sixth- most endangered river.

"We take that seriously," said Scott Franklin, project manager for the federal engineers.

For Denver residents, project delays mean "that we would have less water in storage to cushion us and get us through a drought," Denver Water project director Travis Bray said. "If we don't have that much water in storage, then you could be looking at more severe restraints."

Suburban metro water providers also are planning diversions of water out of the Colorado River Basin to enable population growth.

Energy companies, too, seek water — for drilling in the development of oil shale. Veteran water lawyer Glenn Porzak has recommended that energy executives work in concert to divert and store water they need.

"The state is at that critical juncture where demand is starting to outstrip available water supplies," Porzak said. "Either you need to think about limiting development, or you are going to see massive conversions of agriculture to municipal use. It is going to be a trade-off. The day of reckoning is coming."

Meanwhile, plans to let more river water run its course naturally, for environmental purposes, appear increasingly difficult. At Grand Junction, a stakeholders group last week recommended against a federal "wild and scenic" designation for a stretch of the river before it reaches Utah because this could hurt Colorado's ability to use water.

Even incremental development within the Colorado River Basin on Colorado's Western Slope is running into water sensitivities.

A plan to build a new town of 5,000 on former sheep pastures at Wolcott is up for review.

Developer Rick Hermes carefully converted ranchers' agricultural water rights to municipal rights — and received an Eagle River Water and Sanitation District commitment to serve his "river-centric" town.

The town would be built without a new golf course, breaking the mold for Vail-area development. A new sewage treatment plant is planned, ensuring that water withdrawn for town showers, toilets and lawns could be returned to the Eagle River, which flows into the main stem of the Colorado River.

"In the early 1990s," Hermes said, "water wasn't in the top five items (discussed during permitting). You just assumed you would have the right to develop."

Eagle County commissioners' decision on whether to allow construction also may be based on efficient use of water. State data indicate daily water consumption per person in Colorado River Basin communities currently is 256 gallons per person, compared with 178 gallons in the South Platte River Basin along the Front Range.

Water "is increasingly something that local officials are aware of," commissioner Jon Stavney said. "I have questions about whether we need to create a whole new town. . . . Do we need to create a whole new water service community where none existed?"

Bruce Finley: 303-954-1700 or bfinley@denverpost.com

Regional News 06/27/10

Warming Climate Means Trouble For Southwest Plantlife

This month, fires have charred tens of thousands of acres in New Mexico, Colorado and Arizona. After more than a decade of drought, these large seasonal fires are increasingly a part of life in the Southwest, and fire can be revitalizing in many conifer forests.

However, unlike other conifers -- including their larger cousins the Ponderosa pines -- fire hasn't played a fundamental role in many pinyon pine ecosystems. As a result, the trees are easily killed by it.

Between the surrounding high deserts of the Southwest and the ponderosa pine forests of the Colorado Plateau, a transition zone of pinyon pines and juniper trees dominates the landscape. Pinyons are a symbol of life on the plateau. These woodlands hold a wealth of biodiversity, providing homes for a vast array of plant and animal life. Their dry, open forest-floors allow for the growth of desert plants like yucca and prickly pear cactus.

In rockier areas, small plants like lichens, Rockmat and vibrant-red wildflowers called Indian Paintbrush are prevalent. The small, often shrub-like trees can take hundreds of years to grow a six inch trunk and full-grown they can be little more than a bush, or if conditions are favorable they can grow as tall as a five story building.

This reluctant growth has allowed pinyons to thrive in the arid Southwest for millennia, but today the trees are vanishing from the landscape. A decade of drought, which scientists said is a direct result of climate change, has allowed bark beetles to feast on Southwest forests and left them vulnerable to catastrophic wildfires.

"There is little doubt that our current drought has driven processes that resulted in mortality for some plants," said Ken Cole, a researcher with the U.S. Geological Survey in Flagstaff.

Cole's research has shown that bark beetles, catastrophic fires and other unknown causes have resulted in the widespread death of pinyon pines. Climate change is expected to increase the frequency and intensity of drought in the coming decades and ecologists think the changes may be too quick for species occupying the most vulnerable of ecosystems, such as the transition zones.

The history of fire in many pinyon forests is not yet well understood, but studies from many old growth forests and the lack of fire scars indicate that until recently large, stand replacing fires were rare, occurring only once every 400 years or so. So, the last century of fire suppression ethics has had less of an impact on pinyons than it has on many other species. Ecologists say that drought conditions may have shifted the environment in favor of non-native species, so when pinyons do burn, invasive shrubs and grasses often sprout up in their place as well as oak and mahogany trees.

These new invasive plants are much more flammable than natives and are literally adding fuel to the fire. Once an understory of these fire prone plants is in place, it would make it more difficult for pinyons to recover. Post-pinyon woodlands could resemble chaparral or savannah—something like the interior valleys of California.

Rainfall totals in the most recent drought have been comparable to those the Southwest has experienced in the past, but the droughts have been unusually hot. Researchers believe these temperature increases are a direct result of climate change and exactly the type of conditions models have predicted will become more frequent in the Southwest in the coming century. Cole said these conditions will result in widespread reductions in pinyon pines, but scientists are reluctant to speculate on how bad it will be.

"The correlations between these model predictions and our climate trends of the last 20 years should concern everyone," Cole said.

In a paper published in the Proceedings of the National Academy of Sciences, University of Arizona ecologist David Breshears and his colleagues described how pinyons respond to long-term drought. "Lots of attention focuses on the bark beetle effects on pinyon pines, but the pinyon response is also tied tightly to their water response," Breshears said.

And despite the recent wet winter, the Southwest is still firmly in the midst of a drought. The group conducted an experiment at Biosphere 2—a research building containing an artificial, sealed ecosystem outside of Tucson—and found that drought stressed trees exposed to higher temperatures died thirty-percent more often than trees at normal temperatures with identical conditions. This indicates that die-offs could occur five-times more often.

"They are the trees that make it at the lowest, driest areas, below which shrubs and grassland and deserts dominate," said Lisa Floyd-Hanna, an ecologist at Prescott College studying pinyon-juniper woodlands. "Thus, they are tough." In a drought, a pinyon tree will close off its pores to conserve water and try to ride it out.

However, the pores are also necessary for it to breathe in carbon dioxide, and it starves itself waiting for rain. While the tree could last for long periods of time in an average drought, the increased heat makes it die of exhaustion much quicker. Also in response to drought, pinyons stop producing sap, which is the tree's first line of defense against bark beetle invasion. The insects are then free to move in and start their feeding frenzy on the unprotected trees, helping to create the conditions for catastrophic wildfires.

"Since there are only two dominant tree species, near complete loss of one species is indeed devastating," Floyd-Hanna said.

Already, hiking in these forests is like a walk through a graveyard where the dead lay unburied. In areas of Arizona, New Mexico and Colorado there are places where more than half the pinyons are already dead. In Sante Fe, as many as 90 percent are dead.

"Higher temperatures cause more evaporation and the result is less of the moisture being available for plants, animals and municipalities," Cole said.

Despite the last season of wet weather, climate models predict the situation will only get worse in the Southwest in the coming decades. Floyd-Hanna said there is hope that pinyon forests can recover. In other areas in the Southwest, such as the old-growth pinyons around Mesa Verde National Monument, young pinyons are growing up where bark beetles have recently killed off large numbers of trees. And the saplings are outcompeting the invasive species that have plagued similar sites.

Regional News 07/01/10

Prepare for Hotter and Drier Southwestern US, Climate Experts Urge

ScienceDaily (June 28, 2010)

[Link to article in Science Magazine](#)

Two prominent climate experts, including one from the University of Arizona, are calling for a "no-regrets" strategy for planning for a hotter and drier western North America. Their advice: use water conservatively and continue developing ways to harness energy from the sun, wind and Earth.

Jonathan Overpeck, principal investigator with the Climate Assessment for the Southwest at the UA, and Bradley Udall, director of the Western Water Assessment at the University of Colorado, write in the June 25 issue of the journal Science that such an approach is necessary for coping with a wide range of projected future climate changes in the West and Southwest.

In their overview of shifting climate in the region, Overpeck and Udall cite published findings of prevalent signs of change: rising temperatures, earlier snowmelt, northward-shifting winter storms, increasing precipitation intensity and flooding, record-setting drought, plummeting Colorado River reservoir storage, widespread vegetation mortality and more large wildfires.

"The West, and especially the Southwest, is leading the nation in climate change -- warming, drying, less late-winter snowpack and drought -- as well as the impacts of this change," said Overpeck, a UA professor of geosciences and atmospheric sciences and co-director of the Institute of the Environment.

In the past 10 years, temperatures in almost all areas in western North America have surpassed the 20th century average, many by more than 1 or even 2 degrees Fahrenheit. The warming has decreased late-season snowpack, which serves as a water reservoir, as well as the annual flow of the Colorado River, the researchers said.

Those reductions, combined with the worst drought observed since 1900, haven't helped matters; water storage in Lakes Powell and Mead, the largest southwestern water reservoirs, fell nearly 50 percent between 1999 and 2004 and has not risen significantly since.

In addition to water, vegetation is feeling the effects of climate change. Work by UA's David Breshears and colleagues have already showed that more than 1 million hectares of piñon pine have died in the Southwest in the last few decades from a lethal combination of record-high temperatures and uncommonly severe drought. In addition, the frequency of large wildfires has increased as snowpack has decreased.

While researchers are confident that the higher temperatures and resulting changes in snowpack, Colorado River flow, vegetation mortality and wildfires are human-caused, they don't know whether the drought that has plagued the West for the last 10 years -- the worst since record-keeping began -- is because of humans, Overpeck said.

"It's critical to determine the causes of the observed change, including the drought, because then we will have a much improved ability to say what's coming next, in the future," Overpeck said.

To complicate issues, studies published to date suggest that Colorado River flow could continue to decrease by 20 percent by 2050, with severe implications for cities served by Colorado River water and for agricultural production.

"One thing is for sure," Overpeck said. "The best strategy now -- the no-regrets strategy -- is to prepare for a hotter and drier West, Southwest and Arizona, and to make sure we don't commit water to things now in ways that could make water shortages in the future more difficult to deal with."

Fortunately, Overpeck said, scientists have a better understanding about potential future climate change in western North America than for many other regions around the globe, making it easier for policy makers to plan coping strategies.

The researchers also point to the region's potential wealth of solar, wind and geothermal renewable energy production.

"That offers a way to make up economically for the costs that will be incurred in adapting to the warmer, drier conditions," Overpeck said. "And it will have the side benefit of decreasing the chances, through reducing greenhouse gas emissions, for potentially greater human-caused climate change."

OpEd 07/05/10

Hoover Dam's false promises

MICHAEL HILTZIK
Los Angeles Times (MCT)
[Linked here](#)

The most striking sight greeting visitors to the Colorado River gorge known as Black Canyon used to be the great wedge of concrete spanning the canyon wall to wall. But in recent years Hoover Dam, that enduring symbol of mankind's ingenuity, has been upstaged by another sight signifying nature's power to resist even the most determined effort to bring it under control: a broad white band stretching along the edge of Lake Mead like a bathtub ring, marking how far the reservoir has fallen below its maximum level.

The nearly decade-long drought in the Colorado River Basin, which has lowered Lake Mead by about 120 feet from its high-water mark, reminds us that the promises made for Hoover Dam were always unrealistic. Delegates from the seven state capitals who met in 1922 to apportion the river's bounty (under the supervision of then-Commerce Secretary Herbert Hoover) were led to believe that the river, once dammed, would provide all the water their states could conceivably need to fulfill their dreams of irrigation, industrial development and urban growth.

To the federal officials anxious to get the dam project approved, this was a necessary subterfuge, for without it the states would never reach agreement and the dam would not be built. But today we must confront the consequences of that founding fiction. Hoover Dam truly made the West, but it has also confined it in the straitjacket of an ever-intensifying water shortage.

Promises based on the seemingly magical power of new technologies are almost always excessive (witness the tragedy in the Gulf of Mexico). This year, as we celebrate the 75th anniversary of President Franklin D. Roosevelt's dedication of "the greatest dam in the world" on Sept. 30, 1935, we should also recognize the dam's equivocal legacy to the West, and to the nation.

Connoisseurs of irony will note that on that day, under a blistering sun and before 10,000 spectators and 20 million radio listeners, FDR claimed as a symbol of the New Deal a public work conceived, designed and launched by his Republican predecessors.

Indeed, during the 1932 presidential campaign, candidate Roosevelt had savagely attacked Hoover, his GOP opponent, for excessive deficit spending on projects like the dam. Once ensconced in the White House, however, he quickly came to appreciate the totemic power of great public works and their effectiveness at representing the benefits that could be bestowed on the citizens by a visionary administration.

In his dedication speech Roosevelt proclaimed that the federal government and the seven states of the Colorado River Basin had jointly ensured that millions of current and

future residents in the West would enjoy "a just, safe and permanent system of water rights." He promised an end to the river's ancient cycle of drought and floods and a bountiful irrigation supply. He called the dam "a splendid symbol" that had turned the unruly Colorado into "a great national possession."

The nation took him at his word. Since that dedication year, the population of California and the six other states of the basin has swelled by some 45 million people. Much of this growth has been fueled by the dam and its precious bounties of water and electrical power.

The promise of abundant water and power took the brakes off the growth of Los Angeles, San Diego and many other western cities; it encouraged farmers to complacently plant the most water-thirsty crops; and it gave us city dwellers the impression that we can water our lawns every day without worrying about waste and runoff.

Yet the world Hoover Dam made is now facing the era of limits. For decades California was able to use Colorado River water formally apportioned to Arizona and Nevada, because those states weren't developed enough to use their full allocations. That condition ended in the mid-1990s, at which point California had to give up nearly 20 percent of its Colorado River supply.

Thus far we've managed a "soft landing" from that shock by crafting intricate reallocations of water among the state's agricultural, urban and ecological interests. But the balancing act is only getting harder, as a long drought shrinks our water-supply cushion and population growth continues almost unabated. Up to now, solutions to our water needs have been worked out in a crisis atmosphere. In the future, they'll take place against a political background too.

In the Central Valley, farmers are already marching to demand the construction of more dams to provide more water for irrigation, as if one can just create abundance out of thin air. There isn't enough water in the Colorado to serve all the demands we place on the river, and there never was. This was evident to some people, like the great Western explorer John Wesley Powell, who at an irrigation congress in 1893 announced, "Gentlemen, you are piling up a heritage of conflict and litigation over water rights, for there is not sufficient water to supply the land."

Powell was driven from the hall by a chorus of boos and catcalls. But time has proved him right. It was thought that Hoover Dam would put an end to 50 years of conflict over the water of the Colorado. It has not. We still delude ourselves into thinking that it will; only a few years ago, in 2003, then-Interior Secretary Gale Norton came out to the dam to sign 24 agreements transferring water rights among various claimants -- Indian tribes, irrigation districts, Western cities, the government of Mexico. And she proclaimed, "With these agreements, conflict on the river is stilled."

The truth is that conflict on the river will never be stilled, because there will always be more demand for the water than there is water.

We should not regret the building of Hoover Dam, which Roosevelt hailed three-quarters of a century ago as a "great achievement of American resourcefulness, skill and determination." It was a bold enterprise for a nation grappling with doubts about its place in the world at a time of crisis. Dealing with the problems of resources and growth bequeathed us in part by that remarkable Depression-era effort will require every bit as much boldness and resourcefulness, or more.

Michael Hiltzik, a Los Angeles Times columnist, is the author of "Colossus: Hoover Dam and the Making of the American Century," just published by Simon & Schuster.

World News 07/26/10

After dam failure, Iowa's nine-mile-long Lake Delhi is gone

By JENNIFER JACOBS • and TONY LEYS • jjacobs@dmreg.com • July 26, 2010
Delhi, Ia. - Gov. Chet Culver vowed Sunday to restore Lake Delhi, a treasured summer retreat that drained away in less than a day this weekend.

The nine-mile-long lake all but disappeared after sudden floodwaters breached its 92-year-old dam Saturday morning. Residents fear millions of dollars in property values also washed away, because about 900 vacation homes and cottages lost their lakefront status.

"It just makes your jaw drop," said Irv Janey, a Marion resident who owns a condominium there. "The lake's gone."

The dam is owned by the local homeowners association, and state officials said the lake's sole purpose was recreation. The Department of Natural Resources said if the homeowners decide to rebuild the dam, it would have to meet modern design requirements.

"We would hold them to a higher standard so this couldn't happen again," said Jon Garton, a dam safety engineer for the department.

Garton said that despite the dam's age, it had been well-maintained. A 2009 state inspection found a few minor problems, but nothing that could have caused its failure, he said.

On Saturday, "there was just more water than it was designed for," he said.

Culver traveled here Sunday to reassure residents that he would do what he could to help restore what they'd lost.

"This is a real landmark, and I think it's in Iowans' best interests to save this lake," Culver said, standing in muddy work boots.

Members of the Lake Delhi Recreation Association, which owns the dam and pays for upkeep of the lake, pleaded with Culver for assistance.

"This is beyond our capacity to take care of ourselves," said association President Jim Willey.

The lake has several public boat landings and two public beaches.

Culver said the 900 area homeowners would not be on their own.

"We're going to throw everything we have at it, in terms of federal and state resources," he said.

Culver said the areas that broke were earthen portions of the dam, next to the main concrete structure. A 300-foot section was breached. Culver said the restoration could include reinstallation of hydroelectric turbines, which could generate power for a quarter of Delaware County.

Maggie Burger, a cabin owner and executive director of the homeowners association, said the Federal Emergency Management Agency agreed to help finance a dredging project to clear silt left by 2008 flooding. She said she hoped FEMA would agree to help again.

U.S. Rep. Bruce Braley, a Democrat who represents the area, said he also would work to obtain government money to help rebuild the dam. Braley said that the lake was the area's top tourist attraction, and that vacation homes there provided 10 percent of the county's tax revenue. FEMA spokesman Bob Josephson said it was too early to speculate about whether a dam rebuilding project could qualify for money from his agency. However, he said, vacation homes damaged by flooding generally are ineligible for such assistance. FEMA often helps people repair or replace their primary homes, he said, but not their second homes.

Several area homeowners said they lacked flood insurance. State officials said they didn't yet have accurate estimates of property damage. Homes along Lake Delhi range from modest cottages worth about \$50,000 to large houses worth hundreds of thousands of dollars.

Property owners pay \$4 extra per \$1,000 of valuation each year to cover the upkeep of the dam and related costs. But the special lake district has no savings account. Instead, it has debt on a \$3.5 million dredging project from 2004-05 that won't be paid off for another 15 or 16 years.

Homeowners expressed amazement at how fast the weekend's events unfolded. On Friday, vacationers floated on inflated tubes, played on beach sand and swam in quiet waters. By Friday night, floodwaters were surging through homes like never before. Then, on Saturday morning, the dam broke and the lake drained away.

"Now, my dock is 20 feet above where it should be," said Jim Kouba, a dentist from Bloomfield.

Several boats were forced ashore near his vacation home in the Hickory Hollow neighborhood, along with wooden docks and a yellow swimming slide. Foundations of nearby cabins blew apart when lake water outside drained away, leaving floodwater trapped inside basements. "Houses just exploded because the water couldn't escape fast enough," Kouba said.

Jamie Ashby's cabin was one of them.

"We heard them going down - boom, boom, boom - along the shore," said Ashby, an engineering manager at Heinz Co. in Cedar Rapids. Windows shattered and interior walls collapsed with the rapid change in water pressure. By Sunday afternoon, the shore of the lake was a steep cliff leading down to mud flats, then a thin channel of running river water. The air reeked of rotting fish. Lawns were muddy messes, laden with soaked furniture, carpet, drywall, insulation, mattresses and other household goods.

Relatives of Cheryl Schatzle were lucky enough to get one of the last available Dumpsters for rent in the area. They lighted a bonfire to get rid of paneling, 2-by-4s and other waterlogged wood from a cedar-sided cabin the family has owned for 40 years. Schatzle, a social worker, was heartsick, but she was keeping perspective. She noted that her family didn't lose its primary home, as so many people did in Cedar Rapids in 2008.

Still, seeing Lake Delhi as a puddle of its former self was troubling, Schatzle said. "What's going to happen to the lake? That's a concern I have. Maybe it'll never be the same," she said.

Garton, the DNR dam safety expert, said Iowa has dozens of dams similar in design to the one at Lake Delhi, though most are smaller. He said most are about 10 feet tall. The one at Lake Delhi was about 50 feet tall. The dam didn't have an emergency spillway to divert water before it could go over the top, he said. The dam had three gates to regulate outflows, and they reportedly were wide open.

But after storms dumped up to a foot of water on areas upstream, the gates apparently couldn't let water out fast enough to keep the lake from pouring over the top of the dam and to keep the breach from happening, he said.

Garton said a few smaller Iowa dams have failed in past years. "This is probably the most significant one we've had in recent history," he said.

Regional News 07/27/10

Global warming: NASA says it's the hottest year on record

Lulu Liu | Sacramento Bee

[Linked here](#)

Worldwide, 2010 is on track to become the warmest year on record.

Scientists at the NASA Goddard Institute for Space Studies reported recently that the average global temperature was higher over the past 12 months than during any other 12-month period in history. The National Oceanic and Atmospheric Administration has released corroborating data, adding that the past four months, including June, have each individually been the hottest on record as well.

The NASA findings were based on data from 5,000 weather stations around the world, said scientist Reto Ruedy, co-author of the study. Scientists used temperature anomalies, or departures from the baseline, rather than absolute measurements to account for differences in the instruments of individual stations.

The average global temperature, computed over a 12-month period, reached a new record in May and held steady for the month of June, he said. This was despite the recent minimum in solar activity, which should have had a cooling effect on Earth.

Apparently, Ruedy said, the solar cycle "has much less impact than the warming trend."

NOAA research meteorologist Tom Knutson doesn't find that surprising. The trend has existed since records began in the late 1800s.

The new finding comes on the tail of a NASA announcement that 2000 to 2009 was the warmest decade in history.

"This is just the tip of the iceberg," Knutson said. "The models are projecting a substantial warming into the 21st century."

The temperature rise is caused by a fundamental imbalance, Ruedy said: "At this point, the Earth's atmosphere receives more energy from the sun than it emits as heat to the universe." The Earth will continue to warm until balance is re-established, at a higher global temperature.

That's another 1.1 degrees Fahrenheit if atmospheric composition does not change, according to the NASA institute's models. By comparison, global mean temperatures have risen by about 1.5 degrees Fahrenheit since 1880.

Meteorologist David Unger at NOAA's Climate Prediction Center in Maryland said that El Niño is likely a player in this year's record-setting warmth. 2010 began with "large areas of equatorial Pacific Ocean at above normal sea surface temperatures," he said. It's easier to set global temperature records when the tropics are exceptionally warm.

The El Niño phenomenon was also responsible for California's wetter-than-average winter and spring, he said. And its death, as the Pacific began to enter a cooler-than-average pattern, generated the unusually persistent trough that has brought Sacramento all that nice weather, he added.

April this year was 4.9 degrees cooler than average in downtown Sacramento. May was 5.3 degrees cooler. June 5 was the first 90-degree day of the year.

"What it did was it cooled the air over the entire region," said Dan Keeton, a meteorologist at the National Weather Service. "Most importantly for Sacramento, it enhanced the Delta breeze."

The Delta breeze is the region's natural air conditioner, he said. The ocean breeze follows the Sacramento River into the Central Valley.

"The influence can be pretty much Valley-wide in the strongest situations," Keeton said.

According to NOAA, California was one of the few spots in the world reporting below average temperatures from April through June.

On a large scale, only isolated regions in Southeast Asia and South America could say the same.

(Lulu Liu reports for the Sacramento Bee)

LR in the News 07/28/10

Groups challenge plans for Utah tar sands mine

By Steven Oberbeck The Salt Lake Tribune
[Linked here](#)

A small Canadian company, in need of millions for its ambitious plans, also is facing stiff opposition from two Utah environmental groups that are trying to thwart its efforts to build one of the first commercial tar sand mines in the country.

Earth Energy Resources, based in Calgary, Alberta, received approval a year ago from the staff of the Utah Division of Oil, Gas and Mining to begin working a 62-acre deposit on the Uintah County-Grand County line.

But opposition from Moab-based Living Rivers and Peaceful Uprising has thrown that decision to Division Director John Baza, who said Tuesday at an informal hearing he anticipates ruling on the company's mining permit within the next 30 days.



John Weisheit of Living Rivers

"Even then, my decision won't necessarily be final," Baza said, indicating that anyone who disagrees with his ruling can appeal to the board of the Division of Oil, Gas and Mining.

Earth Energy Resources contends its process is environmentally friendly and uses citrus-based solvent to recover heavy oil, or bitumen, from tar sands.

“We can extract the bitumen in a far more responsible manner than has been done to date anywhere in the world,” said Barclay Cuthbert, Earth Energy’s vice president of operations. “We are eager to get this project under way.”

Environmentalists such as John Weisheit of Living Rivers aren’t convinced.

Weisheit noted that recovering bitumen from tar sands will require vast water resources and that Earth Energy’s project could be just the beginning of a wave of such development. That could have far-reaching effects on the environment in Utah and other states, he said.

“This type of project isn’t appropriate for the Colorado Plateau. There is just not enough water to develop those resources.”

Earth Energy is facing what may be a far more formidable obstacle than the outrage of Utah environmentalists.

The company needs to raise \$35 million to fund the development of its plant that it projects will turn out 2,000 barrels of oil a day. Included will be \$1.7 million it will need to purchase a bond so the state can be comfortable that adequate financing is available to handle the reclamation of the mining property once all the tar sands have been removed.

“It is a challenge,” Cuthbert said, indicating Earth Energy has some financing commitments in place but that many are contingent on the company raising the money that will put it over the \$35 million mark.

He estimated that it may be 18 months to two years before Earth Energy’s Utah mine is up and running.

Juliana Williams of Peaceful Uprising questioned whether the threat to the environment was worth a plant and mine that over its seven-year life would produce the equivalent of four hours of the nation’s total energy needs.

“They promise there will be zero emissions and zero discharge, but those promises of safety will mean very little if something happens,” she said.

Four Utah refineries already process upward of 5 million barrels of crude a year that are recovered from tar sands in Canada, a figure that could climb by 13 percent if Earth Energy’s project eventually goes online, she said.

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By PAUL FOY Associated Press Writer 07-27-2010 18:57

SALT LAKE CITY (AP) _ An energy startup from Canada on Tuesday defended its plan to launch the first significant U.S. oil sands project in eastern Utah, after opponents argued it would dig up fragile topsoil and pollute groundwater.

The criticism against the Earth Energy Resources Inc. project came during an informal hearing before the head of the Utah Division of Oil, Gas & Mining, who is considering whether to uphold his staff's approval of the company's operating permit.

The Calgary, Alberta-based company insisted it won't pollute anything and will leave Utah's oil sands as clean as beach sand after processing with a citrus-based solvent.

"It will be a good project for Utah," company vice president Barclay Cuthbert testified. "We'll be providing energy that will be used in the state."

The company has obtained government permits to open the first U.S. oil sands surface mine designed for producing bitumen, a tar-like form of petroleum, at a 62-acre pit in eastern Utah. For decades other Utah operators have used oil sands as a poor-man's asphalt, but nobody has tried to produce petroleum from U.S. oil sands on a scale planned by Earth Energy.

The private company with 411 shareholders says it will turn out 2,000 barrels of oil a day after raising \$35 million from private equity groups for the plant.

The Division of Oil, Gas & Mining approved a permit a year ago, but the company hasn't posted a reclamation bond needed to obtain the permit.

Division head John Baza held a "protest hearing" Tuesday to take objections from Grand County residents and environmental groups. The groups promised not to file a formal appeal to a state board pending Baza's review.

Opponents said an oil-sands operation that produces so little petroleum isn't worth doing, given the potential damage to public lands. State officials responded that their job was simply to ensure Earth Energy follows environmental rules. The company obtained a lease on Utah's trust lands.

Utah's oil sands will never prove economical, argued Tim DeChristopher, an environmental activist who faces a September trial on felony charges of disrupting the Bush administration's final oil-and-gas auction in Utah.

"This project is a bridge to nowhere," DeChristopher said.

Opponents fear Earth Energy's project is the start of widespread development of Utah's spotty oil-sands reserves, which they say can't be developed responsibly in a semiarid desert.

Earth Energy says it will take 4,000 barrels of water a day to make half as many barrels of bitumen and that it can pump the water from deep underground. Even state

regulators questioned whether that much groundwater was available, but said it wasn't their call to make.

The company says it has obtained water rights for the pumping.

John Weisheit, a Colorado River guide and founder of Living Rivers, said the project will be a disaster, and others questioned whether the company could possibly make money on it.

"We're not undertaking this project to go bankrupt," Cuthbert replied. He said the project was profitable with crude prices hovering around \$77 a barrel.

Cuthbert added Earth Energy is hoping to "prove our technology" in its first business venture.

Baza said he will decide whether to uphold his staff's approval within a month.

###

Deseret News Amy Joi O'Donoghue

State officials listen to concerns about proposed tar sands mining project

[Linked here](#)

Published: Tuesday, July 27, 2010 7:34 p.m. MDT

SALT LAKE CITY — Prompted by concerns lodged by environmental groups, the state Division of Oil and Mining held an informal hearing Tuesday to air questions on impacts that could result from a tar sands mining project straddling the borders of Uintah and Grand counties.

Proposed by Canada-based Earth Energy Resources, the operation would take place on 213 acres and involve the open-pit mining of tar sands to extract 2,000 barrels of bitumen per day over a seven-year period.

Although several of the hearing participants questioned the financial viability of the project, even terming it "experimental," Earth Energy Resources Vice President Barclay Cuthbert said the venture would not be pursued if dollars weren't going to follow.

"We're not undertaking this project to go bankrupt," Cuthbert said. "The economics of this project stand on their own."

Timothy DeChristopher, an environmental activist best known for deliberately monkey-wrenching a controversial oil and gas lease auction in December 2008, said he failed to understand why the state would allow the project to move forward given the unknowns.

"I can't understand why the state would allow an unprecedented, experimental project to happen in the Colorado River watershed," DeChristopher said. "This project is a bridge to nowhere."

Groups that include Living Rivers and Peaceful Uprising worry that the operation could contaminate tributaries that feed into the Colorado River and result in dust pollution because of the heavy truck traffic — all for oil that they say generates more greenhouse gas emissions than conventional crude oil.

Aside from those concerns, Living Rivers conservation director John Weisheit said the water taken from an aquifer necessary in the mining process could deplete the aquifer. Weisheit stressed that the value of the Tavaputs Plateau is to "leave it as it is."

"It is inappropriate to do this in the Colorado Plateau," he said. "It cannot go forward."

Carla Knoop, an environmental consultant hired by Earth Energy Resources, said the appropriate controls and safeguards have been implemented in the mining operation's design to catch any runoff in a containment system that includes berms and ditches. The operation, Knoop said, is 25 miles from Willow Creek and 38 miles from the Green River. The area has no "live" water in its vicinity — only an drainage system that has no water in it except during or immediately after a rainstorm, she said.

Tom Munson, a state hydrologist who has reviewed the proposed project, said the company also plans to implement a storm water-containment system, which is "one of the strong things we could ask for."

"We're not dealing with the Colorado River here," Munson said. "I am very certain very little if any runoff will occur."

Division officials said Earth Energy Resources has met the requirements of the permitting process, leading the agency to approve a permit last year, pending receipt of a reclamation surety of nearly \$1.7 million.

Division director John Baza will review a transcript of the hearing and the documents associated with the permitting process. Baza indicated he will issue a final decision within 30 days on whether to grant the permit, seek modifications or remand it for additional review.

The environmental groups and the company then have the option to appeal his decision. That matter would be heard by the state Board of Oil, Gas and Mining.

LR in the News 07/30/10

Suit seeks to halt drilling, expansion of La Sal-area mine

By Amy Joi O'Donoghue
Deseret News

Published: Friday, July 30, 2010 3:35 p.m. MDT MOAB — Three Moab-based conservation groups filed a federal lawsuit this week to halt uranium exploration and the construction of radon vent holes on U.S. Forest Service land in the Manti-La Sal National Forest in La Sal, San Juan County. The complaint filed with the U.S. District Court in Salt Lake City challenges a decision by the Moab/Monticello Ranger District to permit the drilling of 16 exploration drill holes and two radon vent holes as part of the expansion of the Pandora Uranium Mine.

The Pandora Mine is owned by Denison Mines Corp. Uranium ore from the mine is transported to Denison's uranium mill on White Mesa, a few miles south of Blanding in San Juan County.

The groups — Living Rivers, Uranium Watch and the Center for Water Advocacy — also filed a request for a preliminary injunction at the Pandora Mine to stay ground disturbance and construction of the exploration holes and radon vent holes until the case can be fully heard by the federal court.

The citizens' groups challenge the granting of a "categorical exclusion" for the projects and request that the Forest Service develop a full environmental analysis of the projects as part of the proposed expansion of the Pandora Mine.

In December 2009, Denison Mines submitted an amended "plan of operations" to the Forest Service, Bureau of Land Management and the state Division of Oil, Gas & Mining.

The suit asserts the Forest Service approved the new projects without consideration of the cumulative environmental impacts from the expansion of the Pandora Mine. Additionally, it asserts the Pandora Mine is operating under an outdated environmental analysis from 1981. Radon is vented to the surface from the underground mine operations so that the miners will not breathe in the radon gas and be exposed to the short-lived, highly radioactive particles that are produced when radon decays.

The proposed radon vents would add to the amount of radon gas and radioactive particulates released in the vicinity of the community of La Sal, on the south slope of the La Sal Mountains, according to a press release.

A Forest Service official declined comment on the suit, saying it had not been reviewed as of late Friday.

Regional News 08/10/10

California water bond delayed until 2012

[Link to Sacramento Bee article](#)

Regional News 08/12/10

Lake Mead level plunges as 11-year drought lingers

[Green Wire article here](#)

[Arizona Republic article here](#)

World News 08/13/10

NOAA: Second Warmest July and Warmest Year-to-Date Global Temperature on Record

[Link to NOAA press release here](#)

Regional News 08/14/10

Unused Colorado River water proposed for Salton Sea

[Link to Desert Sun article here](#)

Regional News 08/14/10

Mexico, US Talking About Colorado River Water

[AP article linked here](#)

Regional News 08/25/10

Rio Grande Project Reservoirs Less Than 25% of Capacity – Labor Day Level Projected at 16.1%

[Press release](#) from El Paso Extension of Texas A & M University

LR in the News 08/30/10

My Canyonlands: The Adventurous Life of Kent Frost

... will be screening at three film festivals in the next month.

- The [Wyoming Film Festival](#) will show it at 6:45 on August 28 in Saratoga, Wyoming. Producer and film director Chris Simon of Sageland Media will be there.
- [DocUtah](#), a new festival in Southern Utah, will have TWO screenings. The first screening is Monday, Sept 20, 2 pm in St. George. The second screening is in Kanab at 10:30 on Friday, Sept 24th at the Parry Lodge, Old Barn Playhouse.
- Associate Producer Susette Weisheit and Chris Simon will be attending the [Pt. Townsend Film Festival](#) in Washington on Sept 24-26th. There will be two screenings in Port Townsend, but they have not finalized their schedule so stay tuned!

My Canyonlands: The Adventurous Life of Kent Frost is a project of Living Rivers & Colorado Riverkeeper.

Two clips are available on YouTube:

[Clip #1](#)

[Clip #2](#)

Regional News 09/05/10

Toxic legacy of uranium haunts proposed Colorado mill

[Link to article by Denver Post](#)

Regional News 09/11/10

Hoover Dam could stop generating electricity by 2013

North County Times article by Eric Wolff [linked here.](#)

OpEd 09/12/10

Lake Powell trash brings call for non-motorized use

[Click here](#) to read opinion piece by Andrew Gulliford

OpEd 09/19/10

Westwaterless: Blanding Utah should share water wealth

[Click here](#) to read this opinion from the editorial board of the Salt Lake Tribune

Regional News 09/20/10

Windborne Dust on High Peaks Dampens Colorado River Runoff

[Click here](#) to read press release from National Science Foundation
PDF [here](#)

Abstract [here](#)

Regional News 09/27/10

Water Use in Southwest Heads for a Day of Reckoning

[Click here](#) for the story in the New York Times

LR in the News 09/27/10

Environmentalists appeal state approval of tar sands mine

[Click here](#) to read story in Salt Lake Tribune

[Click here](#) to read OpEd in Salt Lake Tribune

[Click here](#) for story in Reuters on September 24.

[Click here](#) for story in Moab's Times-Independent on September 23.

[Click here](#) for story in Moab's Times-Independent on September 29.

For documents and other press stories, click [here](#)

and [here](#).

Mining for oil

Salt Lake Tribune Editorial

The strip mining of tar sands deposits for oil in Utah's Book Cliffs will disturb the earth, degrade the environment and disrupt wildlife. It's an energy- and water-intensive way of producing petroleum that could jeopardize water quality and supplies. Plus, the process yields an old-school fossil fuel that produces climate-changing greenhouse gases in abundance. Simply put, tapping tar sands won't yield clean, renewable fuels; instead, it will compound our energy problems.

But common sense hasn't stopped Earth Energy Resources from attempting a demonstration project that could result in a flurry of destructive tar-sands mining on the environmentally sensitive Colorado Plateau. And it didn't stop the Utah School Institutional Trust Lands Administration from leasing the initial 62-acre site, plus nearly 6,000 additional acres in eastern Utah, to the Canadian company. And it didn't keep the Utah Division of Oil, Gas and Mining, which must assure that the mining plan complies with environmental and land-reclamation laws, from issuing a permit to proceed.

Moab-based Living Rivers, an environmental advocacy group, is protesting the mining permit. The Division's board will hear the appeal, a process that can take six months to a year to complete, and a fine-tooth-comb approach is in order.

Living Rivers officials argue that the project will contribute to climate change, and negatively impact water quality and supplies in the Colorado River basin. Due to the lack of storm-water drainage impoundments, the environmental group claims residual petroleum and chemicals from the mine could wash into Willow Creek.

Earth Energy counters that its patented citrus-based solvent is nontoxic, although independent verification by the public is not possible. The company, despite patent protections, considers its solvent to be proprietary, and only state regulators have access to the data.

Plus, the firm counters that it will require just 1.5 barrels of water to produce a barrel of oil. Still, that's a lot of water in the second-driest state, especially if the industry gets its toe in the door and tar-sands mining becomes commonplace.

Even if Earth Energy survives the appeal, the project is not a done deal. The company must also obtain approval from Grand County to proceed, and the county should carefully consider the impact of tar-sands mining on Grand's lucrative tourism and recreation industries.

Also, Earth Energy needs \$35 million to launch the mine, and investors are rightfully skittish. That could be the biggest obstacle to the project, and the Book Cliffs' saving grace, since government seems reluctant to stand in the way despite the threat to the environment and the economy.

Regional News 10/04/10

Ocean conditions likely to reduce Colorado River flows this winter

[Click here](#) to read story by UCLA

Regional News 10/19/10

Lake Mead water level at new historic low

[Click here](#) to read article in the Arizona Republic by Shaun McKinnon

Regional News 10/20/10

Water Scarcity a Bond Risk, Study Warns

[Click here](#) to read this New York Times article

[Click here](#) to read the Ceres Report.

Regional News 10/20/10

UA to head up US-funded center to study climate change

[Click here](#) to read this story from the Arizona Daily Star.

Regional News 10/21/10

Ozone raises its ugly head in rural eastern Utah

[Click here](#) to read story by Judy Fahys of Salt Lake Tribune

Regional News 10/31/10

Colorado Water Official Blasts Entrepreneur's Wyoming Pipeline Proposal

[Click here](#) to read the story from Southwest Wyoming Tribune.

OpEd 11/05/10

Hoover Dam: marvel turned folly

[OpEd in Salt Lake Tribune by John Weisheit](#)

Regional News 11/07/10

Drying Lake Mead Worries Water Users In Colorado

[Click here](#) to read story in Grand Junction Sentinel

Regional News 11/12/10

Will The Central Arizona Project Be An Empty Ditch?

[Click here](#) to read this story from the Tucson Citizen Regional News 11/15/10

Regional News 11/15/2010

Binational Desalination Plans Heat Up

[Click here](#) to read story in Online San Diego

Regional News 11/18/10

CAP Describes Costly Future Water Options

[Click here](#) to read the story from the Arizona Daily Star

Regional News 11/29/10

Decade of Drought Leaves Two Lakes, Powell And Mead, In Same Boat

[Click here](#) to read this story from the Las Vegas Review Journal

Regional News 12/01/10

GAO: More research needed on oil shale, water

[Click here](#) to read the Associated Press story

[Click here](#) for GAO Report

Regional News 12/07/10

Western Governors Debate Water Laws

[Click here](#) to read story in the Standard Examiner

LR in the News 12/08/10

Oil Sands Project In Utah Draws Fire For Water Use

[Click here](#) for this story in CNN Money News

Regional News 12/14/10

Scientists See Southwest As First Major US Climate Change Victim

[Click here](#) to read this story from the New York Times

Regional News 12/20/10

Salazar & Elvira Announce Water Agreement for Support Response to Mexicali Valley Earthquake

[Click here](#) to read press release from Department of Interior

[Click here](#) to read "Desalination Promotion Part of Colorado River Agreement."

Regional News 12/26/10

Arizona Drought Prompts Colorado River Water Proposal

[Click here](#) to read this article from the Arizona Republic

LR in the News 12/30/10

Is Tar Sands Mining Viable In Utah?

[Click here](#) to read story by Bobby Magill in New West Magazine

LR in the News 01/01/11

Compilation of magazine articles about Colorado Riverkeeper

Waterkeeper Magazine Winter 2011: [Tarnation](#)

Waterkeeper Magazine Spring 2008: [Rivers are Forever, Dams Are Not](#)

Waterkeeper Magazine Winter 2007: [Save the Colorado River](#)

Waterkeeper Magazine Summer 2004: [Saving Grand Canyon Once and For All](#)

Regional News 01/06/11

Pinon Ridge Uranium Mill Opponents Weighing Options Of State Approval

[Click here](#) to read the story from the Colorado Independent

[Website of Sheep Mountain Alliance \(SMA\)](#)

[SMA group sign-on letter](#)

[SMA geology comments](#)

[SMA socio-economic comments](#)

[SMA environmental comments](#)

[SMA wildlife comments](#)

[Uranium Watch](#)

Regional News 01/17/11

Arizona Drought May Be Eased By Heavy Snow

[Click here](#) to read story from the Arizona Republic

[Click here](#) to read similar story from Las Vegas Review Journal

Take Action 01/18/11

Draft Environmental Assessment Development and Implementation of a Protocol for High-flow Experimental Releases from Glen Canyon Dam, Arizona, 2011 - 2020

Note: Comment period extended to March 18th.

[Click here](#) to read Reclamation press release about the extension

The Department of the Interior, acting through the Bureau of Reclamation, is proposing to develop and implement a protocol for high-flow experimental releases from Glen Canyon Dam to better determine whether and how sand conservation can be improved in the Colorado River corridor downstream of Glen Canyon Dam including areas within Grand Canyon National Park. Under the concept of high-flow experimental releases, sand stored in the river channel is suspended by high-volume dam releases and a portion of the sand is redeposited in downstream reaches as sandbars and beaches, while another portion is transported downstream by river flows. These sand features and associated backwater habitats provide key wildlife habitat, protect archaeological sites, enhance riparian vegetation, and provide camping opportunities along the Colorado River in Grand Canyon National Park.

This protocol for high-flow experimental releases from Glen Canyon Dam is part of the ongoing implementation of the Glen Canyon Dam Adaptive Management Program. As part of the GCDAMP, the protocol is a component of Interior's compliance with the Grand Canyon Protection Act of 1992 (Public Law 102-575).

Written comments may be provided to Reclamation through March 18, 2011 to: Bureau of Reclamation, Environmental Resources Division, 125 South State Street, room 7218, Salt Lake City, Utah 84138 or to via e-mail to: protocol@usbr.gov. For more information, please contact Dennis Kubly at (801) 524-3715.

[Federal Notice](#)

[Click here](#) to go to Reclamation webpage

[Click here](#) to download the Environmental Assessment

[Click here](#) for supporting sediment documents from USGS [and here](#)

[Sediment modeling document](#)

[Aeolian reworking of sand](#)

[Sediment Analysis by Reclamation](#)

Regional News 01/19/11

Running On Empty?

[Click here](#) to go directly to a featured two part series in Climate Central
The story is archived [here](#)

Take Action 01/28/11

Reclamation Releases Environmental Assessment for Control of Non-Native Fish in the Colorado River to the Public for Review and Comment

Note: Comment period extended to March 18th.

[Click here](#) to read Reclamation press release about the extension

[Click here](#) to read the press release by Reclamation about this EA

[Click here](#) to go to the Reclamation web site for the environmental documents

[Click here](#) to read the scientific study by the USGS.

Written comments may be provided to Reclamation through March 18, 2011 to: Bureau of Reclamation, Environmental Resources Division, 125 South State Street, room 7218, Salt Lake City, Utah 84138 or to via e-mail to: protocol@usbr.gov. For more information, please contact Dennis Kubly at (801) 524-3715.

The Bureau of Reclamation has released a Draft Environmental Assessment for the control of non-native fish in the Colorado River downstream from Glen Canyon Dam to the public for a 30-day review and comment period. The EA analyzes the environmental consequences of a range of specific actions designed to control non-native fish, particularly rainbow and brown trout, known to prey on, and compete with, the endangered humpback chub in Grand Canyon. Some means of control are necessary to satisfy conservation measures contained in the 2008 Biological Opinion issued by the U.S. Fish and Wildlife Service for the Operation of Glen Canyon Dam, and the terms and conditions of a subsequent 2010 biological opinion.

"Protecting endangered native species is a key component of Reclamation's efforts to balance the complex and competing interests in the Colorado River downstream of Glen Canyon Dam," said Assistant Secretary for Water and Science Anne Castle. "The science we are bringing together through this study will help us wisely manage Colorado River flows and meet our water delivery and environmental responsibilities, while protecting the cultural values of native American communities."

Continued mechanical removal through the Glen Canyon Dam Adaptive Management Program was the primary method anticipated in the conservation measure, particularly at the confluence of the Colorado River mainstem and the Little Colorado River. However, several tribes represented on the Adaptive Management Work Group, particularly the Pueblo of Zuni, expressed concerns over the taking of life in a culturally

sacred area and the adverse effect that this action has on the values of the Zuni people. To address these concerns, other potential methods of control are evaluated in the EA.

Reclamation worked with the U.S. Geological Survey Patuxent Wildlife Research Center to conduct a Structured Decision Making project to enlist cooperating agencies and AMP tribes in the development and analysis of potential alternatives to control non-native fish for evaluation in the EA. Government-to-government tribal consultation meetings are on-going and will be concluded prior to completion of a final decision on the proposed action.

Non-native fish control efforts identified in the EA would be focused within Glen Canyon National Recreation Area and Grand Canyon National Park. The proposed action is intended to reduce competition and predation on the humpback chub which threaten the potential recovery of the species, while attempting to address tribal concerns and avoid or minimize effects to other resources. The EA describes the current environmental conditions in Glen, Marble, and Grand canyons downstream from Glen Canyon Dam and discloses the direct, indirect, and cumulative environmental impacts that could result from the proposed action and alternatives.

The draft EA was prepared in accordance with the National Environmental Policy Act and is available on our web site. A printed copy of the report is available at the Bureau of Reclamation Upper Colorado Regional Office, 125 South State Street, room 7218, Salt Lake City, Utah 84138.

Regional News 01/31/11

Climate Change and Water in the Southwest: A summary of a special peer-review article series

[Click here](#) to read this article from the University of Arizona.

Articles from Proceedings of National Academy of Sciences

- [1,200 Year Perspective on 21st Century Drought in Southwestern North America](#). Woodhouse et al.
 - [Water, Climate Change and Sustainability in the Southwest](#). MacDonald et al.
 - [Reclaiming Freshwater Sustainability in the Cadillac Desert](#). Sabo et al.
 - [Roadmap to Sustainable Water Resources in Southwestern North America](#). Gleick.
 - [Future Dryness in Southwest & Hydrology of 21st Century Drought](#). Cayan.
 - [Greenhouse Warming & 21st Century Hydroclimate in SW North America](#). Seager et al.
 - [Forest Responses to Increasing Aridity & Warmth in SW USA](#). Williams et al.
 - [Vulnerability Assessment of Climate Induced Water Shortage in Phoenix](#). Gober et al.
-

Regional News 02/01/11

10 American Cities With Worst Drinking Water

[Click here](#) to read story from the Daily Finance

OpEd 02/06/11

Arid Utah Can't Afford Costly & Thirsty Nuclear Power

[Click here](#) to read this opinion piece in the Salt Lake Tribune.

[Click here](#) to read another opinion piece about the nuclear power plant at Green River, Utah at [On The Colorado](#).

[Click here](#) to read 2/07/2011 news item from Deseret News

OpEd 02/24/11

Colorado River's Coming Crisis

[Click here](#) to read Douglas Kenney's OpEd in the Denver Post.

[Click here](#) to read "Rethinking the Future of the Colorado River."

[Click here](#) to learn about the upcoming conference by Natural Resources Law Center at the University of Colorado at Boulder.

LR in the News 02/27/11

BLM begins public hearings in Salt Lake City on oil shale, tar sands development in the West

Associated Press
Chi-Chi Zhang

SALT LAKE CITY — Environmentalists are urging the Bureau of Land Management not to develop nearly 2 million acres of land in Utah, Wyoming and Colorado for oil shale and tar sands use.

The first of seven hearings began on Tuesday in Utah following a decision by Interior Secretary Ken Salazar to take a fresh look at a federal oil shale plan that was released in 2008 by the Bush administration.

That plan would open about 2 million acres of Western public lands to oil shale research and development. The potential impacts include water pollution, huge power needs and boom-bust economic risks.

"The scoping process is designed to explain to the public what we're about to do and gather their input early on," said Mitch Leverette, chief of the Solid Minerals Division for the Bureau of Land Management. "Based on their comments, we hope to offer a range of alternatives in the final report."

A draft of the report is expected to be completed by late September and the final report completed by December 2012, he said.

The report will provide suggestions and examine the potential impact of development, with as much as 1.9 million acres available for commercial oil shale projects and more than 400,000 acres for tar sands leasing and development.

Environmentalists are concerned not only about the impacts of mining in Utah's San Rafael Swell and the scenic Book Cliffs area, but also the potentials risks to air quality and water supplies downstream.

"If they go ahead with this, it means the U.S. is not serious about climate change," said John Weisheit, a Colorado River guide and founder of Living Rivers who spoke at the hearing in Salt Lake City on Tuesday. "This won't help provide more jobs or solve the oil crisis, but it will damage our water resources so why even get started?"

Living Rivers is currently challenging Utah's approval of a proposed commercial tar sands project in the Uinta Basin, which would be the first of its kind in the U.S. The group contends it would dig up fragile topsoil, destroy limestone plateaus formed over thousands of years and pollute groundwater downstream that flows into the Colorado River. Living Rivers filed a complaint with the state, claiming that the Utah Division of Water Quality didn't accurately assess the potential for widespread environmental damage from the PR Springs mine.

But some companies say there are ways to make oil shale development economically viable and technology that will minimize the environmental impact.

"The cleaner we can produce, the more we can produce," said Ray Ridge, founder of Excalibur Industries Inc., an oil shale extraction technology company, at the hearing on Tuesday. "A lot of opponents believe there are no clean methods of oil shale extraction, which is not true and there are alternative solutions."

Another hearing was planned Wednesday in Price.

Hearings will be held in Wyoming on April 29 in Rock Springs and May 5 in Cheyenne and in Colorado on May 3 in Rifle and May 4 in Denver.

OpEd 03/09/11

Utah's Tar Sands

[Click here](#) to read Mike Duncan's contribution to Writer's on the Range in the Salt Lake Tribune

LR in the News 03/15/11

Quest For Renewable Energy Leads To Utah Hydroelectric Projects

[Click here](#) to read story from KSL by Amy Joi O'Donoghue

[Click here](#) to read letter from Living Rivers to FERC about pump-back hydropower generation at Bull and Long canyons.

[Click here](#) to read letter from FERC regarding applicant's failure to comply in providing progress report for Long Canyon Project.

[Click here](#) to read letter from applicant announcing surrender of Long Canyon Project.

[Click here](#) to read letter from applicant announcing surrender of Bull Canyon Project.

Regional News 03/16/11

Local Tribes Say They Are Owed Millions For Water Rights

[Click here](#) to read story in North County Times

LR Letter 03/18/11

Comments by Living Rivers on High Flow Experiment and Non-Native Fish Controls

[Click here](#) to read LR letter to Reclamation on High Flow Experimental Protocol
[and here](#) to read the background material

[Click here](#) to read LR letter to Reclamation on Non-Native Fish Control
[and here](#) to read the background material

Here are the revised EAs that were published on July 5, 2011:

[Click here](#) to download the revised draft for the High Flow Experiment.

[Click here](#) to download the revised draft for the Non-Native Fish Control.

LR in the News 03/24/11

Tar Sands Project Brings Objections by Environmentalists

[Click here](#) to read this story from the Deseret News

Regional News 03/27/11

Ground Zero Law Firm Sues Over Colorado Drilling

[Click here](#) to read this story from New West Magazine by David Frey.

Regional News 03/31/11

Water Shortage Looms in Southwest Despite Steep Rise In Giant Reservoir

[Click here](#) to read the story from the Wall Street Journal

OpEd 04/05/11

Water dumped into the oceans'--Shocking!

[Click here](#) to read the OpEd by the Sacramento Bee editorial board

OpEd 04/09/11

Lake Powell Pipe

[Click here](#) to read this OpEd from the editorial board of the Salt Lake Tribune

LR in the News 04/11/11

Debate Stirred Over 1st Major US Tar Sands Mine

[Click here](#) to read this story in the Associated Press.

[Click here](#) to read the documents about this tar sands project in Utah

[Click here](#) to submit a letter of concern to Utah Division of Oil, Gas and Mining (UDOGM).

[Click here](#) to view the agenda and schedule of Utah Division of Oil, Gas and Mining

LR in the News 04/13/11

Uranium Mill Loses Bid for Green River Water

[Click here](#) to read story in the Salt Lake Tribune by Judy Fayes

[Click here](#) to read the order from the State Engineer

[Click here](#) to visit Uranium Watch for additional information

[Click here](#) to visit the State Engineers records for the uranium mill proposal by Mancos Resources

Regional News 04/14/11

BLM begins new look (PEIS) at oil shale and tar sands

COMMENTS ARE DUE MAY 16, 2011

[CLICK HERE](#) to submit comments

[Click here](#) to read comment letter of Living Rivers

TALKING POINTS ARE LISTED BELOW

[Visit Far Country](#) for documents about tar sands and oil shale in the Uinta Basin

[Click here](#) to read the press release by Bureau of Land Management. This press release includes the schedule for public scoping meetings in Utah, Wyoming and Colorado.

[Click here](#) for the Federal Register Notice of April 14, 2011

[Click here](#) to visit the BLM web site for this Programmatic Environmental Impact Statement

[Click here](#) to review the water energy nexus problems of the Colorado River basin.

[Click here](#) to review US Geological Survey documents on oil shale.

NEWS

[Click here](#) to read the story by David Williams in the Colorado Independent

[Click here](#) to read the story by Dennis Web in the Grand Junction Sentinel.

[Click here](#) to read this Associated Press article by Chi-Chi Zhang.

SUGGESTED TALKING POINTS FOR COMMENTS:

See also the report called [Fossil Foolishness](#)

BLM needs reliable information on how much oil shale development would change the landscape, and it must understand the potential effects on water supplies, air quality, public health and wildlife before it considers commercial leasing. The BLM does not have enough information to consider dedicating public lands to commercial leasing at this point.

A watershed of two million acres will be destroyed

The BLM plan released in 2008 for oil shale allocated 2 million acres in UT, WY and CO for commercial leasing. This is a massive amount of public, taxpayer land that would be sacrificed for a singular use of the landscape; the BLM should reconsider this decision, and consider alternatives that protect the wildlife habitat, water, and air in the West.

Oil shale is projected to have huge impacts on water supplies in the West.

We don't know about the real impacts of commercial oil shale to water supplies in the West, but we know they will be significant. The latest water use estimates range from 3 times the amount consumed annually in Mesa County, Colorado (110,000 acre ft) to 50% more than the Denver Metro area consumes annually (378,000 acre ft). Either scenario would have enormous impacts on the West. We should not consider commercial development of oil shale before we know those impacts.

Oil shale would require a huge amount of electricity.

Oil shale requires a huge amount of electricity to heat it enough to extract a liquid from the rock. The Bureau of Land Management's (BLM) initial estimates show that producing 1 million barrels per day would require ten new coal-fired power plants, each with a capacity to power a city of 500,000 people. The BLM should very carefully consider the serious impacts of new energy required for oil shale development.

Oil shale would have significant impacts to wildlife and fish populations.

The land overlying oil shale resources in Utah, Colorado and Wyoming is some of the best wildlife habitat in the West. We don't know the true impacts that oil shale could have on wildlife populations, but we know that elk, deer, and aquatic species could be seriously impacted by a full-scale oil-shale industry. BLM estimated in its draft EIS that large-scale oil shale development would result in the permanent loss of up to 50 percent of BLM stream fisheries in the area of development, up to 35 percent of Colorado River cutthroat trout fisheries, and up to 11 percent of available nest and brood range for blue and sage grouse.

Research and development leases have shown us nothing so far.

We have had 6 research and development projects in place on federal lands since 2007, with 3 more recently approved by Secretary Salazar, and tens of thousands of acres of oil shale private lands owned by industry. The BLM should not consider allocating millions of acres of western lands for oil shale without any information from oil shale research and development leases on federal lands.

Oil shale is a dirty fuel of the past. We should be focusing on clean fuels of the future.

Simply put, as a nation we should be investing in clean energy sources of the future, not wasting our time promoting dirty energy sources of the past like oil shale and tar sands.

Regional News 04/18/11

Sedimentation: a building problem in the West's reservoirs

[Click here](#) to read this story by High Country News (HCN).

[Click here](#) to watch a HCN video with Craig Childs.

Regional News 04/25/11

Interior Releases Report Highlighting Impacts of Climate Change to Western Water Resources

[CLICK HERE](#) to read the story in the Salt Lake Tribune by Brandon Loomis.

[CLICK HERE](#) to read the story in the Pasadena Star by Mike Sprague.

[CLICK HERE](#) FOR THE REPORT.

The following is the press release from Dept. of Interior:

WASHINGTON, D.C. – Secretary of the Interior Ken Salazar today released a report that assesses climate change risks and how these risks could impact water operations, hydropower, flood control, and fish and wildlife in the western United States. The report to Congress, prepared by Interior's Bureau of Reclamation, represents the first consistent and coordinated assessment of risks to future water supplies across eight major Reclamation river basins, including the Colorado, Rio Grande and Missouri river basins.

"Water is the lifeblood of our communities, rural and urban economies, and our environment," said Secretary Salazar, "and small changes in water supplies or the

timing of precipitation can have a big impact on all of us. This report provides the foundation for understanding the long-term impacts of climate change on Western water supplies and will help us identify and implement appropriate mitigation and adaptation strategies for sustainable water resource management.”

The report, which responds to requirements under the SECURE Water Act of 2009, shows several increased risks to western United States water resources during the 21st century. Specific projections include:

a temperature increase of 5-7 degrees Fahrenheit; a precipitation increase over the northwestern and north-central portions of the western United States and a decrease over the southwestern and south-central areas; a decrease for almost all of the April 1st snowpack, a standard benchmark measurement used to project river basin runoff; and an 8 to 20 percent decrease in average annual stream flow in several river basins, including the Colorado, the Rio Grande, and the San Joaquin. The report notes that projected changes in temperature and precipitation are likely to impact the timing and quantity of stream flows in all western basins, which could impact water available to farms and cities, hydropower generation, fish and wildlife, and other uses such as recreation.

"Impacts to water are on the leading edge of global climate change, and these changes pose a significant challenge and risk to adequate water supplies, which are critical for the health, economy, and ecology of the United States," added Reclamation Commissioner Mike Connor. Reclamation is already working with stakeholders across the West to achieve a sustainable water strategy to meet our nation's water needs. Through the WaterSMART Basin Studies Program, Reclamation is developing and evaluating options for meeting future water demands in river basins where water supply and demand imbalances exist or are projected.

Reclamation is also continuing to implement actions to mitigate and adapt to changing climate. For example, at Hoover Dam, new wide head range turbines are being installed that will allow more efficient power generation over a wider range of lake levels than existing turbines. In addition, through the WaterSMART program, Reclamation continues to work with water users across the West to implement conservation and recycling measures and promote the efficient use of finite water resources. The Department of the Interior has also established Landscape Conservation Cooperatives and Climate Science Centers to help assess vulnerabilities to the natural and cultural resources management by the Department, and spearhead activities to adapt to the stresses of climate change.

“The WaterSMART program provides a strong foundation for the Department's efforts to improve water conservation and help water-resource managers make sound decisions about water use,” said Assistant Secretary of the Interior for Water and Science, Anne Castle. “As climate change adds to the challenges we face in managing our water supply, meaningful engagement between the River Basin states and the Department of the Interior will continue to be essential.”

To develop the report, Reclamation used original research and a literature synthesis of existing peer-reviewed studies. Projections of future temperature and precipitation are based on multiple climate models and various projections of future greenhouse gas emissions, technological advancements, and global population estimates. Reclamation will develop future reports to Congress under the authorities of the SECURE Water Act that will build upon the level of information currently available and the rapidly developing science to address how changes in supply and demands will impact water management.

The Bureau of Reclamation is the largest wholesaler of water in the country, providing water to more than 31 million people and to one out of five Western farmers for irrigation of more than 10 million acres of farmland. Reclamation is also the second largest producer of hydroelectric power in the western United States with 58 power plants generating nearly a billion dollars in power revenues and producing enough electricity to serve 3.5 million homes.

The SECURE Water Act Report, with fact sheets highlighting climate challenges and impacts in the eight western river basins, is available online at <http://www.usbr.gov/climate>.

More information about Reclamation's WaterSMART program is available at <http://www.usbr.gov/WaterSMART>

LR in the News 04/29/11

BLM begins Oil Shale Hearings in Utah

[Click here](#) to read this Associated Press article by Chi-Chi Zhang.

LR Letter 05/04/11

Grand Canyon Uranium Withdrawal DEIS

[Click here](#) to read the comments of Uranium Watch, Living Rivers and the Glen Canyon Group of the Sierra Club

[Click here](#) to read the comments of Center for Biological Diversity, Grand Canyon Trust, Grand Canyon Wildlands Council and Grand Canyon Chapter of the Sierra Club

Comments on Draft Studies for Lake Powell Pipeline

COMMENT LETTERS:

- 1) [Comments by FERC](#)
- 2) [Coalition comments](#)
- 3) [EDF comments](#)
- 4) [State of Colorado](#)
- 5) [Western Resource Advocates](#)

The draft study documents were submitted by the Utah Division of Water Resources in accordance to the Federal Energy Regulatory Commission (FERC) for the potential licensing of Lake Powell Hydroelectric Project No. 12966, otherwise known as the Lake Powell Pipeline. The proposed project will deliver Colorado River water (100,000 acre-feet per year) from Lake Powell to Kanab, Washington and Iron counties. The project also includes the generation of electricity to defer a portion of the operating costs.

The Utah Board of Water Resources (UBWR) held two initial study report meetings to discuss the draft study report results, one on March 22, 2011 in St. George, Utah and another on March 23, 2011 in Salt Lake City.

March 22, 2011 - St. George; 8:30 a.m. - 5:00 p.m.
Lexington Hotel & Conference Center; Sabra Room
850 South Bluff Street; St. George, Utah

March 23, 2011 - Salt Lake City; 8:30 a.m. - 5:00 p.m.
State Office Building Auditorium; Utah State Capital Complex
350 North State Street; Salt Lake City, Utah

[Home page of the Lake Powell Pipeline Project](#)

THE DOCUMENTS

The sensitive material of the archeology report will not be made public. The ethnographic report is still pending.

- [March 11, 2011 - Draft Study Report Transmittal Letter to FERC](#)
- [Draft Air Quality Report](#)
- [Draft Aquatic Resources Report](#)
- [Draft Geology & Soils Report](#)
- [Draft Groundwater Resource Technical Report](#)
- [Draft Land Use Report](#)
- [Draft Noise Report](#)
- [Draft Paleontological Resources Report](#)
- [Draft Recreation Resources Study](#)
- [Draft Socioeconomic & Water Resources Report](#)

- [Draft Special Status Aquatic Species Habitats Report](#)
- [Draft Special Status Plant Species](#)
- [Draft Special Status Wildlife Species Report](#)
- [Appendix B Avian Survey Report](#)
- [Appendix C Avian Survey Report](#)
- [Appendix D Mohave Desert Tortoise Survey Report](#)
- [Appendix E Utah Prairie Dog Survey Report](#)
- [Draft Transportation Report](#)
- [Draft Vegetation Community Report](#)
- [Draft Visual Resources Report](#)
- [Draft Surface Water Quality Report](#)
- [Draft Surface Water Resources Report](#)
- [Draft Climate Change Report](#)
- [Draft Water Needs Assessment Report](#)
- [Draft Wetland Riparian Resources](#)
- [Draft Wildlife Resources Study](#)
- [Draft Alternatives Development Report V3](#)
- [March 2011 - Meeting summary of the study presentations](#)

ADDITIONAL DOCUMENTATION

- [2011 SECURE Water Report](#). Reclamation.
- [Document archive at FERC's search engine](#) (Docket P-12966)
- [Lake Powell Pipeline Facts](#)
- [Citizen's for Dixie's Future](#)
- [Motion to intervene](#): Citizen's For Dixie's Future et al.
- [Motion to intervene](#): Kaibab Paiutes
- [Motion to intervene](#): Central Arizona Water Conservation District.
- [LLP Comments by DOI](#)
- [LPP Colorado Comments](#)
- [LPP presentation to Nevada](#)
- [Comments of Living Rivers](#)
- [2007 - Application Preliminary Permit LP Pipeline Project](#)
- [2008 - Notice of Intent for Lake Powell Pipeline](#). Utah Water Resources.
- [2008 - LP Pipeline Report Socioeconomic Resources](#). Tufte.
- [2000 - Washington County Water Supply Report](#). Hydrosphere.
- Graphic: [Water per capita use in the Intermountain West](#)

Regional News 05/13/11

Climate Change to Create a Dustier Southwest

[Click here](#) to read this story by Judy Fahys of the Salt Lake Tribune

LR Letter 05/16/11

LR Comments on PEIS for proposed oil shale & tar sands development in the Colorado River basin

[Click here](#) to read our comments

[Click here](#) for background information on the PEIS

[Click here](#) for additional information related to potential dirty oil development in the Uinta Basin

Regional News 05/26/11

Feds Stop Work on Flaming Gorge Pipeline Study

[Click here](#) to read this story from the Associated Press

[Click here](#) to read further information about this story from the Denver Post

[Click here](#) to read further information about this story from The Coloradoan

[Click here](#) to read the Public Notice of termination of EIS by ACOE.

Regional News 05/30/11

The Colorado River's Nonexistent Emergency Plan

[Click here](#) to read this story by Rob Davis in the Voice of San Diego

[Click here](#) to read the comments of Living Rivers to the Bureau of Reclamation for the poor planning behind the development of Shortage Criteria

Regional News 06/20/11

20-year Ban Planned at Grand Canyon for Uranium Mining

[Click here](#) to read story from the Los Angeles Times

Regional News 06/24/11

Decline in water usage tied to rise in conservation

[Click here](#) to read this story in The Desert Sun by Keith Matheny

[Click here](#) to read the report by Michael Cohen of the Pacific Institute.

LR in the News 06/29/11

Green groups question proposed Utah nuclear plant

By JUDY FAHYS The Salt Lake Tribune

Environmental groups from four states are urging Utah water officials to take a hard look at the proposed Green River nuclear power plant's potential impacts on the environment and human health.

The ten groups say in a letter to State Engineer Kent Jones that, while the likelihood of catastrophe might be low, the consequences of a radiation release at the proposed plant would be enormous for about 30 million people who rely on water from the Green and Colorado rivers downstream, as well as for the ecosystem.

"We urge you to carefully consider that possibility," says the June 29 letter, "given the critical location of the proposed reactors upstream from not just the water supply for tens of millions of Southwestern residents, but for a host of fragile ecosystems, flora and fauna."

At the State Engineer's office, the staff continues to review a pair of applications to divert 53,600-acre-feet of water for the 3,000 megawatt plant, said John Mann, assistant state engineer. The water-rights review is looking at concerns about radiation releases like those at the Fukushima nuclear station in northern Japan, at the possibility that radiation would wind up in the Colorado River system, and that it could affect endangered fish species.

"The issues that are raised in the letter are things we are going to have to consider anyway," Mann said, noting the water-rights decision might not be complete before the summer's end. "The downstream interests of water users are always taken into consideration."

The groups signing onto the letter include Uranium Watch and Living Rivers in Moab. They also include the Grand Canyon Trust, the Sierra Club Grand Canyon Chapter, SafeEnergyAnalyst.org, Environment Nevada, Environment California, Environment Arizona, Don't Waste Arizona and the Arizona Wilderness Coalition.

Aaron Tilton, president and CEO of Blue Castle Holdings, the company proposing the nuclear plant, said the state engineers' water rights review is limited to questions about the availability of water and the project's feasibility. Deeper questions about environmental impacts will be dealt with in-depth by the U.S. Nuclear Regulatory Commission.

"The real forum for that [environmental] discussion is the NRC," he said.

The NRC is not expected to take up the Blue Castle license until the end of next year or the beginning of 2013, said Tilton.

The plant is planned for a location near the junction of Interstate 70 and State Route 6 just west of Green River.

fahys@sltrib.com

###

By JOSH LOFTIN Associated Press Posted: 06/29/2011 01:32:25 PM PDT

SALT LAKE CITY—Environmental groups from four states have sent a letter to Utah officials criticizing a request from the owners of a proposed nuclear power plant to use water from the Green River.

The biggest issue for the groups from Arizona, California, Nevada and Utah is the scarcity of water in the Colorado River basin. But they also cite safety concerns in the wake of the Fukushima disaster in Japan, cautioning that a similar disaster could have dire consequences because the radioactive material could flow downstream.

"We urge you to carefully consider that possibility, given the critical location of the proposed reactors upstream from not just the water supply for tens of millions of Southwestern residents, but for a host of fragile ecosystems, flora and fauna," the groups wrote.

The proposed nuclear power plant would be located in eastern Utah. The Utah Division of Water Rights is studying a request for the power plant to use about 17.5 billion gallons of water a year from the Green River, a major tributary of the Colorado River. That's enough to serve about 100,000 households. "Awarding a massive quantity of water ... to nuclear reactors seems a poor choice given the realities of the already over-subscribed Colorado River system," the groups wrote.

The nuclear power plant is being proposed by Blue Castle Holdings, which is managed by President and CEO Aaron Tilton, a former state Republican lawmaker.

Take Action 07/05/11

Reclamation Releases Environmental Assessment on a Protocol for Experimental High-Flow Releases from Glen Canyon Dam for Second Public Review

Comments are due on July 19, 2011

Send to Dennis Kubly via email

Email address: protocol@usbr.gov

[Click here](#) to download the revised draft for the High FLOW Experiment.

[Click here](#) to download the revised draft for the Non-Native Fish Control.

[Draft Environmental Assessment for high flow experiment](#)

[Draft Environmental Assessment for non-native fish control](#)

[Comments by Living Rivers on Draft Environmental Assessment in March 2011.](#)

Upper Colorado Region
Salt Lake City, Utah
Media Contact: Lisa Iams
(801) 524-3673
Beverley Heffernan 801-524-3712

Reclamation Releases Environmental Assessment on a Protocol for Experimental High-Flow Releases from Glen Canyon Dam for Second Public Review.

The Bureau of Reclamation has released the revised Draft Environmental Assessment for the Development and Implementation of a Protocol for High-Flow Experimental Releases from Glen Canyon Dam, from 2011 through 2020 for a second two-week public review and comment period.

The EA analyzes the effects of implementing a protocol to conduct multiple high-flow experiments from the dam between 2011 and 2020 to better determine whether and how beach and sandbar building and maintenance can be improved in the Colorado River corridor downstream of the dam. The protocol will provide an adaptive management framework to learn how to better conserve the limited sand supply to the Colorado River below the dam, while ensuring that no significant impacts occur to other downstream resources affected by the high releases.

During a high flow experiment, the high volume of water released from the dam suspends sand stored in the river channel deposited by tributaries. A portion of that sand is re-deposited in the downstream river reaches as sandbars and beaches while another portion is transported downstream by river flows. These sand bars and beaches, and the associated near-shore habitats, are important components of the Colorado River ecosystem in addition to providing camping opportunities for river runners and hikers along the Colorado River within Grand Canyon National Park.

The Department of the Interior initiated development and implementation of the protocol as part of the ongoing Glen Canyon Dam Adaptive Management Program, to build on the knowledge gained from the previous high-flow experiments conducted in 1996, 2004, and 2008, and to comply with requirements and obligations established by the Grand Canyon Protection Act of 1992.

The draft EA was prepared in accordance with the National Environmental Policy Act and is available at www.usbr.gov/uc under the "[Environmental Documents](#)". A printed copy of the report is available at the Bureau of Reclamation Upper Colorado Regional Office, 125 South State Street, room 7218, Salt Lake City, Utah 84138.

Written comments may be provided to Reclamation through July 19, 2011 to the address above or via e-mail at protocol@usbr.gov. For more information, or to request a printed or CD-ROM copy of the EA, please contact Dennis Kubly at (801) 524-3715.

Take Action 07/05/11

Long-Term Plan For Glen Canyon Dam In The Works

[Click here](#) to read the story by Environmental News Service

[Click here](#) to read the Federal Register Notice

We will update this website as new information becomes available.

###

Reclamation documents of the Long-Term Experimental Plan EIS before it was suspended.

[Click here](#) to visit the suspended LTEP EIS website by Reclamation ([cache](#))

[LTEP Scoping](#)

[Experimental Plan 2008-2012](#)

[2007 - Sediment Augmentation Feasibility Report](#). Randle. Bureau of Reclamation.

[2007 - Risk Assessment: Temperature Control Device](#). Valdez et al.

[2007 - LTEP workshop](#). US Geological Survey.

[2008 - Comments on BHBf](#) (experimental flood). National Park Service.

[2009 - Development of high test flow protocols](#). Federal Notice.

[2010 - Work Plan and Budget for 2010 & 2011](#). GCMRC.

[2011 - High Flow Experiment EA](#)

[2011 - Non-native Fish Control EA](#)

LR Letter 07/08/11

Living Rivers' comments on Interim Report for the Colorado River Basin Supply and Demand Study

[Click here](#) to read our comments to the Bureau of Reclamation.

[Click here](#) to review the Interim Report issued by the Basin Study team.

[Click here](#) to review other Reclamation documents related to climate change in the western states.

[Click here](#) to read news about the Interim Report in the Colorado Independent.

LR Letter 07/19/11

LR Comments for revised EA for High Flow Experiment and Non-Native Fish Control

[Click here](#) to read the comments submitted by Living Rivers and Center for Biological Diversity.

[Click here](#) for more background information.

OpEd 07/22/11

Republicans Should Quit Trying to Roll Back Uranium Mining Moratorium

[Click here](#) to read the editorial from the Las Vegas Sun.

[Click here](#) to read the press release from Congressman Flake.

[Click here](#) to read the comments to the EIS from regional NGOs.

[Click here](#) to read opinion from the editorial board of The Desert Sun

[Click here](#) to read Associated Press story and the reaction of Raul Grijalva, congressman from Tucson and author of the Grand Canyon Watershed Protection Act.

Regional News 07/22/11

Mississippi River May Help Ease West Drought Says Mulroy

[Click here](#) to read this story from the Las Vegas Review Journal.

LR Event 07/26/11

A River Trip with Tim DeChristopher

An interview conducted by Alex Chadwick with Tim DeChristopher during a Cataract Canyon river trip in early May of 2011.

[Click here](#) to listen to the interview on KCRW

[Click here](#) to listen to the interview on NPR's All Things Considered

DeChristopher is a climate justice activist who was sentenced to federal prison today for civil disobedience to disrupt what turned out to be an illegal auction of oil and gas parcels near Canyonlands and Arches National Parks.

###

Additional Information:

[Opinion:](#) DeChristopher and Noel, A Tale Of Two Crimes.

[Click here](#) to read Tim DeChristopher's statement before Judge Benson.

[Click here](#) to read a story about Tim DeChristopher in the LA Times

[Click here](#) to read a story about DeChristopher in the Deseret News

[Click here](#) to read a letter from Tim DeChristopher from prison

[Click here](#) to read an article in Outside Magazine called The Trials of Bidder 70

[Click here](#) to visit Peaceful Uprising

Take Action 07/28/11

PEIS by DOE for Uranium Leasing Program for Uravan Mineral Belt in SW Colorado

Public scoping meeting for the U.S. Department of Energy Uranium Leasing Program Programmatic Environmental Impact Statement (DOE/EIS-0472)

[Click here](#) to read a press article from the Durango Herald

[Click here](#) to read a press article from the Telluride Daily Planet

[Click here for Federal Register Notice](#)

[DOE responses to previous public comments](#)

COMMENTS ARE DUE SEPTEMBER 9, 2011

Mailing Address:

Laura Kilpatrick, Realty Officer
11025 Dover Street, Suite 1000
Westminster, CO 80021
Telephone: (720) 880-4338
E-mail: ULinfo@lm.doe.gov

PUBLIC MEETING SCHEDULE

August 8, 2011

6:30 to 9 pm

Montrose Pavilion

1800 Pavilion Drive

Montrose, Colorado 81401

August 9, 2011

6:30 to 9 pm

Sheridan Opera House

110 North Oak Street

Telluride, Colorado 81435

August 10, 2011

6:30 to 9:00 pm

Naturita Community Building

411 West 2nd Street

Naturita, Colorado 81422

August 11, 2011

6:30 to 9:00 pm

San Juan County Court House

Commission Chambers

117 South Main Street

Monticello, Utah 84532

BACKGROUND INFORMATION

This study was generated by a [lawsuit](#)

[Link to Programmatic Environmental Impact Statement](#) (PEIS)

LINKS TO PREVIOUS ENVIRONMENTAL ASSESSMENT

[Link to Program Summary](#)

[Link to Current Status](#)

[Link to FONSI](#)

[Link to Map](#)

OpEd 08/04/11

Canyon's Preservation is Worth Every Penny

[Click here](#) to read Bill Hedden's OpEd in the Arizona Republic

[Click here](#) to read Paul Gosar's opening statement before Water and Power Subcommittee

[Click here](#) to read David Marcus' report

[Click here](#) for more information on the Glen Canyon Dam Adaptive Management Program

Regional News 08/08/11

New Mexico Sues Reclamation To Block Water Release

[Click here](#) to read this story in the Albuquerque Journal

[Click here](#) to read another story (9/11/11) in the Albuquerque Journal about a dispute over water rights in New Mexico.

[Click here](#) to read the this related story from the Santa Fe New Mexican

[Click here](#) to read OpEd in the Albuquerque Journal about conflicts over water scarcity in the Colorado River basin

Regional News 08/11/11

USU scientist to lead Grand Canyon project (GCMRC)

By Cache Valley Daily
August 11, 2011

Utah State University river scientist Jack Schmidt will lead a federal agency focused on providing science to guide management of an iconic region that has been a pivotal part of his research for nearly 30 years.

Starting August 15 Schmidt assumes the post of Chief of the U.S. Geological Survey's Grand Canyon Monitoring and Research Center based in Flagstaff, Arizona. Schmidt, a professor in USU's Department of Watershed Sciences, says the Grand Canyon and the Colorado River that flows through it is where his research life started.

He says he views this as an opportunity for service within the federal government as a way to give back to a river and to a landscape that has been central to his professional career and the education of his students.

Originally printed at <http://www.cachevalleydaily.com/news/local/USU-scientist-to-lead-Grand-Canyon-project-127485753.html>

LR in the News 08/13/11

Bounty at Lake Powell Follows Record Dry Stretch

[Click here](#) to read this story by Bettina Boxall from the Los Angeles Times

[Click here](#) to read the One-Dam Solution by Living Rivers

Regional News 08/22/11

Nevada Water Authority Board Member Wants Projects Reconsidered

[Click here](#) to read this story from the Las Vegas Sun

[Click here](#) to read the OpEd from the editorial board of the Salt Lake Tribune

LR in the News 08/26/11

Pressure is Building for First US Tar Sands Mine in Utah

[Click here](#) to read this story from E Magazine

LR Letter 09/09/11

Comments for Dept. of Energy and mining uranium in Western Colorado

Comments by Living Rivers and Uranium Watch for the Programmatic EIS by the Department of Energy for the mining of uranium deposits in the watershed of the

Dolores River:

[Uranium Watch, Living Rivers, Sierra Club and Grand Canyon Trust](#)

[Exhibit A: Ecological Effects](#)

[Exhibit B: ULP History](#)

Other groups:

[Dolores River Coalition](#)

[City of Ophir & Telluride](#)

[Sheep Mountain Alliance](#)

[The Wilderness Society](#)

Regional News 09/11/11

Too Wacky! Moving Water From Flood to Drought

[Click here](#) to read this Associated Press story about river augmentation

[Click here](#) to read our comments to the Bureau of Reclamation about water scarcity

Regional News 09/15/11

Billion dollar baby: Why the Flaming Gorge Pipeline is bad for the West

[Click here](#) to read this story from High Country News

[Click here](#) to read about the Flaming Gorge Pipeline in the Denver Post

[Click here](#) to read the story from the Grand Junction Free Press

[Click here](#) to read the story from the Pueblo Chieftain about how the application to FERC was insufficient

Regional News 09/16/11

Navajo Generating Station Blamed For Grand Canyon Haze and Tribal Respiratory Illnesses

[Click here](#) to read this story in the Colorado Independent

Regional News 09/19/11

Lake Powell Pipeline May Take Share of Statewide Sales Tax (Also OpEd)

[Click here](#) to read this story in the Salt Lake Tribune

[Click here](#) to read the comments of the editorial board at the Salt Lake Tribune

[Click here](#) to read this story in Deseret News about Lake Powell Funding clearing the Water Issues Task Force

Regional News 09/23/11

USGS Provides Information on Arizona's Ground Water depletion

[Click here](#) to read the press release by USGS.

[Click here](#) to view the interactive mapping of Arizona's ground-water condition.

[Click here](#) to read the Open-File Report by USGS.

Additional Information

[Click here](#) to read The One-Dam Solution produced by Living Rivers in 2005.

Regional News 09/25/11

Arizona drought conditions could deepen

[Click here](#) to read this story from Shaun McKinnon of the Arizona Republic

OpEd 10/21/11

Richard A. Muller: The Case Against Global Warming Skepticism

[Click here](#) to read this piece in the Wall Street Journal

[Click here](#) to visit the scientists website at UC Berkeley

Regional News 10/25/11

Federal Regulators Accept Flaming Gorge Pipeline Application

[Click here](#) to read this Associated Press article in Deseret News

Regional News 10/27/11

Talks Between Nuclear Plant Planners Feds 'Well Under Way'

[Click here](#) to read this story in the Salt Lake Tribune by Judy Fahys

[Click here](#) to read this story in the Deseret News by Amy Joi O'Donoghue

Regional News 10/29/11

Massive California Farm-to-City Water Deal Snared in Litigation

[Click here](#) to read this story by Tony Perry in the LA Times

[Click here](#) to read this story by Elliot Spagat of Associated Press

Regional News 10/30/11

Water Authority Touts Pipeline While Foes Pursue Desalination Plant

[Click here](#) to read this story by Harry Brean in the Las Vegas Review Journal

Regional News 11/10/11

Salazar Highlights 18 Backcountry Areas Deserving Congressional Protection

[Click here](#) to read this press release from the Department of Interior. Wilderness in the Colorado River basin are included in this recommendation.

[Click here](#) to read Secretary Salazar's letter to Congress and the Senate leadership.

[Click here](#) to read the report prepared by Deputy Secretary David Hayes.

Regional News 11/14/11

The Energy & Expense of Bringing Water To Southern California

[Click here](#) to read this story in the Los Angeles Times by Bettina Boxall

Regional News 11/21/11

Who's Kent Jones? Utah's Nuclear Future Rests In His Hands

[Click here](#) to read this story by Judy Fahys in the Salt Lake Tribune

[Also click here](#) to read Fahy's story called Utah & U.S. Learn From Japanese Nuclear Meltdown

Regional News 11/30/11

Request for ideas: Reclamation's supply and demand study

[Click here](#) to read the press release from Reclamation.

[Click here](#) to read the request for ideas proposal.

[Click here](#) to review Reclamations website for the supply and demand study

Regional News 12/11/11

Air Quality Difficult to Gauge in Dustier American West

[Click here](#) to read this story in the New York Times by Kirk Johnson

Regional News 12/12/11

Water Woes (Basin Study Webinar)

[Click here](#) to read this story by John Fleck of the Albuquerque Journal

[Click here](#) to visit Reclamation's web site about the demand and supply study

LR Press Release 12/15/11

Colorado River Protection Coalition Intervenes Against Flaming Gorge Pipeline

[Click here](#) to read the motion to intervene by coalition that includes Living Rivers/ Colorado Riverkeeper (includes exhibits)

For Immediate Release, December 15, 2011 Contacts:

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Conservation Alliance, 307-742-7978
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Michael Kellett, Glen Canyon Institute, 801-363-4450

Colorado River Protection Coalition Intervenes Against Flaming Gorge Pipeline

Federal Energy Regulatory Commission Should Not Waste Resources On Unbuildable Scheme

Denver, CO – Today a coalition of 10 conservation groups from Colorado, Utah, Wyoming, and Arizona -- the Colorado River Protection Coalition -- moved to intervene in the Federal Energy Regulatory Commission (FERC) review of the Regional Watershed Supply Project (a.k.a., the "Flaming Gorge Pipeline"). FERC is currently evaluating a preliminary permit application for the Flaming Gorge Pipeline from Wyco Power and Water Inc. FERC allows members of the public with a stake in projects to intervene in preliminary permit proceedings, and the Colorado River Protection Coalition, represented by Earthjustice, has called upon FERC to deny the permit on numerous grounds.

"The Flaming Gorge Pipeline would be one of the biggest, most environmentally damaging water projects in the history of the western United States," said McCrystie Adams of Earthjustice, the Coalition's lead attorney. "The Pipeline would devastate the Green River, one of the West's last great rivers and a sanctuary for native fish and wildlife, and severely harm the Colorado River downstream."

In its intervention comments, the Colorado River Protection Coalition asserted that the Flaming Gorge Pipeline is extremely unlikely to be permitted because it would likely violate the Endangered Species Act, would adversely affect four national wildlife refuges, and part of the project would be located in a U.S. Forest Service roadless area. The Coalition also argued that the permit should be denied because the applicant failed to meet various requirements during a previous attempt at permitting a nearly identical project with the U.S. Army Corps of Engineers. Further, the Coalition asserted that the Pipeline is an extremely environmentally damaging water supply project that would irrevocably harm the Green and Colorado Rivers, not a "hydropower project," and thus FERC is not the appropriate agency to lead federal review of the proposal.

"The Flaming Gorge Pipeline would severely harm the Wyoming landscape it crosses," said Steve Jones of the Wyoming Outdoor Council. "Our state's heritage, wildlife, and economy are dependent on protecting roadless and wilderness areas."

“Four endangered fish -- the Colorado pikeminnow, humpback chub, razorback sucker, and bonytail chub -- are dependent on the water this pipeline proposes to drain out of the Green and Colorado Rivers,” said Taylor McKinnon of the Center for Biological Diversity in Flagstaff, Arizona. “The pipeline would spell disaster for those fish and the river ecosystems we and they depend on. It’s a foolish proposal in the face of global warming and projected declines in river flows.”

“The Green River flows through Utah’s largest roadless area, provides 40 percent of the water entering the Colorado River at Lake Powell each year, and supports a world-famous trout fishery averaging 6,000 – 8,000 fish per mile” said Zach Frankel, executive director of the Utah Rivers Council. “This catastrophic proposal would not only mar these treasures, it would forever alter life in Utah.”

The applicant previously sought a permit for the Pipeline from a different federal agency, the U.S. Army Corps of Engineers (Corps). In July of 2011, the Corps terminated its review of the project because the applicant missed multiple deadlines and did not provide information requested by the Corps. A few months later, the applicant redesigned the project to include some incidental hydropower components and requested review through FERC. Despite the modifications, the project remains a huge energy hog -- at least nine air-polluting natural gas-fired pumping stations would be required to pump the water uphill across Wyoming and over the Continental Divide. Wyco’s president has acknowledged that pumping the water uphill would use more energy than the project would create through hydropower.

“We know this project would burn more energy than it produces,” said John Spahr of the Sierra Club. “Claiming it is a hydropower project is nothing more than a thinly veiled attempt to make an end-run around federal law.”

Since its inception, the extremely controversial Flaming Gorge Pipeline has met with great opposition in Colorado, Wyoming, and Utah. The water would go to the Front Range of Colorado which is projected to double in population in the next 50 years. Colorado is already a parched state with severely depleted rivers while the majority of the water in Colorado’s cities is used to keep lawns green for three months in the hot, dry summer across sprawling suburban landscapes.

Duane Short of Biodiversity Conservation Alliance noted, “The Coalition believes that Colorado and other western citizens are beginning to realize that unbridled consumption of water from our rivers and aquifers will leave our precious water resources depleted leading to even more severe water shortages for our children and grandchildren. We hope the public will work with us to prevent this shortsighted and irresponsible water grab.”

“The Flaming Gorge Pipeline would be a flaming disaster for Colorado,” said Gary Wockner of Save the Poudre: Poudre Waterkeeper. “The Pipeline would be a devastating step backwards for water supply policy and river protection in Colorado and the Southwest U.S. -- our coalition will work as long and hard as it takes to stop this project.”

This Coalition's intervention is one of several being filed by public interest groups and local communities. Over a hundred public comments urging FERC to deny the preliminary permit have already been filed before the Dec. 19th deadline. Comments are posted on FERC's website here:

http://elibrary.ferc.gov/idmws/docket_search.asp

Search for Docket Number: P-14263

The Colorado River Protection Coalition's comments are posted here:

<http://savethepoudre.org/documents/Sierra-Club-et-al-Motion-to-Intervene-FERC-Project-No-P-14263-000.pdf>

A map of the pipeline's proposed 550 mile route across Wyoming and down through Colorado is here: <http://savethepoudre.org/documents/RWSP-Overview-map-12-15-2011.pdf>

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Flaming Gorge Pipeline opposition in the news

[Colorado River District opposes Flaming Gorge pumpback proposal](#) Glenwood Springs Post Independent

[Million pipeline in the news again](#) Green River Star

[Props & Disses](#) Jackson Hole Weekly

[Fort Collins objects to Flaming Gorge Pipeline](#) The Coloradoan

[Ten Groups Call for Flaming Gorge Pipeline Intervention](#) Public News Service

[Flaming Gorge plan protested](#) The Chieftain

[Gov. Matt Mead blasts proposed Wyoming-Colorado water pipeline in comments to FERC](#) The Republic

[Critics line up over Flaming Gorge pipeline plant](#) Desert News

[Green groups oppose plan for water pipeline from Wyoming to Colorado](#) Denver Post

[Salt Lake Tribune](#) Salt Lake Tribune

[Coalition intervenes against Flaming Gorge Pipeline](#) Wyoming Business Report

[Environmental groups oppose Wyo./Colo. pipeline](#) Bloomberg Business Week

[Environmental group files objection to Flaming Gorge pipeline](#) Northern Colorado Business Report

[2 Mesa County commissioners vote to oppose Flaming Gorge pipeline proposal](#) Associated Press via The Republic

[Link TextMesa County, Colo. commissioners opposing Flaming Gorge proposal](#)Associated Press via The Billings Gazette

[Colo. water pipeline proposal draws criticism.](#) Durango Herald

Reference 12/26/11

Book Excerpt: A Great Aridness (Debuys)

December 26, 2011

'A Great Aridness'

By SIMON BARON-COHEN (New York Times)

Pages 22-27

THE GOOD NEWS, if you ask Richard Seager, an oceanographer at the Lamont-Doherty Earth Observatory in Palisades, New York, is that the Northern Hemisphere Hadley cell is not expanding as fast as some recent analyses have warned. Those projections, he says, depend upon comprehensive satellite data, which have been available only since the late 1970s, a brief slice of time. He thinks the observed Hadley cell expansion is better attributed to a naturally occurring decadal shift in Pacific Ocean currents.

The bad news, however, is that, because of Hadley cell expansion and other factors, the Southwest is moving — and to some extent has already moved — into a new set of climate conditions “unlike any climate state we have seen in the instrumental record.”

Seager thinks that the droughts of the past, like the Dust Bowl drought of the 1930s and the 2000–2004 drought that killed millions of pinons and ponderosas in New Mexico and Arizona, will be the norm of the future. He is saying, in effect, that what we think of as drought today will cease to be drought in the light of some not-too-distant tomorrow. Drought is relative — and exceptional. One does not say that the Sahara is experiencing drought. The Sahara is dry by nature, not by exception.

According to Seager, the future Southwest will be much drier than the conditions its present inhabitants consider “normal”; it will likely be as dry as its driest recent decades, and people will have to recalibrate their expectations to a new idea of what “normal” stands for. Moreover, he says that the droughts of the future will be superimposed on that dryness and that they will be unlike anything people in the region have known since late medieval times.

Seager holds an endowed position at Lamont-Doherty, a research arm of Columbia University. He’s a Brit who came to the United States for education and stayed. I visited him at his Morningside Heights apartment on a day when the lab was closed and his son Angus was home from school, contending with homework at the dining table. The humid smell of laundry was in the air. We had plenty of time to talk, but not an unlimited amount — an important football game (real football, played with the feet) would be

televised from England that afternoon. Seager lives close to Columbia, only a block from the diner made famous by the sitcom “Seinfeld.”

He takes an amused pride in this link to American pop culture, marveling at the tourists posing for snapshots and the occasional celebrity guiding a tour. Seager is a bit of a cultural sponge. As we talked, he alluded frequently to the intricacies of Colorado River politics and to Dust Bowl histories and books on western water. Except for his accent, he could have been a good-old-boy insider.

Seager calls himself an oceanographer and meteorologist, avoiding the term climatologist, which suggests, to him, a duffer “with a cloth cap and a rain gauge in his garden.” He came to the study of the Southwest “by pure chance, which is the way science goes, you know?” He and his team had been looking at Asian monsoon variability in the nineteenth century, going back to 1856, the year the British and American navies began recording air and sea surface temperatures and winds from all their ships. Other navies and merchant marines eventually followed suit, making it possible to compile a nearly global century-and-a-half record of oceanic weather. Seager and his team drew upon that data to model relationships between sea surface temperature and changes in atmospheric circulation.

In 2004, Siegfried Schubert, a scientist at the nearby NASA Goddard Institute for Space Studies, a leading center for climate science, wrote a paper that linked the Dust Bowl drought to small temperature changes in surface waters of the tropical Pacific. Seager had access to an advance copy. “When Schubert published that paper, and actually before it came out,” says Seager, “I just looked in the model that day and said, well, does our model produce a Dust Bowl drought? And sure enough, it produced a Dust Bowl drought.” Further investigation showed it “made a nice big drought in the Southwest in the 1950s,” which Schubert’s simulation had missed, and it also showed the Southwest turning dry in 1998, the approximate onset of the drought that produced widespread tree die-offs in 2002–2003.

Things were getting interesting. Seager checked the model against a new drought atlas that Lamont-Doherty’s tree-ring researchers had just produced and found that they jibed: the model tracked the wet and dry periods recorded in the tree rings for the mid-to late nineteenth century with high fidelity. “So we just sort of dropped stuff, whatever we had been doing, and misused government funds to fund this research instead of what the government had actually given us funds to do.” His program managers didn’t complain, because they understood the importance and opportunities of the new work. “So we pushed it forward.” The forwardness was in two dimensions: forward in terms of refining an understanding of historical drought records and forward also in time, projecting climate for the Southwest into the twenty-first century.

The Intergovernmental Panel on Climate Change (IPCC), which the United Nations established in 1988, had also done this. Modelers contributing to the IPCC’s “Fourth Assessment Report,” which appeared in 2007, concluded that the North American Southwest would grow appreciably drier in the twenty-first century, but their predictions focused far in the future, past 2080. They also concerned themselves solely with precipitation, not the finer-grained interaction of precipitation less evaporation, which

better describes the moisture available to nourish soil and discharge into streams and rivers. “So there’s a bit more to the story than the precipitation” — and Seager and his team set out to tell it.

Their simulations showed that the Southwest would not have to wait until 2080, or even 2050, to experience drier times; greater aridity was already on its doorstep — hence the considered use of the word imminent in the title of their paper, “Imminent transition to a more arid climate in southwestern North America,” which appeared in the journal *Science* in 2007, attracting considerable attention. Their research also told them that the increase in aridity would not result from the same forces that triggered the droughts of the past. Those droughts, possibly including the extended droughts of medieval times, appear to have occurred when the currents of the tropical Pacific, for whatever reasons, carried relatively cool surface waters far to the east, toward the Americas. This pattern, commonly called La Nina, seems to give a northward push to the winter storm track that brings moisture to western North America. The opposite pattern, El Nino, pulls the storm track southward, bringing winter rain to U.S. deserts and snow to the southern Rockies. (Mexico is not so lucky; it depends principally on summer monsoons.)

Together El Nino, named for the Christmas time arrival of warm waters off the coast of Peru, and La Nina, its contrary sister, are known as the El Nino Southern Oscillation (ENSO). The mnemonic for this relationship, from a southwestern point of view, is sexist: the boy child brings welcome winter precipitation, filling the reservoirs crucial to both cities and agriculture, but the girl brings drought. Or so it has been in the past.

The model simulations analyzed by Seager and his team showed the Southwest to be drying out “for a different reason, and that different reason is just a simple consequence of warming up.” Seager explains that when Earth’s surface and its atmosphere warm up, two things happen. One is the intensification of the hydrologic cycle: warmer air holds more water vapor; more vapor converges in wet regions, and it rains more there.

“The pattern of water vapor transport intensifies. That makes dry regions drier and wet regions wetter. So that’s part of why the Southwest dries, because it’s already in one of these places where important parts of the atmosphere circulation take moisture away.” The other reason Seager cites is the expansion of the subtropical subsidence zone, where the dry, downwelling air of the Hadley cell returns to the surface of the land.

“And that’s not the same as what causes the natural droughts,” he concludes. “The cycle of natural dry periods and wet periods will continue, but they continue around a mean that gets drier. So the depths — the dry parts of the naturally occurring droughts — will be drier than we’re used to, and the wet parts won’t be as wet as we’re used to, because they’re both happening around a mean state that gets drier and drier.”

That new “mean state” is what he calls the new climatology of the Southwest, something similar to the Dust Bowl or the 1950s — a far cry from the anomalously wet period that ran from the late ’70s into the ’90s, which forms many people’s notion of what is “normal” for the region. Not everyone agrees with Seager’s message, and certainly not with the blunt, alarming language in which he delivers it. There are always

cries for more data and improved models, for further analysis at a finer spatial scale, and for the consideration of other possible explanations.

There are also critics who say that even if he is right, he should be more careful: predictions as strident as his risk undermining the public's faith in the scientific community. What if the Southwest enjoys a string of generously wet years? Every system exhibits variation, and all long droughts include wet episodes. What if the new climatology arrives late, or not at all? Perhaps then the urgency he has tried to engender will turn to cynicism, commitment turn to inaction, and the public's grudging acceptance of the reality of climate change degrade into disbelief. Perhaps, in the end, his startling warning might have an effect opposite to the one he intended.

Seager shrugs: "It's because of things like that that the Bureau of Reclamation and their like can sort of throw their hands in the air and say, 'Well, what do we do with these climate model projections? They don't have information at the spatial scale we need to predict what the Colorado River is going to do.' And they're right, strictly speaking — that's correct, but that's not a good excuse for not doing anything, because the chances are, once you get a model with all the right spatial scales to have all the topography, it's probably not going to change the sign of the result."

The sign, plus or minus, would still be a minus in terms of water availability — things will be getting drier. "So if you just do nothing and wait for that, you're just wasting time. . . . It could be ten, fifteen years before you get the models at the resolution you need, by which time you're probably deep into this drying trend."

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Pages 121-124

LEOPOLD'S PREDICTION WAS correct, except for the prophecy of a tourist road. The integrity of the Gavilan did not last long after his 1936 visit. He came back for a second hunt at the close of 1937, bringing his brother Carl and eldest son Starker, and this experience was as enchanting as the first. He also urged in various quarters that the area be preserved as "an international experiment station" to serve "as a norm for sick land on both sides of the border." 29

But nothing came of his proposal. Game began to decline in the mountains in subsequent years, and the outfitting business in Colonia Pacheco was all but dead by 1941. 30 Shortly after Leopold's death in 1948, his son Starker returned to the Rio Gavilan hoping to initiate some of the ecological studies his father had dreamed of, but the paradise he remembered from a decade earlier was gone. Logging roads threaded through the headwaters and livestock had followed. Many stretches of the formerly moss-hung river had become a scour of cobbles.

The downward ecological spiral of the Rio Gavilan continues to the present. 31 In the all-too-familiar cycle that Leopold in his early days documented throughout Arizona and New Mexico, logging and overgrazing bared the land to the violence of storms. Deprived of its defense of grass, litter, and living roots, the soils of the slopes yielded to the force of downpours, and floods tore every soft thing from the rivers and creeks,

leaving rocky gutters in their place. The damage was a kind of sin against the land, which Leopold captured in one of his best metaphors: "Somehow the watercourse is to dry country what the face is to human beauty. Mutilate it and the whole is gone." 32

MANY ARE THE accounts of southwestern watersheds that unraveled. In one of his essays on Mexico, Leopold cites Will Barnes's telling of the destruction of valley lands along the San Simon River in Arizona. In "Pioneers and Gullies" (1924) Leopold himself describes the loss of 90 percent of the cultivated land along the Blue River in Arizona's White Mountains. Elmer Otis Wootton, in a seminal 1908 monograph, *The Range Problem in New Mexico*, recounts how deepening arroyos cut the life out of the Mangas Valley in the Burro Mountains.

These and other reports point unmistakably to human agency as a trigger for widespread erosion, if not through logging and grazing then as a result of roads, trails, and other disturbances that guttered runoff and initiated the formation of arroyos. Just before his first trip to the Gavilan, Leopold drafted an extensive discussion on this topic, which he titled "The Erosion Cycle in the Southwest."

Dutifully, he sent the essay out for review, including a copy to the eminent Harvard geologist Kirk Bryan, a native of New Mexico who had closely studied arroyos in Chaco Canyon and other southwestern locations. Bryan and many of his colleagues maintained that climate, not human activity, governed arroyo formation and that, independent of human influence, the Southwest had repeatedly undergone alternating periods of degradation — arroyo cutting and stream entrenchment — on the one hand, and aggradation — the building up of alluvial lands — on the other.

Bryan's critique evidently prevented Leopold from settling his mind on the subject of arroyo formation, and "The Erosion Cycle in the Southwest" was never published. But he did not let the matter rest. He urged his son Luna to go to Harvard to study with Bryan and get to the bottom of the issue. 33

Not many families pass intellectual conundrums from one generation to the next, but the Leopold family was in a class by itself. All five of Leopold's children became accomplished naturalists, and three, Starker, Luna, and Estella, achieved election to the National Academy of Sciences. 34

Luna's dissertation, "The Erosion Problem of Southwestern United States," was not completed until after his father's death, but the conclusion he reached neatly bridged the points of view of his father and his mentor. Near the end of his own life, he restated it in a book, *A View of the River*, that sums up his life's work as a hydrologist: "The deep gullies cut by erosion in pre-Columbian time took less than 200 years to evacuate a large part of the early Holocene fill. In the period 1880–1920, overgrazing and climate change repeated the events of A.D. 1200–1400 in a period of less than 50 years." 35

Luna Leopold had concluded that climate and geology control cycles of large-scale erosion, but also that human activity, like an enzyme in a biological reaction, accelerated the process markedly. The relative weights accorded to climatic and human causes of arroyo formation are important. If climate is the sole cause, then clear-cutting

a watershed or grazing it to the point that it can't hide a golf ball might alter its biota and ruin its productivity, but the gullies that subsequently take form would have formed anyway.

Such a view is nonsense, as both Leopolds well knew, and the Rio Gavilan was their proof. The watershed of the Gavilan did not unravel during the arroyo-cutting heyday of 1880–1920. It came apart later, after its timber was cut, its grass removed, and its slopes braided with roads and trails that concentrated the energy of storm runoff on newly exposed targets.

The most reasonable conclusion, in fact, might be stated less conservatively than the restrained scientist Luna Leopold was willing to do: namely, that the way people treat the land influences arroyo-cutting considerably, and that the influence is especially great when climatic factors favor downcutting and degradation. Two key factors are important to understand: effective aridity and storm energy.

In the period 1880–1920, when most of the valley arroyos in the western states were cut, total precipitation did not differ markedly from other periods of similar length, but more precipitation appears to have come from heavy storms, and less as light rain. A light rain — what some Pueblos call a female rain — falls slowly and gently. It soaks the ground, and a large proportion of its water becomes available to plants. Under a regime of abundant light rain, which would normally mean many mild storms, the vegetative cover of the land tends to increase.

By contrast, heavy rains — male rains — quickly saturate the topmost layer of the soil. During the downpours, the water falls so fast that it soon exceeds the absorptive capacity of the soil, and most of it runs off, sometimes in violent flash floods. Only a small portion remains behind to nurture plant growth. As a result, a period with many violent thunderstorms and few light rains is effectively more arid than a period in which light rains produce the same total amount of moisture.

As aridity increases, the protective clothing of the land — in the form of vegetation, leaf litter, and other organic matter — decreases, making the soil more vulnerable to the increased energy of those big, wild, violent male rains. If all this sounds familiar, it should. The prospect of bigger, more violent storms coupled with increased effective aridity is part of the bundle of effects predicted for the Southwest as a result of climate change.

In the early 1990s, Luna Leopold put the matter bluntly: “The climatic changes of the past suggest that if the trend toward a warmer and more arid climate actually continues in the coming decades, the erosion of alluvial valleys seen in the thirteenth century, and again in the nineteenth, will be repeated in many of the semiarid areas of the planet where the rainfall is primarily of the thunderstorm type.”³⁶

Reprinted from "A Great Aridness: Climate Change and the Future of the American Southwest" by William deBuys with permission from Oxford University Press, Inc.

OpEd 01/13/12

Dammed If We Don't

Environmentalism: Essay
Dammed If We Don't
Yvon Chouinard
Mountain 2012

[Click here](#) to read the One-Dam Solution

<http://livingrivers2.org/pdfs/TheOne-DamSolution.pdf>

Environmentalist David Brower was once asked, "Why are you conservationists always against things?" He replied, "If you are against something, you are always for something. If you are against a dam, you are for a river."

I'm also a lover of wild rivers. That's why our company has been involved in trying to take out obsolete and damaging dams since 1993. We've had some success helping take down the Edwards Dam on Maine's Kennebec River in 1999, and the Savage Rapids Dam on Oregon's Rogue River in 2009. As I write this, three large dams are slated to come down on Washington's Elwha and White Salmon Rivers. The United States has more than 82,000 dams in its inventory and researchers estimate there may be at least two million dams of various sizes. So far, at least 836 dams have come down, but 26,000 "hazardous" dams (according to the U.S. Army Corps of Engineers) remain. Many of these dams were built by local irrigation districts, private power companies and local, state and federal governments. When they become obsolete safety hazards, like mines, the owners just walk away and leave the cleanup and restoration to the taxpayers.

When I was 18, I used to go down to the Sea of Cortez to spearfish. Within 15 or 20 minutes, I would spot a 30- to 40-pound grouper. It was like a fishbowl. And now, many of the bottom fish are gone, the shrimp are almost gone, and fishermen are left to eke out a living fishing for low-value skate wings in the winter. This is largely due to overfishing and destructive fishing practices like bottom trawling, but it's also because the mighty Colorado River no longer flows to the Gulf of California. Fewer nutrients support the biota of the gulf because the river and its tributaries are impoverished by more than 100 dams. The Mediterranean is on its way to becoming a dead sea, with the Aswan Dam on the Nile being the last indignity. It's projected that there won't be a single undammed river reaching the sea in China by 2025, only thirteen years from now.

The estuaries and coastal lagoons at the mouths of our planet's rivers are often referred to as the 'nurseries' of our world's fisheries, and many ocean fish need brackish or fresh water to spawn and rear. Four crucial dams to take out if we wish to restore wild Pacific salmon are on the lower Snake River – a tributary to the Columbia River and one of our planet's mightiest salmon producers. Every fisheries biologist not in the pocket of the

Bonneville Power Administration agrees that the dams must come down. But the National Oceanic and Atmospheric Administration and state and local governments in the area lack backbone and refuse to act on good science. The U.S. taxpayer continues to bleed billions of dollars on a failed policy of hatcheries and barging salmon around dams, when President Obama should add basic economics to overwhelming scientific fact and direct federal agencies to remove the lower Snake River dams.

The best chance of restoring wild Atlantic salmon to the United States is taking out two of the three dams (and breaching the third) on the Penobscot River in Maine (scheduled for 2012). The best chance of restoring wild Atlantic salmon in France is to remove the Poutès Dam, built in 1941 on the upper Allier River, the main tributary of the Loire River. (The French government announced the removal of the Poutès Dam as this catalog went to press.)

But if I chose one dam to fall, for me, it is the Matilija Dam, just up the road from Patagonia headquarters, near Ojai, California. In 2000, I watched then U.S. Secretary of the Interior Bruce Babbitt stand on the top of the dam and swear it was going to come down. It's still there.

It was built in 1948 by a few local irrigators and was almost silted up after only 18 years. The dam is an impassable barrier to endangered sea-run steelhead trout migrating home to the Ventura River and prevents much needed sand from nourishing the coastline of Ventura County and beyond. One reason it hasn't come down is a lack of sound planning and leadership on the part of local politicians, water districts and the U.S. Army Corps of Engineers.

The question of how to take down the dam was given to some local grammar school children, and one little girl raised her hand and asked, "Why don't they take a little bitty bite out of the dam every year?" If we had started doing that back in 2000, the Matilija Dam would be gone by now and steelhead would be spawning in Matilija Creek.

According to Bruce Babbitt, we've been building at least one dam a day since the Declaration of Independence was signed in 1776. Building dams is old technology that doesn't fit with 21st century innovation, yet dams are still going up. Brazil is building the Belo Monte Dam, the third largest in the world, that will inundate a large part of the Xingu River basin and force tens of thousands of local people from their land. Argentina is going to dam the Santa Cruz River. The five proposed dams in Patagonia, Chile, would require the longest transmission line in the world to go through most of their national parks. If those dams and transmission lines are built, every other Chilean river to the north can be dammed and plugged into those transmission lines.

When are we going to stop? After we dam every single river in the world?

We are now on the cusp of a multitude of good options for clean energy, like solar, wind, tidal power, wave power, geothermal and energy efficiency. Rather than storing water in on-stream reservoirs, water is best stored in underground aquifers, off-stream reservoirs and restored floodplain basins that also provide flood protection and water quality benefits. Water conservation and efficiency measures alone eliminate the need for new

storage dams, and existing railroads are a viable alternative to shipping produce on barges. I wonder why we are so impatient to destroy our rivers with this outdated technology and why we have to wait so long to tear down these obsolete behemoths.

OpEd 01/14/12

Even Lake Mead, the biggest reservoir in the U.S., will eventually run dry if its outgo consistently exceeds income

By William deBuys

January 13, 2012, 6:23 p.m.

Southern Californians are used to turning on the tap, or the sprinklers, and getting the water they want. Their ability to do so depends, in large part, on the Colorado River and the reservoir it feeds, Lake Mead.

In 2008, Tim Barnett and David Pierce, scientists at Scripps Institution of Oceanography, wrote that the lake — a lifeline not just for Southern California but for much of the desert Southwest — would soon teeter at the brink of failure. The Review-Journal in Las Vegas, a city especially dependent on that lifeline, responded with predictable bluster: "We'd love to buy some action on the odds provided by Mr. Barnett and Mr. Pierce. They can name the amount at stake. Are they willing to put their money where their mouths are?"

As far as I know, the Scripps scientists didn't take advantage of the Review-Journal's rash offer. Maybe they should have. They knew the odds. So should everyone. There are plenty of reasons the water-happy habits of the modern Southwest are a bad bet:

First, the Lower Basin states of the Colorado River are living beyond their means. The Colorado River Compact of 1922 allocates 7.5 million acre-feet to be divided among California, Arizona and Nevada. Today tens of millions of people from L.A. and San Diego to Las Vegas, Phoenix and Tucson, not to mention agriculture worth billions of dollars, depend on those flows. Trouble is, those Lower Basin states don't budget for evaporative losses, for their proportionate share of the U.S. treaty obligation to Mexico or for other water losses associated with the plumbing of the river. As a result, they consistently overdraft their account by 1.2 million to 1.3 million acre-feet per year. That's an annual deficit of about 17%.

For decades the Lower Basin (mainly California) got away with its profligate habits because the Upper Basin — the states upstream of Arizona — developed more slowly; they didn't have the means to withdraw their share of the river water (theoretically, an additional 7.5 million acre-feet). Not anymore. The Upper Basin now sucks the life out of the river with gusto. No more leftovers.

More bad news for Lake Mead is that the Colorado River Compact incorporates a nettlesome flaw: Its authors divided up more water than the river can provide. Drawing on a small, skewed set of measurements (all that were available in 1922), they thought the river's average flow was about 17 million acre-feet annually. Now the relevant data set is a lot bigger. The most extensive (and most generous) reconstruction of "paleo" flows, going back more than 1,200 years, points to an average annual flow of only 14.7 million acre-feet. Even Lake Mead, the biggest reservoir in the country, will eventually run dry if its outgo consistently exceeds income.

Water managers have known about these problems for a long time, but they consoled themselves that "augmentation" would provide a solution. Diverting the Yukon River in Alaska and Canada to flow to the Southwest is a good example of augmentation, and once upon a time, people gave this flaky idea serious consideration. Desalination on a massive scale constitutes another form of augmentation, but although desalination is politically more palatable than hijacking rivers, it is similarly costly, as well as gluttonous in its consumption of energy. Augmentation at a scale to bail out the sweltering Sun Belt has been a nonstarter.

As if overuse, over-allocation and a dearth of rivers available for theft weren't enough to persuade you to make book on Lake Mead's vulnerability, the climate is changing. OK, so maybe 82 degrees in Los Angeles on New Year's Day is a fluke. And nearly snowless Sierra Nevada and the Rockies are just weird, and last year's shoe-melting temperatures and holocaust fires in Arizona, New Mexico and Texas could have happened any time. But really, the Southwest is getting hotter. And hotter means drier even if precipitation stays steady (but don't bet your house on that) because more heat causes more evaporation. A respected 2005 study predicts that stream flow in the Southwest will probably decline 10% to 30% by mid-century.

Add all of this together and you can see why Barnett and Pierce might have concluded Lake Mead risked failure, which in this context means the lake level drops below Hoover Dam's lowest outlets. Which means no water goes downstream. All you get is seepage.

The Scripps scientists missed some things in the original study. But eventually they, and a second respected team at the University of Colorado, came to pretty much the same conclusion: After 2026, the risk of failure of Lake Mead, in the words of a member of the second team, "just skyrockets."

But that is not what is scary.

What's really scary, according to Jonathan Overpeck, a climatologist at the University of Arizona, "is the possibility that we could trip across a transition into a megadrought." A megadrought lasts multiple decades. It is the kind of drought that caused Ancestral Puebloan civilizations at New Mexico's Chaco Canyon and Colorado's Mesa Verde to collapse and triggered a chain of events that helped do in the Hohokam in central Arizona.

Such droughts, it turns out, are characteristic of semiarid regions around the world, but we've not yet seen one in the Southwest during the American era. The droughts of the

Dust Bowl days in the 1930s, and the even drier 1950s, were comparative child's play. The paleo-climatic record tells us our land can get a whole lot drier than anything we've ever known.

If/when Lake Mead fails, Phoenix will still drink from the Salt River, but the city is now too big to get by on the Salt alone, and besides, whatever causes the Colorado to shrink will surely shrivel the Salt. So groundwater will have to save the day, but only for as long as it holds out. Los Angeles' situation is similar. If the Colorado River Aqueduct goes dry, the California Aqueduct and the Los Angeles Aqueduct, which deliver snowmelt from the Sierra, are unlikely to do much better.

Las Vegas, at least, is taking action. Among other desperation plays, it is building Intake No. 3, a kind of bathtub drain at the bottom of Lake Mead, at a cost of \$800 million. When the lake level falls below Hoover Dam's lowest outlets, Las Vegas will still sip the warm tea of the "dead pool." Las Vegas has put its money where its future is. Although betting on the weather may be akin to playing the lottery, the people responsible for Sin City's water supply know that a wager on a warming climate is, well, not so much of a gamble.

William deBuys is the author of the newly released "A Great Aridness: Climate Change and the Future of the American Southwest."

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Phoenix in the Climate Crosshairs: We Are Long Past Coal Mine Canaries

By William deBuys

If cities were stocks, you'd want to short Phoenix. Of course, it's an easy city to pick on. The nation's 13th largest metropolitan area (nudging out Detroit) crams 4.3 million people into a low bowl in a hot desert, where horrific heat waves and windstorms visit it regularly. It snuggles next to the nation's largest nuclear plant and, having exhausted local sources, it depends on an improbable infrastructure to suck water from the distant (and dwindling) Colorado River.

In Phoenix, you don't ask: What could go wrong? You ask: What couldn't?

And that's the point, really. Phoenix's multiple vulnerabilities, which are plenty daunting taken one by one, have the capacity to magnify one another, like compounding illnesses. In this regard, it's a quintessentially modern city, a pyramid of complexities requiring large energy inputs to keep the whole apparatus humming. The urban disasters of our time -- New Orleans hit by Katrina, New York City swamped by Sandy -- may arise from single storms, but the damage they do is the result of a chain reaction of failures -- grids going down, levees failing, back-up systems not backing up. As you might expect, academics have come up with a name for such breakdowns: infrastructure failure interdependencies. You wouldn't want to use it in a poem, but it does catch an emerging theme of our time.

Phoenix's pyramid of complexities looks shakier than most because it stands squarely in the crosshairs of climate change. The area, like much of the rest of the American Southwest, is already hot and dry; it's getting ever hotter and drier, and is increasingly battered by powerful storms. Sandy and Katrina previewed how coastal cities can expect to fare as seas rise and storms strengthen. Phoenix pulls back the curtain on the future of inland empires. If you want a taste of the brutal new climate to come, the place to look is where that climate is already harsh, and growing more so -- the aptly named Valley of the Sun.

In Phoenix, it's the convergence of heat, drought, and violent winds, interacting and amplifying each other that you worry about. Generally speaking, in contemporary society, nothing that matters happens for just one reason, and in Phoenix there are all too many "reasons" primed to collaborate and produce big problems, with climate change foremost among them, juicing up the heat, the drought, and the wind to ever greater extremes, like so many sluggers on steroids. Notably, each of these nemeses, in its own way, has the potential to undermine the sine qua non of modern urban life, the electrical grid, which in Phoenix merits special attention.

If, in summer, the grid there fails on a large scale and for a significant period of time, the fallout will make the consequences of Superstorm Sandy look mild. Sure, people will hunt madly for power outlets to charge their cellphones and struggle to keep their milk fresh, but communications and food refrigeration will not top their list of priorities. Phoenix is an air-conditioned city. If the power goes out, people fry.

In the summer of 2003, a heat wave swept Europe and killed 70,000 people. The temperature in London touched 100 degrees Fahrenheit for the first time since records had been kept, and in portions of France the mercury climbed as high as 104°F. Those temperatures, however, are child's play in Phoenix, where readings commonly exceed 100°F for more than 100 days a year. In 2011, the city set a new record for days over 110°F: there were 33 of them, more than a month of spectacularly superheated days ushering in a new era.

In Flight From the Sun

It goes without saying that Phoenix's desert setting is hot by nature, but we've made it hotter. The city is a masonry world, with asphalt and concrete everywhere. The hard, heavy materials of its buildings and roads absorb heat efficiently and give it back more slowly than the naked land. In a sense, the whole city is really a thermal battery, soaking up energy by day and releasing it at night. The result is an "urban heat island," which, in turn, prevents the cool of the desert night from providing much relief.

Sixty years ago, when Phoenix was just embarking on its career of manic growth, nighttime lows never crept above 90°F. Today such temperatures are a commonplace, and the vigil has begun for the first night that doesn't dip below 100°F. Studies indicate that Phoenix's urban-heat-island effect may boost nighttime temperatures by as much as 10°F. It's as though the city has doubled down on climate change, finding a way to magnify its most unwanted effects even before it hits the rest of us full blast.

Predictably, the poor suffer most from the heat. They live in the hottest neighborhoods with the least greenery to mitigate the heat-island effect, and they possess the least resources for combatting high temperatures. For most Phoenixians, however, none of this is more than an inconvenience as long as the AC keeps humming and the utility bill gets paid. When the heat intensifies, they learn to scurry from building to car and into the next building, essentially holding their breaths. In those cars, the second thing they touch after the ignition is the fan control for the AC. The steering wheel comes later.

In the blazing brilliance of July and August, you venture out undefended to walk or run only in the half-light of dawn or dusk. The idea for residents of the Valley of the Sun is to learn to dodge the heat, not challenge it.

Heat, however, is a tricky adversary. It stresses everything, including electrical equipment. Transformers, when they get too hot, can fail. Likewise, thermoelectric generating stations, whether fired by coal, gas, or neutrons, become less efficient as the mercury soars. And the great hydroelectric dams of the Colorado River, including Glen Canyon, which serves greater Phoenix, won't be able to supply the "peaking power" they do now if the reservoirs behind them are fatally shrunk by drought, as multiple studies forecast they will be. Much of this can be mitigated with upgraded equipment, smart grid technologies, and redundant systems. But then along comes the haboob.

A haboob is a dust/sand/windstorm, usually caused by the collapse of a thunderstorm cell. The plunging air hits the ground and roils outward, picking up debris across the open desert. As the Arabic name suggests, such storms are native to arid regions, but -- although Phoenix is no stranger to storm-driven dust -- the term haboob has only lately entered the local lexicon. It seems to have been imported to describe a new class of storms, spectacular in their vehemence, which bring visibility to zero and life to a standstill. They sandblast cars, close the airport, and occasionally cause the lights -- and AC -- to go out. Not to worry, say the two major utilities serving the Phoenix metroplex, Arizona Public Service and the Salt River Project. And the outages have indeed been brief. So far.

Before Katrina hit, the Army Corps of Engineers was similarly reassuring to the people of New Orleans. And until Superstorm Sandy landed, almost no one worried about storm surges filling the subway tunnels of New York. Every system, like every city, has its vulnerabilities. Climate change, in almost every instance, will worsen them. The beefed-up, juiced-up, greenhouse-gassed, overheated weather of the future will give us haboobs of a sort we can't yet imagine, packed with ever greater amounts of energy.

In all likelihood, the emergence of such storms as a feature of Phoenix life results from an overheating environment, abetted by the loose sand and dust of abandoned farmland (which dried up when water was diverted to the city's growing subdivisions).

Water, Water, Everywhere (But Not for Long)

In dystopic portraits of Phoenix's unsustainable future, water -- or rather the lack of it -- is usually painted as the agent of collapse. Indeed, the metropolitan area, a jumble of jurisdictions that includes Scottsdale, Glendale, Tempe, Mesa, Sun City, Chandler, and

15 other municipalities, long ago made full use of such local rivers as the Salt, Verde, and Gila. Next, people sank wells and mined enough groundwater to lower the water table by 400 feet.

Sometimes the land sank, too. Near some wells it subsided by 10 feet or more. All along, everyone knew that the furious extraction of groundwater couldn't last, so they fixed their hopes on a new bonanza called the Central Arizona Project (CAP), a river-sized, open-air canal supported by an elaborate array of pumps, siphons, and tunnels that would bring Colorado River water across the breadth of Arizona to Phoenix and Tucson.

The CAP came on line in the early 1990s and today is the engine of Arizona's growth. Unfortunately, in order to win authorization and funding to build it, state officials had to make a bargain with the devil, which in this case turned out to be California. Arizona's delegation in the House of Representatives was tiny, California's was huge, and its representatives jealously protected their longstanding stranglehold on the Colorado River. The concession California forced on Arizona was simple: it had to agree that its CAP water rights would take second place to California's claims.

This means one thing: once the inevitable day comes when there isn't enough water to go around, the CAP will absorb the shortage down to the last drop before California even begins to turn off its faucets.

A raw deal for Arizona? You bet, but not exactly the end of the line. Arizona has other "more senior" rights to the Colorado, and when the CAP begins to run dry, you may be sure that the masters of the CAP will pay whatever is necessary to lease those older rights and keep the 330-mile canal flowing. Among their targets will be water rights belonging to Indian tribes at the western edge of the state along the lower reaches of the river. The cost of buying tribal water will drive the rates consumers pay for water in Phoenix sky-high, but they'll pay it because they'll have to.

Longer term, the Colorado River poses issues that no amount of tribal water can resolve. Beset by climate change, overuse, and drought, the river and its reservoirs, according to various researchers, may decline to the point that water fails to pass Hoover Dam. In that case, the CAP would dry up, but so would the Colorado Aqueduct which serves greater Los Angeles and San Diego, as well as the All-American Canal, on which the factory farms of California's Imperial and Coachella valleys depend.

Irrigators and municipalities downstream in Mexico would also go dry. If nothing changes in the current order of things, it is expected that the possibility of such a debacle could loom in little more than a decade.

The preferred solution to this crisis among the water mavens of the lower Colorado is augmentation, which means importing more water into the Colorado system to boost native supplies. A recently discussed grandiose scheme to bail out the Colorado's users with a pipeline from the Mississippi River failed to pass the straight-face test and was shot down by then-Secretary of the Interior Ken Salazar.

Meanwhile, the obvious expedient of cutting back on water consumption finds little support in thirsty California, which will watch the CAP go dry before it gets serious about meaningful system-wide conservation.

Burning Uplands

Phoenicians who want to escape water worries, heat waves, and haboobs have traditionally sought refuge in the cool green forests of Arizona's uplands, or at least they did until recently. In 2002, the Rodeo-Chediski fire consumed 469,000 acres of pine and mixed conifer on the Mogollon Rim, not far from Phoenix. It was an ecological holocaust that no one expected to see surpassed. Only nine years later, in 2011, the Wallow fire picked up the torch, so to speak, and burned across the Rim all the way to the New Mexico border and beyond, topping out at 538,000 charred acres.

Now, nobody thinks such fires are one-off flukes. Diligent modeling of forest response to rising temperatures and increased moisture stress suggests, in fact, that these two fires were harbingers of worse to come. By mid-century, according to a paper by an A-team of Southwestern forest ecologists, the "normal" stress on trees will equal that of the worst megadroughts in the region's distant paleo-history, when most of the trees in the area simply died.

Compared to Phoenix's other heat and water woes, the demise of Arizona's forests may seem like a side issue, whose effects would be noticeable mainly in the siltation of reservoirs and the destabilization of the watersheds on which the city depends. But it could well prove a regional disaster. Consider, then, heat, drought, windstorms, and fire as the four horsemen of Phoenix's Apocalypse. As it happens, though, this potential apocalypse has a fifth horseman as well.

Rebecca Solnit has written eloquently of the way a sudden catastrophe -- an earthquake, hurricane, or tornado -- can dissolve social divisions and cause a community to cohere, bringing out the best in its citizenry. Drought and heat waves are different. You don't know that they have taken hold until you are already in them, and you never know when they will end. The unpleasantness eats away at you. It corrodes your state of mind. You have lots of time to meditate on the deficiencies of your neighbors, which loom larger the longer the crisis goes on.

Drought divides people, and Phoenix is already a divided place -- notoriously so, thanks to the brutal antics of Maricopa County Sheriff Joe Arpaio. In *Bird on Fire: Lessons from the World's Least Sustainable City*, Andrew Ross offers a dismal portrait of contemporary Phoenix -- of a city threatened by its particular brand of local politics and economic domination, shaped by more than the usual quotient of prejudice, greed, class insularity, and devotion to raw power.

It is a truism that communities that do not pull together fail to surmount their challenges. Phoenix's are as daunting as any faced by an American city in the new age of climate change, but its winner-take-all politics (out of which has come Arizona's flagrantly repressive anti-immigration law), combined with the fragmentation of the metro-area into nearly two dozen competing jurisdictions, essentially guarantee that, when the worst of

times hit, common action and shared sacrifice will remain as insubstantial as a desert mirage. When one day the U-Haul vans all point away from town and the people of the Valley of the Sun clog the interstates heading for greener, wetter pastures, more than the brutal heat of a new climate paradigm will be driving them away. The breakdown of cooperation and connectedness will spur them along, too.

One day, some of them may look back and think of the real estate crash of 2007-2008 and the recession that followed with fond nostalgia. The city's economy was in the tank, growth had stalled, and for a while business-as-usual had nothing usual about it. But there was a rare kind of potential. That recession might have been the last best chance for Phoenix and other go-go Sunbelt cities to reassess their lamentably unsustainable habits and re-organize themselves, politically and economically, to get ready for life on the front burner of climate change. Land use, transportation, water policies, building codes, growth management -- you name it -- might all have experienced a healthy overhaul. It was a chance no one took. Instead, one or several decades from now, people will bet on a surer thing: they'll take the road out of town.

William deBuys, a Tom Dispatch regular, is the author of seven books, most recently *A Great Aridness: Climate Change and the Future of the American Southwest*. He has long been involved in environmental affairs in the Southwest, including service as founding chairman of the Valles Caldera Trust, which administers the 87,000-acre Valles Caldera National Preserve in New Mexico.

LR in the News 01/21/12

Utah gives green light to nuclear power plant

[Click here](#) to read this story by Judy Fahys of the Salt Lake Tribune.

[Click here](#) to read press release by Utah State Engineer

[Click here](#) to read the decision of Kane County water transfer

[Click here](#) to read decision of San Juan County water transfer

Breaking news of alleged corruption

[Click here](#) to read this story by Judy Fahys and Steven Oberbeck in the Salt Lake Tribune about a fraud case involving a financial partner of Blue Castle Holdings called LeadDog Capital.

[Click here](#) for the press release of Blue Castle Holdings' partnership agreement with LeadDog Capital that has since been removed from the BCH web page after the story of fraud by LeadDog Capital broke.

LR in the News 01/23/12

Finding the Cinematic Fire in Environmentalism

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OpEd 01/23/12

Addiction to Growth has Left Water Authority in Financial Straits

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LR in the News 01/24/12

Water deal big win for nuke plant: Opponents say they'll fight decision over Green River

By Gary Harmon Grand Junction Sentinel

With the state's approval of plans for water to operate a proposed nuclear plant just outside Green River, Utah, the developer cleared a major hurdle.

Opponents of the plant, however, said they would move quickly to reverse the decision by the Utah State Engineer's Office on Friday to approve a request by two counties downstream from Green River to change their points of diversion to accommodate the power plant.

The significance of the approval of the plans by Blue Castle LLC, named for the rock formation on the Book Cliffs that overlooks the site of the proposed plant west of Green River, can hardly be understated, Blue Castle President and CEO Aaron Tilton said.

If the company had to prioritize its assets, "Water would be number one," Tilton said.

Blue Castle faces four more years of regulatory work before it begins construction on the two-generator plant, which is estimated to cost about \$18 billion to construct. Backers of the plan said the plant will mean about 2,000 high-paying jobs.

John Weisheit of LivingRivers.org in Moab, Utah, downstream on the Colorado River, called the state engineer's decision "a tragic mistake" that will force the recognition that there is no water left in the river for the plant.

The decision is "not helping" to quell controversy among the states on the question of how much water remains in the Upper Colorado River Basin and is making issues more contentious, Weisheit said.

Conservation organizations are lining up to ask the state engineer's office to reverse the decision, the first step before it can be appealed to the courts, Weisheit said, noting he is confident of the opposition case.

"I'm going to enjoy this one," Weisheit said.

The 53,600 acre-feet of water expected to be used annually by the nuclear plant already have been set aside for use by coal-fired plants, but the projects never were built. Blue Castle is leasing the rights from San Juan and Kane counties.

The plant will pull water from the Green River and use it to cool the reactors. There are no plans to return the water to the river.

Backers maintain that even in drought conditions the effect of the plant on the level of the Green River will be minimal.

The economies of Emery and Grand counties both stand to be improved by the plant, said Mike McCandless, economic-development director for Emery County, population 1,100, which would be home to the plant. Neighboring Grand County and the town of Moab have served as a wellspring of opposition to the plant, with dozens of residents turning out last year to voice opposition in a public hearing.

Grand County, however, stands to be a "big winner" if the plant moves forward because 30 percent to 40 percent of the employees will come from there, McCandless said.

"I am having more folks from Moab reach out to me in support" of the nuclear plant, McCandless said.

While the nuclear plant is moving toward approval by the U.S. Nuclear Regulatory Commission, another proposal to use Green River water to supply the burgeoning Colorado Front Range also is under study.

Fort Collins businessman Aaron Million, a Green River, Utah, native, said the Blue Castle proposal was "interesting."

It's unlikely that his project will conflict with the nuclear plant, Million said, because he is proposing to use only Colorado's share of water from the Green River, which dips into the northwest corner of Colorado after leaving Wyoming and flowing into Utah.

<http://www.gjsentinel.com/news/articles/water-deal-big-win-for-nuke-plant>

LR in the News 01/24/12

U of U Professor Warns Tar Sands Process Could Taint Water

[Click here](#) to read this story by Brandon Loomis in the Salt Lake Tribune

Regional News 01/24/12

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[Click here](#) to read this story in the Las Vegas Review Journal by Henry Brean

Regional News 01/27/12

Feds: Company Backing Utah Nuclear Plant is a Fraud

[Click here](#) to read this story by Judy Fahys and Steven Oberbeck in the Salt Lake Tribune

[Click here](#) for the press release of Blue Castle Holdings that has been removed from their web page after this story broke.

LR Letter 01/30/12

Paradox Valley Salinity Control Coalition Comments

[Click here](#) to read the comments by Sheep Mountain Alliance and their partners.

[Click here](#) for detailed information on the Paradox Valley Salinity Control EA.

LR Letter 01/31/12

Scoping Comments: LTEMP EIS on operations of Glen Canyon Dam

[Click here](#) to read the comments by Living Rivers, Colorado Riverkeeper, Center for Biological Diversity and River Runners for Wilderness. The letter is 25 pages.

We have offered two alternatives:

- 1: Mimic the natural hydrograph and other natural processes.
- 2: Dam removal and a management plan based on the precautionary principle.

There are seven tables:

Table No. 1: Two alternatives in brief for consideration of the LTEMP EIS

Table No. 2: Academic reviews of GCD AMP

Table No. 3: Key public interventions on management of Glen Canyon Dam, Glen Canyon National Recreation Area and Grand Canyon National Park.

Table No. 4: References of Table No. 3

Table No. 5: Administrative History of NEPA (1970) compliance below the forebay of Glen Canyon Dam.

Table No. 6: References for Table No. 5.

Table No. 7: Administrative history of Glen Canyon Dam and its features.

CONCLUSION

After four decades of Interior's attempts to address the declining habitat conditions in Grand Canyon National Park's river corridor resulting from Glen Canyon Dam operations, it's critical now to treat this EIS opportunity as the major step forward in what must be a remedy to the ongoing failure of Interior's past ambivalence.

The management process is faulty from both the bottom-up and the top-down. From the bottom lies an AMP process that is guided by the whims of special interest, while the resource itself continues to suffer. From the top there is no clear mandate of what the real objectives are or should be, especially over the medium- and long-term. The ecosystem in Grand Canyon National Park is not WAPA's, trout fishermen's or river runner's playground to do with as they please. Nor is it Glen Canyon Monitoring and Research Center's scientific playground to tinker with trivial actions from a body dominated by these special interests. This is a world renowned riverine resource for which Interior, guided by the most rigorous interpretation of the spirit of those acts governing the National Park System, must step forward and act in the public's interest. If these special interest groups become frustrated with Interior's actions, they can challenge them in the courts and the court of public opinion. There is no substitute for Grand Canyon, and it should be managed in accordance with that principle, now and in the future.

As such, there must be new leadership, and new avenues for administering the will and mandate of this leadership. The GCD AMP has and will continue to be a failure, so the EIS must address how this will be remedied.

Unfortunately, the complexity of water issues in the basin have effectively taken the common citizen out of the process. The issues, policy, laws and science have become too burdensome, too one-sided, and has created a situation of bewilderment or malaise. It has been suggested by many authors and oversight agencies that an independent commission for the Colorado River basin should be established. These issues have arrived to a point in history where it is quite possible that Interior is not the best choice in providing a long-term management proposal for the Colorado River basin, as evidenced by decades of time under its watch having failed to provide the leadership necessary to provide effective change toward greater sustainability on several fronts.

The EIS should therefore evaluate the constraints impairing Interior's ability to address the complex challenges facing the Grand Canyon River ecosystem and Colorado River management as a whole. A key component of any alternative must therefore be mechanisms to give all the funding and authority to an independent commission that

can provide basin-wide and comprehensive analysis of what must be accomplished and in a reasonable time-frame for the benefit of Grand Canyon and the basin as a whole.

The EIS must also address Glen Canyon Dam's operations and impacts, in the full spectrum of its lifespan. All reasonably supported hydrologic and catastrophic scenarios over a century time-window must be explored in conjunction with evaluating alternatives. If climate change has taught us anything, it's that such long-range planning is critical now, something that Reclamation has been slow to recognize. If Glen Canyon Dam fails in a flood, or fails to provide water during a severe and sustained drought, then everybody will lose and this EIS will have been nothing more than stepping stone in that process.

Alternatives must also address specific strategies for habitat restoration in Grand Canyon's river corridor including: natural flow regime with associated temperature changes and sediment transport along with non-native species eradication. Most of these issues and the recommendations surrounding them have been on the table for decades, but it's time they are fully explored consistent with the present and long-term needs of a healthy, natural, Grand Canyon river ecosystem. And in exploring alternatives that can deliver these alternatives, a decommissioned Glen Canyon Dam must be included. As the past decade of inflows has illustrated, the likelihood of a naturally drained reservoir is no longer something water and energy planners can ignore, especially in light of the long-term environmental damage Glen Canyon Dam continues to impose.

Most importantly, it's time for Interior to have some real vision for what can be and should be done when it comes to water management through Grand Canyon. Interior must once and for all abandon its policy of tinkering with knobs and switches and then defend these actions in court explaining how the public should not expect them to achieve a better result.

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For more information please visit [On The Colorado](#)

LR in the News 02/03/12

Herbert Fumes as BLM Reins In Oil Shale Development

[Click here](#) to read this story by Brandon Loomis in the Salt Lake Tribune.

[Click here](#) to read this story in the Moab Times-Independent by Charli Englehorn.

Regional News 02/03/12

BLM Issues Draft Programmatic Environmental Impact Statement for Oil Shale and Tar Sands

[Click here](#) to read the press release from the Bureau of Land Management

LR in the News 02/10/12

Groups to Protest State Engineer's Decision on Water for Green River Nuke

[Click here](#) to read this story by Lisa Church in the Times-Independent

[Click here](#) to read this story by Judy Fahys of the Salt Lake Tribune

[Click here](#) to read the protest by Uranium Watch et al.

[Click here](#) to read the protest by HEAL et al.

OpEd 02/14/12

Where The Colorado River Runs Dry

[Click here](#) to read this Op Ed by Jonathan Waterman in the New York Times

LR in the News 02/15/12

DeChristopher's Group (Peaceful Uprising) Is Broke

[Click here](#) to read this story by Brandon Loomis of the Salt Lake Tribune

[Click here](#) to listen to the NPR version of this story

[Peaceful Uprising website](#)

Additional information

[Click here](#) to read the article in The Nation

[Click here](#) to read this story in the LA Times.

[Click here](#) to read this story in the Deseret News

LR in the News 02/16/12

Utah Tar Sands Still Seeking Investors Despite Questions

[Click here](#) to read this story by Brandon Loomis of the Salt Lake Tribune

Regional News 02/16/12

Proposal Would Make Users Pay For Water

[Click here](#) to read this story by Robert Gehrke in the Salt Lake Tribune

Regional News 02/20/12

Earth First! to Protest Proposed Tar Sands Mining at SITLA Salt Lake City office

[Click here](#) to read this press release from Earth First! and Utah Tar Sands Resistance.

[Click here](#) to read about the protest in the Deseret News by Amy Joi O'Donoghue.

Regional News 02/24/12

Flaming Gorge Pipeline hits a snag

FERC has dismissed (2/23/12) the application by WYCO on grounds that the application is premature and project coordinator Aaron Million vows to reapply.

[Click here](#) to read the order.

PRESS COVERAGE

- [The Coloradoan](#)
- [Deseret News](#)
- [The Republic](#)
- [The Denver Post](#)
- [Salt Lake Tribune](#)
- [The Pueblo Chieftain](#)

[CLICK HERE](#) to read press release and motion to intervene by coalition of environmental groups

Regional News 02/27/12

Real Money? Blue Castle Holdings Defends Utah Reactor Financing

[Click here](#) to read this story by Judy Fahys and Steven Oberbeck in the Salt Lake Tribune, which includes the administrative record of the State Engineer's review.

Regional News 02/29/12

Utah Refuses to Block Plans for Nuke Plant Near Green River

[Click here](#) to read this story by Judy Fahys of the Salt Lake Tribune.

Regional News 03/15/12

Metropolitan Water District Wages Costly War with Nature and Age

[Click here](#) to read this story by Michael Hiltzik of the Los Angeles Times

Regional News 03/16/12

Watershed invasion of Desolation Canyon

[News from Greenwire](#)

Waiting Period Ends April 16, 2012

Following conclusion of the waiting period, a Record of Decision (ROD) will be prepared and signed to disclose the BLM's final decision and any project Conditions of Approval.

- [BLM web site for the GASCO Project](#)
- [The alternatives](#)
- [ARCHIVED HERE](#)

Under Alternative F, the Agency Preferred Alternative, up to 1,298 new gas wells would be drilled from 575 well pads over a period of 15 years, resulting in approximately 3,604 acres of disturbance (about 2 percent of the total project area). Water evaporation facilities were reduced to 78 acres. This is adequate for the first 5 years of the project while other disposal options are developed and implemented. The BLM also incorporated the measures to minimize impacts to resources, while allowing for the development of valid existing rights. No surface disturbance would occur below the rim

of Nine Mile Canyon, within one-half mile of the Green River, in 100-year floodplains, or endangered fish critical habitat.

Under the Proposed Action (Alternative A), Gasco Energy Inc. would develop their existing oil and gas leases by drilling 1,491 wells from the same number of well pads over a period of 15 years, and by constructing 143 acres of evaporative ponds to dispose of produced water. The Proposed Action would result in approximately 7,584 acres of surface disturbance.

This Final EIS is not a decision document. Following conclusion of the 30-day availability period, a ROD will be signed to disclose the BLM's final decision and any project Conditions of Approval. Availability of the ROD will be announced through local media, the Vernal BLM Web site, and Utah BLM's Environmental Notification Bulletin Board.

Copies of the Final EIS are available for public inspection at the BLM Vernal Field Office, 170 South 500 East, Vernal, Utah, and at the following Web site:

http://www.blm.gov/ut/st/en/fo/vernal/planning/nepa_.html

Contact information:

Stephanie Howard
Environmental Coordinator
435-781-4400
170 South 500 East
Vernal, Utah, 84078
email: BLM_UT_Vernal_Comments@blm.gov

Regional News 03/18/12

Uinta Basin Mystery: Ozone Pollution in the Winter

[Click here](#) to read this story by Judy Fahys of the Salt Lake Tribune

Regional News 03/19/12

LTEMP EIS Upcoming Public Meeting to Discuss Alternatives

The public is invited to participate in a two-day meeting on alternatives being considered for inclusion in the Glen Canyon Dam Long Term Experimental and Management Plan Environmental Impact Statement (LTEMP EIS) being prepared by the Bureau of Reclamation (Reclamation) and the National Park Service (NPS).

The meeting will be held on April 4 and 5 at the High Country Conference Center located at 201 West Butler Avenue, Flagstaff, AZ 86001. The meeting is tentatively scheduled for 8 a.m. to 5 p.m. both days.

The preliminary draft alternatives being considered for evaluation will be presented and discussed at this meeting hosted by Reclamation and the NPS. Stakeholders and other attendees who have alternatives to propose should bring those ideas to the meeting.

PowerPoint slides and posters are welcome. To be added to the agenda, register for the meeting as explained below, provide your email address, and indicate that you will be presenting an alternative.

Those wishing to attend the meeting are encouraged to register through the LTEMP EIS Web site at <http://ltempeis.anl.gov/involve/pubschedule/>, but registration is not required.

Alternatives to be considered in the EIS must meet the purpose and need of the LTEMP. The EIS will document and evaluate the impacts of the alternatives carried forward for analysis.

Regional News 03/21/12

Cedar City and Iron County pull out of Lake Powell Pipeline Project

[Click here](#) to read about Cedar City's decision in the Salt Lake Tribune. Story by Mark Havnes.

[Click here](#) to read about Iron County's decision on the Salt Lake Tribune. Story by Mark Havnes.

For more information go to On The Colorado [HERE](#)

Regional News 03/23/12

Right to Pump Nevada Ground Water to Vegas Gets Nod

[Click here](#) to read this story by Brandon Loomis of the Salt Lake Tribune

Regional News 03/23/12

Aaron Million requests reconsideration for Flaming Gorge Pipeline

[Click here](#) to read this story in the Colorado Independent.

[Click here](#) to read Million's request for agency action with FERC

Regional News 03/27/12

Utah Critics Take Nuclear Power Plant Fight To Court

[Click here](#) to read this story by Judy Fahys of the Salt Lake Tribune

[Click here](#) to read the complaint to Kane County Water Conservancy District. The complaint to San Juan County Water Conservancy District was also filed in court today and identical in its content.

Would you like to donate funds to the legal defense in support of the litigation? [CLICK HERE](#)

[Click here](#) to read this OpEd by Jen Jackson in the Times-Independent

[Click here](#) to view the full-page ad in the Times-Independent

[Click here](#) to read the article by Living Rivers in CounterPunch.

###

Group battles water rights for Utah nuke plant

State failed to adequately assess impact on river, complaint alleges

Grand Junction Sentinel By Matthew Berger

Thursday, March 29, 2012

A proposal for Utah's first nuclear power plant will face a legal challenge from environmental groups questioning the state review process that resulted in the proposed plant's water rights.

The facility would be located about five miles northwest of the city of Green River, and the water, used to cool the plant's reactors, would be pulled from the city's namesake river.

But HEAL Utah and Uranium Watch say State Engineer Kent Jones did not adequately ensure the company behind the proposal, Blue Castle Holdings, has the necessary funding to complete the project nor sufficiently review the impacts the water withdrawal might have on the river ecosystem and on others with water rights. "We just think that

the state engineer did a really bad job of ensuring this isn't a speculative project," said Matt Pacenza, policy director at HEAL Utah. The case was filed late Tuesday in Emery County district court.

Jones approved requests Jan. 20 by Kane and San Juan counties to lease a portion of their water allotments to the nuclear project. He reaffirmed that decision at the end of last month after opponents requested he reconsider it.

"We assumed and expected this was something they would choose to do," said Blue Castle CEO Aaron Tilton, a former Utah state representative.

He said the plant is necessary because of rising energy needs over the next decade. His company expects the plant to increase the electricity generated with the state by 50 percent.

Contentions that Blue Castle, founded in 2006, has shaky financial backing are "inaccurate," Tilton said, though he declined to elaborate on the privately held firm's revenue other than to say it derives from two segments — this nuclear licensing work and Grand Junction-based Willow Creek Companies, a pipeline business that builds and repairs gas and oil pipelines and facilities.

When Blue Castle acquired Willow Creek in 2010, it said their combined cash flow was anticipated to be enough to complete the Nuclear Regulatory Commission licensing process for the Green River nuclear plant, a process which is expected to take about five years and cost approximately \$100 million.

Willow Creek's financial records are not publicly available, but Pacenza, who has been trying to determine how much money Blue Castle has and where it might be coming from, said all his research has turned up so far is Willow Creek had a gross revenue of only \$5.6 million in 2010.

Tilton emphasized Blue Castle has said all along its finances are sufficient to cover the licensing process. HEAL Utah and the 17 other plaintiffs in the case hope the court challenge will force the 6-year-old company to disclose more about its finances. If approved, the plant is expected to require another five to seven years to build.

LR in the News 03/28/12

Company Gets Approval for Big Oil Shale Project in Eastern Utah

[Click here](#) to read this story by Amy Joi O'Donoghue in the Deseret News

[Click here](#) to read more about the activities of Red Leaf Resources

Regional News 03/28/12

Agencies Weigh Competing Suggestions For New Glen Canyon Dam Plan

[Click here](#) to read this story by April Reese in Greenwire

LR in the News 03/29/12

US Oil Sands Inc Announces Discovered Resource

[Click here](#) to read this story in the Canada News Wire

[Click here](#) to follow the litigation against US Oil Sands (formerly Earth Energy Resources)

Regional News 04/03/12

Warm Dry March Creates Early Snowmelt Runoff

[Click here](#) to read this story by Jason Blevins of the Denver Post

Reference 04/04/12

Presentation: Living Rivers' Dam Decommissioning Alternative

[Click here](#) to download the presentation given today in Flagstaff during the public meeting to discuss the alternatives for the LTEMP EIS.

[Click here](#) to download a letter from Living Rivers and presented to Secretary Salazar on Monday April 2, demanding his immediate intervention on the handling of the LTEMP EIS.

[Click here](#) to download Salazar's response to Living Rivers letter of Monday April 2, demanding his immediate intervention on the handling of the LTEMP EIS.

[Click here](#) to download the LRs' response to Salazar on May 27, 2012, demanding again his immediate intervention on the handling of the LTEMP EIS.

Visit [ON THE COLORADO](#) for more information on the LTEMP EIS.

LR in the News 04/06/12

Grand County Hydroproject Proposed Once Again

[Click here](#) to read this story by Charli Engelhorn in the Moab Times-Independent

[Click here](#) to read this story by Amy Joi O'Donoghue in the Deseret News

[Click here](#) to visit FARCOUNTRY for more information

Regional News 04/14/12

Lawmakers Join Quest To Protect Desolation Canyon

[Click here](#) to read this story by Brandon Loomis in the Salt Lake Tribune.

For more information visit [On The Colorado](#)

[LR letter](#) to Secretary Salazar

LR in the News 04/17/12

Nuclear Power Proposal In Utah Reignites Century Old Water War

[Click here](#) to read Dave Hasemyer's article in Inside Climate News.

LR in the News 04/19/12

Energy, Real Estate Interests Fuel Herbert's Campaign

[Click here](#) to read this story by Robert Gehrke in the Salt Lake Tribune

Regional News 04/24/12

Enviros Protest at Utah Trust Lands Office

[Click here](#) to read this story by Brandon Loomis in the Salt Lake Tribune

[Click here](#) to read this story by Margaret Kriz Hobson of E&E Publishing Service.

LR in the News 04/26/12

Construction of Utah Tar Sands Plant Possible By Years End

[Click here](#) to read this story by Margaret Kriz Hobson of E&E Publishing Service

[Click here](#) to read this story by Brandon Loomis in the Salt Lake Tribune

LR Event 05/02/12

Protest: No Green River Nuke

Saturday, May 19 at 6:00pm at Green River, UT, just south of I-70 Exit 164
March to Celebrate and Protect the Green River and the Colorado Plateau!

Bring your most colorful street art, banners, costumes, puppets, decorated bicycles, goat-drawn chariots, and enthusiasm for singing and dancing. We'll parade high over the desert in front of the proposed construction site, smile pretty for the cameras, and show potential investors that they don't want to be a part of this bad project. We're specially requesting that people bring a brightly colored umbrella--the sun will backlight it and make our march more beautiful.

For those coming to Moab--a bunch of people will be meeting up at Swanny City Park at 3:30. We'll combine rides to carpool, arrange our costumes, etc., and then motorcade through Main Street on our way to Green River.

For more information, go to www.nogreenrivernuke.org

[Media Advisory](#)

[Click here](#) to view the POSTER for this event.

LR in the News 05/04/12

Oil Sands Company Raising Money For Utah Tar Sands Project

[Click here](#) to read today's story about a proposed tar sands strip mining project in Utah by The Associated Press.

[Oil Shale Development isn't Worth the Time, Money & Waste](#)

LR Letter 05/04/12

Comments on Draft PEIS for oil shale and tar sands exploitation

[Click here](#) to read our comments for the PEIS on oil shale & tar sands exploitation in the Colorado River basin.

[Click here](#) to read the comments by a coalition of 16 conservation groups who submitted comments for the PEIS on oil shale & tar sands exploitation in the Colorado River basin.

[Click here](#) to read today's story about a proposed tar sands strip mining project in Utah by The Associated Press.

[Oil Shale Development isn't Worth the Time, Money & Waste](#)

LR Letter 05/07/12

Scoping comments for Moab BLM Master Leasing Plan for leasing parcels to corporations for oil, gas and potash exploitation

[Letter: Canyonlands Watershed Council et al](#)

[Letter: Southern Utah Wilderness Alliance et al](#)

LR in the News 05/13/12

The Fight For Water Can The Mighty Mississippi Save The West

[Click here](#) to read this story by Amy Joi O'Donoghue of the Desert News

LR in the News 05/13/12

State Wants To Keep Public Press Away From Tar Sands Hearing

[Click here](#) to read this story by Judy Fahys in the Salt Lake Tribune

LR in the News 05/14/12

The Fight for Water (Special to Deseret News)

[Click here](#) to read these 3 stories by Amy Joi O'Donoghue of Deseret News

LR in the News 05/17/12

Nuke Plant Foes Converging On Tiny Utah Town

[Click here](#) to read this story by David Hasemyer in Inside Climate

LOCATION OF THE PROTEST HAS BEEN CHANGED TO THE INTERSECTION OF INTERSTATE 70 AND HIGHWAY 6 WEST OF GREEN RIVER UTAH.

HIGHWAY 6 IS THE ROAD TO PRICE AND SALT LAKE CITY.

[Click here](#) to read the Media Advisory of No Green River Nuke

[Click here](#) to go to the web site of No Green River Nuke

LR in the News 05/17/12

Nations First Tar Sands Mine Plan Dispute Hinges On Water

[Click here](#) to read this story by Paul Foy of Associated Press

[Click here](#) to read this story by Brandon Loomis in the Salt Lake Tribune

[Click here](#) to read this story by Margaret Hobson of EnergyWire

[Click here](#) to read "Activists Try Mainstream Route To Raise Climate Change Awareness" in this story by Judy Fahys of the Salt Lake Tribune

LR in the News 05/18/12

Federal Regulators Reject Green River Pipeline Again

[Click here](#) to read this story by Brandon Loomis of the Salt Lake Tribune

[Click here](#) to read the press release by Earth Justice

[Click here](#) to visit the web page of Earth Justice about this victory

OpEd 05/19/12

University of Utah complicit in ignoring climate change

By Hans G Ehrbar

Last Tuesday I attended the "unconventional fuels" conference at the Institute of Clean and Secure Energy of the University of Utah. Unconventional fuels are shale gas, tar sands and oil shale.

The business people, scientists and state employees participating in this conference know that the carbon trapped in Utah oil shale, if released to the atmosphere, will make the planet unlivable for humans. I tried to understand how they can sleep at night. At least seven denial strategies were evident:

- (1) It is not necessary to mention climate change because Utah regulators will only look for "criteria pollutants" and water. Federal CO₂ regulation was a concern, not the CO₂ itself.
- (2) Downplay the potential of renewables so that it seems there are no alternatives. One presenter called solar panels a "niche market."
- (3) Confuse local pollution with global greenhouse gas impacts. Professor David Pershing, a member of the institute who just recently became the university's president, said the environment was one of the ICSE's core concerns, namely contamination of aquifers and seismic issues. If you manage to get the CO₂ into the atmosphere without earthquakes, smog and dirty water, you can call yourself "clean."
- (4) Play one fossil fuel against another. When asked about global warming, Pershing said that natural gas has a lower carbon footprint than coal. A producer of oil from oil shale can call himself "ecological" if he uses less water than other processes.
- (5) Pretend that baby steps are enough. Fuel switching from coal to natural gas is the mildest thing imaginable. Renewables require a re-engineering of the entire energy infrastructure.
- (6) Claim that Utah is too small. Utah tar sands are only 1 percent of the extent of the Alberta tar sands. Don't mention that the energy content of Utah oil shale is about 100 times that of Utah tar sands.
- (7) The conference itself was part of their denial strategy. It had the purpose of opening the work of the ICSE to public discussion. Comments from the audience concerned about future generations were welcome. In this way they can congratulate themselves for being open to debate, as if global warming were still debatable.

These are the thought processes by which decent people justify making big sums of money or accepting grants for doing something destructive of our future. It is difficult to say "no" when such an "opportunity" arises. They all think and say pretty much the same thing, having learned from each other how to navigate this dilemma.

When someone at the conference came up with an especially eloquent excuse, there was general applause.

The ICSE receives much more grant money than the Sustainability Institute or others at the U. trying to research and mitigate climate change.

Atmospheric sciences are running their climate models on the leftover cycles of ICSE's supercomputer purchased from grant money for modeling combustion processes, a sad commentary on how our society addresses humanity's greatest ever problem.

When I mentioned this in a conversation, an ICSE scientist replied that all the good researchers were going into renewable energy, and a good researcher was worth much more than money.

Pershing showed a new advertising movie, "This is not your father's Oldsmobile," about how modern the University of Utah has become. Apparently he did not realize how damning it is for the university that the biggest challenge to humankind ever, global warming, was completely absent in this clip.

For the students it is a warning about how seriously deficient their education will be.

Hans G Ehrbar is an associate professor of economics at the University of Utah. He lives in Salt Lake City. His views are his own and do not represent the university's.

LR in the News 05/19/12

Protesters Gather To Thwart Green River Nuclear Plans

[Click here](#) to read this story by Brandon Loomis of the Salt Lake Tribune

[PHOTO GALLERY](#)

See also the video on Moab21.com of the pre-assembly at Swanny Park in Moab.

LR in the News 05/22/12

Utah Paves The Way For Oil Sands Explosion

[Click here](#) to read this story by Margaret Hobson of EnergyWire

LR Letter 05/22/12

Long Canyon Pump Storage Project: Living Rivers files motion to intervene

[Click here](#) to read and study this proposed hydropower project at Long Canyon along the Potash Highway and below the town of Moab, UT.

Reference 05/25/12

The Glen Canyon Dam Declaration of 3/14/2000

Today people from across the country joined more than 50 organizations and businesses to celebrate and inaugurate "The Century of River Restoration" at Carl Hayden Visitors Center at Glen Canyon Dam, Arizona. Led by longtime Colorado River advocate and environmental leader David Brower, the event was highlighted by a signing ceremony of the "Glen Canyon Declaration," calling for restoration of the Colorado River and Glen Canyon.

David Brower, who has led the fight to save Glen Canyon for 40 years, addressed the festive crowd with his concerns about dam safety, water evaporation, seepage, and sustainable economics. He described Glen Canyon as a rich and beautiful landscape that should have become a national park as early as the Franklin D. Roosevelt administration.

Brower was joined by Thomas Morris, president of the Diné Medicine Men's Association, whose organization unanimously voted to drain "Lake" Powell on Saturday, March 11th, and who gave the invocation at the river rendezvous and celebration. Morris said, "'Lake' Powell Reservoir has submerged our sacred sites and destroyed our ability to communicate with sacred gods. These sites must be restored for our children and grandchildren."

Yvon Chouinard, owner of Patagonia, Inc., the world's leading manufacturer of quality outdoor clothing, stated in a letter read at the celebration, "The construction of Glen Canyon Dam more than any other dam in the United States represented the most blatant disrespect for the planet's sacred landscape -- all for a facility that we know was not needed."

Significant parts of the declaration--presented by John Weisheit of the Moab-based Glen Canyon Action Network, primary sponsor of the celebration, and Phil Williams of International Rivers Network--include:

- The Bureau of Reclamation should begin the process of developing and then implementing a decommissioning plan for Glen Canyon Dam.
- The Bureau of Reclamation should establish a federal laboratory to serve as the nation's primary research facility for river and riverine habitat restoration, and give strong consideration to locating this facility in the town of Page, Arizona.

- All new management plans affecting the Colorado River watershed should undergo rigorous analysis of basinwide impacts.
- No new dams within the Colorado River watershed should be constructed, nor should existing dams be reconstructed in the event of their failure.
- Operating licenses should be required for all federal dams, as has long been the case with all non-federal dams. Federal dams must be subject to periodic relicensing reviews to ensure compliance with all environmental laws and safety standards.
- The Bureau of Reclamation should provide funding to support scientific research on the biological and habitat requirements of the endangered native fish of the Colorado River.
- The National Park Service should implement a program to quantify, monitor, and evaluate the presence of a wide range of pollutants including toxic and radioactive metals, petroleum compounds, bacteria, and other contaminants in Lake Powell Reservoir.

"We're thrilled by the outpouring of support we're seeing from all across the country for restoring Glen Canyon," said John Weisheit, President of Glen Canyon Action Network. "We are on our way to Glen Canyon, a movement of people seeking to restore the world's most beautiful canyons and a world-class river."

The celebration was one of 65 actions taking place in twenty other countries today on this, the Third Annual International Day of Action Against Dams, and For Rivers, Water and Life. "There is a rapidly growing global movement for 'Living Rivers,'" said Juliette Majot, Executive Director of the California-based International Rivers Network. "We're excited to be part of the leadership for restoration. The Colorado, long a symbol of the development of rivers, is now becoming a symbol of society's growing commitment to heal them."

Among the organizations and businesses endorsing the declaration are: Alaska Action Center, American Lands Alliance, Arizona Green Party, Blue Mountains Biodiversity Project, Blue Water Network, Californians For Utah Wilderness, Center for Biological Diversity, Coast Range Association, Colorado Plateau River Guides, Columbia Gorge Audubon Society, Committee for Idaho's High Desert, Diné Medicine Men's Association, Earth First! Journal, Earth Island Institute, Environmental Law Society (Univ. of AZ), Environmental Resource Center (Evergreen Coll.), Escalante Wilderness Project, European Rivers Network, Eyak Preservation Council, Flagstaff Activist Network, Forest Conservation Council, Four Corners School of Outdoor Education, Free The Planet! (N.A.U.), Friends of the Earth, Friends of the Eel River, Friends of the River, Grassroots Environmental Effectiveness Network, Great Basin Mine Watch, Great Old Broads for Wilderness, GreenAction, Green Party Of Utah, Hells Canyon Preservation Council, International Rivers Network, John Muir Project, Living Arts Center For Ecology, National Forest Protection Alliance, Native Environmental Justice Advocacy Fund, Oregon Wildlife Federation, Oregonians for Utah Wilderness, Round River Conservation Studies, Sea Shepherd Conservation Society, Sky Island Watch, Solar Energy

International, Southern Appalachian Biodiversity Project, Terra Firma (Univ. of UT), Utah Environmental Congress, Virginians for Wilderness, Western Land Exchange Project, Wetlands Action Network, Wild Angels, Canyon Voyages & Adventure Company, Back of Beyond Books, Moab Man Construction, Knave of Hearts Bakery, Fry Canyon Lodge, Tag-A-Long Expeditions, The Rio Colorado Restaurant, Wildland Scapes, and North American River Expeditions/O.A.R.S.

[Click here](#) to read the declaration.

[Click here](#) to read the Declaration for the Restoration of the Colorado River through Grand Canyon.

LR in the News 05/25/12

Oil Sands Company Raises \$11M for Utah Project

[Click here](#) to read this story by Paul Foy of Associated Press.

LR in the News 05/28/12

Ken Sleight: Capturing the stories of legendary river-running pioneer

[Click here](#) to read this story by Stephen Speckman of the Salt Lake Tribune.

Note: the film about Ken Sleight by Sageland Media is a project of Living Rivers.

[DIRECT LINK](#) to Salt Lake Tribune

Regional News 06/25/12

Utah Oil Shale Company in the news and in the court

Secret meeting among promoters of oil shale development in Vernal was illegal

[Click here](#) to read this story in the Salt Lake Tribune by Brandon Loomis

[Click here](#) to read this story in the Post Independent by John Stroud

On Wednesday June 27 at 9 am the citizen Board of Utah Division of Oil, Gas and Mining will conduct a formal hearing in the matter of Red Leaf Resources strip mining oil shale (kerogen) in the Uinta Basin. The challenge was brought forward by Living Rivers and attorneys from Western Resource Advocates.

[Living Rivers v Red Leaf Resources](#)

The address is:

Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84116

ADMINISTRATIVE RECORD

- [Living Rivers v Red Leaf Resources](#)
- [Final Memo in Opposition Motion in Limine](#)
- [Final MSJ Response](#)
- [Final Response to DOGM's Pre-Hearing Brief](#)
- [Final Response to DOGM's Reply](#)
- [DOGM Pre-Hearing Brief](#)
- [RED LEAF'S PRE-HEARING BRIEF](#)
- [RLR PRE-HEARING REPLY BRIEF](#)
- [RLR'S MEMO IN SUPPORT OF MOTION FOR PARTIAL SUMMARY DECISION](#)
- [RLR'S MEMO IN SUPPORT OF MOTION IN LIMINE](#)
- [RLR'S MOTION FOR PARTIAL SUMMARY DECISION](#)
- [RLR'S MOTION IN LIMINE](#)
- [DEQ comments Red Leaf 2012 Feb](#)
- [DOGM Red Leaf Hearing Notice Feb 2012](#)
- [DWR comments Red Leaf 2012 Feb](#)
- [LivingRivers RAA Red Leaf](#)
- [Red Leaf Informal Hearing Transcript 2012 March](#)
- [Red Leaf NOI protest](#)
- [Weisheit Declaration](#)

LR in the News 06/26/12

Nation's Only Oil Shale Project Put Off

[Click here](#) to read this story in Colorado Energy News

[Click here](#) to read this story by Brandon Loomis of the Salt Lake Tribune

###

PRESS RELEASE FROM WESTERN RESOURCE ADVOCATES

CONTACT: Jason Bane (720) 763-3721
jason.bane@westernresources.org

Nation's Only Oil Shale Project Hits a Wall

Red Leaf Resources Agrees to Conduct More Research on Water Quality Issues Just Before Scheduled Hearing in Utah

SALT LAKE CITY (June 27, 2012) — The only commercial oil shale project in the United States is now facing a lengthy delay after the company bowed to concerns raised by Western Resource Advocates on behalf of the conservation organization Living Rivers.

Living Rivers, Red Leaf Resources, Inc., and the Utah Division of Oil, Gas and Mining came to an agreement on Tuesday to postpone development plans while more research is done on potential impacts to water quality. Red Leaf agreed to compile more information on potential water contamination for the Utah Division of Water Quality, something that Western Resource Advocates and Living Rivers have pushed for months.

“Everybody agrees that Red Leaf and the State of Utah were trying to do too much, too quickly, and without enough information,” said Rob Dubuc, Staff Attorney for Western Resource Advocates. “This project should not move forward until the company can prove that there are no risks of contaminating groundwater.”

Red Leaf’s EcoShale In-Capsule oil shale proposal theorizes that the company can extract kerogen from shale rock by heating it to extreme temperatures inside massive, 10-acre clay structures (136 feet tall) that would be impermeable to leaking. A mining expert for Western Resource Advocates was prepared to testify in front of the Utah Division of Oil, Gas and Mining that Red Leaf’s proposal is not technologically feasible.

###

Western Resource Advocates is a regional nonprofit conservation organization dedicated to protecting the West’s land, air, and water. Offices or staff are located in Boulder (CO), Phoenix and Tucson (AZ), Pocatello (ID), Santa Fe (NM), Carson City (NV) and Salt Lake City (UT). Visit www.WesternResourceAdvocates.org.

LR in the News 08/03/12

Eastern Utah may be poised for major tar sands development

[Click here](#) to read this story in High Country News by Jeremy Miller

Regional News 08/06/12

Groups Challenge Weak Regulations to Clean Up Haze in National Parks & Uintah Basin

National Park Air Quality: [Click here](#) to read this story by Earth Justice

Uintah Basin Air Quality: [Click here](#) to read this story by Amy Joi O'Donoghue in Deseret News

Regional News 08/12/12

Hundred-Year Forecast: DROUGHT

[Click here](#) to read this story in the New York Times written by three scientists

Regional News 08/14/12

9th Circuit rules against Recovery of Endangered Species

[Click here](#) to read this story by Howard Fischer of East Valley Tribune

[Click here](#) to read the court's decision

LR in the News 08/16/12

Nations First Tar Sands Mine Stirs Water Environmental Fears Out West

[Click here](#) to read this story by Dave Hasemyer of Inside Climate News

[Click here](#) to view the slideshow of photos

LR in the News 08/29/12

Judge Recommends Approving Utah Tar Sands Mine

[Opposition Mounts As First Tar Sands Mine In US Gets Green Light \(Indy Press\)](#)

THE DECISION: Administrative Judge Sandra Allen's Recommendation for PR Springs tar sands mining operation proposal

[Judge Recommends Approving Utah Tar Sands Mine \(Salt Lake Tribune\)](#)

[Oil Sands Mining In Utah Clear Major Hurdle \(Inside Climate News\)](#)

[Proposed Oil Sands Mine In Utah Survives Judicial Scrutiny \(Deseret News\)](#)

[Fight To Continue Over US Oil Sands Project \(Bloomberg\)](#)

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FROM THE EDITORIAL BOARD OF THE SALT LAKE TRIBUNE

Oil and water: Tar mine needs more oversight

A Utah administrative law judge has bought the argument of a tar sands mining company that there's no need to protect or monitor the water that might be affected by a proposed operation in the Book Cliffs area of the state because, well, there isn't any.

Water, that is.

It is a frighteningly shortsighted decision.

There are few places on Earth where there is no water. (We're not even completely sure yet that there isn't any on Mars, for goodness' sake.) And even if the amount of water to be found most of the time in the area targeted by a Canadian-based company that is still called U.S. Oil Sands is minuscule, the admitted fact of the matter is that the miners are going to bring some.

A selling point of the method that U.S. Oil Sands brags about is that, rather than using a witch's brew of scary-sounding chemicals to free the petroleum precursor from the rocks and sand between Moab and Vernal, the company uses a much more benign process that it describes as "citrus based." Lemon juice on steroids.

But that's a liquid. And that liquid, and the substances it liberates from the mineral base, are likely to find their way into the ground, into the (usually dry) creeks and, eventually, into the watershed that leads to the Colorado River. And that river is the source of water — and thus of life — for most of the American Southwest, all the way to California.

The intent of the corporation that is seeking the permit may very well be to capture all the distillate that is produced, if for no other reason than to make sure none of the precious tar is lost. After all, the site, on land to be leased from the Utah School & Institutional Trust Lands Administration, is only expected to produce some 2,000 barrels of oil a day. And that's such a small amount that allowing any of it to seep away would not be in the mine's best interest.

But, then, it wasn't in BP's best interest for the Deepwater Horizon to blow up, either.

Even if Administrative Law Judge Sandra Allen is correct in her view that water is extremely scarce in the area of the proposed mine, the fact that the company isn't even being required to place monitoring equipment in areas where water could be, and satisfy itself and state regulators that no pollution is seeping away from the site, is far too trusting.

There are other administrative hoops that the miners must jump through before they can start production on the site, and environmental advocates are mulling a lawsuit. Somebody, somewhere, needs to give this project a lot more thought. And require a lot more precautions.

LR in the News 10/09/12

Democracy Now interviews Living Rivers about strip mining tar sands in Utah

[Click here](#) to watch the program

TRANSCRIPT:

AMY GOODMAN: We're on the road in Durango, Colorado. With less than 30 days before the election, we turn to look at tar sands oil, the subject of promises by both major presidential campaigns, even as they avoid the issue of climate change.

On Monday, Republican vice-presidential candidate Paul Ryan vowed to approve the Keystone XL pipeline that would run the thick crude oil from Canada to the U.S. refineries in Texas. Addressing supporters in Ohio, he said, if elected, Romney would approve the pipeline on his first day in office, and blamed President Obama for standing in the way of jobs the project could bring.

Obama has delayed a final decision on the pipeline until after the November election. But TransCanada is already clearing the way for its southern leg in Texas, drawing protests from activists who say spills along its path could poison communities. They call the pipeline the fuse to the largest carbon bomb on the planet. For more than two weeks, they've held a tree-sit to block its path near Winnsboro, Texas. Meanwhile, on Thursday, actress Daryl Hannah and a 78-year-old East Texas farmer were arrested while protesting the clearance [of] her land seized by eminent domain. This is Eleanor Fairchild speaking as she stared down one of the TransCanada bulldozers.

ELEANOR FAIRCHILD: I am mad. This land is my land, and it's been our land since '83. Our home is on it. They're going to destroy the woods, and also they could destroy the springs. It's just devastating, but it also is not very good to have the tar sands anywhere in the United States. This is not just about my land; it's about all of our country.

AMY GOODMAN: Well, as the tar sands blockade continues in Texas, we look now at what could be the first actual tar sands and oil shale strip-mining operation in the United States. Not far from where we were yesterday in Moab, Utah, the state has already released land to a Canadian energy development company that recently changed its name to U.S. Oil Sands. The company plans to mine nearly 6,000 acres in an area of unspoiled wilderness that's also the watershed of the Colorado River, which provides water to more than 30 million people. The mine itself would be water-intensive in what's already the second-driest state in the country, and activists say chemicals used in the mine could pollute the water that's left.

For more, we're joined here in Durango, Colorado, just a few hours from the proposed site, from two Moab activists working to block the project. John Weisheit is the longtime conservation director of Living Rivers & Colorado Riverkeeper. And Ashley Anderson is founder and director of Before It Starts, which is leading the fight to stop tar sands drilling in Utah. He's the former director of Peaceful Uprisings, a group he founded with

activist Tim DeChristopher, who I understand is listening to this program on KDUR, the station that broadcasts where he is imprisoned.

But I want to start with John Weisheit. John, explain—when people hear "tar sands," they think Canada, Alberta. They may think dirty oil, or if they're Paul Ryan, they think jobs. But talk about why you're talking about it in Moab.

JOHN WEISHEIT: Well, we're concerned because this particular locality is in a high-elevation place called the Tavaputs Plateau, and it's one of the last wild places in Utah. It's a huge refuge for elk and deer. It's also a beautiful watershed. It not only would affect the Colorado River, but it also—at this particular site, it's at the top of the drainage, so it would also affect the White River and the Green River. And so, this is an inappropriate activity. People probably aren't aware that Utah has a lot of tar sands. It's exposed at the surface. It's easy to get to. This would be a strip-mining project. It would completely deforest this high plateau. It would completely annihilate the vegetation for these animals. And it would actually—once they're done, it would never have any kind of beneficial use whatsoever, besides destroying the watershed.

AMY GOODMAN: So, where did these tar sands come from?

JOHN WEISHEIT: There used to be a lake here. The Colorado River actually was a river system that didn't make it to the ocean. It drained interiorly, and there were these big, huge lake deposits with algae and leaf litter, and these are the organic material that provided these hydrocarbons.

AMY GOODMAN: I want to turn to a clip from the CBC's report on the Utah tar sands. This is a report on the Utah Tar Sands Project. According to Earth Energy Resources—since renamed U.S. Oil Sands—there's now a revolutionary clean technology involving, of all things, oranges.

CBC REPORTER: If you can get all this bitumen out of the ground, separate the oil from the sand, and then put all the land back where it came from—cleanly—that's exactly what the Calgary company behind this project says it can do, with a secret formula, incredibly, involving something you can find at any grocery store: these. That's right, oranges! It's a recipe concocted by the upstart Albertans, who say they can keep Utah beautiful while mining for oil.

GLEN SNARR: That's actually about almost two million barrels a day of—or a year of production using three units out of that pit.

CBC REPORTER: Company president Glen Snarr says his patent-pending process with, yes, citrus extract does the unthinkable: it takes oil from the sand, leaving no pools of toxic waste, and will not permanently scar the land.

GLEN SNARR: Our long-term environmental footprint is almost nil, and I can say that with a high degree of confidence.

CBC REPORTER: This company video shows a test run. The only byproduct: the sand itself, later used to relandscape the pits they dig. Snarr calls it "beach clean."

GLEN SNARR: If we can't do it, then we'll fold up our tent and go back to Canada.

AMY GOODMAN: John Weisheit, can you talk about the citrus solution?

JOHN WEISHEIT: Well, yes. It's called D-limonene. It's a terpene. It's kind of like pine needles make turpentine. And this is the solvent that they want to mix in with hot water to liberate the bitumen in the materials that they strip-mine from the plateau. And what our concern is, is that once this chemical liberates the hydrocarbons, it also liberates all the nasty chemicals and cancer-producing things within the processing system, which are going into the waste sand, which is going into unlined pits. And with all the broken-up sand and rubble and the very intense cloudbursts that are in the area, what happens is, is the rainwater will percolate into these, releasing and picking up the chemicals and putting them into the local aquifers near the surface, and it would also put it into the streams that would carry them to the Green, Colorado or White River, depending on where they're locating their mining operation.

AMY GOODMAN: Are tar sands activists working on the Keystone XL aware of what's going on in Moab? And what do you make of what Paul Ryan says, when he says he will jump-start the Keystone XL pipeline if he were vice president?

JOHN WEISHEIT: Well, I think people are aware of what's going on in Utah, but it is a mining operation that hasn't begun yet. And there are activists working on it, and it is in litigation. But I would like the country to know that we aren't prevailing in the court system, and it is highly likely that this operation will begin in either 2013 or 2014.

AMY GOODMAN: I want to talk about uranium now and uranium mining and uranium milling. Please lay out the story.

JOHN WEISHEIT: Well, Moab used to be called the uranium capital of the world. And in the '50s and '60s, it was our main economic force in Moab. We also have the second-largest uranium waste pile in the United States, and it's right next to the Colorado River. There was a time when the Department of Energy was going to cap this mining activity in place near the Colorado River, but thanks to California water managers, such as the Metropolitan Water District, we were able to convince the Department of Energy to move the pile away from the Colorado River floodplain. But, in 1984, the uranium industry fell, and—but its prices dropped. The government refused to subsidize the industry any further. But there's been a resurgence due to an increase in uranium prices. So there are two companies, Denison and Energy Fuels—they've actually merged. They're currently using a milling facility about 100 miles south of Moab. It's the only uranium-processing facility in the United States, and so whatever uranium mining is happening is happening here in southeastern Utah.

AMY GOODMAN: As Democracy Now! travels on this 100-city tour, we follow the uranium trail from one proposed mine in Virginia, amazingly, to another one near Green River, Utah. Later this week we'll be in Los Alamos, the birthplace of the Nuclear Age, the atomic bombs used in World War II developed there. I want to play a comment from Dan Chancellor, who is running for a seat on the local San Miguel County Commission.

I met him when I was in Telluride, and he was talking about a proposed uranium mill in Paradox, Utah.

DAN CHANCELLOR: Well, we've got some development on the valley floor here that's an issue. And we have the Piñon Ridge mill, the uranium mill. And I've come out very strongly—

AMY GOODMAN: What is it?

DAN CHANCELLOR: The Piñon Ridge uranium mill.

DENIS MOYNIHAN: Piñon.

AMY GOODMAN: Piñon Ridge.

DAN CHANCELLOR: Piñon Ridge.

AMY GOODMAN: What's the uranium mill?

DAN CHANCELLOR: Well, they're getting ready to put a uranium mill near Paradox.

AMY GOODMAN: Why are you against it?

DAN CHANCELLOR: Well, I'm—couple of things. One, I think it's bad for the economy, because typically what happens is they bring—they bring people in from other places. And then, when the mill closes down, we've got that many more unemployed people with no sense of community. But also, the prevailing winds come straight from there to Telluride, and it's less than 60 miles away. Their high-tech solution to keeping those particles from blowing into our lungs is spraying water on them. They're using our water to—you know, they're basically taking our water to do it. My father grew up in a house in Grand Junction that was built on uranium tailings, and he died when he was 58 years old of a type of cancer that's typically associated.

AMY GOODMAN: What kind of cancer?

DAN CHANCELLOR: It was a lung cancer, but it's typically—I mean, that particular type of cancer is typically associated with radiation. I mean, the doctor asked him—his oncologist asked him if he had worked in the uranium industry.

AMY GOODMAN: Wow.

DAN CHANCELLOR: And he hadn't. But I think we need to protect people's health and safety, and save the environment.

JOHN WEISHEIT: Yeah.

AMY GOODMAN: That was Dan Chancellor, running for a seat on the local San Miguel County Commission, speaking about this uranium mill in Paradox, Colorado. He was speaking to us in Telluride. John, the significance of this?

JOHN WEISHEIT: Well, it's on the Dolores River, and it's going to require Colorado River water. It's also a very sensitive area. The Dolores River is basically a river that doesn't flow anymore because of McPhee Reservoir. We're partnering with a group in Telluride called the Sheep Mountain Alliance. We've actually been able to have this under review again. And so, it's—we really don't want to see this. We have a legacy of uranium waste and carnage, and we want—our communities want this out of the way. We want it to be part of the history, not the future.

AMY GOODMAN: Ashley Anderson, the activism you're involved with, from uranium to tar sands? And if you could quickly mention—we have less than a minute—Tim DeChristopher and what's happening with him.

ASHLEY ANDERSON: Sure. Well, I'd just like to say that what we're trying to do is stop the fossil fuel industry in its tracks from spreading the way it's done damage in Canada. There's a great group called Utah Tar Sands Resistance that's working on it in Utah. But nationally, we need a big movement to come in and help in the way that we did with the Keystone XL pipeline. We also need to make it obsolete. So that's how we're going to kind of preserve our future.

And if you want me to mention Tim, he's probably listening, and he'll be getting out on October 24th and serving the rest of his sentence from a halfway house. So, we'll be able to see him.

AMY GOODMAN: And he was sentenced for two years for?

JOHN WEISHEIT: By the Obama administration, basically, for disrupting a BLM oil and gas lease auction.

AMY GOODMAN: A Bureau of Land Management.

JOHN WEISHEIT: Yeah, gas lease auction to sell off our public lands for oil and gas exploration. So, when you talked about the presidential candidates, I don't think we're looking at a good choice when it comes to either candidate preserving a livable future for ourselves.

AMY GOODMAN: Well, Ashley Anderson and John Weisheit, I want to thank you very much for being with us. That does it for our broadcast. We are on our 100-city tour. Tonight we'll be in Taos. Tomorrow we'll be in Santa Fe. And then we'll be in Los Alamos, and we're moving on to Arizona.

LR in the News 10/17/12

Tar Sands Battle

[Click here](#) to read this story in the Salt Lake Weekly by Eric Peterson.

Reference 10/23/12

Utah Supreme Court issues opinion on Clondrock Development near Moab

[Click here](#) to read the decision against concerned citizens who are protecting pristine groundwater supplies from inappropriate development in Moab and Spanish Valley

LR in the News 10/24/12

Utah Board OKs The Nation's First Commercial Tar Sands Project

[Click here](#) to read this story by Dave Hasemyer from Inside Climate News

[Click here](#) to read this story by Judy Fahys in the Salt Lake Tribune

[Click here](#) to read this story by AP Reporter Paul Foy

[Click here](#) to read the feature in Common Dreams

LR in the News 11/09/12

Court Ordered Uranium Mill Hearing Under Way

[Click here](#) to read this story by Heather Sackett in the Telluride Daily Planet

Regional News 11/25/12

Colorado Drought To Hurt Lakes Powell and Mead

[Click here](#) to read this story by Scott Willoughby of the Denver Post

LR Letter 11/26/12

Letter to Bureau of Reclamation on Salinity Control in the Paradox Valley

[Click here](#) to read the letter

[Click here](#) to visit On The Colorado, to get more specific information and read the many documents related to salinity control in the Colorado River basin

PRESS RELEASE

For immediate release

November 27, 2012

The Bureau of Reclamation misses the target for controlling salinity Salinity Control in the Paradox Valley of western Colorado

Contact: John Weisheit at 435-259-1063 or 435-260-2590 (cell) or john@livingrivers.org

Moab, UT - On November 26th, Living Rivers submitted a scoping letter to the Bureau of Reclamation (Reclamation) regarding a salinity control project along the Dolores River in the Paradox Valley of western Colorado in Montrose County; the project is called the Paradox Valley Unit. The Dolores River joins the Colorado River in Grand County, Utah upstream of Moab City.

Below the Paradox Valley lies a huge natural deposit of ocean salt that formed nearly 300 million years ago. Natural groundwater flowing through the Paradox Valley dissolves the salt underneath the alluvium and the heavy brine enters the Dolores River through a series of saline springs.

The Salinity Control Act of 1974 mandates that the Bureau of Reclamation (and other federal agencies) reduce salinity levels in the Colorado River basin to honor a treaty with Mexico (1944) to provide useable irrigation water for their growing fields. The program is also intended to reduce corrosion of infrastructure to other end users of the Colorado River water delivery system, such as the municipalities of Tucson, San Diego and Tijuana.

Most of the salinity problem in the Colorado River basin is derived from human activities, which includes diverting pristine water from the headwaters into the Mississippi River basin (diminishing the benefits of natural dilution), applying irrigation water to fields with salty soils on the Colorado Plateau, and surface evaporation that occurs on nearly 50 water storage reservoirs built by the federal government in the Colorado River basin.

Instead of addressing the human causes of salinity that have occurred in the last 100-years, in this instance Reclamation is targeting an input of salt that will be a problem for millions of years, and with a solution that will only provide benefits that can be measured in decades.

At present, Reclamation is intercepting saline groundwater in the Paradox Valley with nine water pumps, and then injects the treated brine into the earth's crust at a depth of nearly 16,000 feet. Of the 205,000 tons of salt that enter the Dolores River every year in the Paradox Valley, Reclamation removes about 110,000 tons (54%) at the Paradox Valley Unit.

Though the permitted facility became fully operational in 1996, Reclamation has informed the public that the lifespan of the facility is projected to end in about 5-years. Reclamation is proposing to develop a pilot program to investigate the potential of evaporating the collected brine in huge surface ponds. If the pilot program is deemed successful, up to 800 acres (1.25 square miles) of solar ponds would be constructed in this beautiful valley, and at great cost and with cumulative impacts to the environment.

The letter by Living Rivers points attention to the Department of Interior and the Bureau of Reclamation for applying more and more Band-aids to a broken water management system, instead of developing a holistic watershed plan that would secure clean and abundant water supplies for the entire basin and it's future. The letter also explains how in the process of controlling salinity in the Dolores River basin, increases of salinity occur in the San Juan basin.

The Dolores River was dammed in 1984 near Dolores, Colorado (The Dolores Project and McPhee Dam) and the river water is actually diverted across a divide and into the San Juan River basin. The soils of the San Juan river basin are high in salt and selenium. The San Juan River basin transports more sediment into Lake Powell, than the Colorado and Green rivers combined. Had McPhee Dam never been built, the salinity would have been controlled naturally by the dilution factor that occurs after every annual snow melt (817,000 acre-feet on average). This illustrates how typical quid quo pro practices in the Colorado River basin transfers a solution for one basin, to become a problem for another.

Living Rivers is asking the Department of Interior and Reclamation to stop implementing redundant management protocols and instead initiate a basin-wide programmatic Environmental Impact Statement that would initiate watershed resiliency planning throughout the Colorado River basin. Otherwise the Colorado River basin will turn into a train wreck of crisis management and endless litigation.

LR in the News 12/01/12

US Oil Sands Bets Big On Utah

[Click here](#) to read this story by Darren Campbell in Alberta Oil Magazine

LR in the News 12/11/12

Environmental Groups Protest BLM Oil Shale (tar sands) Plan.pdf

[Click here](#) to read this story from the Salt Lake Tribune

[Click here](#) to read this story by Berwyn of Summit County Citizens Voice

Regional News 12/12/12

Final Report of Imbalances of Supply and Demand in the Colorado River Basin

[Click here](#) to read the documents of the final report issued at the annual convention of the Colorado River Water Users Association meeting at Caesar's Palace, Las Vegas.

LR in the News 01/11/13

Tar Sands Mine Inches Closer to Reality

[Click here](#) to read this story by Amy Joi O'Donoghue

[Click here](#) to read this story in the Salt Lake Tribune by Judy Fahys

[Click here](#) to read about the protests at the Energy Summit in Salt Lake City by Eric Peterson of the Salt Lake Weekly

[Click here](#) to watch a video as protesters grab the stage and announce Governor Herbert as recipient of "Polluter of the Year" award.

[Click here](#) to read this story by Steve Kadel in the (Moab) Times-Independent

LR Press Release 01/23/13

Controlled Flood in Grand Canyon a Dud

For immediate release:

Contact: John Weisheit @ 435-260-2590 (cell)

Controlled Flood in Grand Canyon a Dud

Federal Scientists Say Sand and Beaches Continue to Erode Away

PHOENIX, Arizona - January 23, 2013 - Just two months after Secretary of Interior Ken Salazar opened the jet tubes at Glen Canyon Dam, launching a five-day (24-hour peak) controlled flood into Grand Canyon, the results are in and they are not positive.

During today's Annual Reporting Review for the Grand Canyon Adaptive Management Program's Technical Working Group, representatives from the Glen Canyon Monitoring and Research Center reported:

Just 55% of the target beaches showed improvements, while 36% remained the same and 9% were worse off. 25% of the sediment scientists had hoped to mobilize and distribute with the flood never moved. No evidence of improved nursery habitat for native fish. Nothing is stopping the long-term erosion of sediment from Grand Canyon's river corridor.

"Ken Salazar claimed that this was going to be 'A milestone in the history of the Colorado River', but like the three previous experiments in 1996, 2004 and 2008, it too has shown that at best some beaches are temporarily improved, but the long-term prognosis for the Grand Canyon is a system without sediment," says Living Rivers Conservation Director John Weisheit

Since 1963, 95% of sediment inflows to Grand Canyon National Park's river corridor have been trapped behind Glen Canyon Dam. This has completely transformed habitat conditions for Grand Canyon native fish, leading to the extinction of the Colorado pikeminnow, razorback sucker, bonytail chub and roundtail chub, and the endangerment of the humpback chub.

The November 19th 2012 flood is the first to occur in a ten-year time window that scientist have been granted to experiment with Glen Canyon Dam operations. Additional controlled floods can be attempted if certain conditions are met, mainly the existence of large amounts of sediment entering the Colorado River from two tributary rivers that feed into the upper part of Grand Canyon, the Paria and Little Colorado.

"Far too much public time and money is wasted on preparing for, publicizing, executing and monitoring these useless floods that do nothing but perpetuate a science welfare program masquerading as an endangered species recovery effort," adds Weisheit. "Scientists know, but won't publicly state, that the only real solution to addressing Grand Canyon's sediment deficit is to transport it around Glen Canyon Dam or decommission the dam altogether."

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For more information: Grand Canyon Monitoring and Research Center www.gcmrc.gov
928-556-7380

Commentary @ www.charliechub.com

Scientists studying last fall's experimental flood of the Grand Canyon say it did what it was supposed to do: build sandbars.

Or, at least it built more sandbars than it eroded and generated new Colorado River campsites and fish habitats.

But the question is for how long.

"We'll just have to see," Grand Canyon Monitoring and Research Center Chief Jack Schmidt told participants in an annual canyon work-group session Wednesday. The real results will come over the next year or so, when researchers will know what remains of the newly built sandbars.

Over a 24-hour period in November, the U.S. Bureau of Reclamation cranked Glen Canyon Dam's release from 8,000 cubic feet per second to 42,300 to churn up sand and allow the U.S. Geological Survey and others to track the impact.

Some of the new sandbars and beaches are dramatically larger, nearly doubling, providing rafters a flat overnight perch and young endangered humpback chubs a warm backwater shelter from the pulsing river. The sand washed up by the flood also is meant to provide a wind-borne source of cover for uphill archaeological sites and a purchase for vegetation.

But it's unclear whether the benefits to these and other Grand Canyon National Park resources can withstand longer-term dam releases that fluctuate to meet hydropower or downstream water needs, and a shrinking sand source. After the previous three experiments that started in 1996, the buildup in many parts of the canyon has been on a downward trend as the river swept residual sand to Lake Mead.

Glen Canyon Dam blocks most of the sediment carried downstream by the Colorado River. Among the few remaining sources of sand is the Paria River, which flows into the Colorado about 15 miles below the dam and dumps, on average, about a tenth of the sand that the undammed river used to wash into the Canyon. The flood experiments are meant to find out how to make the best use of it.

Schmidt's staff has reviewed snapshots from remote digital cameras that showed more than half of the monitored sandbars and beaches — 18 — grew substantially after the November flood receded. Twelve sites showed no change and three eroded substantially.

"Every time we do a flood, it builds sandbars," said Paul Grams, a U.S. Geological Survey research hydrologist. "We know the floods build the bars, and they tend to erode in the six months to a year following the floods."

The Canyon's chub numbers have grown threefold, to 12,000 over the past two decades, biologists at this week's meetings estimated, perhaps aided more by warmer water spilling from a low reservoir.

Some river advocates have argued that only frequent artificial floods can approach pre-dam conditions — a possibility that the U.S. Interior Department set up by stripping environmental red tape from experimental releases for the next decade.

But others want more drastic action.

"It's not working," said John Weisheit, conservation director for Living Rivers, a non-profit organization dedicated to Colorado River conservation. The dam blocks too much sand, and the government should either breach the dam, transport sand around it or give up, he said.

"I would hope that this country could solve the health of Grand Canyon National Park," he said.

The Bureau of Reclamation has estimated it would cost more than \$100 million to build a pipeline around the dam to deliver about the same amount of sand that the Paria dumps in the Canyon. Schmidt and his staff advised river managers this week that there's a chance that sand depletion could at some point wipe out gains from these floods — but not yet.

Most of the targeted sandbars in Marble Canyon — the highest stretch of the park affected by the flood — grew in the November flood. But the results downstream were mixed, and USGS scientists said it was because prolonged high flows last year to move water from Lake Powell to Lake Mead washed away sand.

The Colorado River Energy Distributors Association estimates that its cooperative members from Arizona to Wyoming lost about \$1.4 million in power generation as water bypassed turbines during the release. It's unclear whether the canyon got "the bang for the buck," association Executive Director Leslie James said. Each flood introduces new results and variables.

"The more you experiment," she said, "the less you know."

Next fall is the soonest the government could plan another flood, if monsoon rains wash sufficient sediment down the Paria.

LR in the News 02/09/13

Lake Powell Pipeline Foes Rejoice In Delay

[Click here](#) to read this story by Amy Joi O'Donoghue in the Deseret News

For more information visit [On The Colorado](#)

LR in the News 03/02/13

Utah Senate Spikes Hot-Button Nuclear Power Bill

[Click here](#) to read this story by Judy Fahys in the Salt Lake Tribune

Moab based non-profits Uranium Watch, Living Rivers and Before It Starts have campaigns and litigation to stop this nuclear power plant project.

LR Letter 03/13/13

LR comments on Basin Study assessing supply and demand in the Colorado River basin to year 2060

[CLICK HERE](#) to read the comments of Living Rivers and the Center for Biological Diversity.

Excerpt from our letter:

5. Conclusion

The Basin Study represents a valuable technical achievement by Reclamation staff in applying contemporary modeling tools to generate predictions regarding future Colorado River flows. But these are just numbers, and they are wrought with uncertainty.

Moreover, how these results were presented shielded the public from attaining an understanding of the real challenges that Colorado River water users may be facing far sooner than the study's findings predict. Therefore, Reclamation should task the authors to begin work on a revision that addresses the following:

- 1) Provide extensive qualitative analysis as to the significant real-world uncertainty associated with the future streamflow predictions.
- 2) Discuss in far more detail the range and probabilities in future streamflows beyond the 10% average reduction projected by 2060.
- 3) Specifically address the new critical period (2000-2013) and the likelihood that it will continue. Moreover, if these conditions do persist for several more years, at what point do the study's future streamflow findings lose relevance and Reclamation's modeling needs recalibrating?
- 4) Detail the history and present status of over-allocation in the Basin, and the strategies that might be pursued to address remedies.
- 5) Eliminate discussion of demand projections that are not directly connected to Colorado River withdrawals and/or Colorado River water delivery obligations with Mexico.
- 6) Restrict discussions of new water supply options to water saved through demand-side management and conservation, and only to the extent necessary to help balance the Colorado River's water supply budget.
- 7) Incorporate an analysis of the Colorado River's long-term needs and potential, relating to issues other than water diversion: critical habitat maintenance and restoration, appropriate recreation and cultural preservation, etc. Explore opportunities for changes in how the river is managed and water is stored and delivered, given the changes in the hydrologic regime, the potential for water conservation, increased instream flows, and the decommissioning of unnecessary storage infrastructure.

This revised effort should be led by a team whose vision for the Colorado River extends beyond the dams and diversions put in place since the signing of the Colorado River Compact. There's more to the future of the Colorado River than how much and where its water can be diverted. Additionally, there's a need for full disclosure about the actual challenges water users may be facing in the near term, and creative discussions about solutions that address the real imbalance on the Colorado: excessive human intervention at the expense of the river's natural integrity. So despite the study's significant shortcomings, it can nonetheless serve as a valuable step in a continuing process that seeks real solution for the whole of the Colorado River, should the Interior Department, and Reclamation specifically, summon the leadership do so.

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Additional information:

Links to ON THE COLORADO articles on this subject

- [The One-Dam Solution](#)
- [The Water Imbalance of the Colorado River Basin](#)
- [Towing Iceburgs to San Pedro](#)
- [Pipe Dreams and Schemes](#)
- [Aquifer Recharge and Recovery](#)

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LR in the News 03/13/13

Interior Pick Puts Outdoor Rec In Spotlight

[Click here](#) to read this story in the Moab Sun News by Kristin Millis

[Click here](#) for another story in Moab Sun News related to oil and gas leasing in Grand County, Utah

Regional News 03/23/13

Utah Protesters Decry Tar Sands & March At Chevron Refinery

[Click here](#) to read this story by Christopher Smart of the Salt Lake Tribune

LR Press Release 03/26/13

Investors Beware: Utah's Tar Sand Deposits are Duds

For Immediate Release

[Click here](#) to read the Press Release

March 26, 2013

Living Rivers & Colorado Riverkeeper
Before It Starts www.beforeitstarts.org

John Weisheit - 435-259-1063; 435-260-2590; john@livingrivers.org
Ashley Anderson - 801- 652-2971; ashley@beforeitstarts.org

Investors Beware: Utah's Tar Sand Deposits are Duds

MOAB, UT - The Record of Decision issued March 22nd by the Bureau of Land Management concerning the development of TAR SANDS in Utah states the following on page 40:

"[t]his resource is not, at present, a proven commercially viable energy source, and the BLM would like to obtain more information about environmental consequences associated with its development prior to committing to broad-scale commercial development."

http://ostseis.anl.gov/documents/docs/2012_OSTS_ROD.pdf

Activists opposing the development, processing, and refining of Utah's TAR SANDS emphatically concur with this statement. It is well documented in the [geologic literature](#) that the majority of the deposits in Utah will require steam injection to liberate the bitumen ("tar"), in order for this viscous oil to be pumped to the surface for further refining (in-situ). Vast amounts of water will be required for this proposed industry and in the second driest state in the USA (preceded by Nevada).

"Aquifers will be depleted before there is any investment return and depletions of surface water from the Colorado River and its tributaries will be fiercely litigated because current demand outstrips the supply," says John Weisheit, conservation director of Living Rivers and Colorado Riverkeeper.

The Energy Return on Investment (EROI) for in-situ extraction is, under the best of circumstances, 2 to 1, according to respected [energy analysts](#) from the USA. Additionally, [analysts from Canada](#) place the EROI of steam injection at 1 to 1. For comparison, the EROI for the USA oil and gas industry is 10 to 1.



However, there are tar sand deposits near the surface in some localities such as the PR Spring deposit in the Tavaputs Plateau of east-central Utah. It has been speculated that these deposits could be strip-mined and processed on site with just hot water and solvents to liberate the bitumen. Lack of water, none-the-less, is still the #1 heartache of industry speculators such as US Oil Sands, Inc., which is based in Calgary, Alberta. US Oil Sands has leased 30,000 acres from the state of Utah that it considers worthy of strip mining.

Investors must understand that this ore deposit near the surface is by no means a bonanza. The near surface deposits are lens-shaped deposits that have an average thickness of 27 feet and the deposits are interrupted and isolated by a series of incised canyons. The average depth of the overburden and intraburden (rocks with no economic value) is 124 feet. The general standard for economic return is a ratio of waste rock to ore is 2 to 1. In this case the ratio is an exorbitant 5 to 1.

"The strip-mining proposed by US Oil Sands will become the grave of their business. When they declare bankruptcy, the citizens of Utah will have the responsibility to reclaim their damage to the last remaining wild place of the contiguous USA," says Ashley Anderson, co-founder of Before It Starts.

Potential investors should do at least these three things:

1) Ask USOS what it would cost the company to be shut down unexpectedly for a full day of operation, and write that amount down.

2) Take a moment and visit some search engines, such as Keystone XL pipeline protests and mass arrests, which were organized in part by Utah activists. An ever-growing number of people are now blockading construction of the pipeline in multiple states. The CEO of Endinbridge said "We are facing a very strong, almost revolutionary movement."

3) Write down how many days you think USOS can be stopped by a continental movement and multiply those two numbers together.

Now ask yourself, is it worth it?"

###

Supplemental information:

Table One

Analyses of drill records available to the public within a two mile radius of US Oil Sands proposed strip mining project.

Depth below surface for this analysis is 150 feet (as per submitted application).

Standard: uneconomical if ratio of ore to waste is over 1 to 2

Reference: Horn, George H., 1967. Open File Report on PR Spring-Roan Cliffs, Grand County and Southern Uintah Counties. USGS.

<http://www.riversimulator.org/Pubs/OSTS/Ref/Horn1967.pdf>



Table Two

Analyses of drill records available to the public on an 8-mile transect along the Divide Ridge Road.



Regional News 04/03/13

Herbert Rejects Snake Valley Water Pact With Nevada.pdf

[Click here](#) to read this story by Brian Maffly and Judy Fahys in the Salt Lake Tribune

Regional News< 04/05/13

ENEFIT: Testing Utah Oil Shale Samples in German Labs Hold Little Promise for Estonia's State-Owned Energy Company

[ALL NEWS FEATURES COMBINED](#)

October 28, 2012 - [Dodging Man Camps](#)

October 30, 2012 - [American, Estonian Oil Shale Testing in Progress](#)

November 8, 2012 - [Enefit in America: Hot Topics](#)

January 7, 2013 - [Investing Abroad: Meet Uintah County](#)

January 24, 2013 - [PM Backs Minister as Skepticism Emerges Over Utah Oil Shale Venture](#)

January 25, 2013 - (Salt Lake Tribune) [Utah oil shale becomes political punching bag in Estonia](#)

January 25, 2013 - [Eesti Energia CEO Defends Utah Project](#)

February 17, 2013 - [Eesti Energia Assisting in Utah Air Quality Study](#)

March 4, 2013 - [Eesti Energia Doubles Lobbying Expenses](#)

###

[Click here](#) to read this interview with CEO Sandor Liive of Eesti Energia by Scott Diel for Estonia Public Broadcasting.

Reference 04/13/13

Dr. John C. Dohrenwend passes in Moab, Utah

[Click here](#) to read the obituary of Dr. John C Dohrenwend in the Moab Times-Independent.

Visit this website to look at some of the contributions John made to the residents of Grand County, Utah.

- [Paleoflood studies in the upper Colorado River basin.](#)
- [A Look at Johnsons Up On Top](#)

Regional News 05/08/13

Protesters at university conference denounce 'dying industry'

Utah's Oil Shale & Tar Sands in for a Bumpy Ride

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

Regional News 05/22/13

Activists Send Photo To Tar Sands Investors

[Click here](#) to read this story from the Moab Sun News

LR in the News 05/23/13

NGOs file 60-Day Notice on Oil Shale & Tar Sands Development

[Click here](#) to read the 60-day notice

[Click here](#) to read the press release

"On March 22 the BLM amended 10 resource management plans in Utah, Colorado and Wyoming, making 687,600 acres available for oil shale leasing and 132,100 acres available for tar-sands leasing. The BLM refused to conduct formal consultation with the U.S. Fish and Wildlife Service to protect endangered species despite acknowledging likely impacts to Colorado pikeminnow, humpback chub, razorback sucker, Mexican spotted owl and many other threatened and endangered species."

Regional News 05/24/13

As Lake Mead Shrinks Imperial Irrigation District Uses More Water

[Click here](#) to read this article by Henry Brean of the Las Vegas Review Journal

LR Letter 05/29/13

Update: Paleoflood Data for the Colorado River above Moab

Letter from Living Rivers and Uranium Watch to the Site Futures Committee regarding proposals to develop the land that is currently occupied by the Atlas Tailings Pile (uranium mill waste) near Moab, Utah, once the site is remediated by the Department of Energy.

The reason why this uranium waste pile is being moved off the Colorado River floodplain is because of its vulnerability to 100-, 500- and 1000-year floods.

The best use of this land is to let it serve the community as a free ecological service to reduce the impacts of catastrophic flooding events, and not to develop it for human habitation or for industrial uses.

[Letter from Living Rivers concerning new information on the history of floods on the Colorado River at Moab, UT](#)

Regional News 06/15/13

Tar Sands Mining Beginning in Utah: Why the USA is Becoming Ground Zero for the Dirtiest Energy

[Click here](#) to read this story by Tara Lohan from AlterNet

Regional News 06/23/13

The Shrinking Colorado River: How low will the flow go?

[Click here](#) to read this press release from the University of Arizona

[Click here](#) to read the author's paper

Regional News 06/29/13

Utah Tar Sands: Will The U.S. Join Canada In Tapping The 'Bottom Of The Barrel'?

[Click here](#) to read this story by Lynne Peeples of the Huffington Post

Regional News 07/22/13

Green River Refinery Would Pollute Air, Enable Dangerous Oil Shale, Tar Sands Mining in Colorado River Basin

For Immediate Release, July 22, 2013

Contact: Taylor McKinnon, Grand Canyon Trust, (801) 300-2414

John Weisheit, Living Rivers, (435) 259-1063

David Garbett, Southern Utah Wilderness Alliance, (801) 486-3161

Bill Snape, Center for Biological Diversity, (202) 536-9351

Utah Tar Sands, Oil Shale Refinery Challenged

Green River Refinery Would Pollute Air, Enable Dangerous Oil Shale, Tar Sands Mining in Colorado River Basin

SALT LAKE CITY— A coalition of conservation groups today filed a “request for agency action” challenging the Utah Department of Air Quality’s June 21 approval of a new oil refinery in Green River, Utah that would affect local and regional air quality and facilitate oil shale and tar sands mining in the Colorado River Basin’s Green River Formation.

The U.S. Geological Survey estimates that between 353 billion and 1.146 trillion barrels of oil in the Green River Formation “have a high potential for development,” which is 2 to 7 times as much as Alberta’s 170 billion barrels targeted by the Keystone XL pipeline.

“The public needs to understand that the Colorado River Basin’s carbon bomb dwarfs Alberta’s,” said Taylor McKinnon, director of energy with Grand Canyon Trust. “In addition to polluting Utah’s already-dirty air, this refinery is another step toward massive strip mining, greenhouse gas emissions and Colorado River drying.”

The groups are challenging the department’s June 21 issuance of a permit approving the plant over several alleged violations of the Utah Air Conservation Act. The challenge was submitted to the Utah Department of Environmental Quality and will be heard by an administrative law judge, and potentially later the Utah Supreme Court.

“To experience clean and crisp air in the Green River Desert today, you have to wait for an infrequent thunderstorm to sweep the haze, dust and smoke away,” said John Weisheit, conservation director with Living Rivers. “Only then can you actually see the features of the Book Cliffs, the San Rafael Swell, and the Henry and La Sal mountains.”

The refinery would emit volatile organic compounds, other hazardous pollutants and greenhouse gases while creating now-absent local capacity for processing up to 7 million barrels of heavy crude annually in the heart of Utah’s oil shale and tar sands country.

“People travel from all over the world to enjoy the stunning vistas at Arches and Canyonlands national parks as well as Dead Horse Point,” said David Garbett, a staff attorney with the Southern Utah Wilderness Alliance. “It makes no sense to risk compromising the remarkable views this region offers with visibility-reducing pollution from this refinery.”

Oil shale and tar sands development entails strip mining and dangerous energy and chemical inputs to melt and extract fuel. Greenhouse gas emissions stemming from oil shale and tar sands development far exceed that of conventional oil development. In March the Bureau of Land Management allocated more than 800,000 acres of federal public land in the Colorado River Basin to oil shale and tar sands development.

“Given all of Utah’s current pollution problems under the Clean Air Act, it makes no sense to further harm public health and exacerbate climate change,” said Bill Snape, senior counsel at the Center for Biological Diversity.

Groups filing today's request for agency action are Grand Canyon Trust, Living Rivers, Southern Utah Wilderness Alliance and the Center for Biological Diversity.

To download a copy of today's "request for agency action," [click here](#).

To download maps of the refinery and state and federal leasable oil shale and tar sands land, [click here](#) (high resolution for media applications).

LR Press Release 07/26/13

Lawsuit Challenges 800,000-acre Oil Shale, Tar Sands Plan Across Public Lands in Utah, Colorado and Wyoming

For Immediate Release, July 26, 2013

Contact: Taylor McKinnon, Grand Canyon Trust, (801) 300-2414

John Weisheit, Living Rivers, (435) 259-1063

David Garbett, Southern Utah Wilderness Alliance, (801) 486-3161

Bill Snape, Center for Biological Diversity, (202) 536-9351

Matt Sandler, Rocky Mountain Wild, (303) 546-0214

Virginia Cramer, Sierra Club, (804) 225-9113 x 102

Lawsuit Challenges 800,000-acre Oil Shale, Tar Sands Plan Across Public Lands in Utah, Colorado and Wyoming

DENVER— A coalition of seven conservation groups sued the Bureau of Land Management on Thursday afternoon in federal district court in Colorado for allocating more than 800,000 acres of federal public land to climate-warming oil shale and tar sands development without undertaking formal consultation to protect endangered species.

The lands due to be mined are in Utah, Colorado and Wyoming within the Green River Formation, which the U.S. Geological Survey states contains between 353 billion and 1.146 trillion barrels of oil with "high potential for development," — in fact, so high it holds 2 to 7 times as much as Alberta's 170 billion barrels targeted by the Keystone XL pipeline.

"Vast mining, carbon emissions and water use will only worsen climate disruption and Colorado River drying," said Taylor McKinnon, director of energy with the Grand Canyon Trust. "This plan opens the door to that kind of development, and it does so while ignoring the plight of the creatures most vulnerable to its many impacts."

"This citizen intervention is necessary because the Department of Interior is sending mixed messages to the public. On one day, the administration issues a statement that the Colorado River's critical water supply will be protected for people and habitat, and then on another day they announce the most carbon intensive mining practice on the planet can move forward," said John Weisheit, conservation director with Living Rivers.

“The two programs are not mutually beneficial. Interior has to protect the Colorado River, there is no other choice.”

In March the BLM amended 10 resource-management plans, making 687,600 acres available for oil shale leasing and 132,100 acres available for tar sands leasing. The agency refused to conduct formal consultation with the U.S. Fish and Wildlife Service to protect endangered species, as required by the Endangered Species Act, despite acknowledging likely impacts to those species.

“The Endangered Species Act requires agencies to consult with the experts at the Fish and Wildlife Service when they know listed species will be impacted,” said Matt Sandler, a staff attorney at Rocky Mountain Wild. “BLM has skipped this step, which will push these species closer to extinction.” Mining for oil shale and tar sands would industrialize backcountry and destroy habitat, pollute and deplete water, and emit greenhouse gases. The allocated lands encompass habitat for several threatened and endangered species, including Colorado pikeminnow, humpback chub, razorback sucker, Mexican spotted owl and many other threatened and endangered species.

“Our public lands should be managed to protect our air, water and wildlife, not auctioned off for dirty and destructive fossil fuel development that will push us ever closer to climate disaster,” said Bill Snape, senior counsel with the Center for Biological Diversity.

Thursday’s lawsuit comes as atmospheric CO₂ concentrations approach 400 parts per million, a milestone in human history. Making fuel from oil shale and tar sands is an energy-intensive process of mining, heating, chemical treatment and refining. Its greenhouse gas emissions would far exceed that of conventional oil. For example, emissions from Alberta’s tar sands development exceed that of conventional oil by several times.

“The BLM should be managing these wild areas for the rich wildlife diversity and recreational opportunities they provide,” said Dan Chu, director of the Sierra Club’s Our Wild America campaign, “not for dirty fuels development on a giant scale.”

The groups filing today’s lawsuit are Grand Canyon Trust, Living Rivers, Southern Utah Wilderness Alliance, Rocky Mountain Wild, Biodiversity Conservation Alliance, the Center for Biological Diversity and Sierra Club. Many of the same groups on [Monday](#) challenged a new oil refinery in Green River, Utah, that could process fuels derived from oil shale and tar sands mined in lands subject to this lawsuit.

To download a copy of Thursday’s lawsuit, [click here](#).

To download maps of the refinery and state and federal leasable oil shale and tar sands land, [click here](#) (high resolution, 6.7 MB) or [click here](#) (low resolution, 1.7 MB) (for media use).

Regional News 08/07/13

Las Vegas Water Chief Seeks Disaster Aid For Colorado River Drought

[Click here](#) to read this story by Henry Brean from the Las Vegas Journal Review

Regional News 08/09/13

Tar Sands Opponents Utilize the Concept of Civil Disobedience

[Click here](#) to read this story by Jon Kovash for Utah Public Radio

[Click here](#) to read this story by Jeff Richards in Moab's Times-Independent

[Click here](#) to read this story in the Moab Sun News

[Click here](#) to read this story by Geoff Liesik of KSL News

[Click here](#) to read this story by Christopher Smart of the Salt Lake Tribune

Regional News 08/29/13

Why Aren't Experimental Floods Helping Native Fish Below Glen Canyon Dam

[Click here](#) to read this article from High Country News by Sarah Jane Keller

[Click here](#) to read this story by the Cary Institute of Ecosystem Studies

[Click here](#) to read the scientific paper by Cross et al.

Living Rivers would like to emphasize to the public that the lack of sediment is not the reason why the endangered fish are suffering. It is the lack on entrained carbon in the sediment that is causing the collapse of the Grand Canyon's ecosystem.

Before Glen Canyon Dam, driftwood and leaf litter provided nutrients and substrate for algae and bacteria to in turn provide food for insects, to in turn provide food for fish.

The only way to get carbon back into the system, is to remove Glen Canyon Dam. Until then, restoring the ecosystem of Grand Canyon National Park is an impossibility.

[Click here](#) to read about the ecosystem above Glen Canyon Dam

Regional News 09/06/13

Paradox Valley Uranium Mill On Hold

[Click here](#) to read this story by Joe Hanel of the Durango Herald

LR in the News 09/12/13

Forget Keystone: Tar Sands Drilling is On in Utah

[Read this story by Leslie MacMillan in Esquire](#)

LR in the News 09/19/13

The First Sacrifice: The Colorado River

[Click here](#) to read this feature by the Colorado Riverkeeper in the official Waterkeeper Alliance magazine

[Click here](#) to read this OpEd by Colorado Riverkeeper, John Weisheit

Regional News 09/19/13

Colorado River Hydropower Faces A Dry Future

[Click here](#) to read this story by Katherine Tweed of IEEE Spectrum

LR in the News 09/20/13

Company secures financing commitment for first U.S. oil sands mine, drawing the ire of local environmental groups

UPDATE: [Click here](#) to read this story by Steve Horn of DeSmog Blog and how this venture capital move is related to a business partner of former president Bill Clinton Nathanael Massey, E&E reporter

Published: Friday, September 20, 2013

The fight over oil sands just got domestic.

Calgary, Alberta-based U.S. Oil Sands Inc. secured financing this week to begin operations in the Uinta Basin of eastern Utah, in an area it claims contains up to 180 million barrels of discovered bitumen. If realized, the project would be the first oil sands venture on American soil.

Local environmental groups, meanwhile, called the financing announcement "an illusion to investors" and claimed the company has not been upfront about its environmental and economic costs.

While no money has yet changed hands, U.S. Oil Sands Inc. signed a letter of intent this week to sell \$80 million worth of shares to three private investment groups by mid-October. The company plans to use the funds to launch the first phase of commercial development in its PR Springs Project.

The company has a 100 percent interest in 32,000 acres in the PR Springs area. It plans to begin extraction next year at 2,000 barrels per day, and eventually scale up to 20,000 barrels per day.

"Unlike most bitumens, this resource is high in oil and low in sulfur, producing a sweet crude," said Cameron Todd, CEO of U.S. Oil Sands. As such, it benefits from a lower greenhouse gas profile, he said.

Compared to the industrial juggernauts of northern Alberta, U.S. Oil Sands' proposed mine would be a pint-sized operation. The Canadian oil sands industry churns out more than 1.6 million barrels of oil a day; the Utah project's operators hope, someday, to achieve 1.25 percent of that. Where project costs can tally in the billions of dollars for major extractors like Suncor Energy and Syncrude Canada, operator U.S. Oil Sands Inc. hopes to get its project off the ground for a modest \$30 million.

An 'ugly dream'

But those numbers are cold comfort to local environmental groups, which see the project as a threat to regional water supplies and a new front in the oil industry's push toward unconventional fossil fuels.

"U.S. Oil Sands is selling a foolish hope and ugly dream that would deplete and endanger the water resources of the West," said Denise Davis, a member of the group Utah Tar Sands Resistance. "Investors aren't hearing the dangers about water and climate change, and they aren't being honestly briefed on the financial risks."

Environmental groups have opposed the project since it first acquired regulatory approval in 2009. Recently, a coalition of parties has staged sit-ins and protests, even blocking a road used to transport equipment bound for the PR Springs site, according to a report in The Huffington Post. Prescient of the potential for environmental backlash, U.S. Oil Sands has pursued a method of extraction that it claims will mitigate most environmental concerns.

"This oil sands project stands to be the most environmentally responsible ever built," Todd said. "This will be the first commercial development anywhere without tailing ponds," the toxic pools of wastewater that result from conventional extraction processes.

"Our methods cut the surface profile [of the project] by 95 percent so that we can reclaim as we go. They leave clean sand and no sludge tailings," he added

The company has staked those claims, and its fortunes, on a citrus-based biosolvent called d-limonene, an extract pulled from orange peels found commonly in household cleaning products. U.S. Oil Sands claims this miracle fruit can strip oil from sand without leaving a toxic wastewater footprint.

In development since 2003, d-limonene has been tested in pilot projects that ranged from 24 to 500 barrels a day in size. If proven in the field, Todd said the process could be exported to other similarly sized operations.

Water is a major issue for the Uinta Basin region, which receives 8 inches of precipitation annually. Conventional oil sands operations consume vast quantities of water, but U.S. Oil Sands claims it will be able to recycle up to 95 percent of all the water it uses.

Most of the water, the company maintains, will be pumped up from deep underground, well below the level tapped for human consumption.

Environmentalists disagree. "They found water on their fourth drilling attempt, and the pump test was around 93 gallons a minute," said John Weisheit, conservation director with the group Living Rivers. "Phase one of their operations requires 116 gallons per minute." That phase would produce 2,000 barrels of oil per day, or one-tenth of the final proposed production value.

"If they don't get [water] from the ground, where's it going to come from? They're going to have to truck it in," he said.

Regional News 09/24/13

Shell & Chevron Temporarily Back Out Of Oil Shale Plays In Colorado

[Click here](#) to read a series of news articles about this issue of liberating kerogen from hard rock shale

LR in the News 09/26/13

Green River to Host Intermountain West's First Refinery Since 1976

[Click here](#) to read this story by Amy Joi O'Donoghue of the Deseret News

[Click here](#) to read the the response from the attorneys of Emery Refinery to our request for agency action.

[Click here](#) for the request for agency action

[Press release](#)

Regional News 10/08/13

Report: Powell Pipeline Tab Too Steep for Kane County

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

LR in the News 10/13/13

What Will The Future Hold For Glen Canyon Dam Glen Canyon Dam full of use & conflict after 50-years

[Click here](#) to read Part One of this story by Brandon Loomis of the Arizona Republic
[Archived here](#)

Glen Canyon Dam full of use & conflict after 50-years

[Click here](#) to read Part Two of this story by Brandon Loomis of the Arizona Republic
[Archived here](#)

[Click here](#) to watch the video with Ken Sleight

This story was also posted on [USA Today](#)

[Click here](#) to read Loomis' article on preserving Dinosaur National Monument from dam building

Take Action 10/16/13

Moab citizens protest Chamber of Commerce luncheon sponsored by US Oil Sands, Inc.

[Click here](#) to see this feature from the Moab Sun News

LR in the News 10/30/13

State Turns Attention To Selenium Levels In River

[Click here](#) to read this story by Rudy Herndon of the Moab Times Independent.

[Click here](#) to read the comments of Living Rivers

Regional News 11/05/13

Colorado River Hydrology at end of Water Year / September 30, 2013

For the first time in history, the Bureau of Reclamation is withholding water from Lake Mead due to 14 years of successive drought.

[CLICK HERE](#) to read this story in the Summit County Citizens Voice, which is followed by the monthly report from the Bureau of Reclamation.

DATA SUMMARY As of December 11, 2013

The end of November elevation and storage of Lake Powell were 3587.9 feet (112.1 feet from full pool) and 10.63 million acre-feet (maf) (44% of full capacity), respectively.

The water year 2013 unregulated inflow volume was 5.12 maf (47% of average), placing 2013 as the fourth driest on record since the closure of Glen Canyon Dam in 1963.

Water years 2002, 1977, and 2012 were drier, receiving 2.64 maf, 3.53 maf, and 4.91 maf, respectively.

In terms of reservoir elevation and storage, Lake Powell reached its peak for water year 2013 on June 18th at 3,601.2 ft (98.8 feet from full pool) which is 35.7 feet lower than last year's peak elevation of 3636.9 ft.

The end of water year 2013 elevation and storage of Lake Powell were 3591.3 feet (108.7 feet from full pool) and 10.93 maf (45% of capacity), respectively.

This is 3.0 maf less than 2012 end of water year storage which was 13.93 maf (57% of capacity).

The period 2000-2014 is the lowest 14-year period since the closure of Glen Canyon Dam in 1963, with an average unregulated inflow of 8.25 maf, or 76% of the 30-year average (1981-2010).

For comparison, the 1981-2010 average is 10.83maf.

The unregulated inflow during the 2000-2013 period has ranged from a low of 2.64 maf (24% of average) in water year 2002 to a high of 15.97 maf (147% of average) in water year 2011.

At the beginning of water year 2014, total system storage in the Colorado River Basin was 29.9 maf (50% of 59.6 maf total system capacity).

This is about 4 maf less than the total storage at the beginning of water year 2013 which began at 34.0 maf (57% of capacity).

Based on current forecasts, the current projected end of water year 2014 total Colorado Basin reservoir storage is approximately 29.6 maf (50% of capacity).

LR in the News 11/06/13

Hydroelectric Developer Misses Federal Report Filing Deadline and surrenders their application

NEW INFORMATION: As of 12/9/13, Utah Independent Power has surrender their preliminary permit application.

[Click here](#) to read the letter of surrender.

[Click here](#) to read this story by Rudy Herndon of the Moab Times Independent

[Click here](#) to read the entire administrative record from FERC

LR in the News 11/29/13

Utah Judge Clears Way for Nuclear Power Plant in Central Utah

[Click here](#) to read this story by Curtis Haring of Utah Political Capitol

[Click here](#) to read this story by Kristen Moulton of the Salt Lake Tribune

[Click here to read the Decision of the Judge](#)

The decision confirms that water, finances and endangered fish will continue to be problematic for the promoters of this project and their intentions to sell their package to a power utility in the future. It affirms that the Blue Castle Project is more about securing water rights, than it is about securing Utah's energy future.

- 1) The water right of the Central Utah Project will NOT be junior to the water right of Kane County, which is year 1965.
 - 2) The year 2000 priority for San Juan County's water is junior to Kane County's water right. Thus the combined water for the proposed project is tiered, and subject to vulnerabilities much like the Central Arizona Project would be in times of declared water shortages.
 - 3) Nuclear power is risky in places where water is abundant, but Judge Harmonds decision makes it clear that nuclear power in the state of Utah is even riskier, simply because the Colorado River basin is over-appropriated and suffering from the impacts of increasing aridity and increased water consumption.
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LR in the News 12/03/13

Earth Island Journal: Rough Waters Ahead

[Click here](#) to read this story in the Earth Island Journal by Jeremy Miller.

Photos are by Jonathan Byers.

[PDF archive](#)



OpEd 12/08/13

What If There's A Bad Snow Year?

[Click here](#) to read this opinion piece in the Denver Post by Allen Best of the Aspen Journalism Project.

Regional News 12/11/13

The well has run dry once again for the Southern Nevada Water Authority's controversial pipeline project.

by HENRY BREAN LAS VEGAS REVIEW-JOURNAL

<http://www.reviewjournal.com/news/eastern-nevada-pipeline-opponents-win-court-ruling>

For the second time since 2009, a judge has stripped the authority of permission to siphon billions of gallons of groundwater a year from across eastern Nevada.

In a highly anticipated decision issued Tuesday, Senior District Judge Robert Estes ruled that the state's chief water regulator has more work to do before allowing the authority sink its wells in four lonesome valleys in Lincoln and White Pine counties.

Specifically, Estes ordered the state engineer to recalculate how much the authority can safely be allowed to pump from Spring, Cave, Dry Lake and Delamar valleys to avoid draining the basins and causing conflicts with other water rights holders there and elsewhere.

He also directed the state engineer to develop specific triggers for mitigation measures, should damage from large-scale groundwater pumping occur, and he ordered any mitigation plans to include Millard and Juab counties at the western edge of Utah.

Simeon Herskovits, the lawyer for many of those who officially protested the authority's pipeline, called the decision "a big victory for us."

“The judge ruled in our favor on a host of the core deficits in this project that we’ve been talking about for years,” he said.

If the ruling survives an expected appeal to the Nevada Supreme Court, Herskovits said, it could fundamentally change the way regulators review the authority’s controversial pipeline from now on. The state engineer won’t be allowed to essentially “rubber stamp” the project anymore, he said.

Water authority spokesman Bronson Mack said the agency’s attorneys were still reviewing the document early Wednesday afternoon and could not yet comment on it.

Since the late 1980s, Las Vegas water officials have pushed plans to import groundwater from across eastern Nevada to supply future growth and provide a backup supply to the Las Vegas Valley, which gets 90 percent of its drinking water from an overtaxed and drought-stricken Colorado River.

Water authority officials hope to deliver water to the valley from as far north as Great Basin National Park through a network of pumps and pipelines stretching more than 300 miles and costing as much as \$15 billion.

The valley’s wholesale water supplier — and, ultimately, water ratepayers — have already spent tens of millions of dollars on the pipeline project.

Pipeline opponents filed an appeal last year asking the court to review and overturn State Engineer Jason King’s March 22, 2012, order granting the authority permission to pump up to 84,000 acre-feet of groundwater a year from the four valleys.

King’s decision came roughly two years after the state Supreme Court struck down two previous rulings that gave the authority almost 79,000 acre-feet a year from the same valleys.

One acre-foot of water can supply two average valley homes for one year.

In October 2009, a different district court judge struck down a previous state engineer’s ruling granting the authority water rights in the three Lincoln County watersheds.

The Supreme Court eventually ordered the state engineer to conduct all new hearings on the four valleys, which King did in 2011.

Herskovits, who has been arguing against the pipeline project for years now, acknowledged that opponents still have a long way to go before their fight is done.

Authority officials have said they expect to be defending their project in court for years to come. This particular case was almost guaranteed to wind up in the Supreme Court no matter how Estes ruled on it, Herskovits said. “I have always assumed that.”

When the lawyer got the good news Wednesday morning, he was hard at work on something else: a federal lawsuit against the U.S. Bureau of Land Management for granting a right of way for the authority to build its pipeline.

This is a developing story. Check back for updates.

Contact reporter Henry Brean at hbrean@reviewjournal.com or 702-383-0350.

Regional News 12/12/13

Low Water Threatens Glen Canyon Hydro Production

[Click here](#) to read this story in the Denver iJournal by Allen Best

[Click here](#) to read this AP story called "Downstream States Eye Flaming Gorge Water."

Regional News 12/13/13

Satellites Show Colorado River Basins Biggest Water Losses Are Groundwater

[Click here](#) to read this story by Brett Walton of [Circle of Blue](#)

LR in the News 12/20/13

Utah OKs Nation's First Commercial Oil Shale Mine

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

[Click here](#) to read the story by Gary Harmon of the Grand Junction Sentinel called Red Leaf Gets Nod For Shale Testing

PRESS RELEASE: Red Leaf Resources

FOR IMMEDIATE RELEASE DECEMBER 20, 2013

Red Leaf Resources Clears Major Permitting Hurdle On the Path to Commercial-Scale Oil Shale Production

SALT LAKE CITY – Utah oil shale development company Red Leaf Resources has cleared a major regulatory hurdle and will soon launch the first commercial-scale oil shale production in North America in decades.

The Utah Division of Water Quality today issued a Groundwater Discharge Permit to Red Leaf Resources, which the company sought despite not producing any discharge water. In 2012, Red Leaf received a Large Mining Operation permit from the Utah Division of Oil, Gas & Mining, contingent upon issuance of the discharge permit.

"We are pleased to finally have the major permits required to move forward with construction of our commercial demonstration project, which will produce more than

300,000 barrels of oil and prove our clean oil shale technology works on a large scale,” said Red Leaf CEO Adolph Lechtenberger. In 2009, Red Leaf successfully completed a pilot project on its lease holdings in Eastern Utah, from which it successfully produced more than 300 barrels of oil.

Red Leaf estimates it has up to 600 million barrels of recoverable oil under leases on school trust lands in Utah, which will be developed under a joint venture with the French energy conglomerate TOTAL SA. Red Leaf has another estimated 750 million barrels on land leased in Wyoming, which will be developed under a joint venture with the Canadian firm Questerre Energy.

“Red Leaf has more than 20 U.S. patents for our EcoShale™ technology, which extracts oil with lower energy consumption, lower emissions, lower water use and less environmental impact than any oil shale technology deployed in the world today.” Lechtenberger continued, “The EcoShale™ process was specifically designed to address traditional environmental challenges of oil shale production.”

“Not only do we have less environmental impact, our oil is of much higher quality than traditional oil shale production, equal to or better than the industry benchmark of light sweet West Texas Intermediate crude,” said Lechtenberger.

OIL SHALE VS. SHALE OIL Oil shale is often confused in the media with shale oil and shale gas production. When traditional oil and gas is extracted from shale rock formations like those in North Dakota, Pennsylvania and Texas, it is correctly called shale oil and shale gas, not oil shale. This extraction process involves drilling for the resource.

By contrast, oil shale development is the process by which a solid organic material rich in hydrocarbons called “kerogen” is converted to crude oil, condensate and natural gas through the application of heat. All traditional oil and gas was once kerogen. Over tens of millions of years, heat from the earth’s core caused deposits of kerogen to transform into oil and natural gas. Modern oil shale production simply speeds up the natural process of turning kerogen into oil and gas, either by mining the ore and heating it at the surface or heating it underground (in-situ). EcoShale™ is a surface mining and processing technology.

Contact: Jeff Hartley jhartley@redleafinc.com 801-557-3772 www.redleafinc.com

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OIL SHALE: 'Critical last step' taken to open commercial-scale facility in Utah

Margaret Kriz Hobson, E&E reporter
Published: Tuesday, January 7, 2014

This spring, as the snow melts and ground thaws in eastern Utah, Red Leaf Resources Inc. plans to begin building the first commercial-scale oil shale production facility to operate in the United States in 30 years.

The Utah Division of Water Quality last month granted Red Leaf a long-awaited water discharge permit, clearing the deck for the company's large oil shale demonstration project in the Uinta Basin. The project had been delayed by concerns that it might pollute local water supplies.

"It's hard to overstate how significant it would be to commercialize oil shale in the United States," said company spokesman Jeff Hartley. "This is the last critical step we need to move forward."

The Salt Lake City-based company is proposing to use its EcoShale technology to develop Utah's plentiful supply of oil shale. The procedure entails mining and crushing the kerogen-rich oil shale and dumping it into a massive clay-lined pit. A single rock capsule will be almost a half-mile long and 300 yards wide.

Once sealed, the encased rock will be heated to 700 degrees Fahrenheit over a period of weeks to convert the solid kerogen into oil, natural gas and condensate.

Red Leaf successfully tested the technology in a 2009 smaller-scale demonstration project. Now company officials hope to prove the process can be scaled up for commercial production (EnergyWire, Jan. 11, 2013). They predict that the upcoming demonstration project will produce more than 300,000 barrels of oil, with an initial output estimated at 10,000 barrels a day. Red Leaf predicts that its Utah state trust land leases could contain up to 600 million barrels of recoverable oil.

The large-scale demonstration project is targeted for completion in July 2015. The company must acquire a second water permit before moving to the next stage of broad-scale oil shale development.

As Red Leaf begins the commercial-sized demonstration project, the company plans to monitor rain and well water at the site, as well as the heat distribution in the rock capsule, Hartley said.

"Because this is our first commercial demonstration project, we will be testing throughout the process," he explained. "So this will be a slower construction time frame than when we get into full commercial production."

The Utah project is being underwritten through a joint venture with the U.S. affiliate of French energy company Total SA.

"They brought \$400 million to the table," Hartley said. "We have the technology and the resource. It's a straight-up JV that will split the profits 50-50 and prove the commerciality of oil shale."

Red Leaf also is leasing oil shale-rich lands in Sweetwater Canyon, Wyo. That property is estimated to contain 750 million barrels and is being developed under a joint venture with the Canadian firm Questerre Energy.

The company is also licensing its EcoShale technology to other companies. Hartley said oil shale development projects are moving forward in Morocco and Jordan. In addition,

Red Leaf has licensed its extraction process to another company with state leases in Utah.

Regional News 12/22/13

Western Slope Mining & Drilling Takes Job Hurting Hits

[Click here](#) to read this story by Nancy Lofholm of the Denver Post

Regional News 12/22/13

Feds begin Colorado River drought action

Ken Ritter and Paul Foy The Associated Press

LAS VEGAS — After back-to-back driest years in a century on the Colorado River, federal water managers are giving Arizona and Nevada a 50-50 chance of having water deliveries cut in 2016, reports the Mohave Valley Daily News.

A U.S. Bureau of Reclamation operations plan made public in August will for the first time slow the flow of water from the Lake Powell reservoir upstream of the Grand Canyon to the huge Lake Mead reservoir that provides almost all of Las Vegas' water.

But a bureau official said Lake Mead won't reach a low point next year that would trigger cuts to Sin City's main drinking water supply.

"What we've seen in the last two years are the worst consecutive years of inflow in the last 100 years," bureau Lower Colorado Regional Director Terry Fulp told The Associated Press.

"We're going to slow Powell's decline. That will hasten Mead's decline," he said. "But next year, we can adjust again."

The bureau that controls the levers at the Glen Canyon and Hoover dams said cities, states, farmers and Indian tribes will get their full Colorado River water deliveries next year — and probably in 2015.

Fulp said a two percent chance of the Lake Mead level dropping in 2015 to the trigger point for a shortage declaration increases to 50 percent in 2016.

Bureau officials and environmentalists have been raising alarms in recent months about demand outstripping supply on the river serving about 40 million people in seven states and cities including Los Angeles, Phoenix, Denver and Las Vegas.

"The problem isn't drought, and a big rain storm or a heavy winter snow season won't fix this," said Bob Irvin, president of American Rivers in Washington. D.C. The advocacy group in April labeled the Colorado River the most endangered waterway in the U.S.

“What we need are fundamental changes in how we manage water in the Colorado basin,” Irvin said. “This is the loudest wake-up call so far.”

Fulp pointed to a federal report issued in December that concluded that the river may not meet the needs of a growing regional population by 2060.

“The study showed very clearly that demand and supply curves are crossing and demand is exceeding supply,” he said.

Fulp compares managing the two largest reservoirs on the Colorado River to pouring tea from one cup to another. He said the usual annual delivery of 8.23 million acre-feet of water from Lake Powell to Lake Mead will be cut next year about 9 percent, to 7.48 million acre-feet. Officials say one acre-foot is enough to serve two Nevada families for a year.

Lake Powell, near the Utah-Arizona state line, would decrease from 45 percent this year to 42 percent next year.

Lake Mead, on the Nevada-Arizona state line, is currently at 47 percent capacity and could drop to 39 percent capacity next year.

Lake Mead on Friday was at 1,106 feet. The low level next year would be about 10 feet above a 1,075-foot elevation trigger point agreed upon in 2007 by the seven U.S. states that share river water under a 1928 allocation agreement. Native American tribes and Mexico also get shares of Colorado River water.

A shortage declaration would mean Arizona would get 11.4 percent less than its 2.8 million acre-foot allocation. Nevada would get 4.3 percent less than its 300,000 acre-foot allotment — a loss equivalent of the amount serving 26,000 homes.

Southern Nevada Water Authority chief Pat Mulroy last week floated the idea of a federal disaster declaration due to drought in the Southwest. Meanwhile, local officials stress conservation, and note that iconic dancing fountains on the Las Vegas Strip use recycled water.

Mulroy called Friday’s projections “an unwelcome development that will demand all the resolve and ingenuity we can muster.”

Reaching the shortage declaration trigger point would prompt a vote by southern Nevada elected officials whether to pursue plans for a massively expensive and controversial pipeline to tap groundwater in rural counties along the Nevada-Utah state line to slake the thirst of 2 million Las Vegas residents and 40 million tourists a year.

In Arizona, a projected loss of 320,000 acre feet in 2016 wouldn’t affect cities like Phoenix, Tucson, and Native American tribes, said Chuck Cullom, Colorado River program manager for the Central Arizona Project. But the agency would cut the amount of water it stores underground and limit the amount available for purchase by agricultural customers.

California, Colorado, Utah, New Mexico and Wyoming wouldn't see direct cuts in their share of river water in 2016 depending on the Lake Mead water level. But officials acknowledged there would be ripple effects.

"Denver Water has a direct interest in these issues because half our supply comes from the Colorado River," said Jim Lochhead, chief executive of the water agency serving Denver and its suburbs. "Issues like compact curtailment or political or legal confrontation along the river will affect that supply."

Southern California gets 25 percent of its water from the Colorado River and 30 percent from drought-stricken in-state sources, said Jeff Kightlinger, Metropolitan Water District of Southern California general manager. The agency serves 19 million customers.

Both sources are threatened by drought, which is evident throughout the region.

"It's serious," Kightlinger said Friday. "The important thing is how well the basin states are working together. We all recognize the immediate impact on southern Nevada. We're not running to the courthouse. We're working together to deal with this."

In Coolidge, Ariz., Hohokam Irrigation District manager Sidney Smith said she's been advising farmers to make sure their wells are working in case they lose Colorado River water and have to revert to pumping groundwater. "Basically if farming stops here, it's going to hurt the whole community," Smith said.

Steve Erickson of the Great Basin Water Network in Salt Lake City, raised the specter of a "panic reaction" and free-for-all to dam and divert water before it reaches lakes Powell and Mead.

"That's always been the Western way — use it or lose it," Erickson said. "Everybody building water diversions — that's old thinking."

Utah Division of Water Resources chief Dennis Strong said his state doesn't currently draw its full 1.4-million acre-foot allotment of river water. He said his concern was for states in the Colorado River's lower basin.

"We've spent 14 years in a drought situation — with only three above-average years — and Lake Powell and Lake Mead are below half full," Strong said.

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[Click here](#) to read this AP story called "Downstream States Eye Flaming Gorge Water."

World News 01/05/14

Colorado River Drought Forces a Painful Reckoning for States

[Click here](#) to read this story by Michael Wines of the New York Times

[Click here](#) to go directly to nytimes.com

[Click here](#) to read this AP story called "Downstream States Eye Flaming Gorge Water."

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[Click here](#) to read a similar story published in The Economist (February 26, 2014).

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Old Facilities, Older Rivers, and Arizona Water Legislation Pending At The State Capitol Supports Bringing The Yuma Desalting Project Back Online, But The Federal Government Says That's Not The Answer

By Chris Braswell

Modern Times Magazine

Feb. 17, 2014 — In the high deserts of Arizona and throughout the Southwestern United States, access to water resources seems far closer to mind at a policy level than any wetter or non-landlocked states.

The Colorado River Basin Water Supply and Demand Study released by the U.S. Bureau of Reclamation in December 2012 predicts a future imbalance between the supply and demand for Colorado River water, which, by way of the Central Arizona Project, is where most Arizonans get their water.

The Yuma Desalting Plant is in the southwest corner of Arizona, which today approximates the southernmost extent of the Colorado River flow. The Colorado River Basin Salinity Control Act of 1974 provided for the YDP's construction in order to treat saline agricultural return flows from the Wellton-Mohawk Irrigation and Drainage District in the Yuma area.

During the implementation of the project, a separate canal or "bypass string" was built that takes the salty groundwater and delivers it to the Cienega Santa Clara wetlands, where it serves as a recharge catalyst for the ecological water mixture in the area.

Since the YPD was built, water has been delivered to Mexico from the Colorado River instead of treated flow delivery from the YPD, but that still satisfies the U.S. obligation to the saline-mitigated flow to Mexico, said Rose Davis, a spokeswoman for the Bureau of

Reclamation's Lower Colorado Region. Meanwhile, the bypass string has been used over the years to continue feeding the growing Cienaga Santa Clara ecosystem.

Proposed during the current second session of the 51st Arizona Legislature, Senate Concurrent Memorial 1001 spearheaded by Arizona Senator Gail Griffin, district 14, urges the U.S. Department of the Interior to "immediately take all necessary measures to operate the Yuma Desalting Plant."

The legislation criticizes the DOI for using 100,000 acre-feet of water from Lake Mead to fulfill the treaty's water quality obligations to Mexico rather than conserving an equivalent amount of water through the operation of the Yuma Desalting Plant, and it also notes an ongoing 14-year drought that has led to DOI projections of a shortage of Colorado River water to exceed 50 percent in 2017.

"By abdicating its obligation to operate the Yuma Desalting Plant, the federal government has caused the loss of more than 1,300,000 acre-feet from Lake Mead, placing the state of Arizona at increased risk of water shortage," according to SCM 1001. "If the federal government were to operate the Yuma Desalting Plant, it would conserve 100,000 acre-feet per year, equivalent to the water needed to supply more than 250,000 Arizona residents with water annually."

The USBR holds a different view about the wisdom of bringing YDP back into full operation.

When the complex was built in the 1980s, "it was a low-water period so it made some sense, and we were flushed with the government money at the time," Davis said.

In 1992, the region went into surplus flooding conditions, and the YDP was put into maintenance mode by the USBR. In 2007, the USBR did a 90-day demo run of the facility at one-tenth capacity, to see if it was still being maintained correctly.

"It was still working OK, but we did not really have a call from any of the water stakeholders, the water customers, to use it on a consistent basis," Davis said.

In 2010, as the current drought continued, the Southern Nevada Water Authority and the Central Arizona Project asked the USBR to go ahead with another demo run. Other organizations involved with these recent demonstration and pilot tests at the YDP include University of Arizona Department of Geosciences, as well as some Mexican partners such as the non-governmental agency Podnatura, and the state agency which is responsible for the biosphere preserve status that exists in the northern half of the Gulf of California.

"(In 2010) we looked at the expenditures needed for operations, the chemicals involved, updating the designs, the solid contact reactor, the reverse osmosis pumps, the membranes, the high pressure piping, media filtration, and the instrumentation required to bring the electronic operations up," Davis said. "The initial investment at running it at one-third capacity, would be over \$23 million to fix it up. And if you wanted to operate it at two-thirds capacity, that would be another \$20 million per year. At one-third capacity

you would get 31,361 acre feet, so I don't want to say it is a "drop in the bucket," but that is not a lot of water.

Today, that kind of money is not available in the USBR's budget.

"What would we have to sacrifice to take out \$30 million, out of all of our programs, our conservation programs, our safety of dams programs, our upgrades to our electronic systems and security? The money definitely is an issue," Davis said. "This would be a huge investment. But if things got really worse and worse, then there might be great minds that come together to say, how do we fund bringing it up to this century's standards, and make it work."

There are a couple of plants in California that the USBR has helped get off the ground with some funding through our Water Smart Program, and the technology has improved greatly since the 1980s and the time of the YDP's construction, Davis said.

Bringing the YDP online would also affect the saline water from its bypass stream that currently goes to the Cienaga Santa Clara, according to the USBR. Before the YDP bypass flows began, the Cienaga Santa Clara was "about 10,000 acres or less of pretty poor-quality tidal infill," said Tom McCann, assistant general manager of operations, planning, and engineering for the Central Arizona Project. "Now it's about 40,000 acres, of which about 14,000 is dense, marshy vegetation areas. The remaining acreage is open-water habitat."

Each year, 1.5 million acre feet of water from the Colorado River go into Mexico, McCann said, which satisfies the U.S. treaty obligations. The water crosses the Southwestern border in two places, at its "Northerly International Boundary" near the Morales Dam immediately west of Yuma (at a rate of about 1.35 million acre-feet per year), and at the "Southern International Boundary" near the border at San Luis. The SIB is a far more limited amount of flow of about 150,000 to 160,000 acre-feet per year.

None of the NIB flow continues downstream since it is entirely redirected by Mexico, primarily to irrigated farmland in the Mexicali Valley Irrigation District in Baja State. About 1 or 2 percent of the NIB flow goes to Tijuana by pipeline. The SIB flow goes to San Luis, Sonora.

Weather Patterns

"People may realize that it is a finite resource, you know we have studies out there that are looking out 50 years and looking back 1,200 years, and recognizing the cycles of water. But now we are adding in climate change effects," Davis said.

Ken Waters, Phoenix-based warning coordination meteorologist for the National Oceanic and Atmospheric Administration, consented that the desert Southwest has been under drought conditions for 14 to 15 years, but that the Yuma area itself only typically gets rain about two or three times per year anyway. Rain is rare in greater Yuma, southern Arizona and northern Sonora, and when it does come, it comes fast, resulting in far more groundwater runoff than basin recharge. The seasonal monsoon

precipitation phenomenon in the region is sporadic and does not go as far north into Arizona as it used to.

The headwaters of the Colorado River are fed by snowpack in western Colorado, “and that's been at a deficit for a number of years,” Waters said. “Lake Powell and Lake Mead are also going down again. Las Vegas is very concerned because the Lake Mead levels are going down. It all goes downhill, so to speak, and it's going to eventually get down to Yuma. In the next couple of years, we don't see it turning around.”

Agricultural concerns are a large portion of the water appropriation of the Colorado River and its constituent Central Arizona Project. California's Imperial Valley is a very robust agricultural community, and is largely irrigated from the Colorado River up north all the way to Palm Springs and the Coachella Valley. Still, a significant portion of the Arizona agricultural efforts are irrigated via the Gila River, which eventually merges with the Colorado.

“It's still a desert, but it's irrigated,” Water said. “Four years ago, the decision was made to reduce the Lake Powell release, which even more reduced the supply along the Colorado.”

The climate models are highly variable. It is not simply a matter of how much precipitation may come, but also that the type of precipitation could change from snow to rain for example, or the pattern of precipitation could change to different times in the year.

“There are a number of global climate models out there, and they disagree on what will happen in the Colorado River basin, ranging from zero to 33 percent reduction in river flow,” McCann said. “But, a 10 percent reduction in river flow due to climate change is probably a likely, reasonable, middle-of-the-road expectation for the next 50 years in this basin.”

On Thursday, delegates from the White House Council on Environmental Quality, the Intergovernmental Affairs Office, the U.S. Environmental Protection Agency, and the Department of Energy met with California Governor Jerry Brown, Los Angeles Mayor Eric Garcetti, and state, local, and tribal leaders from across the country at Los Angeles City Hall following the second meeting of President Barack Obama's Task Force on Climate Preparedness and Resilience. The Task Force was established in November to advise the administration of how to respond to needs of communities throughout the nation through the White House's Climate Action Plan. The task force meeting focused on improving the resilience and longevity of our nation's transportation, water, and energy infrastructure in the face of extreme weather, sea level rise, extreme temperatures, drought, and other various effects of global climate change.

On Feb. 4, the U.S. Department of Agriculture announced that it will make \$20 million in assistance available for agricultural water conservation efforts throughout California for producers who are affected by the drought. Interested landowners and managers have until March 3 to apply for funds. The program is also part of the White House's Climate Action Plan, and the funds are appropriated through the Natural Resources

Conservation Service's Environmental Quality Incentives Program. NRCS Service Center locations and more information about the drought initiative can be found at www.ca.nrcs.usda.gov.

Drought Policy

The Arizona Water Settlements Act of 2004 between Arizona and New Mexico gives New Mexico rights to about 14,000 acre-feet of water per year from the Gila River. The end of 2014 is the deadline for the Interstate Stream Commission to decide what to do with the water from the Gila and one of its tributaries, the San Francisco River. Federal funding is available to the state for diversion project construction, or if no decision is made, the water will continue flowing south into Arizona.

The Gila is a tributary of the Colorado that begins in the Gila National Forest in New Mexico. The proposed location for the diversion project is in a pristine roadless area of unblocked wild river. Farmers in the region want the diversion as backup water supply, while conservationists and sports enthusiasts argue that dams and diversions would the ecosystem. In the current New Mexico legislature, Senate Bills 89 and 90 attempt solutions to the issue.

And currently pending in the 51st Arizona Legislature is House Bill 2326 (<http://www.azleg.gov/legtext/51leg/2r/bills/hb2326p.pdf>) would amend the statute related to the Arizona Water Banking Authority in such a way as to make it more water storage/banking credits more fiscally commodifiable, adding language that reinforces water banking credits are purchasable by the authority, and providing for statutory basis for such accounting.

The Central Arizona Project provides water to about 80 percent of the Arizona population through a 336-mile long water delivery system that sources the Colorado River. Its construction was federally approved in 1968 for construction by the USBR, and in 1971, the Central Arizona Water Conservation District, which now manages the CAP, was formed to repay the federal government for certain construction costs once the system was complete. Construction began at Lake Havasu in 1973 and was completed 20 years later south of Tucson.

"We run 40 to 50 percent in the Phoenix area, and if you add in agricultural and the reservations that we also serve, about 80 percent of the population of the state takes CAP in some form or another," said Robert Barrett, a spokesman for the Central Arizona Project. "It goes to agricultural use which is also critical in this state as well, and that's generally Pinal County, which is that area between Phoenix and Tucson, a big agricultural area. And then finally, we also recharge water; we store water that is not being used underground to guard against future drought."

"You can't make up all that difference with conservation because right now in Arizona, we're one of the leading states in terms of conservation," Barrett said. "Our population doubled or tripled from 1960 to today but our total water use has gone down during that period. You can only squeeze that lemon so hard before you do not get any more juice out of it, and what we need to do is start looking forward for ways to augment the supply

in the Colorado River. They can do that by cloud seeding when possible, but that's not going to be enough, in and of itself. The CAP is looking at multiple ways to augment our water supply for the future, but for some of the ideas, all seven states are going to have to cooperate on the big picture."

The CAP is examining the possibility of desalination, for which there appears to be two primary options to choose from, Barrett said.

"We could probably partner with somebody in California; we pay for them to desalinate the water and then whatever the volume they get out of it creates a net volume left in the river, and we take it so it would be a trade off that way," he said. "The other thing we are talking about is working with Mexico, and there is a couple of locations in Mexico we are talking about. It is going to be some time before that happens, so right now most of the emphasis is going to be on conservation, you know, what more can people do, but that's a limited fix, you can only take that so far."

USBR is more optimistic.

"We are the water wholesaler, and Arizona, California, and Nevada are doing incredible things in the way of water reuse and recycling, in the way of conservation, in the way of Arizona storing a lot of water in groundwater areas," Davis said. "Some of the planning that Arizona has done, and some of the things that they have implemented over the last decade have truly shown that the water managers have been looking at the horizon."

An excellent model of municipal water management in the Southwest is Las Vegas, for example.

"Almost every drop of the water in Las Vegas is reclaimed water," Davis said. "Everything that you are not drinking, all the toilet water—everything that you are not drinking—is recycled water."

There are many great examples of progressive water use policy at the state and local levels in the Southwest, but when not all cities and agricultural operations are using the most cutting-edge civil engineering and technology, the USBR strongly cautions against resorting to industrial-scale desalination as an everyday solution.

"The states are the water managers, they are the retailers, so to speak, and are the managers of where the water is going within, how it is being used, how its being retreated, reclaimed, and recycled," Davis said. "We're really supportive of states' activities. And while the YDP is a piece of equipment that we are still maintaining, its just not high on the list of alternatives, considering the way the states are cooperating with each other, in augmenting water supplies and conserving water."

Chris G. Braswell is the managing editor of Modern Times Magazine. He can be reached at cgbraswell@moderntimesmagazine.com.

OpEd 01/10/14

Goldwater, Brower and the Disastrous Damming of the Colorado River

[Click here](#) to read this opinion piece by Paul VanDevelder as featured in the Los Angeles Times

Regional News 01/15/14

British Company Jumps Into Utah Oil Shale

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

[TomCo's Small Mining Permit Application](#)

LR Press Release 01/22/14

Controversial Utah Oil Shale Project Challenged Utah Oil Shale Mine Faces New Challenge

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

Fight Erupts Over Uintah Basin Oil Shale Mining Project's Protection of Water

[Click here](#) to read this story by Amy Joi O'Donoghue in Deseret News

###

For Immediate Release, January 22, 2014

Contact: Rob Dubuc, Western Resource Advocate, (801) 487-9911

John Weisheit, Living Rivers, (435) 259-1063

Taylor McKinnon, Grand Canyon Trust, (801) 300-2414

Shelley Silbert, Great Old Broads for Wilderness, (970) 385-9577

Tim Wagner, Sierra Club, (801) 502-5450

Controversial Utah Oil Shale Project Challenged

38,000 Public Comments Opposed Plan Threatening Aquifers, Seeps and Springs
SALT LAKE CITY— Oil shale strip mining atop Utah's Book Cliffs is being challenged by conservation groups. The challenge is a "request for agency action" filed Tuesday, over the ground water discharge permit approved by the Utah Department of Water Quality. The permit, which authorizes Red Leaf Resources to test an oil shale mining facility, lacks measures to prevent or detect surface or groundwater pollution, in violation of state law. More than 38,000 public comments were sent to the Department opposing an earlier draft of the flawed plan.

“The scheme used by Red Leaf Resources is basically the same as it was for failed ventures a century ago: mine it, crush it, sort it, put it in an oven, heat it, gather the liquid into a sump, hope that it doesn’t burn the facility down, and get it to a refinery before it congeals,” said John Weisheit, conservation director with Living Rivers. “It makes far more sense for an energy company to come over to my house and install solar panels on my roof.”

The company plans to strip mine shale from a 385 by 695-foot long, 160-foot deep prototype “capsule,” line it with clay, and then crush, backfill, bury and bake (or “retort”) the shale in it at 725°F for three months in order to extract hydrocarbons. If the prototype proves economical, the company plans to strip mine vast acreages; it has approximately 17,000 acres of state land under lease.

“As light sweet crude becomes more rare, we can choose to develop better and cleaner ways to power our world, or we can turn to ever-dirtier fuels like oil shale,” said Taylor McKinnon director of energy with Grand Canyon Trust. “Regardless of whether this technology proves viable, oil shale is the wrong energy path in an era of drought, waning river flows and worsening climate change.”

Red Leaf plans to leave toxic post-production residues in its experimental capsules. The state permit lacks provisions to detect if or how the capsule would fracture during heating or prevent contaminants from leaching into groundwater, seeps and springs.

“State law requires protection of all waters of the state from contamination. Yet the state has approved a permit for Red Leaf to discharge potentially contaminated water from a first-of-its-kind facility,” said Shelley Silbert, executive director with Great Old Broads for Wilderness. “Amazingly, they are not even requiring monitoring of springs, seeps, or groundwater on site.”

The energy inputs and carbon emissions required by strip mining and retorting oil shale exceed those of conventional oil extraction. Given the size of oil shale deposits in the Colorado River Basin, commercial development, if it takes hold, is likely to result in vast strip mining and greenhouse gas emissions, contributing to climate change, regional droughts and Colorado River drying.

“It’s clearly a misguided state energy policy that encourages heating rocks to find usable oil, especially after a century of similar ventures have failed,” said Tim Wagner of the Sierra Club in Salt Lake City. “It’s this lack of visionary leadership that is putting Utah far behind the curve of other western states that are embracing the clean energy revolution of the 21st century.”

The U.S. Geological Survey estimates that between 353 billion and 1.146 trillion barrels of oil in the Green River Formation “have a high potential for development.” But despite decades of attempts, oil shale’s low energy density and inherent inefficiencies have precluded industry from yielding a commercially viable shale-to-fuel sector. Attorney Rob Dubuc of Western Resource Advocates is representing Living Rivers, Grand Canyon Trust, Southern Utah Wilderness Alliance, Great Old Broads for Wilderness, and Sierra Club in today’s challenge.

Download a copy of today's "request for agency action" [here](#).

Learn more about Red Leaf's oil shale plans at the Western Values Project [here](#).

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LR in the News 01/29/14

Lots for Tots: How One Agency (SITLA) Is Selling Off Utah In The Name Of The Children

[Click here](#) to read this story by Colby Frazier of the Salt Lake City Weekly

OpEd 02/09/14

Retirement: Pat Mulroy of the Southern Nevada Water Authority

[Click here](#) to read an Interview with Pat Mulroy in the Las Vegas Review Journal by Henry Brean.

###

From the editorial board of the Las Vegas Sun

Whatever it takes to bring water to the valley

Sunday, Feb. 9, 2014 | 2 a.m.

Pat Mulroy retired Feb. 6, leaving a long legacy as head of the Southern Nevada Water Authority. Mulroy helped create the authority in 1991, and then found ways to provide the water that fueled Las Vegas' explosive growth.

A tireless advocate for Southern Nevada, Mulroy negotiated creative deals to maximize Las Vegas' water supply from the Colorado River, which is the source of about 90 percent of the region's water. And that wasn't an easy task.

The laws that regulate the Colorado River are stacked against Nevada; they were written nearly 100 years ago when Southern Nevada's population was counted by the hundreds, not the hundreds of thousands. But Mulroy and her staff found ways to maximize water from the Colorado through conservation efforts and smart agreements that continued to keep the water flowing.

Mulroy not only has provided water but also has provided a strong vision for years to come. There are still serious challenges ahead for her successor, John Entsminger.

Entsminger, who served as Mulroy's top deputy for several years, is well prepared and versed on what lies ahead. The drought on the Colorado River continues to take its toll, leaving a precarious future for Southern Nevada. With water levels continuing to drop at

Lake Mead, there is a very real concern that the region's main water supply could dry up.

Entsminger will have to press ahead on a plan put together by Mulroy that has attracted significant opposition. Mulroy proposed building a 300-mile pipeline to carry water from rural eastern Nevada to Las Vegas.

The plan recently suffered a setback when a judge in White Pine County overruled state approval that gave the authority permission to pump some water. The case is on appeal, and hopefully, the state Supreme Court will see the folly in that ruling. Clark County accounts for nearly three-quarters of the state's population, and it drives the economy. Anything that harms Clark County harms the state itself.

And there aren't many real alternatives to the pipeline.

The state could cap growth in Clark County, but that would effectively cap the state's economic growth as well.

But critics of the pipeline plan say it is unnecessary. They maintain that the water authority could increase conservation efforts, and while that certainly could help, it won't provide enough water, especially if Southern Nevada's take from the Colorado River is limited.

Pipeline opponents also have suggested that the water authority pursue a proposal to build desalination plants along the Pacific Ocean in California. Under such a plan, the water authority would give California the water from the desalination plants in exchange for keeping the same amount of water, which otherwise would go to California, in Lake Mead for our use. Although that might be an idea worth exploring, it's not one to go all in on. If California agreed to the deal, it would be expensive to build and operate the plants. There also are significant environmental issues that go along with a desalination plant that would need to be worked out.

But more importantly, the desalination proposal would further tie Southern Nevada's future to the Colorado River. With the continued drought, and California Gov. Jerry Brown declaring a drought emergency, don't expect Nevada to get more water from the Colorado; California certainly will be flexing its muscle for it.

The answer for the state is simple: a pipeline to rural Nevada. That will have to be more than Mulroy's legacy; it will have to be Entsminger's top priority.

LR in the News 02/13/14

New Oil Shale, Tar Sands Films Focus on the Colorado River Basin

Posted on February 13, 2014 Tar Sands and Oil Shale strip mining in Utah's Book Cliffs.

[Click here](#) to see this post by Taylor McKinnon, Energy Director for the Grand Canyon Trust

The Colorado River Basin is ground zero for high-carbon fuels. The U.S. Geological Survey estimates that its oil shale and tar sands could eventually yield over a trillion equivalent barrels of oil—as much as we’ve burned since the dawn of the industrial revolution.

Spurred by Alberta’s tar sands boom, pressure to develop the Colorado River Basin’s deposits is growing. Over a million federal and state acres are allocated for leasing with industry targeting the shallow deposits in Utah’s Uinta Basin.

Turning rocks into fuel involves energy inputs and greenhouse emissions far beyond conventional oil. The prudence of committing land, water and society to high-carbon fuels in the face of climate change is hotly debated.

Two new movies explore that debate.

The first, titled Uinta Basin, An Unconventional Future, is a series of issue vignettes that gives voice to industry, advocates, agency officials and communities that would be affected by commercial development in the Uinta Basin.

An Unconventional Future dives deep. It’s long, but its careful portrayal of the people, places and issues at hand warrants attention from those concerned about the Colorado River Basin’s energy, climate and water future.

Watch An Unconventional Future [here](#).

The other, titled Last Rush for the Wild West – Tar Sands, Oil Shale and the American Frontier, moves from Alberta’s tar sands to the Uinta Basin. It’s an advocacy piece that interviews some of the region’s leading advocates and, with an eye toward Alberta’s tar sands experience, chronicles the problems and places at the heart of the Colorado River Basin controversy.

Watch Last Rush [here](#).

LR Press Release 02/21/14

Utah Supreme Court: Living Rivers v US Oil Sands

FOR IMMEDIATE RELEASE

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Supreme Court to hear legal challenge over tar sands strip mine on Tuesday

Landmark case in Utah's Supreme Court will determine the state's obligation to protect groundwater

SALT LAKE CITY - The Supreme Court of Utah is scheduled to hear Living Rivers vs Division of Water Quality at 9:00 AM on Tuesday, March 4th. The location of the hearing is: 450 South State Street in Salt Lake City, UT 84114.

The applicant US Oil Sands, based in Alberta, is poised to begin mining operations on 213 acres near PR Spring, Utah. The PR Spring area is perched at the watershed divides of three major rivers: the Colorado River, the White River and the Green River.

PR Spring is a drinking water source in the White River watershed. Water in the area of the proposed mining site flows toward the Green River, potentially entering the water supply for those who depend upon the Colorado River.

John Weisheit, conservation director of Living Rivers says, "I am very worried this water pollution will in-debt both local communities and larger communities downstream with extensive clean-up costs, as well as making people sick.

"This project is a time bomb. The plume of contaminated water will leach into the Colorado, White and Green Rivers long after the mining companies pack-up and disappear."

Living Rivers is concerned that the untested, experimental mining operation will pollute precious groundwater sources that will one day enter the drinking water supply for Las Vegas, Phoenix, Tucson, Los Angeles, San Diego, and other western communities.

The Division of Water Quality claims the groundwater at the mine site is an insignificant amount of water and harm to water resources will not occur.

Living Rivers understands that wildlife, ranchers, and recreational visitors depend on these freshwater springs, and many are concerned that mining pollution will migrate into drinking and irrigation water for 35 million downstream users of the Colorado River.

US Oil Sands has leased a total of 32,000 acres from the School and Institutional Trust Lands Administration and millions of gallons of accumulated waste water and waste solvents will be absorbed and dispersed into the groundwater systems of the Tavaputs Plateau.

Representing Living Rivers are attorneys Joro Walker and Rob DuBuc of [Western Resource Advocates](#).

[Click here](#) to read the brief prepared by Western Resource Advocates.

[Click here](#) to visit the administrative record of tar sands mining in eastern Utah.

Attorneys for Division of Water Quality
Bridget K. Romano (Utah Solicitor General)

Paul McConkie (Assistant Attorney General)
Kimberlee Sellers McEwan (Assistant Attorney General)

Attorneys for US Oil Sands Inc.

A. John Davis III (Holland & Hart)
Christopher R. Hogle (Holland & Hart)

HIGHLIGHTS OF THE BRIEF

The threshold issue in this matter is whether the State's Water Quality Board and the Executive Secretary used a consistent regulatory definition of groundwater to decide that, in the area of US Oil Sand's proposed strip mining operation for bituminous sand, no groundwater exists above 1,500 to 2,000 feet below the surface. Living Rivers shows that the Executive Secretary did not and, as a result, that the Executive Secretary failed to properly weigh and consider clear record evidence pointing to the presence of groundwater, as defined by the Utah Ground Water Quality Protection regulations (Regulations) and in keeping with the Water Quality Act.

Arguments

1. The Utah Water Quality Act requires the Board to protect from pollution all Waters of the State.
2. For the purposes of groundwater protection, Waters of the State is defined as “all accumulations” of subsurface water.
3. In its Ground Water Quality Protection Regulations, the State's Water Quality Board has narrowed that definition, stating that groundwater is “subsurface water in the zone of saturation including perched ground water.”
4. Water in a zone of saturation must be equated with a subsurface accumulation of water and the Act must be understood to require the Executive Secretary to protect any accumulation of subsurface water located within a zone of saturation.

LR Event 02/26/14

Remembering Abbey, 25 Years Gone

For More Information: Call Bob Lippman at 435-259-1182 John Weisheit at 435-259-1063

Sponsors: Abbey's friends, Utah Film Commission, Back of Beyond Books, Center for Biological Diversity, and Living Rivers.

POSTER: [click here](#)

MONDAY, MARCH 10 5:00 pm. Radio program on KZMU's This Week in Moab, about Abbey, and the upcoming events. Feature selected eulogies from the Arches memorial in 1989.

LISTEN [click here](#)

FRIDAY, MARCH 14 5:00 pm. Radio panel on KZMU 7:00 pm. Private gathering of Abbey's clan @ Pack Creek Ranch.

LISTEN [click here](#)

SATURDAY, MARCH 15 7:00 pm. Film and panel at Star Hall 1. Film screening by ML Lincoln: "Wrenched" 2. Panel Discussion with Ken Sanders, Sarah Stock, Lauren Wood, ML Lincoln, Ken Sleight and John Weisheit. 3. Tabling: Back of Beyond Books, Uranium Watch, Southern Utah Wilderness Alliance.

Regional News 02/26/14

Enefit American Oil Shale Project On Hold

[Click here](#) to read this story by Mary Bernard of the Vernal Express
Energy-independent but dirty, Estonia makes "big shift" to renewables

[Click here](#) to read this story by Arthur Max of Energy Wire

A New Use for Orange Peels: Squeezing Oil From the Utah Desert

[Click here](#) to read this story by Chester Dawson of the Wall Street Journal

Regional News 03/03/14

California Will Tap Its Water Bank, Even As Mead Shrinks

[Click here](#) to read this story by Henry Brean in the Las Vegas Review Journal

LR in the News 03/05/14

Utah Supreme Court Hears Challenge to Tar Sands Permit

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

LR in the News 03/20/14

Harpers - Razing Arizona: Will drought destroy the Southwest?

[Click here](#) to read this story by Christopher Ketcham in Harpers Magazine

LR Testimony 04/01/14

Utah Watershed At Risk! Tar Sands Strip Mining in the USA

[Click here](#) to read this color booklet created by Living Rivers and the Colorado Riverkeeper

LR in the News 04/13/14

Moab's Dilemma Can Recreation Coexist With Energy

[Click here](#) to read this story by Amy Joi O'Donoghue of Deseret News

LR in the News 04/15/14

Will Utah Oil Sands Project and Water, If There is Any, Mix?

[Click here](#) to read this story by Dave Hasemyer of Inside Climate News

[Click here](#) to read this story by staff from Moab Sun News

[Click here](#) to read this story from DeSmog Blog called "Permanent Protest Set Up at US Oil Sands Project in Utah."

[Click here](#) to read this article from the Calgary Herald called "US Oil Sands Gears Up For Utah Project."

Regional News 04/16/14

Jolted by Reality Colorado River Water Managers Plan for Persistent Drought

[Click here](#) to read this story by Brett Walton in Circle of Blue

[Click here](#) to view Reclamation's graphic of Trace 96, a potential scenario of Lake Powell elevation if the current drought prevails for the rest of the decade

LR Press Release 05/14/14

Refinery, Approved Without Permit, Would Be Utah's First in 30 Years

For Immediate Release, May 14, 2014

Contact:

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Tim Wagner, Sierra Club, (801) 502-5450, tim.wagner@sierraclub.org

Randi Spivak, Center for Biological Diversity, (310) 779-4894,

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Utah OKs Oil Refinery Construction Before Examining Impacts on Public Health, Pollution, Iconic National Parks

Refinery, Approved Without Permit, Would Be Utah's First in 30 Years

SALT LAKE CITY— Disregarding laws meant to protect public health, the environment and national parks, the Utah Division of Air Quality has given Emery Refining permission to build Utah's first new oil refinery in 30 years. Approval was given even though the project has not been given a permit, public and environmental reviews have not been conducted, and the agency has not determined whether the refinery complies with pollution laws. The refinery in eastern Utah would be within miles of Canyonlands and Arches national parks, two of the state's most popular tourist destinations.

Conservation groups today called on state officials to prohibit construction pending final permitting.

"State and federal law are clear: Construction must follow permitting, and permitting must follow public and environmental review," said Anne Mariah Tapp with Grand Canyon Trust. "Turning that scheme on its head reveals the deeper problem of Utah heeding oil interests over public and environmental health."

Utah is allowing Emery to proceed with construction under a 2013 permit originally issued for a now-abandoned refinery proposal. After conservation groups challenged that permit over unlawful pollution, Emery proposed a new refinery design. Under Utah law the company should have to wait for a new permit for the new design. Instead the state gave Emery approval to build its new refinery under the inapplicable 2013 permit. The groups' legal challenge to the original permit is still pending before an administrative law judge.

"Air quality for the downwind communities of eastern Utah has been worsening, and it's just a short matter of time before the limits of pollution are exceeded. Energy companies need to invest in a clean-energy economy, because this business-as-usual approach to energy development is destined to damage our health, the water cycle of this important watershed, and the enjoyment of this landscape's superlative scenery," said John Weisheit of Living Rivers.

“Utahns should be outraged at the state fast-tracking Emery’s refinery plans,” said Stephen Bloch with the Southern Utah Wilderness Alliance. “The Division of Air Quality has its priorities backwards when it puts streamlining Emery’s permit ahead of its duty to protect the environment and human health.”

Conservation groups’ comments on Emery’s new design point out several major problems in the state’s draft permit for the new design. The state failed to perform mandatory dispersion modeling and impact analysis of hazardous air pollutants, including benzene, toluene, hexane and ethylbenzene; it sharply underestimated emissions from volatile organic compounds and greenhouse gas emissions; and it failed to analyze visibility impacts to Canyonlands and Arches national parks and impacts to endangered fish like Colorado pikeminnow in the Green River.

“Millions of people flock to Utah for the magnificent public lands, national parks and wildlife,” said Randi Spivak with the Center for Biological Diversity. “Putting a toxic oil refinery smack in the middle of some of America’s most stunning landscapes will pollute the air and endanger the health of park visitors and wildlife.”

Emery’s newest refinery plan comes as Grand County officials promote an oil transportation corridor connecting Green River to the oil, oil shale and tar sands deposits atop the Book Cliffs. Increasingly the refinery appears to be one part of a bigger scheme to industrialize Utah’s wildlands for high-carbon fossil fuel extraction.

“Utah’s biggest draw and economic engine, our majestic wildlands, is being transformed into a dirty energy wasteland before our very eyes,” said Tim Wagner of the Sierra Club. “In spite of recent double-digit growth in Utah’s outdoor recreation and tourism economies and the overwhelming evidence of the impacts to Utah from climate change, Utah’s leaders continually demonstrate their lack of regard for anyone or anything but short-term profits.”

Background Utah’s air-quality rules explicitly provide for a pre-construction public comment period and a public hearing and mandate that “the director will consider all comments received during the public comment period and at the public hearing and, if appropriate, will make changes to the proposal in response to comments before issuing an approval order or disapproval order” (R307-401-7(3)). The rules further require new sources of air pollution to obtain an approval order “prior to initiation of construction,” which is defined as “any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change of emissions” (R306-401-2).

The rules ensure that the Division of Air Quality will consider and mitigate environmental and public-health effects of emissions before the company commits resources to a project. See R307-401-7 (1), (2) – Public Notice (“prior to issuing an approval or disapproval order...the director’s analysis of the notice of intent proposal, and the proposed approval order conditions will be available for public inspection.”); see also R307-401-7 (3) (“the director will consider all comments received during the public comment period and at the public hearing and, if appropriate, will make changes to the

proposal in response to comments before issuing an approval order or disapproval order”).

Regional News 05/15/14

McPhee Reservoir Vulnerable to Crisis at Lake Powell

[Click here](#) to read this story by Jim Mimiaga of the Cortez Journal

Regional News 05/19/14

Vexing Mussels: Officials Concede Defeat at Lake Powell

[Click here](#) to read this story by Emiley Morgan of the Desert News

[Click here](#) to read a story by Todd Glasenapp of the Arizona Daily Sun about quagga mussels detected below Glen Canyon Dam

LR Press Release 05/23/14

Green River Oil Spill

[Click here](#) to read the press release

[Click here](#) to read this story in the Salt Lake Tribune by Brian Maffly

[Click here](#) to read this story by Kristen Moulton in the Salt Lake Tribune

[Click here](#) to read this story in EcoWatch

[Click here](#) to view a photo of the oil spill in the mainstem of the Green River approaching Canyonlands National Park

Regional News 06/15/14

Arizona cities could be hit by CAP shortage much sooner than expected

[Click here](#) to read this story by Michael Wines of the New York Times

[Click here](#) to read this story by Tony Davis of the Arizona Daily Star

NOTE: According to the latest forecast by the Bureau of Reclamation, the elevation at Lake Mead will reach the first tier of declared shortages in April or May of 2015.

[Click here](#) to see the projection.

[Click here](#) for a more visual graphic from the folks at the Central Arizona Project.

[Click here](#) for a graphic of the shortages by percent to Arizona, Nevada and Mexico.

Documents from citizens sounding the warning of reservoirs going empty

[April 2007](#) - read the letter from Living Rivers/Colorado Riverkeeper explaining that shortages were inevitable

[February 2008](#) - read this press release from the Scripps Institute explaining that shortages were inevitable

Documents from upper basin water managers sounding the warning of reservoirs going empty

[July 2013](#) - Eric Kuhn

[February 2014](#) - John McClow

Regional News 06/19/14

Colorado River Researchers Find Signs of Ancient, Devastating Floods

[Click here](#) to read this story by Julia Rosen in the Los Angeles Times (Science Now)

[Click here](#) to read the final report published in Water Resources Research (American Geophysical Union).

The purpose was to provide science to the Department of Energy to ensure that Moab's radioactive waste pile would be removed from the floodplain of the Colorado River, which is indeed happening. So far, 41% of the pile has been removed and taken by railroad to a burial site 30 miles north of town at a place called Crescent Junction adjacent to the I-70 corridor.

Highlights of this report include:

- River: Upper Colorado River (above the Green River confluence and below the Dolores River, the last major tributary)
- Site location: 10.5 miles above the Moab Bridge
- Time frame: The last 2,140 years (+/- 220 years)
- Number of floods: 44
- Range of floods in cfs: 60,036 to 349,616

- 34 to 40 floods have exceeded the magnitude of the USGS 100-year flood determination
- 20 - 25 floods have exceeded the magnitude of the USGS 500-year flood determination
- 5 floods have exceeded a peak discharge of 282,000 cfs The two largest floods were slightly over 349,000 cfs
- Most of these floods have occurred in the last 500-years
- The 100-year flood would have a peak discharge ranging from 156,440 to 179,050 cfs
- The 500-year flood would have a peak discharge ranging from 224,780 to 265,570 cfs
- A 1000-year flood would have a peak discharge ranging from 256,740 to 310,770 cfs

ADDITIONAL INFORMATION

1) [Click here](#) - To read the report of 2006 that fulfilled the requirements of the grant that supported the preliminary research for this paleoflood research project.

2) [Updated Report \(2006b\)](#)

3) [Moab Mill Project Cover Letter](#)

4) [Moab Mill Project Brochure](#)

5) [Moab Mill Project Poster](#)

6) ["Investigation of the Hydrogeologic Connection between the Moab Mill Tailings and the Matheson Wetland Preserve," Philip Gardner and D. Kip Solomon, Department of Geology and Geophysics, University of Utah, December 11, 2003 \(with Addendum\) \[PFD 8.3m\]](#)

7) [Initial-Phase Investigation of Multi-Dimensional Streamflow Simulations in the Colorado River, Moab Valley, Grand County, Utah, 2004, Terry A. Kenney, US Geological Survey](#)

8) [Special newspaper supplement from the TIMES-INDEPENDENT about the Moab Mill Project](#)

9) [Special presentation by Dr. John C. Dohrenwend given at the Moab Information Center in 2006](#)

10) [Photo of Colorado River in flood \(1917 or 1921\) near the Colorado River bridge](#)

11) [Paleoflood study of Colorado River at Grand Canyon by O'Conner et al., 1994](#)

12) [Click here](#) to read Dam Failure Inundation Study by the Bureau of Reclamation (1998).

13) [Click here](#) to learn more about the flood of 1884 and the flood of 1983

LR in the News 06/24/14

High Court Rejects Final Appeal of Utah Tar Sands Mine

[Click here](#) to read this story by Brian Maffly in the Salt Lake Tribune

[Click here](#) to read this story by Amy Joi O'Donoghue in the Deseret News

[Click here](#) to read the court's 9-page decision

[Click here](#) to read the plaintiffs petition for a rehearing

LR Press Release 07/08/14

Nevada State Senator Calls for Audit of Bureau Of Reclamation's Colorado River Management Strategies: Encourages State Legislators across the Basin to take part

[Click here](#) to read about this story from Sarah Tory in High Country News

[Click here](#) to read about this story by Gary Wockner in EcoWatch

###

Press Release

Contact: John Weisheit
435-260-2590 (mobile)
435-259-1063 (office)

July 8, 2014

For immediate release

Nevada State Senator Tick Segerblom has announced plans to introduce legislation for an independent scientific and economic probe into the Bureau of Reclamation's current and future management plans for the Colorado River.

Citing deficiencies in Reclamation's response to mounting water scarcity, public safety, and ecological concerns on the Colorado River, the senator fears absent immediate independent intervention, Reclamation's guidance may propel the Southwest into a dangerous cycle of crisis management.

- Reclamation's water supply planning assumes climate change may only reduce river flows by nine percent on average by 2060, despite climate scientists warning that it

could be more than four times that, and that for nearly 15 years average flows of the Colorado River have been dropped 15 percent.

- Reclamation is not addressing the critical interplay between surface water shortages and ground water loss, despite the increasingly rapid depletion of ground water supplies across the Colorado River Basin—recently estimated to be declining at a rate equivalent to 1/3 the Colorado River’s annual flow.
- Findings published last month, and known to Reclamation for several years, presents worrying evidence of Colorado River flood flows of rates and frequencies much greater than what Reclamation has been using in its designs and operations.
- Despite decades of public investment in habitat restoration work, no significant progress is being made toward endangered species recovery, there’s no plan for dedicated flows to the Colorado River Delta, and Reclamation’s much heralded Colorado River Basin Study released in December 2012 made no provisions for the environment.

Such independent scientific review is far from unique, and currently a key aspect to address challenges facing the San Joaquin/Sacramento River system in California, where Reclamation too is a major actor.

“What is unique is a public official stepping outside the box longtime defined by Reclamation’s biases and constraints in order to seek urgently needed independent perspectives on the management of this critical part of the nation’s infrastructure,” says John Weisheit, Living Rivers Conservation Director.

“Thirty five million people and an economy valued at \$1.7 trillion annually, the 12th largest in the world, deserves the truth, not optimistic projections and the potential justification for new infrastructure that renders the system more vulnerable as it wallows from crisis to crisis informed by Reclamation’s short-sightedness,” adds Weisheit.

State Senator Segerblom intends this initiative to also catalyze long overdue cooperation within the legislative bodies of all seven Colorado River Basin states, working toward establishing the type of publicly-accountable, watershed-based governance structure that a river system of this magnitude and importance requires.

“It’s ironic that such leadership is coming from the State of Nevada which consumes just 2% of the Colorado River’s flows,” adds Weisheit. “But then again, the senator was born in the town that built Hoover Dam and led Reclamation’s foray into the Colorado River Basin. Possibly the spirit which launched Colorado River development in the early 20th century is reemerging to push for the river’s sustainable management in the 21st .”

[LR press release \(PDF file\)](#)

###

Additional Information (hyperlinked)

1. [Nevada State Senator Segerblom's Press Release \(July 8, 2014\)](#)
 2. [Executive Summary: Reclamation's Colorado River Basin Supply and Demand Study \(December 2012\)](#)
 3. [Living Rivers Comments on Reclamation's Basin Study \(March 2013\)](#)
 4. [Upper Colorado River Hydrology \(June 2014\)](#)
 5. [Colorado River researchers find signs of ancient, devastating floods \(LA Times: June 19, 2014\)](#)
 6. [NASA's GRACE Satellites Show Colorado River Basin's Biggest Water Losses Are Groundwater \(2005-2013\) \(Circle of Blue: December 13, 2013\)](#)
-

OpEd 07/20/14

Segerblom: Colorado River Must Go With A Better Flow

[Click here](#) to read the print copy of this OpEd in The Las Vegas Review Journal by Tick Segerblom of the Nevada Senate representing District 3.

[Click here](#) to read the online version of this OpEd

[Click here](#) to read this press release about Segerblom introducing legislation to audit Reclamation's Supply and Demand Study.

Regional News 07/22/14

Protesters Arrested at America's First Tar Sands Mine

[Click here](#) to read this story by Zoe Schlanger of Newsweek

[Click here](#) to read press release "National Environmental Groups Stand With Utah Land Defenders."

Regional News 07/24/14

Parched West Using Up Groundwater: Study Points to Grave Implications for Water Supply

[Click here](#) to read this article from Science Daily

[Click here](#) to read this article from Common Dreams

[Click here](#) to read this AGU paper by Stephanie Castle, et al., called Groundwater Depletion During Drought Threatens Future Water Security in the Colorado River Basin.

LR Event 08/01/14

Tribal Reps Air Concerns Over Proposed Nuclear Plant

[Click here](#) to read this story by Eric Trenbeth of the Moab Sun News

[Click here](#) for the clipping of this story

###

We All Live Downstream!

Uniting to Stop the Green River Nuclear Power Plant and Protect the Green and Colorado Rivers!

Update & Community Meeting with Tribal Leaders from the Colorado River Indian Tribes

MONDAY, AUGUST 18, 2014 - 7 PM
Moab Arts and Recreation Center
111 East 100 North
Moab, UT

Tribal Council members of the Colorado River Indian Tribes are coming to Moab and Green River from their home along the Colorado River in Parker, Arizona to share their concerns and learn more about the proposed Green River nuclear power plant that threatens the Green and Colorado Rivers.

Hear updates on the fight against the nuclear power plant, and hear from tribal leaders about their concerns about the threat to the Green and Colorado Rivers.

Sponsored by Greenaction for Health and Environmental Justice, Living Rivers and Uranium Watch

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[Click here](#) to view the poster for this event

OpEd 08/08/14

Oil Shale Forces Utah to Decide its Real Water Priorities

[Click here](#) to read this Op Ed by the Rocky Mountain Farmers Union in the Salt Lake Tribune

LR in the News 08/14/14

Dams Cause Climate Change: They are not Clean Energy

[Click here](#) to read this story by Gary Wockner in EcoWatch

[Click here](#) to view the presentation by Dr. John C. Dohrenwend and Colorado Riverkeeper John Weisheit

World News 08/20/14

Westinghouse Could Provide Reactors for Utah Nuclear Site

[Click here](#) to read this story by David Conti of TribLive News

[Click here](#) to read about the litigation against Blue Castle Holdings

[Click here](#) to read press release by Westinghouse

[Click here](#) to read the testimony of the 4-day trial before the Utah's 7th District Court (This pdf is searchable).

Arnie Gunderson stated under oath that Blue Castle Holdings does not have enough water to cool Westinghouse AP1000 reactors, unless this company changes its business plan to include very expensive upgrades.

The sediment and salinity loads of the Green River will also present water quality and quantity issues and additional expenses for the operation of this proposed nuclear power plant.

Other testimony by Blue Castle Holdings affirms that their business plan has many other issues of infeasibility and risks to the public.

OpEd 08/27/14

Danish Flats: Utah should never take a polluter's word

[Click here](#) to read this Op Ed by the Editorial Board of the Salt Lake Tribune

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune called "Utah Grapples With Toxic Water From Oil and Gas Industry"

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune called "Toxic Evaporation Ponds in Utah Threaten Birds, Little Protection"

LR Letter 09/15/14

Keep It In The Ground: Living Rivers joins the campaign

[Click here](#) to read the letter and sign-ons

LR Press Release 09/19/14

Utah Groups Announce Green River Nuclear Legal Appeal & OpEd

For Immediate Release:

Contacts:

HEAL's Matt Pacenza at 801-864-0264

Uranium Watch's Sarah Fields at 435-260-8384

Attorney John Flitton at 435-940-0842

Living River's John Weisheit at 435-260-2590

Utahns challenging the water rights of the stalled Green River nuclear reactor project announced today they have filed a legal appeal to the state's Court of Appeals.

The plaintiffs – more than a dozen Utah environmental organizations, small business owners and concerned citizens led by HEAL Utah, Uranium Watch and Living Rivers – are challenging the November 2013 verdict from Judge George Harmond upholding the state's decision to approve the transfer of water rights for the nuclear project.

One of the grounds of the appeal is that Blue Castle Holdings – which revealed during last fall's District Court trial that it has raised less than \$20 million of the \$20 billion minimum needed to build two reactors – is engaging in speculation with the water it has leased, which Utah law doesn't allow.

"They've raised less than .1 percent of the total cost of these projects," says Park City attorney John Flitton of Flitton Babalis, who represents the plaintiffs. "What they're trying to do is get a permit to sell to someone else, and while they wait, they're tying up water which is increasingly important. That's the very definition of speculation."

In addition, the plaintiffs will argue that the Colorado River system, which encompasses the Green River, doesn't have the 53,000 acre-feet needed to support the reactors. The

multi-year drought gripping the region certainly suggests there may not be enough water for the reactors, says John Weisheit, conservation director of Living Rivers.

“The Colorado River basin is already over-allocated,” says Weisheit. “Shortages will likely begin next year for lower basin states and there is a strong chance that hydropower stops at Glen Canyon Dam before this decade is even over.”

Lastly, the appeal argues that withdrawing such a massive amount of water – 53,000 acre feet is roughly the amount a city of 200,000 uses in a year– will harm the “natural stream environment,” which Utah law forbids. The plaintiffs say that Judge Harmond ignored expert testimony that the nuclear withdrawal would decrease key fisheries areas by 50 percent. That stretch of the Green River is home to four native endangered species – the razorback sucker, humpback chub, Colorado pikeminnow, and bonytail – which depend upon key eddies, backwater channels and other features threatened by low flows.

Plaintiffs expect a hearing in front of the three-judge Court of Appeals next year.

The Green River nuclear project has made very little progress since it was first announced in 2007. In addition to failing to raise anywhere near the \$100 million plus needed to file for federal permits, let alone the billions needed for construction, Blue Castle Holdings and their CEO former state Rep. Aaron Tilton have found no interest from area utilities, the only possible customers for their nuclear bid. Rocky Mountain Power, Utah’s biggest utility, has repeatedly said that it doesn’t plan to acquire costly nuclear power.

Lastly, while Blue Castle Holdings continues to claim it is preparing a permit application to the U.S. Nuclear Regulatory Commission—their next step if they want to move forward—a search of federal records shows the company has had no formal communication with the agency since 2011.

“It’s past time for Tilton to admit what we all know – his nuclear scheme is all smoke and no fire,” says Christopher Thomas, HEAL Utah’s executive director. “This project costs too much, uses too much water, and produces expensive power the state doesn’t even want to buy. We hope the Court of Appeals will see that under Utah law, it should not proceed.”

Pacenza will be available for interviews on Wednesday at the State Capitol, where the Legislature is holding its monthly interim hearings. In addition, Tilton is scheduled to address the Public Utilities and Technology Interim Committee with an update on the project in Room 215 of the Senate Building at approximately 3:30 pm.

###

OpEd: Don't buy Blue Castle's claims of progress in building nuke plant

By Christopher Thomas of HEAL Utah
September 19, 2014
Salt Lake Tribune

Utah has many annual traditions, such as rushing up the Cottonwood Canyons on powder days or reveling in the lights of Temple Square during the Christmas season. In the past couple years, we're developing a new one: Guffawing when the company that wants to build the Green River nuclear reactors unveils a "big" development. Their periodic news releases are little more than an empty illusion, designed to create the appearance of momentum, even as Blue Castle Holdings' southern Utah nuclear plans remain somewhere between stalled and dead.

Unfortunately, the most recent announcement of a "deal" between Blue Castle and a major nuclear firm apparently snookered The Salt Lake Tribune, which last month ran a story headlined, "Westinghouse to Build Utah Nuclear Plant."

Of course, we know that's not going to happen, not after learning last fall during our trial challenging the project's water rights that Blue Castle has raised just \$500,000 from outside investors since CEO and former state Rep. Aaron Tilton formed the company in 2007. Considering the company needs about \$100 million to apply to federal officials for a federal permit – not to mention the \$20 billion or so they would need to build the reactors – their plan is a bit, um, underfunded.

It's also not going to happen because utilities in the West have universally shunned new nuclear power. Rocky Mountain Power spokespeople periodically make clear that new nuclear is not in their plans. In fact, no utility in the West is planning on investing in new nuclear, leaving Blue Castle with not just no money to build their project – but no hopes of selling the expensive source of power they can't afford to build. Yikes.

Even so, announcing a big contract with a huge nuclear company to build reactors is a big deal, right? Sure, except that's not what actually happened. Read the press release that Westinghouse sent out and what they actually agreed to do was to "work together to develop a scope of activities for enabling the Blue Castle Project under a definitive agreement..."

Let's translate that tortured language: The two companies have decided they'll soon start planning to make a plan. In other words, they're talking. Not investing, or building, or signing a contract, or committing. Talking about planning. Blue Castle's ludicrously positive spin on its stalled project has reared its sad head before. Last spring, the company sought to get the Utah Legislature to force the TransWest transmission company to "tie in" to the Green River nuclear reactors, a move that would have possibly killed that company's serious and important bid to move wind power from Wyoming to southern California.

Thankfully, the adults in the room won out. Far from requiring TransWest to tie transmission into the nuclear project, Blue Castle's bid was whittled down to what amounts to no more than a requirement that TransWest "inform" Blue Castle of its plans.

That less-than-impressive outcome didn't stop Blue Castle from announcing that the legislation "ensures access to new transmission capacity solicitation" in its usual indecipherable hyperbole.

Similarly, in 2013, Blue Castle attempted to force Utah ratepayers to shoulder nuclear power's sky-high costs. This situation ended embarrassingly when the bill's sponsor publicly withdrew his support for the measure on the Senate floor. How did Tilton report this significant setback for Blue Castle? By trumpeting that utilities "must consider nuclear" in their long-term planning ... something they were already doing (and roundly rejecting) for decades.

One has to admire Tilton's moxie, his apparently tireless ability to hype his dying dream, even as evidence to the contrary mounts. One relevant fact: Blue Castle claims it's preparing a permit application to the U.S. Nuclear Regulatory Commission, the next step on the long road to construction. But records show that Blue Castle hasn't even communicated with the NRC since 2011.

It's past time for Blue Castle to admit what we all know: This project is going nowhere fast. It's past time for the rest of us to get back to the hard work of actually planning Utah's energy future, rather than endlessly circling the drain of Tilton's failing nuclear dream.

Christopher Thomas is executive director of HEAL Utah.

LR Press Release 10/15/14

New Coalition Launched to Protect Colorado River Headwaters

Epic Drought and Dirty Energy Boom Spotlight Fragility of Water Supply in American Southwest

October 15, 2014

Media Contacts:

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Tim Wagner, Utah Physicians for the Environment: twagneruphe@gmail.com / 801--502-5450

Dan Mayhew, Utah Chapter of the Sierra Club: drmayhew@comcast.net / 801-712-5353

Pete Nichols, Waterkeeper Alliance: pnichols@waterkeeper.org / 707-845-0832

SALT LAKE CITY, UTAH — A coalition of groups from across the West today announced the formation of a new coalition to inform and engage communities in

California, Nevada, Arizona, and other western states about threats posed to the Colorado River and their water supply.

Colorado River Connected (www.coloradoriverconnected.org) was formed to protect the headwaters of the Colorado River system for the benefit of the 35 million people and thousands of species and natural communities that rely upon it. Currently, the coalition includes Colorado Riverkeeper, Utah Rivers United, Sierra Club, Utah Physicians for a Healthy Environment, Los Angeles Waterkeeper, Glen Canyon Institute, Save the Colorado, and Waterkeeper Alliance. The coalition is inviting hundreds of watershed and community groups to this effort to protect and stand up for a healthy Colorado River. The Colorado River originates in Utah, Colorado and Wyoming, which is the source of drinking water for millions of people in cities including Las Vegas, Tucson, Phoenix, Los Angeles and San Diego. However, the river is threatened by unprecedented dirty energy development, voracious water diversions, and climate change.

Climate scientists have acknowledged for decades that the Southwest will suffer more than many areas of the U.S. as a changing climate lowers snowpack and increases temperatures. In recent years, the Southwest has been gripped by a significant drought, although most residents of California, Nevada, Arizona and New Mexico are not aware of proposed water diversions upstream that are being pursued alongside an increase in pollution generating energy development from tar sands, fracking, and oil shale.

Colorado River Connected is working to engage and activate residents living in downstream urban areas to raise a collective, basinwide voice to prevent devastating projects that will further drain and pollute the Colorado Basin.

“This drought has shown that residents in Phoenix, Las Vegas and Southern California are likely to be heavily impacted by new water diversions proposed upstream, like Utah’s Lake Powell Pipeline,” said Zach Frankel, Executive Director of the Utah Rivers Council. “That’s enough water for nearly one million people’s use for a year and it’s going to impact everything and everyone downstream,” said Frankel.

Thousands of proposed new oil and gas wells are likely to pollute precious water supplies.

“Whether you’re a San Diego mom, a Tucson water manager, or a Las Vegas doctor, if you’re drinking water from the Colorado River, you better pay attention to what is going on in Utah and Colorado,” said Tim Wagner, Executive Director of Utah Physicians for a Healthy Environment. “Between an explosion in fracking for gas and oil, and Utah’s love affair with tar sands and oil shale, the Southwest’s water supply is threatened like never before.”

Colorado River Connected aims to bring the citizens of the basin together to speak with a unified voice for communities who rely on Colorado River water, and to push back against states like Utah and Colorado that are only looking at the Colorado River for

continued development and dirty energy projects. Colorado River Connected will press for changes in water management and seek policies that acknowledge and address these threats for the good of residents and the Colorado River Watershed.

“Between unparalleled dirty energy development and multiple plans for major water diversions, Utah and the upper basin states are demonstrating total disregard for cities such as Phoenix and Las Vegas that depend on Colorado River water for their survival,” said Dan Mayhew, Chair of the Utah Chapter of the Sierra Club. “It’s time downstream users became fully aware of the magnitude of these threats and take action before it’s too late.”

“The issues facing the Colorado River Basin are as vast as the watershed itself,” said Pete Nichols, National Director of Waterkeeper Alliance. “We are excited that Colorado River Connected will be bringing people together from the entire region to heighten awareness and speak with one voice for the river, their communities, and the watershed,” said Nichols.

“Since the dedication of Hoover Dam in 1935, the Colorado River has been the leading model for water governance worldwide. This 80year experiment is about to fail and shortages are eminent because developers continue to plan for water intensive projects without any regard to the watershed’s natural heritage, or the public trust. If concerned citizens don’t unite and turn this pattern of unbridled consumption around, a watershed train wreck will indeed occur,” said John Weisheit, Conservation Director of Living Rivers and Colorado Riverkeeper.

FOR MORE INFORMATION AND TO JOIN THE COALITION VISIT:

www.coloradoriverconnected.org

Follow us on Facebook! <https://www.facebook.com/coloradoriverconnected>

OpEd 11/14/14

Water Scarcity Is Serious and Getting Worse

[Click here](#) to read this Op Ed by John Weisheit in the Moab Sun News

Regional News 12/10/14

Cities Look to Farms for Help in Colorado River Drought (MOUs created)

[Click here](#) to read this story by Matt Jenkins of High Country News

Also read this [PRESS RELEASE](#) from 2008 by the Central Arizona Project about how the possibility of shortages ever occurring at Lake Mead "is absurd."

[Click here](#) to read the MOU between the lower basin states and the federal government for a pilot drought response plan.

[Click here](#) to read the MOU between the municipal water providers and the federal government for a pilot funding program for voluntary conservation projects.

Regional News 12/11/14

Water Supply Risk Las Vegas Considers \$650 Million Insurance Policy

[Click here](#) to read this story by Brett Walton of Circle of Blue [\(Archived here\)](#)

[Click here](#) to read this story by Annie Snider of E & E News

Regional News 12/17/14

Publicly Funding a Utah Disaster in the Making

[Click here](#) to read this story about proposed mining of tar sands and oil shale in Utah by Oil Change International

Regional News 12/26/14

Biggest Cloud-Seeding Experiment Yet Only Sparks More Debate

[Click here](#) to read this story by Allen Best in Live Science

[Click here](#) to read the 2003 report on weather modification by the National Academy of Sciences

[Click here](#) to read the executive summary of this pilot project (weather modification) in southwestern Wyoming

Regional News 12/28/14

Nevada: The Driest State Has No Statewide Water Plan

[Click here](#) to read this story by Jeff DeLong of the Reno Gazette-Journal

Regional News 12/30/14

San Juan Water Dries Up for First Time in 40-years

[Click here](#) to read this story by John Fleck in the Albuquerque Journal News

[Click here](#) to read this article by Tony Davis in the Arizona Daily Star

[Click here](#) to read the Executive Summary of the Rio Grande Climate Risk Assessment by the Bureau of Reclamation

The full report is [HERE](#)

12/20/15

Feds: Fix Colorado River Problems or We Will

[Click here](#) to read this story by Tony Davis of Tucson Daily Star

[Click here](#) to read this April 8, 2016 article by Dennis Webb of the Grand Junction Sentinel

[Click here](#) to read another story by Tony Davis called "Paris Climate Pact Could Limit Colorado River Runoff Reductions"

[Click here](#) to read this opinion piece by Jonathan Overpeck

[Click here](#) to read this story by Blake Herzog of the Yuma Sun called "Drought Contingency Plans Discussed" (May, 2016)

12/17/15

Oil Prices Tumble To Record Lows

[Click here](#) to read this story by Rudy Herndon of the Moab Sun News

12/13/15

Pumped Beyond Limits: Many U.S. Aquifers in Decline

[Click here](#) to read this story in The Desert Sun by Ian James and Steve Elfers

12/13/2015

Pumped Beyond Limits: Many U.S. Aquifers in Decline

[Click here](#) to read this story in The Desert Sun by Ian James and Steve Elfers

12/04/15

Utah advances hot-button proposal for Lake Powell pipeline

COLORADO RIVER:

Jennifer Yachnin, E&E reporter

Published: Thursday, December 3, 2015

Utah pushed ahead this week on plans to construct its Lake Powell pipeline, a billion-dollar project that could divert more than 86,000 acre-feet of water from the Colorado River to cities in the state's southern end.

The Utah Department of Natural Resources Division of Water Resources filed a preliminary licensing proposal with Federal Energy Regulatory Commission on Tuesday, starting the clock on a 90-day public review of the draft document.

A final application is expected to be filed in April.

Environmentalists who have long criticized the proposed pipeline -- which would stretch from Lake Powell to Sand Hollow Reservoir near Hurricane, Utah -- reiterated their objections this week, asserting that the project would further stress the Colorado River.

"The Lake Powell Pipeline is a complete nightmare," Utah Rivers Council Executive Director Zach Frankel said in a statement. "The biggest proposed diversion of the Colorado River during an epic drought, going to the nation's most wasteful water users, with a staggering price tag, just to keep communities outside Utah from using this water."

The Utah Rivers Council has also disparaged the pipeline based on statistics that show residents of St. George, Utah, who would benefit from the pipeline, currently use about 294 gallons per capita -- about twice the daily water use of people who live in Phoenix; Albuquerque, N.M.; and Denver.

Although the preliminary licensing proposal filed this week does not indicate the final cost of the project -- state officials have suggested it is a \$1 billion project, while environmentalists assert it could cost twice that amount -- critics have also questioned its cost and how the pipeline will be funded.

Washington County Water Conservancy District General Manager Ron Thompson told the Salt Lake Tribune late last month that he is confident water districts will find a way to repay a 50-year loan from the Utah Division of Water Resources by raising either impact fees or water rates.

Thompson also told the newspaper that how and where the pipeline is built -- factors that have yet to be finalized -- could also change the cost of the project by as much as 25 percent.

"Until we know which options they're going to allow us to use, it's a little hard to put a price on this project," Thompson said.

Utah legislators first approved the Lake Powell pipeline project in 2006, and critics note that the Division of Water Resources has already spent \$27 million on the application process.

"Adjusted for inflation, the Lake Powell Pipeline will cost as much as it did to make Hoover Dam operational," Colorado Riverkeeper's executive director, John Weisheit, said in a statement.

Twitter: @jenniferyachnin
Email: jyachnin@eenews.net

###

MORE INFORMATION

[PRESS RELEASE](#)

[CLICK HERE](#) to read our overview of why the proposed pipeline project is unnecessary

[CLICK HERE](#) to read the prepared documents to FERC

THE INDIVIDUAL FILES ARE COMBINED HERE:

[Preliminary Licensing Proposal \(combined\)](#). UDWR. (large download)

[Draft Study Reports \(combined\)](#). UDWR. (large download)

[MAPS](#) (combined).

[A Performance Audit of Projections of Utah's Water Needs](#). Legislative audit.

Utah Submits Application for Massive Colorado River Diversion

\$2 Billion Pipeline Being Proposed for America's Most Wasteful Water Users

Colorado River, USA: The State of Utah submitted its application today to the federal government for approval of the largest new diversion of water from the Colorado River.

The proposed Lake Powell Pipeline would divert 86,000 acre-feet of Colorado River water for municipal use in Southwest Utah. The multi-billion dollar pipeline would pump this water 2,000 feet uphill across 140 miles of desert to deliver the equivalent annual water usage of 700,000 average Americans to just 180,000 people in St. George, Utah. This water use inequity can be explained by the extremely high water use of St. George lake-powell-pipeline-route residents, who are using 294 gallons per capita/day, roughly twice the water use of Phoenix, Albuquerque and Denver residents, per person.

The proponent of the pipeline, the Utah Division of Water Resources, has spent 8 years and \$27 million on the application and claims the pipeline is needed to prevent St. George from running out of water. Critics are lining up to question this claim:

"The Lake Powell Pipeline is an unnecessary and grotesquely expensive waste of taxpayer money," said former Bureau of Reclamation Commissioner Dan Beard. "Southwest Utah has hundreds of alternatives for addressing their future water problems and the justification for the pipeline is based on fictitious and bloated water consumption figures that even the experts at the Utah Legislature dispute."

"The Lake Powell Pipeline is a complete nightmare," said Zach Frankel, Executive Director of Utah Rivers Council. "The biggest proposed diversion of the Colorado River during an epic drought, going to the nation's most wasteful water users, with a staggering price tag, just to keep communities outside Utah from using this water."

"The Lake Powell Pipeline is a billion-dollar boondoggle that would have disastrous environmental impacts on the Colorado River," said Gary Wockner, Executive Director of Save the Colorado. "The Colorado is already stretched to the breaking point – water supplies are at the brink in Las Vegas, Arizona, and Southern California. Taking more water out of this river is completely nonsensical."

Located immediately upstream of the Grand Canyon, the diversion would reduce flows available for fish and wildlife species over hundreds of miles of the Colorado River and make restoration efforts at the Colorado Delta much more difficult. It would also impact the millions of residents throughout the Southwest who are much more conscientious with their water use.

"The pipeline is unfortunate, and incredibly irresponsible considering drought conditions across the West, for Utah to spend billions of dollars to deliver Colorado River water to America's most wasteful water users," said Pete Nichols, National Director for the Waterkeeper Alliance.

The would-be recipients of pipeline water have some of the cheapest water rates in the nation, paying only a small fraction of the price for water that Los Angeles residents pay. These cheap rates explain why St. George has some of the highest per-person water use in the entire U.S.

“Adjusted for inflation, the Lake Powell Pipeline will cost as much as it did to make Hoover Dam operational,” said John Weisheit, Executive Director of Living Rivers the Colorado Riverkeeper. In 1934, there was about 8 million acre-feet of surplus in the Colorado River basin. That surplus vanished in 2003.”

Critics also point to the inflation of water use data by the Division of Water Resources as one of many reasons why the pipeline isn’t necessary, as well as the many inexpensive alternatives which are being ignored. These alternatives are documented in a May 2015 Legislative Audit which found that water conservation is not being implemented as aggressively as many other western cities, including Las Vegas.

For example, while California is trying to reduce water use by 25% this year, Utah is trying to reduce municipal water use by just 1%, even though Utah residents are America’s biggest users of municipal water (per person), according to the U.S.G.S.

The Division is submitting their application to the Federal Energy Regulatory Commission (FERC) and the decision making process is anticipated to take several years.

“The LPP proposal should be immediately withdrawn. If not, FERC should kill the project,” said Beard.

12/02/15

Lake Powell Pipeline Preliminary Licensing Proposal Documents

FOR IMMEDIATE RELEASE

Media Contact

Joshua Palmer

jpalmer@utah.gov

801-244-7767

DropBox Access to Lake Powell Pipeline Preliminary Licensing Proposal Documents

Salt Lake City (Dec. 2, 2015) – The Preliminary Licensing Proposal (PLP) documents for the Lake Powell Pipeline project have been submitted to the Federal Energy Regulatory Commission (FERC), but are not yet available on its website. The Division of Water Resources recognizes that several media entities are interested in accessing these files and have story deadlines. The Division anticipated that the files would have been available on the site by now.

As a result, the PLP and study files are now available via DropBox for review. They will remain available until FERC is able to upload the files to their site. We hope that access to these files now will help reporters cover the story and meet deadlines.

Please access the files [HERE](#)

<https://www.dropbox.com/sh/h78mem5oangx1ly/AADeph38B297DZXZiAXwLfjaa?dl=0>

11/19/15

Comments for Moab BLM's Master Leasing Plan

[Click here](#) to read comments by Center for Biological Diversity, Living Rivers and Holiday River Expeditions

[COMMENTS](#) of Wilderness Society, Southern Utah Wilderness Alliance, Sierra Club and Living Rivers

ADDITIONAL INFORMATION:

[Click here](#) to read Impacts of Fracking on Wildlife Review

[Click here](#) to read Potential Greenhouse Gas Emissions from US Federal Fossil Fuels

11/15/15

Exxon's Research Confirmed Fossil Fuels Role in Global Warming Decades Ago

[Click here](#) to read the complete series, from Inside Climate News by Neela Banerjee, Lisa Song and David Hasemyer

Note: David Hasemyer was raised in Moab, UT and reported on the tar sands development in the Book Cliffs

[Click here](#) to visit Inside Climate News and this special series about Exxon's climate research

[Click here](#) to read the coverage by Inside Climate News in eastern Utah.

11/12/15

Protesters Tell Feds To Keep it in the Ground at Colorado Oil and Gas Auction

[Click here](#) to read this press release from the Center for Biological Diversity

[Click here](#) to read the letter to President Obama, of which Living Rivers is a co-signer.

[Click here](#) to read an OpEd in the New York Times about this 400 member coalition by Lydia Millet

11/11/15

Complaint Accuses County Council Member of Violating Ethics Rules

[Click here](#) to read this Op Ed by John Weisheit in the Moab Times Independent and the Moab Sun News

[Click here](#) to read this story by Molly Marcello in the Moab Times-Independent

[Click here](#) to read this story by Rudy Herndon of Moab Sun News

[Click here](#) to read the COMPLAINT

10/22/15

Citizens of eastern Utah submit letter to Utah's Attorney General on use of CIB funds for proposed coal transport facility in Oakland, CA

The Board of Utah's Community Impact Fund (mineral lease money) is considering the approval of a loan of \$53 million to build a corporate coal transport facility at a port terminal in Oakland, California. And now, Utah representatives and senators, with a nod from the governor, plan to launder the money through a state transportation fund

[Click here](#) to read letter to Utah's Attorney General concerning use of CIB funds for development of a coal transport facility in Oakland, California

[Click here](#) to read this blog by Bill Rau at On The Colorado

[Click here](#) to read 1993 opinion by Attorney General of Utah about CIB funds

[Click here](#) to read 1984 opinion by Attorney General of Utah about CIB funds

[Click here](#) for more information

####

PRESS

[Click here](#) to read OpEd by Deseret News Editorial Board: "Coal Port Has Too Many Red Flags."

[Click here](#) to read "Utah Lawmakers Voting to Spend Public Funds on Oakland Coal Terminal; Took \$29,000 from Company that Stands to Profit by Darwin BondGraham of East Bay Express

[Click here](#) to read this story (March 9, 2016) by Christopher Coats of SNL News called Utah Bill Shifts Funding For Oakland Coal Port; Critics Call It Money Laundering.

[Click here](#) to read this OpEd from the editorial board of the Salt Lake Tribune

[Click here](#) to read this story by Molly Marcello in the Moab Times Independent

[Click here](#) to read this story by Darwin BondGraham in the East Bay Express

[Click here](#) to read this story in the Public News Service

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

[Click here](#) to read this story by William Yardley of the LA Times called "How Utah Quietly Made Plans to Ship Coal Through California"

10/22/15

Citizens protest water right extension application of Kane County Water Conservancy for proposed Green River nuclear power plant

[Click here](#) to read Kane County's Extension Application

[Click here](#) to read Heal Utah's protest of Kane County Extension

[Click here](#) to read Uranium Watch and Living Rivers' protest of Kane County Extension

10/13/15

Leading experts call for independent review of Colorado River management program

For immediate release

Contact: John Weisheit - 435-260-2590 (mobile)

Tucson, AZ - As uncertainty mounts surrounding Colorado River water availability, public intellectuals from a wide spectrum of disciplines today called on Interior Secretary Sally Jewell to recruit the National Academy of Sciences to review a six-year old program responsible for informing Colorado River management decisions.

Citing information gaps in surface water variability, water conservation potential, groundwater depletion, ecological deterioration, flood management and water quality, the 23 signatories to the four-page letter warn that absent an independent evaluation, future actions could lead to increased system vulnerability and public expense.

"These experts have devoted considerable time in their careers to improve our understanding of the complexities and fragility of our relationship with the Colorado River, and their recommendation for the National Academy's involvement could pay dividends for generations to come," says John Weisheit, Living Rivers/Colorado Riverkeeper Conservation Director.

The letter's timing comes on the heels of the most recent planning document generated through a joint federal/state, multi-stakeholder process set forth by Congress in 2009. The SECURE Water Act mandates action by Interior as a result of growing climate change concerns. However, as the letter outlines, the work undertaken so far appears to overlook numerous risk factors for this river-dependent society of 36 million people.

The letter further points out that Interior has yet to undertake a sufficient climate change vulnerability assessment for this complex, coupled human-ecological system. Such an assessment should be a prerequisite to the formulation of any climate change response strategies as recommended by the U.S. Global Change Research Program, of which Interior is a partner .

"If ever there was a time to undertake the first basin-wide, independent review of this vital natural resource, that time is now," adds Weisheit. "Decisions should be based on the best available information, and the National Academy is well-positioned to ensure just that."

[**CLICK HERE**](#) to read the letter from 23 academics to Sally Jewell.

[**CLICK HERE**](#) to read DOI's response letter of February 9, 2016

Science papers referenced in the letter:

[Understanding uncertainties in future Colorado River streamflow. Vano et al., 2014](#)

[Sustainable water deliveries from the Colorado River in a changing climate. Barnett and Pierce, 2009](#)

[Groundwater depletion during drought threatens future water security in the Colorado River Basin. Castle et al., 2014](#)

[2000 year natural record of magnitudes and frequencies of largest Upper Colorado River floods near Moab, Utah. Greenbaum et al., 2014](#)

[An ecosystem perspective on collaboration for the Colorado River. Adler, 2008](#)

[Mercury and selenium accumulation in the Colorado River food web, Grand Canyon, AZ. Walters et al., 2015](#)

[Click here](#) to read November 1, 2015 OpEd by Jonathan Overpeck

Photo: Lake Mead @ 1078 feet asl.



10/13/15

Scholars Call for National Academy Review on Colorado River Basin Study

[Click here](#) to read the OpEd by the editorial board from the Casa Grande Dispatch

[Click here](#) to read this story by Kyle Roerink of the Las Vegas Sun

[Click here](#) to read this story by Annie Snider of Greenwire

[Click here](#) to read this story by Tony Davis of the Tucson Daily Star

[Click here](#) to read this story by Amy Joi O'Donoghue of the Desert News

[Click here](#) to read this story by Henry Brean of the Las Vegas Review Journal

[Click here](#) to read November 1, 2015 OpEd by Jonathan Overpeck

From The Associated Press

SALT LAKE CITY (AP) — A coalition of scholars across the West is urging the federal government to partner with the National Academy of Sciences to study the future of the Colorado River, including if climate change is leading to reduced stream flow.

Twenty-three scholars from Western universities sent a [LETTER](#) Tuesday to Interior Secretary Sally Jewell detailing their request for more scientific research on a host of issues related to the Colorado River.

Chief among the concerns is if there will be enough water in the river to support 36 million users in seven U.S. states and parts of Mexico over the next 50 years.

The scholars argue the federal government is relying on a projection of a 9-percent stream flow decline by 2060, while skimming over other estimates that suggest it could fall by as much as 45 percent by 2050 due to climate change.

Secretary Jewell was expected to receive the letter early Wednesday. The Bureau of Reclamation this summer issued the results of a nearly three-year study that concluded that there will be significant shortfalls between water supply and demand on the Colorado River over the next 50 years.

But the scholars say in the letter that those conclusions "may be insufficient to accommodate the full range of risks that lie ahead," the letter says.

The scholars who signed the letter include Robert Adler of the University of Utah law school; Victor Baker of the hydrology and water resources department at the University of Arizona; and Tim Barnett at the Scripps Institution of Oceanography in La Jolla, California.

Owen Lammers, executive director of Living Rivers and Colorado Riverkeeper, said the federal government needs to pursue a wider breadth of scientific projections to ensure it is prepared for all water flow scenarios. His group supports the scholars' efforts.

"We're hoping for the best when we should be preparing for the worst," Lammers said. "We are really putting society at risk without looking at some of these scenarios."

[CLICK HERE](#) to read DOI's response letter of February 9, 2016

10/08/15

Protesters Tell Feds To Keep it in the Ground at Colorado Oil and Gas Auction

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

[Click here](#) to read Brian Maffly's article of February 14, 2015

On November 4, 2015 the CEO of state-owned energy giant Eesti Energia, Hando Sutter, said the project in the US state of Utah has been stopped and currently there is no business plan in place

[Click here](#) to read the story by Estonia Public Broadcasting

[Click here](#) to visit the website of Estonia Public Broadcasting

[Click here](#) to read this story by Dennis Webb of Grand Junction Sentinel called "Exxon/Mobil Again Retreats from Oil Shale"

10/07/2015

Dams Breached: Flooding in South Carolina

[Click here](#) to read this story by CNN

The rains from Hurricane Joaquin have been called a 1000-year event, and USA Today reminds us [HERE](#) that the USA has had 6 such events since 2010

[Click here](#) to read this LA Times story of "1,000-year flood" at Death Valley in October, 2015

[Click here](#) to learn about devastating floods in the Colorado River basin.

10/01/15

U.S. Oil Sands Submits Water Monitoring Program to State; Begin Production this Winter

November 18, 2015 - [Click here](#) to read and listen to this story by Judy Fahys of KUER public radio ([Article archived here](#))

[Click here](#) to read this story by Molly Marcello in the Moab Times-Independent

[Click here](#) to read the decision to develop a groundwater management plan by Director Baza of UDOGM

[Click here](#) to read USOS's groundwater monitoring plan (September 2015)

[Click here](#) to read Professor Johnson's evaluation of USOS's groundwater monitoring plan

09/08/15

Company Faces \$10K Fine For 2014 Oil Spill

[Click here](#) to read this story by Rudy Herndon of the Moab Sun News

[Click here](#) to read the complaint to Utah Division of Water Quality

[Click here](#) to read the NOV Response letter from Utah Division of Environmental Quality.

09/04/15

Massive Rock Threatening to Crash into Base of Glen Canyon Dam

[Click here](#) to read this story by Felicia Fonseca of the Associated Press

[Click here](#) to view the photos of the canyon wall delamination by Frank Talbott

08/27/15

Comments: FEIS for Moffat Collection System Project

[Click here](#) to read the coalition letter to stop this trans-mountain diversion in the headwaters of the Colorado River

Related news stories:

March 10, 2016 - [Click here](#) to read this story "Despite State Water Plan Local Headwaters Have Growing Claims," by Kevin Fixler of Daily Summit News

July 10, 2015 - Bruce Finley of the Denver Post:
[Colorado shies from big fix as proliferating people seek more water](#)

July 13, 2015 - Brent Gardner-Smith of Aspen Journalism:
[Colorado water committee endorses revised transmountain diversion document](#)

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Coalition Comment Letter

Rena Brand
Moffat EIS Project Manager
US Army Corps of Engineers
9307 South Wadsworth Blvd, Littleton, CO 80128
By email: moffat.eis@usace.army.mil

June 9, 2015

Re: Moffat Collection System Project (NWO-2002-080762 DEN) FEIS and Section 404 Permit Comments.

Dear Ms. Brand,

I respectfully submit the following comments on the (Permit Application NWO-2002-080762-DEN) Final Environmental Impact Statement (DEIS) and Section 404 Permit, collectively referred to as the "Moffat" project in this document.

I care about the Colorado River. I enjoy visiting the Fraser River and Upper Colorado headwaters in Grand County, Colorado.

There are fatal flaws within the Final Environmental Impact Statement; including inaccurate, inadequate, and misleading analysis that not only skew the potential project environmental and social impacts but, if allowed to happen, could cause irreversible damaging effects to our precious natural resources. Furthermore, this project if allowed to happen, will devastate the Fraser and Upper Colorado Rivers, and cause numerous harms to the fish, people, and businesses that depend on healthy rivers.

The Analysis in the Moffat FEIS Violates NEPA, the National Environmental Policy Act.

The FEIS failed to analyze a reasonable range of alternatives to the proposed Moffat project, and the stated purpose and need statement is unreasonably narrow and foreclosed reasonable alternatives to meet future water demand. The FEIS should fully analyze the available feasible and non-speculative alternatives to fulfill the purpose and need of this project.

The FEIS fails to take a hard look at the proposed Moffat project's environmental impacts.

The "environmental baseline" in the FEIS is inflated. The FEIS does not adequately analyze the proposed Moffat project's direct impacts, indirect impacts, and cumulative impacts but, rather, hides or obfuscates the severity of these impacts under an inflated environmental baseline.

Impacts affecting wildlife and habitat which are either not evaluated or not properly mitigated in the FEIS include: the removal and destruction of 200,000 trees, the potential blasting and quarrying of Winiger Ridge and Windy Point at Gross Reservoir, destruction and inundation of Elk wintering habitat specifically identified in Boulder County's master plan, adverse impacts to threatened and endangered species including Whooping Crane, Piping Plover, Least Tern, Pallid Sturgeon, and Western Prairie Fringed Orchid. severe impacts to aquatic life, wetlands, and stream flow in the Upper Colorado basins.

The Corps will violate Clean Water Act Section 404 if it issues a Clean Water Act Section 404 Permit for the Proposed Moffat Project.

Several practicable alternatives to the Moffat Project exist that would have less damaging environmental impacts. The Moffat project would result in significant degradation of the aquatic ecosystem and the FEIS does not include appropriate and practicable measures to minimize potential harms.

The Corps must conduct additional analysis to make a reasoned decision on the Section 404 permit. Additionally:

The FEIS fails to adequately address climate change impacts. There are still questions regarding the FEIS Bypass Flows. Thank you for your recognizing that I, the undersigned, am a critical part of your decision-making process. I would appreciate confirmation of receipt of this letter.

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08/26/15

Mercury and Other Toxins Contaminating Remote Grand Canyon Segment of Colorado River

[CLICK HERE](#) to read this story by Rebekah Marcarelli of Headlines and Global News

[CLICK HERE](#) to read the science paper by Walters et al.

08/25/15

Utah Groups Join Oakland in Opposing Coal Export Plan

[October 2, 2015 - San Francisco Baykeeper files lawsuit against proposed Oakland Coal Terminal](#)

[Click here](#) to read the press release from the NGO coalition

[Click here](#) to read the letter from the NGO coalition to Utah's Community Impact Board (CIB)

[Click here](#) to read the story in the East Bay Express by Darwin BondGraham

[Click here](#) to read the letter from EarthJustice

[Click here](#) to read why the residents of Oakland are opposed to coal exports

GRAMA REQUESTS

[Click here](#) to read Jeff Holt's email to CIB.

[Click here](#) to read letter from BMO Capital Markets to county commissioners

08/12/15

Living Rivers Comments about Moving Forward Program (Colorado River Basin Study)

[Click here](#) to read our comments about the Moving Forward Program of the Colorado River Basin Supply and Demand Study

[Click here](#) to read our comments of May 13, 2013

08/09/15

EPA Response to Million-gallon Gold King Mine Waste Spill in Colorado Deeply Inadequate

[October, 2015 - Technical Evaluation of the Gold King Mine](#). Reclamation.

[Click here](#) to read this OpEd by Colorado Riverkeeper John Weisheit in the Moab Times-Independent

[Click here](#) to read this article "Navajo Farmers Reject Use of Water After Mine Spill" by Felicia Fonseca of the Associated Press

[Click here](#) to read this OpEd by Lauren Wood in the Salt Lake Tribune

[Click here](#) to read "EPA-caused Contaminated Water Spill from Colorado Mine Causes Concerns in Southeastern Utah" by Jeff Richards in the Moab Times-Independent

[Click here](#) to watch interviews by the Huffington Post

[Click here](#) to read this press release by Center for Biological Diversity.

[Click here](#) to read this article by Jennifer Kovaleski of the Associated Press

07/27/15

Farmers & Tribes with Senior Water Rights vs. Big Cities with Junior Rights

[Click here](#) to read this story by Matt Jenkins of High Country News call "Cities Look to Farms for Help in Colorado River Drought."

[Click here](#) to read this story by Maranne Goodland of the Colorado Independent called "Farms Could Help Solve Colorado's Water Shortage. So Why Aren't They?"

[Click here](#) to read the article in The Guardian by Ryan Bradley called "How I Rented a Piece of a River in a Never-ending Western Drought"

[Click here](#) to read this story called "In Drying Colorado River Basin Indian Tribes Are Water Dealmakers" by Brett Walton in Circle of Blue

[Click here](#) to read this article by Charlotte Weiner called "Along the Colorado River, Ranchers Square-off Against Cities Over Water Rights"

[Click here](#) to read this Associated Press article by Elliott Spagat called "Water Agency's Land Purchase Rattles California Farmers"

[Click here](#) to read "Arizona Swings Closer to Shortage on Colorado River System" by Cary Blake of Western Farm Press

[Click here](#) to read "Shrinking Colorado River is a Growing Concern for Yuma Farmers and Millions of Water Users" by William Yardley of the Los Angeles Times

[Click here](#) to read "Water Grab?" by John Wright of *Parker Live*

[Click here](#) to read "Can Leasing Irrigation Water Keep Colorado Farms Alive?" by Joshua Zaffos in High Country News

[Click here](#) to read this story by Annie Snider of E&E News called "Tribes Hold Wild Card in High Stakes Supply Game"

[Click here](#) to read this OpEd by Hannah Holmes in the Post Independent called "Colorado River Agriculture Under Stress"

07/22/15

Utah Approves Tar Sands Mine, but Requires Water Monitoring

[Click here](#) to read this article in Audubon Magazine by Joshua Zaffros

[Click here](#) to read this story in Indian Country Today by Anne Minard

[Click here](#) to read this OpEd by Dr. William Johnson in the Salt Lake Tribune

[Click here](#) to read science paper by Dr. Johnson et al. called "Potential Impacts to Perennial Springs from Tar Sand Mining, Processing and Disposal on the Tavaputs Plateau, Utah"

[Click here](#) to read "Protesters Disrupt Work at Tar Sands Mine" in the Moab Sun News by Eric Trenbeath

[Click here](#) to read this story in EcoWatch by Michael Sobczak

[Click here](#) to read this story by Brady McCombs of the Associated Press

[Click here](#) to read this story by Amy Joi O'Donoghue of Deseret News

[Click here](#) to read this story by Brian Maffly of Salt Lake Tribune

[Click here](#) to read this story by Katie Valentine of Think Progress

[Click here](#) to read the transcript of the hearing

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State approves tar sands mine but requires water monitoring

By BRADY McCOMBS - Associated Press - Monday, July 20, 2015

SALT LAKE CITY (AP) - Utah state officials have given the go-ahead for a tar sands mine under construction on the eastern flank of the state. They will, however, require the company to do water and air quality monitoring in a move environmentalists are calling a victory.

Utah Division of Oil, Gas and Mining director John Baza said Monday that his decision addresses concerns raised by opposition while acknowledging that U.S. Oil Sands Inc., the Canadian company building the mine, has complied with regulations.

Baza's ruling, announced late Friday, comes nearly three weeks after he hosted a public hearing to listen to concerns from opponents and give the company a chance to explain a project under construction on a ridge top in the Book Cliffs area on the border of Uintah County more than 200 miles southeast of Salt Lake City.

U.S. Oil Sands must now submit a plan for the monitoring by Nov. 1, Baza said. As long as the company does that, Baza said it will be cleared to move forward with plans to begin extracting oil sands later this year from a sparsely populated area that is home to many types of wildlife such as deer, beavers and bears.

The company already had permission to begin mining under a previously approved plan, but it resubmitted a new proposal for an expanded operation. The company has invested nearly \$100 million over a decade to get permits, buy equipment and develop a new technology.

The company says its process is starkly different than the one used by the numerous operations in Canada, relying on a citrus solvent and plan that is more environmentally friendly and leaves the earth less disturbed. U.S. Oil Sands CEO Cameron Todd said the company plans to comply with all the state's requirements by coming up with a plan to do the monitoring required.

"I'm glad everyone is happy," said Todd, adding the decision is what they expected.

Company officials have said previously there are no measurable quantities of water in the area and that they have gone beyond what is required to show the mine will have a minimal effect on the environment.

Rob Dubuc, an attorney representing the Living Rivers environmental protection organization that has protested the project, called it a pleasant surprise that Baza heeded their warnings about water issues. The area is not only home to wildlife, it is used by hunters and outdoor recreationalists and is home to a few ranching families.

"This is a big deal and it's a step in the right direction," Dubuc said.

"To expect DOGM (Division of Oil, Gas and Mining) to deny the permit is not realistic in this political environment. But at least they are doing the right thing by requiring the monitoring."

Dubuc said measuring effects on water and air quality could help prove whether the company or environmentalists are correct about possible contamination.

Tar sands mines extract oil from minerals in the earth by digging relatively shallow pits, a process that costs more than pumping liquid oil.

07/17/15

U.S. Oil Sands, Inc. Cannot Process Tar Sand Ores Until DOGM Approves Conditions

FOR IMMEDIATE RELEASE

Media Contact

Nathan Schwebach nathanschwebach@utah.gov

801-538-7303 (office)
801-440-9094 (cell)

Utah Division of Oil, Gas and Mining Upholds Tentative Approval of PR Spring Mine Expansion with Conditions

Salt Lake City (July 17, 2015) – Following an informal conference and review by the Utah Division of Oil, Gas and Mining (DOGM), the division has upheld its tentative approval of the PR Spring mine expansion proposal, but with two new amended conditions.

DOGM's approval requires U.S. Oil Sands, Inc. to establish a monitoring program and plan for potential effects to the area's subsurface water systems. It must also submit evidence that confirms the mine is in compliance with EPA air quality regulations. Both amendments are to be submitted to DOGM by Nov. 1, 2015 and U.S. Oil Sands, Inc. is not permitted to process ore until the division has approved both conditions.

"The informal conference held last month was extremely helpful. The feedback we received from concerned individuals helped us determine that these two additional amendments were necessary for the expansion to move forward. I believe the direction we've gone helps mitigate their concerns," said DOGM Director John Baza. "We're committed to accessing our state's abundant natural resources in an environmentally responsible manner. To ensure responsible mining at PR Spring, we have asked the mine operator to provide more information."

U.S. Oil Sands, Inc. initially obtained a tar sands mining permit in 2012 to mine ore and extract bitumen, a hydrocarbon used to fuel refineries. The approved mine included 213 acres of land on the border of Uintah and Grand counties near Tavaputs Plateau. Last year, the operator submitted a revision to its existing mining plan that would add another 104 acres to its operation. DOGM held an informal conference late last month under the Utah Mined Land Reclamation Act to hear from those who opposed the expansion.

[Click here](#) to read the transcript of the hearing

[Click here](#) to read the decision by Director Baza of UDOGM

[Click here](#) to read USOS's ground water monitoring plan (September 2015)

[Click here](#) to read Professor Johnson's evaluation of USOS's ground water monitoring plan

07/16/15

What Tar Sands Mining Means for Utah

[Click here](#) to read this Op Ed by Tory Hill in the Moab Sun News

06/29/15

Precedent Setting Tar Sands Mine Subject of 6/30 Public Hearing

[Click here](#) to read this OpEd from the Editorial Board of the Salt Lake Tribune

[Click here](#) to read this story by Amy Joi O'Donoghue of the Desert News

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

[Click here](#) to read this story by Brady McCoombs of the Associated Press

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For Immediate Release

[Colorado River Connected](#) Member Organizations Urging Public Attendance

CONTACT: John Weisheit, Conservation Director, Living Rivers & Colorado Riverkeeper
- 435.260.2590

Salt Lake City, UT - A public hearing on U.S. Oil Sands' proposed expansion of their tar sands strip mining operations near PR Springs in the Book Cliffs is scheduled for tomorrow, Tuesday, June 30. The hearing is being held by Utah's Division of Oil, Gas, and Mining. Member organizations of Colorado River Connected are urging citizens to attend the meeting and share their concerns.

If approved, the total surface disturbance of this revised strip mine would increase 33% from the original large mining application, which was approved previously with little public participation. The new plan proposes to strip mine 235 acres within the corporation's 32,005-acre leased area. Missing from the new operation plan is an acknowledgment of existing springs and seeps in the mining area, which provide drinking water for campers, wildlife, stock animals and nearby local ranchers. The permit application also ignores increasing concerns over air quality within the region. "The approval of this mining operation is a sham," says John Weisheit, conservation director of Living Rivers and Colorado Riverkeeper.

"Ignoring the presence of spring water flowing adjacent to the mining and processing area essentially means U.S. Oil Sands has no regard for public health and safety, and

they are taking advantage of the fact that Utah's regulatory agencies did not mandate them to monitor water pollution in their previously approved large-scale strip mining plan.”

“The degraded air quality in the oil and gas patches of Uintah County is already taking its toll on human health,” says Tim Wagner of Utah Physicians for a Healthy Environment. “This new application by U.S. Oil Sands fails to demonstrate what the total emissions will be from their fuel-intensive operations and fails to explain how their emissions will be mitigated, if at all. How many more infant mortalities and poor birth outcomes in Uintah County have to occur before regulatory officials take action to address this serious and existing air pollution problem?”

“Our staff has to follow agency regulations every day to make sure our operations do not make our guests sick,” says Lauren Wood of Holiday River Expeditions. “In fact, our company has to explain in writing how we will safeguard public health and safety. We want to know why Utah agencies are less strident about regulating a very dangerous tar sands mine.”

“U.S. Oil Sands' claim of 'environmental leadership' is utter nonsense,” said Jennifer Ekstrom, producer of the documentary 'Last Rush for the Wild West: Tar Sands, Oil Shale and the American Frontier.' "I made the film to alert the American public about the magnitude of destruction on the horizon if these practices gain momentum in Utah. The massive proposed tar sands and oil shale strip mines are unprecedented in America, and out of step with the needs of humanity.”

Precipitation and snow melt would percolate through the strip mined open pits of waste sand and rubble, which include hundreds of compounds including known carcinogens. These compounds will be liberated by mixing hot solvents and water with raw bitumen ore, and will leach out into the springs and canyon bottoms. Eventually these compounds will reach the Colorado River system, which is drinking water for nearly 35 million people.

LOCATION: Department of Natural Resources, Auditorium, 1594 West North Temple, Salt Lake City, Utah.

TIME: Tuesday, June 30, 2015, 9:00 to 11:00 A.M. in the auditorium of the

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[Colorado River Connected](#) is the coordinating body for organizations committed to protecting the headwaters of the Colorado River system for the benefit of the 35 million people and thousands of species and natural communities that rely on it. We provide a collective voice for the preservation of the headwaters of the Colorado watershed.

Colorado River Connected

06/25/15

Media Advisory: Public hearing on expansion of tar sands mine near PR Springs

CONTACT: John Weisheit, Conservation Director, Living Rivers & Colorado Riverkeeper 435.260.2590

[PDF of Media Advisory](#)

WHAT: Utah Division of Oil, Gas and Mining (UDOGM) will conduct an informal hearing with interested members of the public concerning the expansion of mining operations by a Canadian corporation called U.S. Oil Sands (USOS). U.S. Oil Sands intends to strip mine and process tar sands near PR Springs in Uintah County. The size of the surface mining operation is 235 acres; the depth of the mine is 150 feet; 2,000 barrels per day of crude will be processed on site. Colorado River Connected coalition members will be present and Western Resource Advocates attorney representing coalition members will testify on the impacts to public health, groundwater, air quality, and wildlife from the proposed expansion and request the Division to reject the permit.

WHEN: Tuesday, June 30, 2015, from 9:00 to 11:00 A.

WHERE: Auditorium of the Department of Natural Resources, 1594 West North Temple, Salt Lake City, Utah.

PUBLIC NOTICE: <http://utahlegals.com/notice.php?id=252555>

FORMAL PROTEST: [PDF DOCUMENT](#)

###

06/23/15

Green River Could Boost Industrial Complex Dream

[Click here](#) to read this story by Angus M. Thuermer, Jr. in the Wyoming File

[Click here](#) to read the inventory of Wyoming's proposed reservoir projects from Wyoming File

06/22/15

What's Killing the Babies in Vernal, Utah?

[Click here](#) to read this story by Paul Solotaroff of Rolling Stone Magazine

Related: [Report: \\$28 Million in Methane Gas Escapes Yearly into Utah Air](#)

SALT LAKE CITY – Utah makes a "top five" list for amounts of natural gas being wasted by energy developers working on federal and tribal lands.

A [new report](#) says oil and gas companies need to do a better job of repairing leaks and minimize venting and flaring at well sites, both to conserve natural gas and improve air quality.

Dan Grossman, Rocky Mountain regional director of the Environmental Defense Fund, which commissioned the report, says that's one reason the Bureau of Land Management is releasing new rules this summer for drilling on public land.

"They really haven't been on the forefront in pushing operators to run efficient operations," he maintains. "So, I think it's critical if we're really going to get on top of the emissions problem and the waste problem, that BLM play a critical role in helping us do that."

The report says almost all the oil and gas produced in Utah comes from federal or tribal lands, and values the methane gas wasted in the process at more than \$28 million a year.

In addition to the gas going unsold and the government missing out on royalties from it, the emissions are a major component of ground-level ozone pollution.

Rachel Otto, executive director of the air quality advocacy group Breathe Utah, says the legislature has acknowledged and taken recent action to curb the ozone pollution problems in the state, which are affecting more counties in summer as well as winter.

She sees a push to drill more efficiently as a natural next step.

"Not only would it help clean the air, but also it would create more revenue for these companies and for Utah," she states. "And then, ideally, it would create jobs. So, it seems like a bit of a no-brainer."

Otto says the report brings attention to more rural parts of Utah where air quality is just as bad as along the Wasatch Front but doesn't get the publicity.

The report mentions Duchesne and Uintah counties, both of which made the American Lung Association's list of most smog-polluted areas, along with major cities in California and Texas.

06/12/15

Scientists Call for Moratorium on Oil Sands Development

No new oil sands or related infrastructure projects should proceed unless consistent with an implemented plan to rapidly reduce carbon pollution, safeguard biodiversity, protect human health, and respect treaty rights.

WEBSITE: <https://www.oilsandsmoratorium.org>

The following ten reasons, each grounded in science, support our call for a moratorium. We believe they should be at the center of the public debate about further development of the oil sands, a carbon-intensive source of non-renewable energy.

[The Ten Reasons and the scientists who support this action](#)

05/06/15

Legislative Audit Reveals Flawed Projections on Utah's Water Needs

[Click here](#) to read this story by Amy Joi O'Donoghue in the Deseret News

[Click here](#) to read this story by Brett Prettyman of the Salt Lake Tribune

[Click here](#) to read the legislative audit

[FOX 13 Salt Lake City](#) reported the following:

SALT LAKE CITY – Officials have just released a controversial audit of the Utah Division of Water Resources.

Government officials said legislators from both sides called for the audit after claims the division opposed water conservation for fears it could reduce water revenues for water sellers.

Critics also accuse the division of inflating future water needs to scare the public into spending billions on water projects like the Lake Powell Pipeline and the Bear River Project.

The Utah Rivers Council said the audit comes at a critical time; the Division of Water Resources is asking for billions in tax increases at the Utah legislature for these projects.

A Coalition of groups called for the audit including Utah Rivers Council, Utah Chapter of the Sierra Club, Citizen's for Dixie's Future, Glen Canyon Institute, Taxpayer Association of Kane County, Colorado Riverkeeper Living Rivers, HEAL Utah and Utah Environmental Congress.

The audit from the Utah Legislature found a few key concerns:

1. The division does not have reliable local water use data. The audit stated there were "significant inaccuracies" in the division's data.
2. The division needs an improved process for ensuring water data is reliable. The audit states the Division of Natural Resources should take a leading role in coordinating efforts between the Division of Water Resources and the Division of Water Rights to improve the process of getting accurate water use data.
3. The audit questions the reliability of the division's baseline water use study. The audit states the division's study projecting Utah's future water needs was based on old data from 1992 to 1999, which may not be an accurate representation of Utah's future water needs.
4. Conservation will lead to less water use. The audit questions the division's projected water demand which assumes Utah residents will consume on average 220 gallons per day through the year 2060. The audit says the study used to determine that was based on old data. Also, ongoing water conservation trends will continue which should bring down need.
5. Some regions can reduce water use more than the statewide goal of 25 percent. The audit states that would also lower the projected water need reported by the Water Resources Division.
6. State policies on metering and pricing can affect water demand. According to the audit, Utah's relatively low water cost appears to contribute to higher water use when compared with other states. Unless per capita water use is reduced, new, more costly sources of supply will need to be developed. As pressures on Utah's currently developed supply intensify, local and state policymakers will need to consider policy options to reduce demand, including universal metering and water pricing.

7. Division projections should include expected local water development. The division's projections of future water use do not include growth in the state's water supply beyond what was already developed in 2010, with a few exceptions.

8. Good Basin plans should be the basis for better statewide planning. The audit states most of the division's basin plans do not estimate the growth in the region's water supply. The basin plans also understate the amount of agriculture water available for municipal use. The audit recommends the division update its basin plans on a more regular basis.

The Division of Water Resources sent Fox 13 this response to the audit:

The Utah Department of Natural Resources (DNR) and Division of Water Resources (DWRe) appreciate the Legislative Auditor General's staff and the considerable efforts they took during the audit process to assess the effectiveness of DWRe data practices. We recognize the great lengths they took to gather and analyze the information.

Utah faces a number of complex water-related issues. Not only are we the second driest state in the nation, but our population is expected to double by 2060. Additionally, our water supply is currently used near capacity and will become even more strained moving forward, as our population increases and our climate changes.

The responsibility to ensure Utah's families, environment and businesses have enough water is one DWRe takes seriously. Implementing the audit recommendations will strengthen our processes. State water projections are based on water use and supply data reported from hundreds of water providers throughout Utah. The audit revealed differing levels of accuracy within each water provider's reporting can result in the under- or over-estimating of supply and demand reports.

DWRe is committed to gathering the most comprehensive and accurate data available. The division will work with the Legislature to propose standardized data collection practices, quality control measures and the authority to hold water providers accountable to report accurate data. Requests for additional resources will be made to the Legislature so water use data can be collected annually, instead of every five years. DWRe is also committed to making water conservation one of Utah's long-term ethics. However, the state cannot solve its water challenges through conservation alone. DWRe believes a multifaceted water strategy is necessary to meet future growth and to avoid challenges like those currently affecting California.

Utahns are encouraged to meet Gov. Gary R. Herbert's goal of 25 percent water conservation by 2025 and we anticipate meeting that goal this year, ten years early. This effort has led Utahns to conserve approximately 58 billion gallons of water; enough to more than fill Starvation Reservoir. While these results are considered a success, Utah can conserve more. We challenge Utahns to use recommendations provided at SlowTheFlow.org and ConserveWater.utah.gov.

DWRe is currently building phase two conservation strategies that extend beyond the State's initial goal of 25 percent. Future strategies will continue to promote efficiency, educate families and encourage simple life changes. However, they will also introduce programs that further advance Utah's water conservation efforts, including programs to address needed state water facility upgrades; more robust conservation rebates; metering of secondary water systems and enhancements to county and local development landscaping policies.

Finding solutions to tomorrow's water problems requires our attention and resources today. Thankfully the audit has helped identify some of the areas where we can improve, including how and when DWRe data is collected and the future expansion of Utah's conservation efforts. While we are committed to improving these areas, Utah's water challenges will only be solved through collaborative and cooperative relationships between state agencies, the Legislature and dozens of public, private and special interest organizations concerned about Utah's water challenges. By working together we will find the best solutions.

04/23/15

Groups To Host Earth Week Forum & Rally To Raise Awareness on Water Issues

[Click here](#) to watch the video of our community event

[Click here](#) to read this story by the Times-Independent

[Click here](#) to read this OpEd by Sarah Stock of Canyon Country Rising Tide

04/16/15

Earth Week Protest & Events in Moab, Utah Against Threats to Colorado River Watershed

Press Advisory: For immediate release April 15, 2015

[Click here](#) to download the POSTER

Contact:

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David Harper, Colorado River Indian Tribes, Mohave Elders Committee (928) 302-0992

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John Weisheit, Living Rivers (435) 260-2590

Sarah Stock, Canyon Country Rising Tide, (435) 260-8557

Earth Week Protest & Events in Moab, Utah Against Threats to Colorado River Watershed Communities & Tribes Up and Down the Colorado River Unite to Protect Our Rivers, Watershed, Health & Environment!

No Green River Nuclear Power Plant and no more Uranium Mining/Milling
Stop Tar Sands Mining in the Book Cliffs & the Oil Industry Onslaught!
FRIDAY APRIL 24, 2015 - 6 pm Community Dinner and Forum (Moab Arts & Recreation Center, 111 E 100 N, Moab, UT)

SATURDAY APRIL 25th - 11 am starting at Multicultural Center, 156N 100W, Moab
Earth Day Parade & Protest to Protect the Colorado River Watershed from Pollution!
Moab, Utah – A large delegation of tribal leaders and Mohave Elders from the Colorado River Indian Tribes will travel hundreds of miles from their home in Parker, Arizona all the way to Moab, Utah to join with local residents during Earth Week to call for a halt to the pollution and water depletion threats to the Green and Colorado Rivers and the entire Colorado River watershed.

Both the Colorado River Indian Tribes and the Fort Mojave Indian Tribe have passed tribal council resolutions opposing the proposed Green River nuclear power plant. These Native Nations who have lived along the Colorado River since time immemorial are alarmed at the prospect of the radioactive threat posed by a nuclear power plant near the Green River which flows directly into the Colorado River. At events in Moab April 24-25, the Colorado River Indian Tribes delegation will join tribal members from the Ute Tribe, White Mesa Ute Community and Navajo Nation and other southern Utah residents who also are threatened by dirty energy production including the explosion of fossil fuel drilling and fracking, the tar sands mine under construction in the Book Cliffs, and uranium mining and milling.

On Friday, April 24th at 6 pm there will be a Community Forum at the Moab Arts and Recreation Center with tribal leaders, Elders, and community organizers confronting dirty energy production and climate change threats to the Colorado River Watershed. On Saturday, April 25th beginning at 11 am at the Multicultural Center there will be an Earth Week rally and parade along Main Street to bring these profound pollution threats to the attention of the thousands of tourists, local residents, businesses and government officials.

Sponsors: Living Rivers, Uranium Watch, Greenaction for Health and Environmental Justice, Colorado River Indian Tribes, White Mesa Concerned Citizens, La Cuna de Aztlan Sacred Sites Protection Circle, Canyon Country Rising Tide, Peaceful Uprising, Sierra Club Glen Canyon Group, Clean Up The Mines

04/15/15

An Earth Day Event: Water is Life (No Nukes)

Community Dinner and Forum

DAY ONE - Friday April 24th 6pm:

At the MARC (111 E 1 00 N)

A Discussion with tribal leaders, Elders, and community organizers confronting dirty energy production and climate change in the Colorado River Watershed.

DAY TWO - Saturday April 25th 11 AM:

Earthday Parade

Meet at the Multicultural Center (56 North 100 West)

Walk with us for protection of the Colorado River Watershed.

There will be speakers from Colorado River Indian Tribes and White Mesa Ute Community

An Event by: Living Rivers, Uranium Watch, Greenaction, Canyon Country Rising Tide, Indigenous Action, SUWA Colorado River Indian Tribes, White Mesa Concerned Citizens, La Cuna de Aztlan Sacred Sites Protection Circle, Peaceful Uprising, Sierra Club Glen Canyon Group

Questions? Call Sarah Stock 435 260 8557

[Click here](#) to download the POSTER

04/09/15

Former Reclamation Boss Says Tear Down Glen Canyon Dam

[Click here](#) to read this story by Eric Trenbeath in the Moab Sun News

03/13/15

California Has About One Year of Water Left. Will You Ration Now?

[Click here](#) to read this OpEd by Jay Famiglietti in the LA Times.

03/02/15

The Water Czar Who Reshaped Colorado River Politics: Unite and Conquer

[Click here](#) to read this story by Matt Jenkins in High Country News

03/01/15

As the River Runs Dry: An Ongoing Battle Between Urban & Rural Water Users

[Click here](#) to read this story in the Arizona Republic by Brandon Loomis and Mark Henle

02/27/15

James Deacon Noted UNLV Biologist Has Died

[Click here](#) to read this story by Henry Brean of the Las Vegas Review Journal

Photos of Dr. James Deacon are included in this report

02/19/15

Group Challenges Expansion Plan at Utah Tar Sands Operation

[Click here](#) to read this Associated Press story in the Salt Lake Tribune

[Click here](#) to read this story by Amy Joi O'Donoghue in the Deseret News

02/18/15

Legal Challenge to Stop Water Pollution by Tar Sands Mine in Utah

News Release

[CLICK HERE](#) to download the press release as a pdf document

Contacts:

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Legal Challenge to Stop Water Pollution by Tar Sands Mine in Utah

Division of Water Quality Allowing Tar Sands Mine Expansion Without Oversight Despite New Studies Showing Water Pollution Likely

SALT LAKE CITY, UT (February 18, 2015) – In the afternoon of February 17th Western Resource Advocates filed a legal challenge on behalf of Living Rivers against the Utah Division of Water Quality (DWQ) for allowing the U.S. Oil Sands' PR Spring Mine, a tar sands strip mine, to proceed with a four-fold expansion of their mining operation without further review. New studies show that the area of the expanded mine is a recharge zone for perennial springs in Main Canyon, below the mine. Additionally, tests conducted by the company show that diesel range organic compounds in the mine tailings will be thousands of times greater than the maximum contaminant levels allowed in drinking water. Despite the expansion of the proposed mine and the new water pollution evidence, DWQ intends to allow the mine to proceed without a new permit.

U.S. Oil Sands is a company from Alberta, Canada that owns the PR Spring mine located near the Book Cliffs in Uintah County. The Division of Water Quality's existing permit-by-rule allows the PR Spring mine to proceed with ridge-top tar sand mining, processing and disposal in this area without pit liners or monitoring. However, recently completed hydrogeochemistry studies by the University of Utah have shown natural springs in the area are recharged from the area where the strip mine will be expanded. In addition, analysis of process wastes from the mine show that organic compounds in those wastes will be thousands of times greater than levels regulated in drinking water. These tailings have the potential to contaminate springs in Main Canyon, an area renowned for wildlife and the water supply for a ranching operation.

"The State of Utah consistently seems to place development of these dirty fuels above protecting public health and the environment," said lead attorney Rob Dubuc of Western Resource Advocates. "With clear evidence showing that the area of the mine is connected to area seeps and springs, there's simply no justification for DWQ to allow the mine to expand operations without appropriate oversight."

"The Utah DWQ assumes an absence of groundwater in the area, and assumes that the organic compounds leached to precipitation and snowmelt are inconsequential", said Dr. William Johnson of the University of Utah. "Our hydrogeochemical data show that the

ridges, including the permitted site, are where snowmelt and precipitation enters the subsurface to feed perennial springs in nearby canyons. Those who depend on these springs include a ranching family, livestock, recreationalists, and wildlife. The measurements made by U.S. Oil Sands themselves show that the leached concentration of diesel range organic compounds will be thousands of times greater than the maximum contaminant levels that are regulated in drinking water. The State of Utah should genuinely consider potential impacts to this water resource over decades of operation.”

“These petrochemicals from the mine tailings will be extremely hazardous,” said John Weisheit, Conservation Director of Living Rivers. “The scientific evidence is very clear on this point. We need action by the State to protect drinking water and wildlife.”

“With the company’s own tests showing dangerous levels of diesel compounds will be in their waste piles, it’s time for the State to step up and require U.S. Oil Sands to protect these waters,” said Rob Dubuc. “DWQ needs to properly regulate this mine.”

Background: The desired product from the tar sands strip mine is bitumen, used for applications such as to boil water at power generating station, a binder for sand and gravel in paving of roads, and a waterproofing materials for roof construction. If refined the bitumen may be upgraded to become transportation fuel. The energy value of this heavy crude is 50% compared to 97% for conventional light crude. The technology that is proposed for the PR Spring mine is unproven.

[Click here](#) to read this Associated Press story in the Salt Lake Tribune

[Click here](#) to read this story by Amy Joi O'Donoghue in the Deseret News

02/14/15

Study Predicts Future Megadroughts for Western USA

[Click here](#) to read this story by Brooke Hays of UPI

[Click here](#) to read the study

[Click here](#) to visit the web page of AAAS for an excellent interpretation of this study

01/20/15

A Year Without the Colorado River, as Seen by Economists

[Click here](#) to read this story in National Geographic by Sandra Postel

[Click here](#) to read the economic report by Arizona State University

01/09/15

A Think Tank for the Colorado River's Future

[Click here](#) to read this story in National Geographic by Brian Richter.

[Click here](#) to visit the website of the Colorado River Research Group

12/28/16

Obama Declares Bears Ears National Monument in Southern Utah

[Click here](#) to read this story by Matthew Piper of the Salt Lake Tribune

[Watch VIDEO](#) by the Salt Lake Tribune

[Click here](#) to read this article by Brian Maffly and Thomas Burr of the Salt Lake Tribune

[Click here](#) to read this article by Amy Joi O'Donoghue of the Deseret News

[Click here](#) to read this OpEd by Stephen Trimble in the LA Times

[Click here](#) to read this opinion piece by Paul Rolly of the Salt Lake Tribune called "Utah Officials Say They Can Manage Lands Better, But Look at Their Record"

[Click here](#) for opinion piece by George Pyle of the Salt Lake Tribune called "All of Rural America is Shrinking, Monuments or Not"

Additional Information:

[Click here](#) to read the proclamation of Bears Ears NM

[Click here](#) to download the boundary map of Bears Ears NM

[Click here](#) to view map of proposed Escalante National Monument from 1936 when Harold Ickes was Interior Secretary

[Click here](#) to read the history of the proposed Escalante National Monument of 1936

12/22/16

Nuclear Project Foes Turn Out for Hearing

[Click here](#) to read this story by Lara Gale of Moab Sun News

News Release by Living Rivers and Uranium Watch

December 5, 2016

Contact:

- Sarah Fields, Uranium Watch: 435-260-8384; sarah@uraniumwatch.org
- John Weisheit, Living Rivers: 435-260-2590; john@livingrivers.org

Blue Castle Holdings Fails to Make First Water Rights Payment

Blue Castle Holdings Inc. (BCH) failed to make their First Pre-Operational Payments to the Kane County Water Conservancy District (\$100,000) and San Juan County Water Conservancy District (\$80,000) for the lease of water rights for the proposed Blue Castle Project nuclear reactor near Green River. The payments were due after the State Engineer's authorization of the use of 53,600 acre-feet of Green River water for the reactor project became final. The authorization became final in September, when plaintiff's did not appeal the Utah Court of Appeals' decision—upholding the State Engineer's decision—to the Utah

Supreme Court. In addition to their failure to make the payments, BCH failed to even notify the Districts that they would not be making the First Pre-Operation Payments on time.

According to the KCWCD, they are renegotiating the lease with BCH. Plaintiffs Living Rivers, Uranium Watch, and HEAL Utah have asserted that BCH does not have the financial resources to move forward with the nuclear reactor project. Plaintiffs stated that they did not believe that BCH would have the financial resources to make the annual payments, which now has been shown to be the case. The last time BCH sent a letter to the NRC was in 2011. Since then there have been no letters to the NRC, pre-application meetings, or efforts to complete an Emergency Response Plan.

On December 20, 2016, Living Rivers, HEAL Utah, and Uranium Watch will participate in a hearing on the KCWCD request for an extension of time to show proof of beneficial use for the water rights leased to Blue Castle Holdings. The hearing will take place at the Green River City Office at 11:00 am.

Protesters to the KCWCD Request have asserted that there is no reasonable assurance that the water rights approved for the proposed reactor will ever be put to beneficial use. KCWCD and BCH have failed to show due diligence within the past 50 years to make use of the water water rights. "It is about time that the State Engineer demand financial and other documentation for the public record to demonstrate support the Water Conservancy District's assertion that the water will be used for a nuclear reactor," says Sarah Fields, Program Director of Uranium Watch.

Adds John Weisheit, Conservation Director of Living Rivers and Colorado Riverkeeper, "In 2013 we heard testimony under oath that Blue Castle Holdings' annual net investment income is 8 million dollars per year. It is not unreasonable to assume the financial viability of this company has changed and the administrative record should be updated before the State Engineer makes his decision."

###

ADDITIONAL INFORMATION:

KCWCD Water Right documents:

<http://waterrights.utah.gov/cblapps/wrprint.exe?wrnum=89-74><http://waterrights.utah.gov/cgi-bin/docview.exe?Folder=89-74>

The Financial Woes of the Nuclear Power Industry

[Click here](#) to read this December 28, 2016 story by Mark Chediak of Bloomberg News called "Toshiba Corp Stock Plunges by Most on Record as Nuclear Renaissance Turns Into a Nightmare"

[Click here](#) to read this story in E & E by Kristi E. Swartz called "Toshiba's Possible Westinghouse Sale Throws Regulators."

News: March 29, 2017

[Westinghouse declares bankruptcy](#)

News: April 24, 2017

[Vendors Line Up to Demand Returns from Westinghouse](#)

12/19/16

Moab Master Leasing Plan: Where Energy and Scenery Co-exist

[Click here](#) to read this story by Dennis Webb of the Grand Junction Sentinel

[Click here](#) to read the press release from the BLM

[Click here](#) to review the Record of Decision

12/18/16

Long-term Plan for Colorado River Water Won't be Sealed Before Trump Takes Office

[Click here](#) to read this story by Tony Davis of the Arizona Daily Star

12/15/16

Havasupai Nation files complaint about impacts from mining groundwater

[Click here](#) to read this story by Emery Cowan of the Arizona Daily Sun

[Click here to read the complaint](#)

12/15/16

Record of Decision Signed for Glen Canyon Dam Operations

Interior Secretary Sally Jewell signed the protocols for operating Glen Canyon Dam at the annual meeting of Colorado River Water Users Association in Las Vegas.

[Record of Decision](#). December, 2016.

[Biological Opinion](#). US Fish & Wildlife Service.

[OpEd of December 30, 2015](#). Editorial Board of Arizona Daily Sun.

[Click here](#) to read the response from the Bureau of Reclamation to the Editorial Board of Arizona Daily Sun.

[Complete document: 2016 Glen Canyon Dam Final EIS](#)

[Executive Summary](#)

12/13/16

Is a Utah Tar Sands Project Drying Up Oasis Below?

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune
Related Stories:

[Click here](#) to read this story by Rudy Herndon of the Moab Sun News

[Click here](#) to listen to this KUER radio broadcast by Judy Fahys

[Click here](#) to read this press release from US Oil Sands concerning there strip mining and processing operations at PR Springs on the East Tavaputs Plateau.

The company's first promise to investors to begin operations was in 2010 when their company name was Earth Energy Resources [PRESENTATION](#)

[CLICK HERE](#) to read this investor analysis of US Oil Sands. Seeking Alpha.

12/13/16

The Progressive: Reflections from the Center of the Universe

[Click here](#) to read this story in *The Progressive* by Mrill Ingram about a river trip through Canyonlands National Park

12/08/16

US Oil Sands Announces Temporary Plant Closure & Employee Lay Offs

Energy firms in sticky situations: Tar sands projects look to overcome challenges of lower oil prices: [Click here](#) to read this story by Dennis Webb of the Grand Junction Sentinel

[Click here](#) to read this story by Rudy Herndon of the Moab Sun News

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

[Click here](#) to listen to this KUER radio broadcast by Judy Fahys

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[CLICK HERE](#) to read this investor analysis of US Oil Sands. Seeking Alpha.

12/06/16

United States' First Tar Sands Mine Delayed; Companies and investors reject Utah's unconventional fuels

FOR IMMEDIATE RELEASE

December 6, 2016

Contacts:

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Jennifer Eckstrom, (208) 304.2319, jenneks@gmail.com

Lauren Wood, Green River Action Project, A Colorado Riverkeeper Affiliate, (801) 647-1540, lwood1988@gmail.com

United States' First Tar Sands Mine Delayed

Companies and investors reject Utah's unconventional fuels

Vernal, Utah - US Oil Sands Inc., the company attempting to open the United States' first commercial tar sands mine, announced that is putting the project on hold due to an inability to attract investors. Forecasts of worsening climate change and water shortages have compelled the close scrutiny of speculative plans, like those of US Oil Sands, to develop high-carbon, water-intensive tar sands and oil shale deposits in the Colorado River Basin.

"Despite this temporary reprieve, defenders of the Colorado watershed remain aware that the foreign corporation pushing for the first commercial tar sands strip mine in America is chomping at the bit to move forward, and claim they will do so in January of 2017," said Jennifer Ekstrom, director of the award-winning documentary Last Rush for the Wild West: Tar Sands, Oil Shale and the American Frontier. "Under the upcoming Trump Administration, the entire landscape containing tar sands and oil shale, almost a million acres, is at even greater risk of this dirtiest type of strip mining. We will remain vigilant and continue fighting this extraordinary threat."

The company's PR Spring mine is located in a remote landscape behind the Book Cliffs in eastern Utah. US Oil Sands plans to strip mine for the tar sands and then use an industrial strength solvent to access the hydrocarbon. The process results in 100% land destruction, carries a hefty carbon footprint, and threatens to contaminate scarce groundwater resources in the arid high desert.

"We see here that US Oil Sands continues to be stilted up by the few with deep pockets and opposed by the many with clear and steadfast vision for a better future," says Lauren Wood of Green River Action Project, A Colorado Riverkeeper Affiliate. "Even under a Trump administration, it is nonsensical to advance an industry with a carbon and water footprint so extreme that it threatens the very future of the Colorado River Basin."

US Oil Sands' statement comes on the heels of announcements that numerous major companies have ended their attempts to exploit oil shale and tar sands in the Colorado River Basin. ExxonMobil, Shell, American Shale Oil, and Chevron all terminated their oil shale research, demonstration, and development efforts in the Green River Basin. And a pending federal commercial lease for the Asphalt Ridge tar sands mine in Utah's Uinta Basin has been stalled since 2014.

"US Oil Sands has been promising immediate development with breakthrough technology for six years and now, with 98% of the infrastructure in place, all but essential personnel have been laid off. This

clearly indicates that investors have no confidence in this project,” says John Weisheit of Living Rivers and Colorado Riverkeeper.

“The announcement represents yet another example of an oil shale or tar sand project that is unable to make the finances work,” says Lesley Adams of the Waterkeeper Alliance. “Developing unconventional fuels in the Colorado River Basin would fundamentally undermine our national climate goals and threaten scarce water supplies; it is simply not a viable path towards energy independence.”

About Waterkeeper Alliance

Waterkeeper Alliance unites more than 300 Waterkeeper Organizations and Affiliates around the world, focusing citizen advocacy on issues that affect our waterways, from pollution to climate change. Our movement patrols and protects more than 2.4 million square miles of rivers, streams and coastlines on 6 continents. For more information, please visit: www.waterkeeper.org.

Additional Information:

[CLICK HERE](#) to read this investor analysis of US Oil Sands. Seeking Alpha.

12/05/16

Blue Castle Holdings Fails to Make First Water Rights Payment

News Release

Living Rivers and Uranium Watch

December 5, 2016

Contact: Sarah Fields, Uranium Watch: 435-260-8384; sarah@uraniumwatch.org

John Weisheit, Living Rivers: 435-260-2590; john@livingrivers.org

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Additional information: KCWCD Water Right documents:

01: <http://waterrights.utah.gov/cblapps/wrprint.exe?wrnum=89-74>

02: <http://waterrights.utah.gov/cgi-bin/docview.exe?Folder=89-74>

11/22/16

In Water Scarce Regions Desalination Plants are Risky Investments

[Click here](#) to read this story by Keith Schneider in Circle of Blue

11/21/16

Nuclear power: After legal victory, Blue Castle has yet to pay Kane and San Juan counties per water lease agreements

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

11/11/16

USU: Center for Colorado River Studies Weighs in on Fill Mead First Plan

[Click here](#) to read this story by Mary-Ann Muffoletto of Phys.org

[Click here](#) to read the executive summary

[Click here](#) to read the 80-page analysis

###

ADDITIONAL INFORMATION:

[Click here](#) to read Phase One of Fill Mead First Proposal submitted by Glen Canyon Institute to the Bureau of Reclamation for their 2012 Basin Study

[Click here](#) to read Phase Two & Three of Fill Mead First Proposal

[2009 - Fluvial Systems Tied Together Through Common Base Level](#). Majeski.

[1986 -Simulation Analysis Water Level Changes Navajo Sandstone Changes Altitude Lake Powell Wahweap Utah Arizona](#). Thomas.

[Loss Rates from Lake Powell and Their Impact on management of the Colorado River](#). Myers; 2013.

11/05/16

CU Boulder Team: Feds May Order First Cuts in Water from Colorado River & Issues Warning to Next President

[Click here](#) to read this story by Bruce Finley of *The Denver Post*

ADDITIONAL INFORMATION:

Colorado River Future Project Team at Colorado University at Boulder

[Click here](#) to read their roadmap to the executive branch

[Click here](#) to read this story by Matt Reisner of *Water Deeply* called "On the Colorado River, Climate Change is Water Change"

11/04/16

Conflicting Interests Target Declining Great Salt Lake

[Click here](#) to read this story by Jonny Bonner of Courthouse News Service

ADDITIONAL INFORMATION:

[Salt Lake Study](#). USU.

[Powerpoint: Great Salt Lake Water Issues](#). Clyde.

11/02/16

Moab City Presses Pause on Poop from National Parks & BLM

[Click here](#) to read this story by Amy Joi O'Donoghue

[Click here](#) to read this story by Laura Haley of *The Times-Independent* called "After Heated Debate City Council Approves Partial Sewer Hookup Moratorium"

ADDITIONAL INFORMATION:

[Public Notice](#)

[Public Notice Verification](#)

[Transmittal Letter](#)

[Utah Pollutant Discharge Elimination System Permits](#)

[Fact Sheet & Statement of Basis](#)

[Final Environmental Study](#)

[Capacity Evaluation of Moab City Wastewater Plant](#)

[Wasteload Analysis](#)

[City Council Packet on special meeting for a potential moratorium on sewer hook ups](#)

[Notes by citizen attending the sewer service moratorium meetings.](#) Bill Love.

[Announcement of Sewer Hook Up Moratorium](#)

[City Letter to Contractors](#)

10/25/16

Lower Dolores River in Peril

Stories by Jim Mimiaga and Sam Carter of the *The Cortez Journal*

[Click here](#) to read *State Exercises Claim to River Water to Benefit McPhee Reservoir*

[Click here](#) to read *Lower Dolores Study Details Native Fish Needs*

[Click here](#) to read *Lower Dolores River Gets Impaired Status*

[Click here](#) to read *Flash Flood Show Sad State of Dolores River*

[Click here](#) to read a study called *Lower Dolores Native Fish Status and Trends (2010)*

10/22/16

'Farming Nature' Helps Restore Colorado River Delta Cottonwoods, Willows

[Click here](#) to read this story by Tony Davis of the Arizona Daily Star

[Click here](#) to view repeat photography by Karl Flessa of the "pulse flow," during and after

[Click here](#) to read the Interim Report of the monitoring program at the Limitrophe and Delta

[Click here](#) to read the appendices of the Interim Report

10/20/16

Critics Say Water Plan Appears to Move 90% of Pipeline Cost to Utah Taxpayers

[Click here](#) to read this story by Emma Penrod of the Salt Lake Tribune.

[Click here](#) to read additional information on the Lake Powell Pipeline

10/10/16

Colorado River Managers Snub Climate Change Again: Society and Ecology at Greater Risk

For immediate release:

October 10, 2016

Contacts: John Weisheit, Colorado Riverkeeper: 435-260-2590
Tom Martin, River Runners for Wilderness: 928-556-0742; 928-856-9065
Robin Silver, Center for Biological Diversity: 602-799-3275

(Moab, UT) On October 7, following six years of study, the Bureau of Reclamation [released](#) revised guidelines for operating Glen Canyon Dam. Though the dam is viewed by many as integral to the Colorado's existing water delivery infrastructure, leading Colorado River observers point out that the new operating regime, scheduled to take affect next month, is based on antiquated objectives propped up by outdated science.

"In this era of climate change it's unbelievable that Reclamation continues to employ modeling results that suggest shortages are decades down the road when their reservoirs are at all time lows," says John Weishiet with Living Rivers/Colorado Riverkeeper.

The new guidelines rely entirely on surface water forecasts from Reclamation's widely criticized 2012 Colorado River Water Supply and Demand Study. In October of last year 23 Colorado River scholars [requested](#) Interior Secretary Jewell engage the National Academy of Sciences to review these findings, due numerous deficiencies. And just last week the journal [Science reported](#) that if current trends continue, "We find that regional temperature increases [in the Southwest] alone push megadrought risk above 70, 90, or 99% by the end of the century."

Principally, these new guidelines are to improve habitat conditions for endangered native fish in Grand Canyon National Park, downstream of the dam. However, beyond downplaying climate change, Reclamation stresses its new guidelines are not required to "...create a plan for providing water to the Colorado River in Grand Canyon during extended drought."

"Glen Canyon Dam inflicts the greatest harm on Colorado River native fish, once among the most unique assemblages in the world," says Robin Silver with Center for Biological Diversity. "Interior's cavalier attitude toward providing water for thier recovery is wholly inconsistent with its mandate under the Endangered Species Act."

So too is Reclamation's mismanagement of Colorado River flows, says Tom Martin with River Runners for Wilderness. "The biotic community in the river below the dam has been devastated and is in desperate need of sediment, much more woody material, water temperature and flow regime consistent with the river corridor's historic natural conditions, not just prescriptions for redoing old experiments that perpetuate business as usual."

Lack of complete information on water scarcity is not the only major omission the public should be concerned about. The study also lacks a truthful and up-to-date assessment of the known safety risks associated with the continued operations of Glen Canyon Dam.

“We may be in a drought situation now, but no credible scientist denies the basin won’t again experience a major flood even as climate change persists,” add Weisheit. “New [research](#) reveals that historic flooding on the Colorado River is of a frequency and magnitude twice what Reclamation has planned for, and Glen Canyon Dam almost failed from a comparatively minor flood in 1983.”

“The more we try to work with Glen Canyon Dam, and the complexities of the impacts it creates, the more we really need to address whether it might be best to eliminate it from the system altogether,” stresses Weisheit. “Better we do this in a controlled way then before nature does it for us.” ###

10/08/16

Arizona State University Series: Water Future in the Southwest

[Click here](#) to read this three part series by Scott Seckel of ASU Now.

10/08/16

The ProPublica Series: Killing the Colorado

[Click here](#) to read this six-part series called Killing the Colorado by Abrahm Lustgarten and others of ProPublica from the summer of 2015

10/07/16

Marriage of Coal and Water in Arizona Renews Vows

[Click here](#) to read this story about Navajo Generating Station by Brett Walton of Circle of Blue

10/05/16

Reservoirs Are a Major Source of Greenhouse Gases

[Click here](#) to read this press release by Oxford Press

[Click here](#) to read the BioScience Paper by Deemer et al. called *Greenhouse Gas Emissions from Reservoir Water Surfaces: A New Global Synthesis*

[Click here](#) to read this story by Gary Wockner in EcoWatch called *The Hydropower Methane Bomb No One Wants to Talk About*

[Click here](#) to view photos of the water evacuation of Lake Powell during the last 16 years of over-consumption and reduced precipitation: sediment dewatering, methane springs, hydrogen sulfide springs, river entrenchment into sediment, and sediment slumping.

10/03/16

White Mesa Ute Tribe Worries About Contamination

[Click here](#) to read this story by Emma Penrod of the Salt Lake Tribune

[Click here](#) to read this story by Jim Mimiaga of the Cortez Journal (before the community meeting)

[Click here](#) to read this story by Jim Mimiaga of the Cortez Journal (after the community meeting)

[Click here](#) to watch the film "Half Life: America's Last Uranium Mill."

[Click here](#) for information provided by the Ute Mountain/White Mesa Tribe

[Click here](#) for information provided by the Grand Canyon Trust



Sponsors of this event included Green Action for Health and Environmental Justice, Grand Canyon Trust, Uranium Watch, Canyon Country Rising Tide & Living Rivers

###

ANNOUNCEMENT

Tuesday, October 11

MARCH TO OPPOSE THE WHITE MESA URANIUM MILL
PLEASE JOIN THE WHITE MESA UTE COMMUNITY ON A MARCH FROM THE WHITE MESA TRIBAL COMMUNITY CENTER TO THE MILL.

Meet at 8:00 am at the White Mesa Community Center White Mesa Community Center, 14 Willow St, White Mesa, UT 84511. The Mill is about 4 miles north of the Community Center.

Going South on Hwy. 191, turn Right on the street just before the Mobile Gas Station on White Mesa, about 12 miles south of Blanding. Turn Left on next street, Cowboy Street, to the Community Center, on the Right.

Bring Signs, Water, Warm Clothes

The White Mesa Uranium Mill continues to operate, polluting the air, groundwater, and the land on White Mesa.

For more information call: Sarah Fields Uranium Watch 435-260-8384

ADDITIONAL INFORMATION

[Click here](#) to read a summary of activities in 2016 called "Upstream/Downstream Voices" by Green Action for Health and Environmental Justice

[Click here](#) to read this blog post by Kate Savage for Holiday River Expeditions

[Click here](#) to read this story by John Harrington of the Salt Lake Weekly

09/30/16

Lake Powell Pipeline Repayment: Scam or Incompetence?

From our allies at [Utah Rivers Council](#):

Last week 19 PhD economists from two Utah universities released their analysis of a repayment plan created by the Washington County Water District to support funding for the Lake Powell Pipeline at the 2016 Legislature. The economists found the plan fails to grasp basic economic principles and fails to repay Utah taxpayers the billions of dollars they will pay for the Pipeline. Shockingly, the district plans to repay only 28% of the total cost of the pipeline, leaving taxpayers on the hook for the other 72%.

According to the economists, if the water district truly intended to repay the cost of the pipeline, water rates would have to increase 576% and impact fees 128% in Washington County. Water officials and their lobbyists have been using this flawed model to mislead our legislators and the public by claiming they can repay the debt with little to no increases in water rates or impact fees. Now we know that is a lie. In case you missed it, here is a great article from the Salt Lake Tribune.

Upon the release of the economists' analysis we presented our concerns to the State Water Development Commission. The very same lobbyists who deceived the Legislature are also on the Commission, including the Washington County Water District.

When one of the economists, Gail Blattenberger, tried to outline some of their concerns along with Utah Rivers Council staff, the Commission quickly tried to change the subject. It's clear the lobbyists are running the show and it's time we take this Commission, and our Legislature back so the people can be heard!

We need your help! Please write your legislators and ask that the water lobbyists on the Water Development Commission be removed.

Read the economist's cover letter that they sent to the Governor [HERE](#)

[Click here](#) to read a handout about the costs of building the Lake Powell Pipeline

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

[Click here](#) to read this OpEd by the editorial board of the SL Tribune

09/29/16

Colorado Riverkeeper Takes A Stand Against Tar Sands and Oil Shale

By Jennifer Ekstrom and Lauren Wood

From the 2016 Summer Issue of the Waterkeeper Magazine

[Click here](#) to read the story.

09/04/16

Study: Lake Powell Could Dry Up in as Little as Six Years

[Click here](#) to read this story by Tony Davis of the Arizona Daily Star

[Click here](#) to view presentation by Eric Kuhn (West Slope Round Table) about risk management at Lake Powell

08/31/2016

Tar Sands Threaten Majestic Green River

Waterkeeper and activists from the Colorado River basin participate in a Desolation and Gray canyon river trip in central Utah to promote their campaigns to keep dirty fossil fuels in the ground.

[Click here](#) to read this story by Robert Kennedy, Jr. in EcoWatch

[\(archived here\)](#)



08/18/16

Is Conservation Going to Prevent a Water Shortage Declaration at the end of 2017?

[Click here](#) to read this article called "Climate Change is Water Change: Why the Colorado River System is Headed for Major Trouble" by Chelsea Harvey of the Washington Post

[Click here](#) to read this story by Tony Davis of the Arizona Daily Star

[Click here](#) to read, by John Fleck, "Lower Colorado Basin Water Savings not as Big as I Thought"

ADDITIONAL INFORMATION:

[Click here](#) to view this West Slope Risk Study Presentation by Eric Kuhn

[Click here](#) to review the 24-month Report of October 2016

[Click here](#) to review Bureau of Reclamation's five-year Projection

08/11/16

Group drops water battle, still fighting nuclear plant plan

[Click here](#) to read this OpEd by the Salt Lake Tribune Editorial Board

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

Here is the AP story:

By MICHELLE L. PRICE, Associated Press

SALT LAKE CITY — Environmentalists who've spent almost a decade fighting a plan to build Utah's first nuclear power plant said Wednesday that they're dropping a legal battle against the eastern Utah project but are still fighting the facility.

The groups HEAL Utah, Uranium Watch and Living Rivers said they would not contest a Utah Court of Appeals ruling last month allowing the facility to pull water from the Green River to cool nuclear reactors once it's built.

HEAL Utah executive director Matt Pacenza said that by dropping the battle over water rights, the company that wants to build the plant, Blue Castle Holdings, will be forced to start paying hundreds of thousands of dollars on those water rights to local water districts.

"We frankly do not believe they have those resources," Pacenza said. He said the project has not attracted significant investments and no Utah utility companies have stepped up to say they're interested in nuclear power.

"It's a project that we're confident is going nowhere," he said.

David C. Wright, an attorney for Blue Castle Holdings, said he doesn't know specifics about the company's finances but he's confident they'll make the payments. Wright said he's glad to hear the environmental groups won't fight the ruling, but he's confident the state Supreme Court would have ruled in Blue Castle's favor if the case continued.

The 3,000-megawatt plant would occupy a proposed industrial park about five miles from the small city of Green River, about 40 miles upstream from Moab and two national parks, and about 180 miles southeast of Salt Lake City.

Critics argue the nuclear plant would harm endangered fish, swallow a major portion of limited water on the dry Colorado Plateau and hamper outdoor recreation in the area. Green River, a city of about 1,000 people, is known for its melon growing and is a waypoint for hikers venturing out to nearby geologic features and canyons and rafters who are braving the rapids of the Green River and Colorado River. Blue Castle said the fast-growing state will need an additional power source and the plant would be in an area where about 360,000 acre feet of water are unused each year. The project would pull 53,000 acre-feet of water a year from the river.

Wright said the project can move forward now that it's not being bogged down with a court fight. The proposal is a year or two away from getting a site permit from the U.S. Nuclear Regulatory Commission, Wright said.

After that, Blue Castle would need an operational permit from the commission. If approved, construction would take five to seven years, according to Blue Castle, which is headed by former state Rep. Aaron Tilton.

###

Additional information:

Minutes of Kane County Water Conservancy District

1. March 2016 KCWCD Meeting AGENDA ITEM NO. 8: BLUECASTLE HOLDINGS--NUCLEAR POWER PLANT: Mike reported that we had the hearing on January 26th which went very well. There was no new evidence or information brought up from the trial. Attorney John Mabey reported to Mike that he doesn't feel there is any chance that they will be granted an appeal to the Utah Supreme Court on this case. If they decided to appeal this case to the Supreme Court of Utah, there is less than a 10% acceptance rate unless there is new evidence brought up in the appellant court. We should hear back on the decision in June.

2. May 2016 KCWCD Meeting AGENDA ITEM NO. 8: BLUECASTLE HOLDINGS--NUCLEAR POWER PLANT: Mike reported that we are just waiting for the court decision and we believe that we will win the case and will not go to the Supreme Court. We should know by June and at that point we will be getting \$100,000 per year which moves up to \$300,000 and then when the plant is constructed to \$1 million per year.

3. June 2016 KCWCD Meeting AGENDA ITEM NO. 7: BLUECASTLE HOLDINGS--NUCLEAR POWER

PLANT: Mike reported that there is no word on a decision from the Appeals Court. John Mabey reported that there are two cases that will go ahead of us.

4. July 2016 KCWCD Meeting AGENDA ITEM NO. 8: BLUE CASTLE HOLDINGS--NUCLEAR POWER PLANT: Mike reported that we won our court case after 3 years. The decision was unanimous by the appellant court. This is great news and our attorney said the chances for an appeal is almost none. We will have our \$100,000 in 30 days. The next step will be to complete the site plan.

08/07/16

Utah Assessing How Much Rocky Mountain Power Coal Waste Washed into Price River

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune
This coal fired plant is being decommissioned.

[Click here](#) to read this story of 16 months ago.

[Click here](#) to view a photo taken two days after the spill.

08/02/16

Colorado River's Tale of Two Basins

Water diversions upstream increase risk in stressed watershed.

[Click here](#) to read this story by Brett Walton of Circle of Blue

[Click here](#) for the reference to the 2007 hydrologic determination of the Upper Colorado River Basin

[Click here](#) to review Bureau of Reclamation's five-year Projection

[Click here](#) to view presentation by Eric Kuhn (West Slope Round Table) about risk management at Lake Powell

07/26/16

Let the Water Flow! Navajo in Utah Closer to Water Rights Settlement

[Click here](#) to read this story by Anne Minard in Indian Country Today Media Network

[Click here](#) to read this story by Tony Davis of the Arizona Daily Star called "Tribes, Farms Wary of Proposed CAP Cuts as Lake Mead Falls"

At present, there is a 56% chance the Secretary of Interior will declare water shortages in the Colorado River basin on January 1, 2018 ([news](#) & [presentation](#)).

[Click here](#) to learn more about Indian water rights

07/24/16

Appellate court upholds water rights diversion for planned nuclear power plant

[Click here](#) to read this story by Rudy Herndon of Moab Sun News

[Click here](#) to read this story by Dennis Webb of the Grand Junction Sentinel

[Click here](#) to read this story by Amy Joi O'Donoghue of the Deseret News

[Click here](#) to read this story by Courtney Tanner of the Salt Lake Tribune
Analysis of the project status:

- 1) Blue Castle Holdings (BCH) will have to start paying \$180,000 per year for the lease of the water rights. In 5 years the lease goes up to \$580,000 per year.
 - 2) BCH has not submitted an application to the Nuclear Regulatory Commission (NRC) for an Early Site Permit (ESP). The ESP process would take about 5 years. It would take between \$50 and \$100 million to finalize the ESP application.
 - 3) In order to actually construct the reactor, they need a construction and operation license, which also costs millions of dollars.
 - 4) No utility has expressed any interest to participate in this project.
 - 5) It will be necessary for BCH to approach the U.S. Fish and Wildlife Service to develop a biological assessment for the project's impact on critical habitat for endangered species.
 - 6) It will be necessary for BCH to apply for a contract with the Bureau of Reclamation to release water from Flaming Gorge Reservoir (upstream).
 - 7) At present, there is a 56% chance the Secretary of Interior will declare water shortages in the Colorado River basin on January 1, 2018 ([news](#) & [presentation](#)).
-

06/30/16

With Doomsday in Mind, California Officials Are Ceding Water to Arizona, Nevada (Contingency Planning)

[Click here](#) to read this story by Ry Rivard of Voice of San Diego

[Click here](#) to read this story by Ian James of the Desert Sun called "Negotiations Moving Forward on Plan to Avert Colorado River 'Crash.'"

DOCUMENT ARCHIVE

[California River Board Packet, June 2016](#)

[Colorado River Update by San Diego Water Authority, June 2016.](#)

[Colorado River Drought Contingency by Metropolitan Water District of SoCal, June 2016.](#)

ADDITIONAL INFORMATION

[Click here](#) to read this story by Brett Walton and Circle of Blue called "Lake Mead Record Low Reflects Changing American West"

06/23/16

Twenty arrested at June 19 protest at PR Spring mine

[CLICK HERE](#) to donate to the legal fund for resistance to tar sands development in Utah

Media Contacts:

Melissa Graciosa, Canyon Country Rising Tide; Tel: 503-409-7710 email: ccrt@riseup.net

Secondary Contact: Natascha Deininger, Wasatch Rising Tide, Tavaputs Action Council; Tel: 435-414-9299; Email: wasatchrisingtide@gmail.com

[Click here](#) to read the June 19th media advisory of the Tavaputs Action Council

Website: <http://www.canyoncountryrisingtide.org>

[Click here](#) to read this story by Rose Egelhoff of Moab Times-Independent

[Click here](#) to read this story by Sharon Sullivan of Moab Sun News

06/21/16

Groups write U.S. Attorney General asking for investigation of coal shipping terminal deal

[Click here](#) to read the LETTER from Earthjustice on behalf of their clients

[Click here](#) to read this story by Molly Marcello of Moab Times-Independent

[Click here](#) to read this story by Ben Lockhart of The Deseret News

[Click here](#) to read this story by Manuel Quiñones of E & E News

[Click here](#) to read this story by Brian Maffly of Salt Lake Tribune

[Click here](#) to read the minutes of Utah's CIB meeting of April 2016

[CLICK HERE](#) FOR MORE INFORMATION

###

For immediate release June 20, 2016

Contacts: Joshua Kanter, Alliance for a Better Utah – 801-520-0757, josh@betterutah.org

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Michael Shea, HEAL Utah – 801-706-1885, michael@healutah.org

Tom Sanzillo, IEEFA – 216-688-3433, tomsanzillo@yahoo.com

John Weisheit, Living Rivers – 435-259-1063, john@livingrivers.org

Lindsay Beebe, Sierra Club – 801-467-9294, lindsay.beebe@sierraclub.org

Groups call for federal investigation of Utah plan to finance Oakland coal export terminal Letter to Attorney General Loretta Lynch cites potential legal and ethical violations of federal law

SALT LAKE CITY?Conservation, health, and good government groups today sent a letter to U.S. Attorney General Loretta Lynch calling for a formal investigation into potential legal and ethical violations in Utah's extraordinary \$53 million taxpayer-funded loan to build a deepwater terminal in Oakland, Calif., to export coal.

The letter, which also was addressed to Gregory J. Gould, director of the Office of Natural Resources Revenue, and Mary Kendall, interim Inspector General of the Department of the Interior, cites Utah's misuse of federal community development funds and the elaborate web of potential conflicts of interest that propelled the scheme through state agency and legislative approval processes with scant public scrutiny.

"It's staggering that the Legislature and Governor were willing to throw tens of millions in taxpayer money at a project so rife with conflicts of interest," said Michael Shea, Policy associate at HEAL Utah. "It is very clear that someone from the outside should take a careful look at this."

The letter lays out the twists and turns in the decades-long effort to export Utah coal overseas through a Pacific port. Several Utah counties began seeking funding to build transport operations to export coal from mines owned by Bowie Resource Holding Partners as early as 2001. In late 2014, in a deal brokered by Jeffrey Holt, a private investment banker, "strategic infrastructure advisor" to the counties and then-chairman of the Utah Transportation Commission, the counties requested a \$53 million loan from Utah's Community Impact Board to finance the terminal.

The Community Impact Board (CIB) is charged with administering proceeds from the royalties to the state under the federal Mineral Leasing Act (MLA). The Act restricts the use of the money to community planning, construction and maintenance of public facilities, and provision of public services to mitigate the adverse impacts of mining on the communities.

The Community Impact Board approved the loan, and then, when questions arose about the misuse of funds, the 2016 legislature gave fast-track approval to Senate Bill 246, a procedure designed to evade the Mineral Leasing Act's funding limitations by swapping state general fund money with Mineral Leasing Act money for the loan.

"It is inconceivable that this is an intended or proper use of \$53 million of MLA, CIB or taxpayer funds and this appears to represent the worst kind of corporate cronyism that members of the Utah legislature are usually so fond of rallying against," said Joshua Kanter, Board Chair, of the Alliance for a Better Utah. "Diverting these funds is not only improper but will leave these communities without the money they really need to help them retool their economic base as the coal industry continues its decline. There has been no showing that there is a shortage of available port capacity for Utah coal or that exporting Utah coal to Asia makes economic sense, either of which is easily addressed by the free-market without this shell-game and abuse of the public trust."

Many of the bill's proponents in the legislature and the governor who signed the bill had received campaign contributions from Bowie, the coal company expected to be the largest beneficiary of the export terminal deal. At the same time, Strategic Infrastructure Advisor Jeffrey Holt and his investment firm could reap millions if the project is completed.

"From the very beginning, the proposal to use Utah taxpayer resources to prop up an out-of-state coal export terminal has never had the best interest of Utahns at heart," said Lindsay Beebe, Utah Organizing Representative for the Sierra Club's Beyond Coal campaign. "We need to develop real solutions to help our communities as our state transitions away from coal. Instead, our public officials have shown that they are more eager to hand out political favors than to help Utah communities across the state that deserve our support."

Meanwhile in California, public records and media reports revealed that Holt and port developer Phil Tagami attempted to conceal the plan to ship coal through the Oakland terminal, instead emphasizing that it would be used to ship agricultural products.

Many residents near the terminal, who already are burdened by significant air pollution, have vocally opposed coal shipments through their communities due to the environmental and public health impacts. The Oakland City Council is meeting June 27 to consider placing “health and safety” restrictions on the operation of any coal terminal in the city. Utah’s legislation to transfer \$53 million in state funds for the project also goes into effect July 1, lending increased urgency to the call for a federal investigation.

06/15/16

Groups to Feds: Plan for America’s First Commercial Oil Shale Facility Not in Public Interest Strip Mining Plan Threatens Land, Water, Wildlife, Climate

FOR IMMEDIATE RELEASE

June 15, 2016

Contact

Anne Mariah Tapp, Grand Canyon Trust, (512) 565-9906, atapp@grandcanyontrust.org
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Jonathon Berman, Sierra Club, (202) 495-3033, jonathon.berman@sierraclub.org
Denni Cawley, Utah Physicians for a Healthy Environment, (415) 937-3887, dcawleyuphe@gmail.com

Photos: [LINK](#) to aerial photos by Ecoflight

VERNAL, Utah—Fourteen conservation groups submitted formal comments to the Bureau of Land Management’s Vernal Field Office Tuesday urging the Obama administration to deny rights-of-way across federal public lands that would allow an Estonian energy giant to sidestep environmental review and pave the way for the first commercial oil shale project in the United States, north of Utah’s scenic Book Cliffs ([map](#)). The groups also delivered more than 35,000 comments from citizens opposed to the project.

The BLM is [moving forward](#) to grant utility rights-of-way to Enefit American Oil, a subsidiary of Estonian government-owned Eesti Energia. Enefit seeks to strip-mine 9,000 acres for oil shale near the Green and White rivers, and ultimately expand its operations to process up to 1.2 billion barrels of kerogen oil.

“The BLM is charged with safeguarding the American public interest and our national inheritance – our federal public lands,” said Anne Mariah Tapp, energy program director for the Grand Canyon Trust. “But instead the BLM is preparing to flip the ‘on’ switch for Enefit’s massive oil shale strip mine and jumpstart development of one of the world’s most polluting industries. The interests of an Estonian mining giant should not trump those of the American public.”

The groups argue the BLM would be allowing Enefit to sidestep critical environmental reviews designed to protect public health, land, air, water, and wildlife. The company has yet to reveal a development plan for its mining project, but requests approval for its rights-of-way nonetheless.

“Enefit’s massive strip-mining and refining operations will unleash significant air and climate pollution in an area that’s already suffering from some of the nation’s most unhealthy wintertime smog,” said Ted Zukoski, an attorney with the pro bono law firm Earthjustice. “But Enefit has refused to provide federal agencies or the public with information about the project’s air and climate pollution until after it gets BLM’s okay to start building access for water, power, and roads. That’s backwards. Enefit can’t be allowed to game the system by getting federal approval first, but only owning up to the project’s damage later.” The groups’ comments assert that the rights-of-way would amount to a federal subsidy.

“The Interior Department is working against President Obama’s climate goals here,” said Taylor McKinnon, with the Center for Biological Diversity. “Subsidizing the development of one of the world’s dirtiest fossil fuels is the opposite of climate leadership. Doing so in the Colorado River Basin is the opposite of prudent water policy. The administration should abandon this project now.”

The BLM lacks critical information it needs to assess whether or not the project is in the public interest, including the long-term air quality and climate impacts of emissions from mining and processing; the quantity and source of water required; water-quality impacts related to the estimated 23 million tons of spent shale waste a year the project would produce; and potential consequences for endangered species.

Amy Mall, a senior policy analyst with the Natural Resources Defense Council’s Land and Wildlife Program, said: “It’s unfathomable—and inconsistent with the administration’s climate goals—for BLM to give Enefit access to public lands so it can damage them, threaten surrounding communities, and worsen both air quality and climate change. Enefit has not provided enough data on the potential impacts of its mining project and BLM shouldn’t make a decision based on an incomplete environmental assessment.”

Local groups draw attention to threats to Utah. “The utility corridor will facilitate a massive oil shale development that will further compound the damage to Utah’s air, water, wildlife, and land,” said Denni Cawley, executive director of Utah Physicians for a Healthy Environment. “This is not the right direction to go to secure a sustainable future for those who live in that area.”

“Shale waste runoff will contaminate Evacuation Creek, the White River, and the Green River, which are all important for the recovery of endangered fish, and for communities downstream,” said John Weisheit, conservation director for Living Rivers.

An Estonian environmental advocate recently stated [in an op-ed](#) in the Salt Lake Tribune that in her country “the oil shale industry has permanently damaged many of our most important natural resources” and warned Utahns against similar harm.

###

BACKGROUND

About Enefit:

Enefit American Oil owns or holds leases to approximately 30,000 acres of federal, state and private lands in eastern Utah. They are seeking to develop oil shale deposits there.

The company:

Filed a 26 million euro impairment loss for activities associated with its Utah holdings in January 2016; holds a 10-year lease for oil shale research on BLM lands; the lease was issued in 2007, has yet to start work.

About the 5 Rights-of-Way:

Rights-of-way across public lands Enefit has applied for include: 19 miles of water supply pipeline; 8 miles of natural gas supply pipeline; 10 miles of oil product line; 29 miles of 138kV powerlines; 5 miles of upgrading a county dirt road.

Enefit’s Plans:

Massive Refinery: Building a half-square mile industrial complex in the desert – the first commercial-scale oil shale-to-shale oil plant in United States history, nearly doubling the oil production in the Uinta Basin, which already has over ten thousand oil and gas wells.

Strip Mining:

Up to 28 million tons of rock per year, resulting in waste rock totaling up to 750 million tons Depleting

Rivers: Removing up to 100 billion gallons of water from the already over-allocated Colorado River Basin during the next three decades.

Air Pollution:

Emitting a toxic soup of air pollutants in an area that already suffers from some of the worst smog in the nation.

The Wrong Way on Carbon:

Using an mining and refining process that requires up to nearly 40% more carbon per unit of energy than conventional oil, and more even than notoriously dirty tar sands.

###

[CLICK HERE](#) to read the comments submitted to BLM by the above groups

06/13/16

Nature Walk Participants Arrested for Trespassing Near Tar Sands Operation

[Click here](#) to read this OpEd by Paul Rolly of the Salt Lake Tribune called "Don't think Utah has a double standard on public lands? Just ask unwitting hikers."

[Click here](#) to read this story by Ami Joy O'Donoghue of Deseret News

[Click here](#) to read this story by Judy Fahys of KUER

[Click here](#) to read this media advisory by Canyon Country Rising Tide

06/10/16

'The well needs to be plugged' — Utah goes after nonproducing oil wells on federal leases

[Click here](#) to read this important story by Brian Maffly of the Salt Lake Tribune

[Click here](#) to read this story by Robert Gehrke of the Salt Lake Tribune called "Oil Bust Hitting Eastern Utah Hard."

ADMINISTRATIVE RECORD OF HOT ROD

[Comment Letter Burt DeLambert 4 May 2016](#)

[Division Of Oil Gas And Mining Exhibits 25 April 2016](#)

[Motion To Approve Stipulation To Judgment Or Dismissal Stipulation Proposed Order 23 May 2016](#)

[Notice Of Agency Action 11 April 2016](#)

[Order Approving Stipulation To Judgment Or Dismissal 24 May 2016](#)

[Response Letter Bureau Of Land Management 9 May 2016](#)

[Response Of Hot Rod Oil To Notice Of Agency Action 3 May 2016](#)

06/06/16

Water Justice Symposium at University of Colorado, Boulder

Living Rivers provided financial assistance to ensure tribal participation from the Colorado River Basin in this very successful event at CU, Boulder. Many thanks to the professors for inviting us!

[2016 - Indigenous Water Justice Symposium](#)

[2016 - Martz Summer Conference Program](#)

06/01/16

Action Alert to stop the strip mining and retorting of oil shale (kerogen) in eastern Utah

From Earthjustice:

[Click here](#) to record your comments on this Earthjustice web page.

From Western Resource Advocates:

[Click here](#) to visit this action alert from Western Resource Advocates

For more information about the oil shale EIS for Enefit Corporation, please visit

[this website](#)

Narrative: The Bureau of Land Management has announced that it would pave the way for dirty oil shale development in the Uinta Basin, near Utah's scenic Book Cliffs and the Green and White rivers.

The plan would permit Enefit, a foreign company, to build oil, gas and electric transmission lines across miles of public land to enable up to 9,000 acres of strip mining for oil shale. We have until June 14 to write the BLM and stop this plan from going through!

Oil shale is not oil at all, but a rock that, if superheated to hundreds of degrees for long periods, will release a goo that can be further refined into liquid petroleum.

Current oil shale technology requires that the land be effectively strip mined, which destroys wildlife habitat and requires massive amounts of water—already precious and dwindling in the arid and over-allocated Colorado River basin where oil shale rocks are found. It would likely also require large amounts of energy—and huge amounts of climate pollution—just to process the rock into petroleum.

Enefit hopes to produce 50,000 barrels of petroleum a day, every day, for 30 years. The company estimates that producing and burning this fuel will cause nearly 40% more greenhouse gas emissions than similar amounts of regular oil. To prevent the worst impacts of climate change we need to be moving to cleaner fuels, not dirtier ones.

For years Earthjustice has worked with groups in this region to stop any efforts to move forward with oil shale development. Now the public has an opportunity to send a message to the BLM that it should stop subsidizing dirty fossil fuels and not allow Enefit to use our lands to pollute the climate, poison the air and guzzle water from our shrinking rivers.

05/24/16

Bears Ears Opponents Posting Phony Fliers & Letters to Scare Utah Navajos

June 5, 2016 [Click here](#) to read this story by Juliet Eilperin of The Washington Post

May 24, 2016 - [Click here](#) to read this story by Paul Rolly of the Salt Lake Tribune

May 18, 2016 - [Click here](#) to read this story by Robert Gehrke of the Salt Lake Tribune

April 28, 2016 - [Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

April 20, 2016 - [Click here](#) to read this story by Thomas Burr of the Salt Lake Tribune

August 21, 2015 - [Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune

July 28, 2015 - [Click here](#) to read this story by Thomas Burr of the Salt Lake Tribune

05/16/16

Upstream & Downstream Voices: Short Film Festival? and Forum

[CLICK HERE](#) for news clips of the event

[CLICK HERE](#) for the poster of the event

FOR IMMEDIATE RELEASE

Contacts:

John Weisheit of Living Rivers - 435-260-2590

Bradley Angel of Greenaction - 415-722-5270

Indigenous & Community Voices to Protect the Colorado River, Its Tributaries, People and Sacred Places

What: Upstream Downstream Short Film Festival and Forum

When: Tuesday May 24th at 7pm ?Where: Grand Center (182 N 500 W, Moab, Utah)

Admission: Free (donations welcomed to help cover costs)

Moab, Utah – In the face of ongoing threats to the Colorado River, its tributaries, people and sacred places, the “Upstream – Downstream Film Festival & Forum” will be held in Moab, Utah on Tuesday, May 24th at 7 pm.

The evening will feature four short films as well as speakers from tribes in Utah and Arizona. Concerned about the proposed Green River nuclear power plant and funding cuts in the cleanup of radioactive uranium tailings next to the Colorado River, tribal leaders and Elders from the Colorado River Indian Tribes will be traveling nearly 600 miles to Moab from their home along the river in Parker, Arizona for the film festival and forum.

They will be joined by tribal members from the White Mesa Ute Community, Hopi Tribe, Navajo Nation and Uintah Ouray Ute Tribe who will discuss efforts to protect the rivers, people and sacred sites from

destruction and desecration. Local Moab residents and grassroots groups concerned about pollution, climate change and protection of indigenous sacred sites are organizing the film festival and are working to bring together “upstream and downstream” communities and tribes in Utah and Arizona to strengthen ongoing efforts.

The films to be screened are:?

Half Life - the story of American's last uranium mill? In southeast Utah lies America's last remaining Uranium Mill. The Ute Mountain Ute Tribe worries that lax regulations and the mill's aging infrastructure threaten their water supply and way of life.??

Marking of a Milestone? - The Colorado River Indian Tribes are working to protect the river and sacred sites, and are facing challenges from industrial scale solar power projects in the Mojave Desert.??

Defending the Sacred - ?Story of the long battle by the Colorado River Native Nations Alliance and environmental justice allies that defeated a nuclear waste dump proposed on sacred land at Ward Valley near the Colorado River.??

Bears Ears: The Movement to Protect a Cultural Landscape - ?Hear about the effort by Native Nations to protect the Bear's Ears area, a place rich in indigenous history and culture in a landscape of canyons, mesas, arches, red rocks and the Bear's Ears twin buttes.

###

This event is sponsored by Canyon Country Rising Tide, Uranium Watch, Greenaction, and Living Rivers.

05/08/16

Living Rivers' comments on Draft EIS for Operations at Glen Canyon Dam

The Long-Term Management and Experimental Plan (LTEMP)

[CLICK HERE](#) to read the comment letter of Living Rivers, Colorado Riverkeeper, Center for Biological Diversity, River Runners for Wilderness, Save the Colorado, and Poudre Waterkeeper

Recent News on LTEMP DEIS

[April 26, 2016 - Arizona Daily Sun](#)

[January 20, 2016 - Vail Daily](#)

Additional Information

[CLICK HERE](#) to read LR's scoping comments of January, 2012

[Glen Canyon Dam Draft EIS Released After Six-year Delay](#)

[Glen Canyon Dam Long-Term Experimental and Management Plan & Environmental Impact Statement](#)

05/05/16

UMTRA project may take until 2034 to finish, county liaison says

[Click here](#) to read about the tour of the UMTRA site by various Indian tribes of the Colorado River.

[Click here](#) to read this story by Jeff Richards of the Moab Times-Independent called "UMTRA Project May Take Until 2034 to Finish, County Liaison Says"

[Click here](#) to read this story by Rudy Herndon of the Moab Sun News called "31 Axed in UMTRA Layoffs"

[Click here](#) to read this story by Molly Marcello in Moab Times-Independent called "Thirty to 35 Positions to be Eliminated 'Indefinitely' at UMTRA Site"

[Click here](#) to read this story by Eric Trenbeath in Moab Sun News called "UMTRA Job Cuts Loom"

4/26/2016

Skepticism over New Management Plan for Glen Canyon Dam

[April 26, 2016 - Arizona Daily Sun](#)

[January 20, 2016 - Vail Daily](#)

04/25/16

Big CAP Cuts Coming as 3 State Water Agreement Nears

[Click here](#) to read this story by Tony Davis of the Arizona Daily Star

04/06/16

Obama's Interior Department Pushes Oil Shale Plan Threatening Massive Climate Pollution, Water Use

[Click here](#) to read this story by Ami Joi O'Donoghue of Deseret News

[Click here](#) to read this story by Brian Maffly of Salt Lake Tribune

###

[CLICK HERE](#) to read the press release by coalition of NGOs

For Immediate Release, April 6, 2016

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SALT LAKE CITY— The Bureau of Land Management announced this week that it is moving toward allowing dirty oil shale development that could be a double whammy for the environment, unleashing nearly a half a billion tons of greenhouse gases and consuming vast amounts Colorado River basin water. It would be the first commercial oil shale production facility in the United States.

The Bureau said that on April 8 it will release a draft environmental impact statement for the “Enefit American Oil Utility Corridor Project.” It would allow Enefit, an Estonian company, to build water, oil, gas and electric transmission across federal public land in Utah to enable oil shale mining on state or private land. Enefit hopes to process up to 1.2 billion barrels of kerogen oil — one of world’s most carbon-polluting fuels — with estimated lifecycle greenhouse gas emissions of up to 450 million tons of carbon dioxide equivalent, about the same as 100 coal-fired power plants emit in a year.

“President Obama was right when he said in his State of the Union that ‘we’ve got to accelerate the transition away from old, dirtier energy sources’,” said Ted Zukoski, an attorney at Earthjustice. “It’s time BLM got the memo and stopped wasting taxpayer money subsidizing companies that would foul our atmosphere and endanger our planet, and our future.”

“The Interior Department is working against President Obama’s climate goals here,” said Taylor McKinnon with the Center for Biological Diversity. “Enabling the development of one of the world’s dirtiest fossil fuels is the opposite of climate leadership. The administration should abandon this project now.”

“We don’t need to take on this environmental disaster that comes with developing the dirtiest fuel on the planet — oil shale,” said Rob Dubuc, senior staff attorney at Western Resource Advocates. “Renewable energy innovations and improvements in energy efficiency make this fuel unnecessary to develop. BLM should not advance this project.”

The draft environmental impact study comes only months after the United States and countries around the world committed, at the Paris climate negotiations, to the goal of limiting global warming to 1.5 degrees Celsius above preindustrial levels. Reaching that goal will require dramatic reductions in carbon pollution — the key driver of climate change — and leaving the vast majority of fossil fuel reserves in the ground. Enefit’s mining facility would expand development and use of one of the world’s highest carbon fuels.

“There is more energy in a similarly sized baked potato than in a chunk of oil shale,” said Steve Bloch, legal director for the Southern Utah Wilderness Alliance. “We know that burning oil shale in a giant oven can produce shale oil; the question that needs to be asked is whether proceeding with this type of project makes any sense in a carbon constrained 21st century. The unequivocal answer is no. The time has come to turn our backs on the carnival barker’s promise that oil shale will be answer to our nation’s energy needs.”

“It is true that Enefit has made the mining and production of oil shale work for the energy needs of Estonia. However, Estonia also produces more greenhouse gas emissions per capita than other European countries, including Russia,” said John Weisheit with Living Rivers and Colorado Riverkeeper. “What Estonia has, that Utah does not, is ample water supplies to process that oil shale. Ironically, the similarity between the governments of Utah and Estonia is their subsidy of dirty energy projects with public money.”

The proposed facility will be located in the Uinta Basin, approximately 12 miles southeast of Bonanza in Uintah County, Utah, near the Green and White Rivers. The project is designed to develop oil shale mining and a shale oil production complex, at full build-out producing about 28 million tons of raw oil shale

ore rock per day and 50,000 barrels per day of refinery-ready shale oil from the Green River Formation. "Oil shale is a thirsty industry," said Anne Mariah Tapp with the Grand Canyon Trust. "The Colorado River Basin is already looking at up to a 27 percent decrease in April to July flows due to climate impacts. At a rate of up to four barrels of water per barrel of oil, Enefit's project poses an unacceptable threat to limited Colorado River Basin water supplies. Both in terms of carbon footprint and water demands, the West's water future would be drastically compromised by this oil shale program."

"The legacy of the Green River will live or die on the decisions we as a country make here and now," said Lauren Wood with Green Riverkeeper. "The Green River watershed cannot survive as a vibrant source of life in a desert if the BLM continues to view the landscape it runs through as a source of death and climate devastation. It's time to close this chapter of our shared history where we strayed into such extreme and dangerous forms of energy; that isn't our legacy, it's our nightmare."

"This oil shale project would be another significant source of pollution in an area that just can't take any more," said Dr. Brian Moench with Utah Physicians for a Healthy Environment. "During the drilling boom of 2013 the air pollution in the Uinta Basin was literally off the charts, as much as would be expected from 100 million cars, eight times more cars than in all of Los Angeles. It would be unconscionable to allow anything that would make that even worse."

"A century's worth of failed efforts has demonstrated that trying to turn rocks into oil is a fool's errand, but somehow Enefit expects a different result this time," said Bobby McEnaney, a senior analyst for the Natural Resources Defense Council. "The last thing this administration should be considering is a proposal that amount to fossil fuel alchemy, particularly when cleaner energy sources are readily available."

The Bureau of Land Management's webpage for the project is [HERE](#).

[Click here](#) to see a high resolution map of Enefit's oil shale project and the Uinta Basin of Utah by the Grand Canyon Trust

[Click here](#) to see a high resolution photo of the White River by Ray Bloxham of the Southern Utah Wilderness Alliance

03/29/16

More Than 45 Organizations Back Historic Legal Petition That Takes Aim at Ocean-drilling Damage to Climate, Wildlife, Communities

For Immediate Release, March 29, 2016

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Historic Petition Urges Obama to Halt All New Offshore Fossil Fuel Leases

WASHINGTON— More than 45 climate, conservation, indigenous and coastal organizations representing the major coastal regions of the United States filed a legal petition today calling on President Obama to align U.S. energy policy with his climate goals by issuing an executive order to end new oil and gas lease auctions in federally controlled oceans — including the Arctic, Atlantic and Gulf of Mexico.

The order, under the authority of the Outer Continental Shelf Lands Act, would make federally managed waters that have not already been leased to industry unavailable for new leases. Halting new fossil fuel leases on more than 1 billion acres off America's coasts would keep up to 62 billion tons of carbon emissions in the ground — the pollution equivalent of more than 16,000 coal-fired power plants.

The order would be a step toward limiting global warming to 1.5 degrees Celsius above pre-industrial levels, consistent with the 2015 Paris Agreement, by preventing the leasing of new offshore oil and gas. To stay within the 1.5 degree limit, the vast majority of known fossil fuels must remain unburned and kept safely in the ground.

The petition, led by the Center for Biological Diversity, comes on the heels of the administration's proposed five-year plan governing future federal offshore oil and gas leasing. The proposal would expand leasing in the Arctic and Gulf of Mexico, risking more disastrous spills, putting wildlife and communities in harm's way and deepening U.S. dependence on the fossil fuels that are driving the global climate crisis.

Despite its name, leases outlined in the five-year program would allow for oil and gas production over the next 40 to 70 years, long past the point that scientists say fossil fuels should be phased out.

Continuing to rely on fossil fuels decades into the future undermines a rapid and essential transition to renewable energy. The petition calls on President Obama to align federal leasing policy with U.S. climate change goals while promoting a rapid transition to a clean energy economy, starting with a halt in offshore leasing.

Groups joining today's petition are the Center for Biological Diversity, Food and Water Watch, Friends of the Earth, Greenpeace, Oil Change International, Rainforest Action Network, Waterkeeper Alliance, Alaska Inter-Tribal Council, Alaska Rising Tide, Altamaha Riverkeeper, Apalachicola Riverkeeper, Assateague Coastal Trust, Atchafalaya Basinkeeper, Cahaba Riverkeeper, California Coastal Protection Network, Chesapeake Climate Action Network, Clean Ocean Action, Cook Inletkeeper, Courage Campaign, Crystal Coast Waterkeeper, Emerald Coastkeeper, Environmental Defense Center, Environmental Youth Council, Eyak Preservation Council, Friends of Matanzas, Gulf Restoration Network, Institute for Fisheries Resources, Kootenai Environmental Alliance, **Living Rivers**, Louisiana Bucket Brigade, Matanzas Waterkeeper, Miami Waterkeeper, Native Conservancy (Land Trust), Ocean Conservation Research, Pacific Coast Federation of Fishermen's Associations, Preserve Our Wildlife, Prince William Soundkeeper, Resisting Environmental Destruction on Indigenous Lands (REDOIL), Riverkeeper, Sea Turtle Oversight Protection, Seneca Lake Guardian, Suncoast Waterkeeper, Turtle Island Restoration Network, Wabash Riverkeeper Network, Whale and Dolphin Conservation, WILDCOAST and WildEarth Guardians.

Download the [petition](#).

Statements from petition signatories: "President Obama recognized oil drilling off the Atlantic coast was a bad idea. But the same logic — that we must protect our climate, wildlife and coastal communities from oil spills and carbon emissions — holds true for all ocean coasts," said Miyo Sakashita, oceans program director at the Center for Biological Diversity. "So we're calling on the president to honor his climate change pledges and end future fossil fuel leasing from all federal offshore areas."

"President Obama has acknowledged that in order to prevent climate catastrophe, we must transition away from dirty fossil fuels and keep the vast majority of them in the ground. He has the authority to drive that transition by permanently protecting our public waters from oil and gas exploitation," said Marissa Knodel of Friends of the Earth. "To cement his climate legacy and honor his administration's climate goals, President Obama should not offer any new leases in the 2017-2022 offshore drilling program and withdraw all federal offshore areas from future leasing."

"It's time to stop the corporate giveaway of public lands and waters. Obama has the power to create real, lasting change by ending the fossil fuel leasing program. An executive act would cut 25 percent of U.S. climate change emissions and set the stage to transition beyond fossil fuels," said Amanda Starbuck, program director for Rainforest Action Network.

“President Obama must apply a climate test to offshore drilling and the rest of our energy policy. When he does, he’ll see that offshore drilling fails that climate test,” said David Turnbull, campaigns director at Oil Change International.

“Any areas being opened up for leasing now will not even begin producing oil and gas for at least five years. By then we should be well on our way toward ending destructive fossil fuel extraction, not adding new rigs,” said Marc Yaggi, executive director of Waterkeeper Alliance. “By focusing our investments on a clean-energy future, the Obama administration will secure its climate legacy, ensuring economic and environmental resilience for future generations.”

“The recent Refugio Oil Spill off the coast of California reminds us of the inevitable risks of offshore oil and gas development,” said Linda Krop, chief counsel of the Environmental Defense Center. “These risks are compounded by the devastating and long-lasting effects of climate change on our coastlines, communities, wildlife and public health.”

“Alaska stands on the front lines as an Arctic region whose ecosystems and communities are some of the most dramatically affected by climate change,” said Stephen Jolley of Alaska Rising Tide. “If we are committed to social justice and equality for all, we must act as allies to those communities whose social and spiritual health relies on their continued relationship to the land by halting operations that would send our bountiful home into further decline.”

“From sea level rise and extreme storms fueled by climate change, to coastal erosion, to frequent spills and accidents, the people of the Gulf of Mexico are on the frontline of the impacts from the oil and gas industry,” said Cynthia Sarthou, Executive Director of the Gulf Restoration Network.

“Even after the BP disaster, the industry and its political allies continue to actively resist new safety reforms. It is time for the President to end new offshore leasing and promote a transition to a more stable, sustainable and equitable economy for our communities and climate.”

“While we were glad President Obama listened to the communities and citizens of the Atlantic coast and removed that area from offshore leasing, our work is not done,” said Matanzas Riverkeeper Neil A. Armingeon. “We must support those who continue to fight oil and gas development in their communities, and we hope President Obama will once again do what’s right and end new leasing in the Gulf and the Arctic.”

Background

The American public owns nearly 650 million acres of federal public land, and more than 1.7 billion acres of Outer Continental Shelf (the oceans between 3 and 200 miles off the coast) — and the fossil fuels beneath them. This includes sensitive oceans and coastlines, including Alaska’s Chukchi Sea, the Gulf of Mexico and the Eastern Seaboard. These places and fossil fuels, held in trust for the public by the federal government, are administered by the Department of the Interior for potential leasing.

Over the past decade, the combustion of federal fossil fuels has resulted in nearly a quarter of all U.S. energy-related emissions. An August report by EcoShift consulting, commissioned by the Center for Biological Diversity and Friends of the Earth, found that remaining federal oil, gas, coal, oil shale and tar sands that have not been leased to industry contain up to 450 billion tons of potential greenhouse gas pollution.

Burning the recoverable oil and gas under federal waters would release 61.5 billion tons of greenhouse gases into the atmosphere, the equivalent of driving 13 billion passenger cars for one year.

As of this year, 67 million acres of public fossil fuels were already leased to industry, an area more than 55 times larger than Grand Canyon National Park and containing up to 43 billion tons of potential greenhouse gas pollution. Last year Sens. Merkley (D-Ore.), Sanders (D-Vt.) and others introduced legislation to end issuance of new federal fossil fuel leases.

Days later President Obama canceled the Keystone XL tar sands pipeline, saying, "Because ultimately, if we're going to prevent large parts of this Earth from becoming not only inhospitable but uninhabitable in our lifetimes, we're going to have to keep some fossil fuels in the ground rather than burn them and release more dangerous pollution into the sky."

Download a letter from more than 400 groups and climate leaders urging President Obama to [halt new federal fossil fuel leasing](#).

Download [Grounded: The President's Power to Fight Climate Change, Protect Public Lands by Keeping Publicly Owned Fossil Fuels in the Ground](#) (this report details the legal authorities with which a president can halt new federal fossil fuel leases).

Download [The Potential Greenhouse Gas Emissions of U.S. Federal Fossil Fuels](#) (this report quantifies the volume and potential greenhouse gas emissions of remaining federal fossil fuels).

Download The Potential Greenhouse Gas Emissions [fact sheet](#).

Download [Public Lands, Private Profits](#) (this report details the corporations profiting from climate-destroying fossil fuel extraction on public lands).

03/22/16

SECURE Water Act 2016 Report to Congress

[Click here](#) to read Reclamation's press release (archived [here](#))

[Click here](#) to read the Report on the Colorado River

Additional Information: SECURE Water Act

[2009 - Public Law: SECURE Water Act](#)

[2009 - SECURE Water Act](#)

[2011 - SECURE Water Report](#)

[2016 - SECURE Water Report](#)

[Chapter 3 - Colorado River](#)

Water Sustainability (From the White House)

[2016 - Commitments To Action On Building Sustainable Water Future](#). White House.

[2016 - Long-Term Drought Resilience Action Plan](#). White House.

[2016 - Presidential Memorandum Building National Capabilities for Long-Term Drought Resilience](#). White House.

03/16/16

Living Rivers Potash Report

[CLICK HERE](#) to read the report

[Click here](#) to read and listen to the broadcast on KUER (radio).

Executive Summary

The Bureau of Land Management (BLM) is currently preparing a management plan — known as the Moab Master Leasing Plan — to govern oil, gas and potash leasing and development on approximately 750,000 acres of public lands in eastern Utah. In this report, we detail the important environmental and economic risks of increased potash development and outline strategies for mitigating these risks by adopting responsible zoning decisions, best management practices, and other measures.

Definition: Potash is a type of salt used mainly as a fertilizer.



Potash evaporation ponds near Moab

Under its most recent proposed plan, the BLM estimates that each year potash development would require about 2.8 billion gallons of water. These enormous water demands would impose a considerable burden on the Colorado River Basin where existing supplies are already depleted and demand for water is projected to rise.

Water availability is not the only problem. Low potash prices and market volatilities make future development risky. Market downturns, which have been frequent for potash, could halt operations and leave behind abandoned facilities and infrastructure. Potash development could also negatively impact existing, stable economic output. Outdoor recreation on public lands around Moab — hiking, biking, rafting, jeeping, sightseeing, to name a few — continue to provide sustainable and durable economic growth to local communities. These critical economic contributors must be protected as the BLM seeks to increase potash development around Moab.

While the challenges are many, there are a few concrete steps the BLM can follow to mitigate the impacts of proposed potash development. For starters, because of the water demands and the economic risks involved, BLM should carefully regulate any future potash development on the public lands around Moab. Requiring companies to prove the economic viability of their operations before development is initiated would help ensure proposed developments won't result in abandoned operations with a myriad of impacts to air, water and the local economy. Also, imposing robust protections for air and water quality during production activities, along with strict reclamation and mitigation requirements would help alleviate some of the environmental risks. These types of "best management practices," along with others outlined in this report, are critical to any responsible potash development plan for the public lands around Moab.

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03/15/16

Legal Protest Challenges Fossil Fuels Auction on 8,000 Acres in Colorado

Fracking Threatens Climate, Endangered Fish, Roadless Forests

For Immediate Release, March 15, 2016

Contact:
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Matt Sandler, Rocky Mountain Wild, (303) 579-5162

DENVER— Conservation groups filed a formal administrative protest on Monday against a Bureau of Land Management plan to auction off more than 8,000 acres of publicly owned oil and gas in the San Juan National Forest and Little Snake Field Office in western Colorado.

“Each new federal fossil fuel lease takes us closer to climate disaster,” said Taylor McKinnon with the Center for Biological Diversity. “Leaving a livable climate for future generations requires keeping fossil fuels in the ground now, and we should start with the public lands that President Obama controls.”

The protest, filed by the Center for Biological Diversity, Living Rivers, Utah Rivers Council, Rocky Mountain Wild and Sierra Club, calls on the BLM to abandon its auction plans and keep fossil fuels in the ground to protect the climate, wildlife and public lands. The protest identifies the plans’ failure to analyze climate impacts or consider an alternative that would suspend public lands fossil fuel development to protect the climate.

The protest challenges the Bureau’s failure to protect the endangered Colorado pikeminnow and its Colorado River and San Juan River Basin habitat from the impacts of water depletions caused by oil and gas development, toxic spills, climate change and corresponding declines in river flows. It also challenges leasing on four parcels located on U.S. Forest Service lands designated as roadless areas under the 2011 Colorado Roadless Rule. “We understood that when Congress passed the 2005 Energy Policy Act, it was bad news for the Colorado River basin for this one fundamental reason: That water consumption by the energy corporations would increase the demand for water in an over-appropriated system, compounded by the impairment to the water cycle from greenhouse gas emissions,” said John Weisheit with Living Rivers and Colorado Riverkeeper. “The federal government must make the right choice and deny these permits so people and wildlife will have secure and clean water.”

Monday’s protest is part of a rapidly growing national movement calling on President Obama to define his climate legacy by halting new federal fossil fuel leases on public lands and oceans — a step that would keep up to 450 billion tons of potential carbon pollution in the ground. “Keep It in the Ground” rallies opposed to federal fossil fuel auctions have been growing across the country, and have caused several of those auctions to be postponed.

“BLM’s decision to lease thousands of acres within designated roadless areas undercuts the importance of this designation,” said Matt Sandler with Rocky Mountain Wild. “These undeveloped, contiguous areas

are essential for many species like Canada lynx and Columbian sharp-tailed grouse.” Download the protest [here](#).

Background

The American public owns nearly 650 million acres of federal public land and more than 1.7 billion acres of Outer Continental Shelf — and the fossil fuels beneath them. This includes federal public lands like national forests and wildlife refuges that make up about a third of the U.S. land area — and oceans like Alaska’s Chukchi Sea, the Gulf of Mexico and the Eastern Seaboard. These places and fossil fuels beneath them are held in trust for the public by the federal government; federal fossil fuel leasing is administered by the Department of the Interior.

Over the past decade, the combustion of federal fossil fuels has resulted in nearly a quarter of all U.S. energy-related emissions. An August report by EcoShift consulting, commissioned by the Center for Biological Diversity and Friends of the Earth, found that remaining federal oil, gas, coal, oil shale and tar sands that has not been leased to industry contains up to 450 billion tons of potential greenhouse gas pollution. As of earlier this year, 67 million acres of federal fossil fuel were already leased to industry, an area more than 55 times larger than Grand Canyon National Park containing up to 43 billion tons of potential greenhouse gas pollution.

Last year Sens. Merkley (D-Ore.), Sanders (D-Vt.) and others introduced legislation to end new federal fossil fuel leases and cancel non-producing federal fossil fuel leases. Days later President Obama canceled the Keystone XL tar sands pipeline, saying, “Because ultimately, if we’re going to prevent large parts of this Earth from becoming not only inhospitable but uninhabitable in our lifetimes, we’re going to have to keep some fossil fuels in the ground rather than burn them and release more dangerous pollution into the sky.”

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Download The Potential Greenhouse Gas Emissions [fact sheet](#).

Download [Public Lands, Private Profits](#) (this report details the corporations profiting from climate-destroying fossil fuel extraction on public lands).

03/01/16

Intervenors of Lake Powell Pipeline issue comments to FERC

[Click here](#) to read the comments of the coalition to stop the Lake Powell Pipeline To read all the comments, go to [THIS PAGE](#) of the Federal Energy Regulatory Commission (FERC)

In the text box "Date Range" adjust the range from 12/01/2015 to the present date.

In the text box that says "Docket Number" enter this number **P- 12966**

Click the "Submit" button.

02/05/16

US Oil Sands Halts \$60 Million Utah Project As Prices Tank & Contractors Close

[Click here](#) to read this story by Saqib Rahim of E&E News [Click here](#) to read this story by Dan Healing of the Calgary Herald

[Click here](#) to read this story in the Salt Lake Tribune by Brian Maffly

[Click here](#) to read and listen to this story on KUER by Judy Fahys

[Click here](#) to read this story in the Moab Times-Independent

[Click here](#) to read this story in the Moab Sun News

See also this collection of news regarding the faltering of proposed oil shale projects [HERE](#)

Associated Press

Company slows work on controversial Utah tar sands project

Environmentalists are celebrating after the Canadian company behind a controversial tar sands development in eastern Utah announced it is scaling back work on its project.

Calgary-based U.S. Oil Sands Inc. announced plans Thursday to cut back on construction on its PR Spring project, which is located in the Book Cliffs about 170 miles from Salt Lake City and is 85 percent complete. The company said low oil prices forced two of its major contractors to shutter operations in Utah, and said it didn't have all the financing it needed.

"The oil industry is facing one of the most challenging environments it's ever seen and it is prudent for us to adjust our construction plan accordingly," said US Oil Sands CEO Cameron Todd, adding that the cutback would be designed so it can restart quickly when conditions improve. "The company's actions today help ensure US Oil Sands will be a future industry leader."

While companies extract petroleum from sand in Canada and Venezuela, the \$60 million Utah project would be the first commercial effort of its kind in America. U.S. Oil Sands says it uses natural citrus extract to safely process the sand, but opponents say it will contaminate water and destroy wildlife habitat.

Conservation groups have challenged the permits authorizing the project and have been arrested for chaining themselves to equipment in an effort to thwart construction. But the biggest obstacle appears to be crude oil prices that have tumbled to about \$31 a barrel, down from a peak of \$147 a barrel in 2008.

Rob Dubuc, a Utah-based attorney with the environmental group Western Resource Advocates, says the work slowdown was at least a temporary victory.

"That makes my day and everyone's day who likes clean air, clean water and a friendly climate," he wrote in a blog post on the group's website, arguing that tar sands result in up to three times the carbon pollution of conventional oil.

"Mindless of how ridiculous this policy choice is, Utah politicians continue to declare that the state is "open for business" when it comes to development of these very dirty fossil fuels," Dubuc said, calling the endeavor "a bad idea at any price."

01/11/16

CBD & LR Challenge BLM To Frack 45,000 acres in Utah

The Center for Biological Diversity and Living Rivers on Monday filed a formal administrative protest challenging the Bureau of Land Management's decision to auction more than 45,000 acres of public land in Utah for fracking. The sale, which was postponed in November due to impending protests, includes parcels in the BLM's Moab, Price, Vernal and Fillmore field offices in central and eastern Utah and within the Fishlake National Forest in Sevier County.

"If President Obama wants to limit warming to 1.5 degrees Celsius, as he agreed to do at the Paris climate talks, he needs to end the federal fossil fuel leasing program," said the Center's Taylor McKinnon. "Each new auction undermines that goal with more carbon pollution while destroying fragile Utah canyon country and harming air, water and habitat for imperiled species like endangered Colorado River fish, Mexican spotted owls and greater sage grouse."

The filing calls on the BLM and the Obama administration to cancel the fossil fuel auction and "keep it in the ground." A study commissioned by the Center and Friends of the Earth late last year projects that the potential greenhouse gas pollution from unleased federal fossil fuels is incompatible with any U.S. share of global carbon budgets to keep warming below 2 or 1.5 degrees Celsius, a goal world leaders agreed to in the Paris climate pact. It also found that banning new fossil fuel leases on public lands and oceans would keep up to 450 billion tons of greenhouse gas pollution out of the atmosphere.

"With oil companies in liquidation, a warming climate and dwindling Colorado River supplies, committing more Utah canyon country to fossil fuel industrialization makes no sense," said John Weisheit, conservation director at Moab-based Living Rivers. "Now is the time to transition to clean, renewable energy, and to keep climate-destroying fossil fuels in the ground."

Avoiding dangerous warming requires leaving the vast majority of already proved fossil fuels undeveloped. By opening new fossil fuel deposits, federal fossil fuel auctions perpetuate a stark conflict between the Obama administration's climate goals and its "all of the above" energy policy.

Facing growing public support for the "Keep It in the Ground" movement to end new leases for federal oil, gas and coal extraction, federal officials halted oil and gas auctions slated for Utah and Washington, D.C. Hundreds of people turned out for similar protests last fall in Nevada, Wyoming, Colorado and Alaska. More than 400 organizations and leaders working on the "Keep It in the Ground" campaign have called on Obama to end new federal fossil fuel leases following reports that doing so would keep up to 450 billion tons of greenhouse gas pollution in the ground, and that the president has the legal authority to do so now, without Congress. Those emissions would be incompatible with any reasonable U.S. share of global carbon budgets to avoid catastrophic warming.

[Press Release](#)

[Letter of Protest](#)

[EPA 2015 Impact Analysis](#)

[Knick, et al., 2013: Modeling Ecological Distribution of Greater Sage Grouse Leks](#)

[Incident Report: Vernal Field Office](#)

12/22/17

Preparing For Drier Future Along Colorado River

[Click here](#) to read this story by Ian James of *The Desert Sun*.

This feature is about the procrastination behind Drought Contingency Planning from the seven states of the Colorado River Basin, and that the proposed planning is not robust.

OpEd

2/18/17

Tribune Editorial Board: Bureaucratic kinks may block the Lake Powell Pipeline. Good.

Terry Gilliam's 1985 movie "Brazil" depicts an oppressive society ruled by bureaucrats and red tape. It is so dreary that it doesn't even offer its residents the pleasure of hating a single Big Brother figure, because no one really seems to be in charge.

One scene in particular illustrated how everything just rolls along with seemingly little human agency. That's when poor Archibald Tuttle (Robert De Niro), a man labeled a terrorist because he fixes people's air conditioning systems without authorization, is literally consumed by a storm of paperwork.

In the real world, there was news Tuesday that Utah's proposed Lake Powell Pipeline, a project estimated to cost upwards of \$1 billion, may find itself consumed by federal red tape. But, unlike the tragedy that befell the brave Mr. Tuttle, the sight of this colossal boondoggle disappearing into a blizzard of forms, reports, comment fields and permit applications actually stands to be good news, for Utah and all of the American West.

The Federal Energy Regulatory Commission, aka FERC, Tuesday announced that it had granted the state a permit for one aspect of the plan to pipe water from the rapidly shrinking Lake Powell 140 miles west to the rapidly growing St. George area.

But folks at the Utah Division of Water Resources were somewhat nonplussed to learn that all FERC was permitting was the six hydroelectric generating stations envisioned to be peppered along the pipeline's route — because that's the kind of thing FERC regulates.

All the other stuff — environmental impact concerns for the pipeline and its various water storage facilities — may be sent along to other federal agencies, probably including but not necessarily limited to the National Park Service and the Bureau of Land Management.

Those agencies, and all the public and bureaucratic processes their charters require, may leave the state looking at a cost of much more than the \$30 million it — meaning

state taxpayers — has already laid down on the project. All before a single spade of dirt has been turned.

Whatever delay this turn of events will cause is actually a good thing. Nobody really knows just how much this monstrosity will cost. Whether that cost can reasonably be covered by (possibly staggering) increases in water bills paid by end users or have to be underwritten by the rest of the state. Whether climate change and/or proposed changes in the way the Colorado River is managed will leave enough — or any — water in Lake Powell to be piped.

Ideally, the people who are in charge of managing water in Utah generally and in Washington County in particular would take bureaucratic curve ball as an opportunity to abandon the whole project once and for all and focus all their energies on some extreme conservation measures that are going to be necessary, pipeline or no pipeline.

They can, as Utah politicians are wont to do, blame the feds. We would understand.

OpEd - 12/12/17

Crescendo of crisis on the Colorado

By Richard "Tick" Segerblom

The Nevada Independent

Wow, so this is what it looked like watching Rome burn?

Or in our case, farmers' fields and family taps running dry while Colorado River water managers hole up at Caesars Palace rearranging the deck chairs poolside.

For more than a decade, the crescendo from outside the Palace has been that Southern Nevadans and the other 38 million people reliant on this river should prepare for major shortages. In the past two decades alone, streamflow is nearly 19 percent lower than what we've been taking, and the scientific community warns that we must prepare for shortages of 35 percent or more.

But what will members of the Colorado River Water Users Association be discussing this week under the banner of their "Many Instruments, One Orchestra: The Music of the Basin" conference? A drought contingency plan that at best kicks the can down the road for another year or two, hoping nature decides to dramatically change her tune.

By releasing water from small reservoirs in the uppermost reaches of the basin, combined with some surplus water stored in Lake Mead, they intend to utilize a one-time buffer of some 2.7 million acre feet, which is only equivalent to the current annual supply deficit.

In addition, they propose to add upwards of 1.3 million acre feet in conservation measures in the lower basin. This amount just barely covers the 1.2 million acre feet of

ongoing, annual system losses of seepage and evaporation known as the “structural deficit,” which has never been accounted before, thus adding little in real savings.

We’re still not even treading water here as we watch Lake Powell and Lake Mead recede further. And as these reservoirs drop, what’s going to happen to our water quality as they approach their minimum, “dead pool” levels?

There’s tremendous uncertainty about what will be in that water, and how and if we’ll be able to treat it. And what of the endangered fish, like those in Grand Canyon, that too rely on this diminishing supply. We spend millions each year trying to recover their populations already, and soon they may be exposed to even more precarious conditions.

Most importantly, when are we going to make the indigenous peoples of this basin whole? Sure, some of the tribes who have secured water rights from this system will be presenting to the “orchestra” this week, but there are at least 13 others whose claims amount to a considerable total that are yet to be determined. This includes the Hopi Tribe, which maintains the longest continuous settlement in the entire basin and whose supply is tainted with deadly heavy metals.

Instead of shuffling the deck, these water managers must accept that their house of cards is teetering dangerously. Nonetheless, they want to build more dams and diversions in Colorado and toss a straw into Lake Powell for yet more golf course developments in St. George.

We need to be talking about less, not more. What kind of benefits we might see by operating just one major reservoir on the Colorado as opposed to two. Can storage needs be concentrated in Lake Mead, supplemented by expanded underground, off-stream aquifer recharge such that Lake Powell can be removed from the system? Can we work to recover the high-value ecosystem in Grand Canyon National Park and submerged sacred sites under Lake Powell while we build increased resilience in our own water supply/demand equation?

And Las Vegas, let’s not forget that Glen Canyon Dam nearly failed in 1983, so filling that reservoir remains risky business. Should it fail, our own infrastructure for extracting water will be compromised, and a 70-foot wall of water could be tumbling over Hoover dam for eleven days.

Las Vegas is the community that has its roots at the beginning of the Colorado River’s plumbing system, where bold ideas both settled the West and brought much hardship and suffering to its native peoples. We need bold ideas now that recognize this legacy to correct the problems, not some symphony of soothsayers trying to convince us everything is going to be all right.

###

Richard S. “Tick” Segerblom is an attorney and politician. First elected to the Nevada Legislature to represent Assembly District 9 in 2006, he was elected to the Nevada Senate in 2012 to represent District 3. He intends to leave the Nevada Legislature to

run for a Clark County Commission seat in District E to replace term-limited Commissioner Chris Giunchigliani. District E represents part of the Strip and extends to much of the eastern Las Vegas Valley.

12/12/17

Lake Powell Pipeline Approved for Environmental Analysis (EIS)

Feds give initial OK to Utah's application to build Lake Powell pipeline — but with a major, unexpected twist

Salt Lake Tribune
By Emma Penrod

The Federal Energy Regulatory Commission has given its initial approval to Utah's application to build the controversial Lake Powell Pipeline to pipe Colorado River water from Glen Canyon Dam, above, 140 miles to St. George — but many hurdles remain for the project.

Federal regulators have tentatively approved Utah's application to build the Lake Powell Pipeline, but they've also thrown the state an unexpected curveball.

On Tuesday, the Federal Energy Regulatory Commission (FERC) issued a notice that it had accepted Utah's application to construct the 140-mile pipeline, intended to pump Colorado River water from Glenn Canyon Dam to St. George and 12 other southern Utah communities. That, FERC said, clears the way for a full study of the project's environmental impacts.

"This is a major milestone toward meeting Southern Utah's need to diversify its water supply and develop additional resources to meet anticipated demand," Eric Millis, director of the state Division of Water Resources, said in a statement. "Permitting a water project is a lengthy process and this is a significant step."

But FERC also said it was reviewing just how much jurisdiction it actually has over the project — a move that could slow down ultimate approval for the billion-dollar-plus underground pipeline, which is already running behind schedule.

State officials filed the permit application with FERC in 2016 because the Lake Powell Pipeline — at least as currently proposed — is expected to include hydroelectric generating stations along its route through Arizona and Utah. Officials with the Division of Water Resources had long expected that FERC would also be the lead federal agency on the entire project, giving it a key role in obtaining additional permits.

But in its Tuesday notice, FERC said it may only have jurisdiction over the six hydroelectric sites along the route, not the whole pipeline and network of pumping stations and water storage facilities.

If that proves true, it could put Utah more directly in charge of navigating a lengthy review from a host of other federal agencies, forcing additional work on to the Division of Water Resources, which has already spent more than \$30 million in taxpayer funds to obtain permits for the pipeline so far.

As proposed, the pipeline would pump water from Lake Powell about 50 miles northwest to a high point within the area of the former Grand Staircase-Escalante National Monument, according to the FERC notice. The water would then flow just under 90 miles downhill through a series of six hydroelectric turbines before arriving at Sand Hollow Reservoir, east of St. George.

Officials with the Division of Water Resources have said they expect the pipeline to cost between \$1.1-\$1.8 billion.

FERC spokeswoman Celeste Miller said Tuesday the agency had assumed it would not take jurisdiction over the entire water project — just the hydroelectric turbines. She said the commission still planned to produce documentation required by other agencies, such as the National Park Service and the Bureau of Land Management, that have a say in the pipeline's fate.

A spokesman for the Division of Water Resources said late Tuesday it was unclear exactly what the FERC announcement means, given that state officials had written their application assuming FERC would lead the permitting process.

While a shift in jurisdiction would not necessarily boost the number of permits Utah officials have to obtain before breaking ground, those permits could be subject to new and different kinds of review if FERC does not play the role state leaders thought, raising the potential for further delays.

Zach Frankel, executive director of the Utah Rivers Council and a long-time opponent of the pipeline, noted that if other agencies play a bigger role in the permitting process, that could subject the pipeline to more in-depth review of whether the project is necessary.

Establishing the purpose and need for a pipeline, said Frankel, will be an important part of the environmental assessment study, which FERC said will be conducted according to the National Environmental Policy Act.

"If it isn't properly satisfied," Frankel said, "the courts can rule against an agency" in the event a permitting decision is challenged.

But FERC's move could also allow the agency to evaluate the pipeline solely with

respect to demand for hydroelectricity, and not water — opening the possibility that state officials would not have to prove, as has been asserted, that the pipeline is necessary to prevent southwestern Utah from running out of water.

“By not considering the rest of the project features, it could be easier to approve,” Frankel said in an email. “It’s not a slam dunk for anyone.”

FERC has also asked for public comments regarding the pipeline proposal. Comments are due in early February and may be submitted online at ferc.gov/docs-filing/ecomment.asp

Comments should reference the proposal’s docket number, P-12966-004.

[Click here](#) to read this story by David DeMille of *The St. George Daily Spectrum*

[Click here](#) to read the document from FERC that initiates the analysis

[Click here](#) to read this OpEd from Robert Gehrke of *The Salt Lake Tribune*

[Click here](#) to learn more about the Lake Powell Pipeline (LLP) and to review the archive of documents

[Click here](#) to learn more about the LLP water stored in Flaming Gorge; the Ultimate Phase water right.

12/03/17

A county in Utah wants to suck 77 million gallons a day out of Lake Powell, threatening the Colorado River

[Click here](#) to read this story by Kevin Schneider of The Los Angeles Times

12/01/17

Bureau of Reclamation to negotiate water exchange with State of Utah Plan would divert river water to Lake Powell pipeline

The Times-Independent. Moab, Utah

The U.S. Bureau of Reclamation (USBOR) and State of Utah are initiating negotiations for a water exchange contract, which proposes exchanging the state’s assigned Green River water right for the use of Colorado River Storage Project water released from Flaming Gorge Dam. The negotiation meeting is scheduled for Monday, Dec. 4 at 1 p.m.

at the Dixie Convention Center, located at 1835 South Convention Center Drive in St. George.

According to a press release from USBOR, the exchange will provide Utah with a reliable and certain water supply, while assisting the bureau in meeting its legal obligations. It will enable part of the state's Colorado River apportionment to flow from Flaming Gorge Dam to Lake Powell for diversion into Utah's proposed Lake Powell Pipeline.

The negotiation meeting is open to the public. The public will have the opportunity to ask questions and offer comments pertaining to the exchange during an open house period immediately prior to formal negotiations and during a comment period following the negotiation session.

The proposed exchange contract and other pertinent documents will be available at the negotiation meeting or can be obtained on the bureau's website at:

<https://www.usbr.gov/uc/provo/index.html>, under "News and Highlights."

[Draft Contract](#)

Additional Information:

[Click here](#) to read about the negotiations for the Green River Blocks

[Click here](#) to learn more about the Lake Powell Pipeline (LLP) and to review the archive of documents

[Click here](#) to learn more about the LLP water stored in Flaming Gorge; the Ultimate Phase water right.

11/28/17

Supporters Seeking Rights for Colorado River Meet in Denver, Amend Complaint

[Click here](#) to read this story by Lindsay Fendt of Aspen Journalism

11/27/17

Supreme Court won't hear California water agencies' appeal in tribe's groundwater case

[Click here](#) to read this story by Ian James of The Desert Sun

10/19/17

USBR starts Green River water exchange negotiations with Utah

Clean Technology Business Review

The US Bureau of Reclamation and State of Utah are initiating negotiations for a water exchange contract, which proposes exchanging the state's assigned Green River water right for use of Colorado River Storage Project water from Flaming Gorge Dam.

The first negotiation meeting is scheduled for Monday, October 30, 2017, at 1:00 p.m. at the Uintah Conference Center, 313 East 200 South, Vernal, UT 84078.

The exchange will provide Utah with a more reliable and certain water supply, while assisting Reclamation in meeting its legal obligations.

All negotiation meetings are open to the public as observers, and the public will have the opportunity to ask questions and offer comments pertaining to the exchange during an open house period immediately prior to formal negotiations and a brief comment period following the negotiation session.

"The proposed exchange agreement contract and other pertinent documents will be available at the negotiation meeting, or can be obtained on Reclamation's website at: <https://www.usbr.gov/uc/provo/index.html>, under "Current Focus."

Draft contract archived [HERE](#)

Additional Information:

[Click here](#) to view the contract for Lake Powell Pipeline

[Click here](#) to learn more about the Lake Powell Pipeline (LLP) and to review the archive of documents

[Click here](#) to learn more about the LLP water stored in Flaming Gorge; the Ultimate Phase water right.

10/17/17

Contingency Planning: Latest Document

[Click here](#) to view the latest presentation of drought contingency planning in the Upper Basin of the Colorado River

10/15/17

One In 30 Wells in the West Failed in Recent Years

[Click here](#) to read this story by Emily Benson in High Country News

[Click here](#) to read the research paper

10/06/17

Why a Colorado River Reunion with the Sea isn't a Guarantee

[Click here](#) to read this story by Emily Benson of High Country News

10/03/17

Federal oil and gas leases mired in protests over pollution worries for Utah's Uinta Basin

By Brian Maffly of the Salt Lake Tribune

[Click here](#) to visit the SL Trib web site

Environmental, public health and wilderness advocates warn that Dec. 11 auction of leases on 94,000 acres in eastern Utah threatens to worsen region's ozone crisis.

The Bureau of Land Management's next auction of oil and gas leases in Utah is under fire from a multitude of environmental, public health and wilderness groups. Topping the list of concerns is the likelihood that the Dec. 11 lease sale would worsen Uinta Basin's persistent winter-time ozone levels.

The U.S. Environmental Protection Agency is poised to declare Duchesne and Uintah counties out of compliance for emissions of ozone, a pollutant whose high concentrations are attributed to oil and gas development. That determination, expected as soon as Oct. 15, would trigger emission-reducing measures under the Clean Air Act that are expected to put on a damper on future drilling and require industry to stem the clouds of fumes rising from the oil patch.

Industry representatives say such rules will safeguard air quality, while allowing new oil and gas leases to be issued.

"One of the worst ways to address ozone is to stop economic development in the Basin. That would put the area in a double whammy," said Kathleen Sgamma, president of the oil and gas industry trade group Western Energy Alliance.

But environmental activists argue all federal leasing should be holstered here until the worsening ozone situation is reversed. The upcoming on-line auction will offer 75 leases covering 94,000 acres in the Basin and Emery County.

“The region is suffering a smog crisis and the Bureau of Land Management is turning a blind eye to the problem,” said Jeremy Nichols, climate and energy program manager for the environmental group WildEarth Guardians. “Legally they are not allowed to issue more drilling permits until they can show their actions are solving the problem. This is a public threat. This is what matters more than anything else in northeastern Utah.”

WildEarth is among many groups filing formal protests of the auction in recent days.

Ozone is a corrosive three-atom oxygen molecule formed not far off the ground when volatile organic compounds, also known as VOCs, interact with sunlight. Usually a summer phenomenon, high ozone occurs in winter over the Uinta Basin when snow covers the ground and inversions prevent atmospheric mixing.

Joined by the Center for Biological Diversity, Living Rivers and other environmental groups, Utah Physicians for a Healthy Environment has also highlighted the ozone question its protest.

“A pollution crisis will inevitably lead to a public health crisis, and there is preliminary evidence that one may already be occurring with high rates of perinatal deaths in the Uinta Basin,” said Dr. Brian Moench, president of the physicians group. “The health risks go well beyond ozone and particulate pollution. Although VOCs are not addressed by EPA national standards, they likely represent the greatest toxicity to the population, especially for infants and pregnant mothers.”

In its environmental review released last month, however, the BLM noted that leasing won’t in itself release pollutants that lead to ozone formation and other emissions. Those comes from what happens later—drilling and fracking wells and transporting oil and gas.

“At the leasing stage it is not known how much or even whether development will occur on those leases,” Sgamma said. “Once an implementation plans is in place, there is a process to ensure ozone levels will get down to the health standard. Any new development will have to be permitted accordingly.”

Shaping up to be Utah’s most intensely protested sale in a decade, the leases to be sold Dec. 11 have been controversial since they were first unveiled months ago because they include public lands along the western boundary of Dinosaur National Monument and areas in Emery County rich in rock art and natural beauty in and around San Rafael Swell.

Those concerns are the focus of protests filed by Southern Utah Wilderness Alliance and National Parks Conservation Association.

Inviting drilling in place like Molen Reef along the Swell’s western margins is “dumbfounding,” said SUWA staff attorney Landon Newell, whose protest was joined by The Wilderness Society, Sierra Club’s Utah chapter and the Natural Resources Defense Council.

“The Trump administration’s energy policy is trying to find a home in Utah’s redrock country but we’re not having any of it,” he said

Activists have been concerned with the Trump administration’s willingness to lease in areas previously proposed under President Obama for “master leasing plans.” They fear that in Trump’s push for “American energy dominance,” the Interior Department is walking away from a planning process designed to ensure more careful leasing near national parks and monuments.

But the BLM has deferred leasing decisions on 40 other parcels nominated by the oil and gas industry for this year’s lease auction out of its east-central Utah district, served by the Vernal and Price field offices. Twenty of those parcels were set aside because they fell inside the San Rafael Desert Master Lease Area, and another 20 land tracts were held because they overlap with sage grouse habitat, cultural resources or tar sands leases.

09/27/17

Moab Watershed Study Completed

[Click here](#) to read this story by Eric Trenbeath in the Moab Sun News

09/27/17

USA & Mexico to Share Colorado River Water, Shore Up Lake Mead

[Click here](#) to read this story by Henry Brean in *The Las Vegas Review Journal*

09/26/17

Why Does the Colorado River Need to Sue for Rights?

[Click here](#) to read this OpEd by Will Falk in the San Diego Free Press

09/24/17

Water Bailout? Colorado River Tribes Pose Statewide Leasing Idea

[Click here](#) to read this story by Tony Davis of the Arizona Daily Star

09/22/17

Utah Supreme Court upholds DEQ decision to issue Uintah Basin tar sands mining permits

SALT LAKE CITY – The Utah Supreme Court has ruled against an environmental group challenging permits given to US Oil Sands Inc. in the Uintah Basin for tar sands mining. The project has been the subject of protests and Living Rivers sued the State Department of Environmental Quality, challenging the permits given to US Oil Sands.

In a ruling handed down Thursday night, the state's top court upheld the DEQ's decision to issue permits.

[Click here](#) to read the court

09/20/17

Receiver Takes Over Tar Sands Company

[Click here](#) to read this article by Dennis Webb of The Grand Junction Sentinel

09/05/17

Tribes are willing to go into battle if Trump makes Utah's Bears Ears Monument smaller

[Click here](#) to read this story by Brian Maffly in the Salt Lake Tribune

08/22/17

Feds Ask State to Prove It Can Pay for Proposed Lake Powell Pipeline

The Salt Lake Tribune

By Emma Penrod

Feds ask state to prove it can pay for proposed Lake Powell Pipeline Federal Energy Regulatory Commission gives state officials 60 days to produce a financial study, along with more data on water use and cultural riches along proposed pipeline route.

Feds ask state to prove it can pay for proposed Lake Powell Pipeline Officials from the Federal Energy Regulatory Commission (FERC) have given the state of Utah 60 days to provide a financial feasibility study on how the state would pay for the billion-dollar-plus Lake Powell pipeline.

State officials and other proponents of the Lake Powell pipeline may have just two months to convince federal regulators that their project is backed by a robust plan to pay off more than \$1 billion in costs.

The Federal Energy Regulatory Commission has indicated it cannot review the state's yet-to-be-completed application for permission to build the pipeline in southern Utah because it lacks an adequate financial analysis.

In an Aug. 11 letter to the state's Board of Water Resources, federal regulators have given Utah 60 days to submit the financial feasibility study, including estimated costs to new and existing water users in Washington and Kane counties. FERC has also asked for additional water use data and for more details about cultural resources along the proposed route of the pipeline, which would carry Colorado River water from Glen Canyon Dam 140 miles to St. George.

A spokeswoman for the federal agency, Celeste Miller, said Tuesday that state officials had indicated the requested information would be part of Utah's final application. But the study still has not been submitted.

Josh Palmer, a spokesman for the Utah Division of Water Resources, said the division's staff is reviewing FERC's request and plans to submit at least some additional information within 60 days.

Whether or not Utahns can actually afford to build the pipeline — last estimated to cost in the range of \$1.4 billion— has been a central issue in a long-running debate over the proposed project. Zach Frankel, executive director of the Utah Rivers Council and an outspoken opponent of the pipeline, said he was pleasantly surprised to see FERC wading into the issue.

"We're pleased to see they're at least asking the right questions," he said.

According to current state law, the state Division of Water Resources would pay for the construction of the Lake Powell pipeline, with taxpayer money. But the recipients of the water — currently Kane and Washington county water conservancy districts — would be required to repay the state through the purchase of pipeline water over the course of 50 years. How much that water will cost remains a matter of dispute.

Frankel pointed to an analysis by economists at the University of Utah, which concluded that water rates in Washington County would have to rise by more than 500 percent to pay for the water the Washington district would be obligated to buy.

The water district, on the other hand, has contended it has a plan that would enable it to pay for the pipeline by increasing customers' water bills just a few dollars each month. But, when pressed for documentation of its plan, the water district released a series of slides and spreadsheets it said were used in interactive focus groups in 2013 and 2014.

The documents did not represent an actual repayment plan, according to the water district.

The state's Lake Powell pipeline license application, which was initially submitted in March 2016, did not detail the cost of water to end users. The application remains incomplete in other ways as well; shortly after filing it, regulators at the Division of Water Resources indicated that the 6,000-page document contained numerous errors and would require revision.

The state has intermittently filed supplementary material correcting and expanding its application since it was first submitted. Frankel said he believes the state is stalling in order to avoid having to admit it does not know how to pay for the pipeline.

"I think Utah taxpayers are going to pay \$6 of every \$7, or \$8 of every \$10, for the Lake Powell Pipeline and the proponents of the project know it," Frankel said. "They're stalling and they're hiding, and they're pretending like they have a viable repayment plan, but they know it can't be done."

Utah's congressional delegation, as well as Gov. Gary Herbert, have asked FERC to complete its review of the as-yet-unfinished application by 2018.

08/03/17

EPA Rescinds Offer to Give Utah and Other States More Time to Deal with Ozone

[Click here](#) to read this story by Emma Penrod of *The Sal Lake Tribune*

08/02/17

San Diego Water Authority to take legal dispute to Supreme Court

By Dana Lohr

SAN DIEGO (KUSI) — The San Diego County Water Authority announced Monday that it will take a long-running legal dispute over rates to the state Supreme Court.

The decision comes just over a month after an appellate court issued what amounted to a split decision in the Water Authority's case against the Metropolitan Water District of Southern California.

The SDCWA has sued the MWD multiple times over rates, with the largest issue being how much the MWD was allowed to charge for transporting Colorado River water to San Diego. The MWD is the primary water wholesaler in the southern half of the state and owns the facilities that convey water around the region.

A San Francisco Superior Court judge has consistently ruled in favor of the San Diego water agency, which has been awarded a total of roughly \$232 million. The MWD appealed, and among other things, the appellate justices ordered the damages to be recalculated.

The San Diego water agency contended it was not only billed for moving the water from one place to another, but also for the MWD's costs of maintaining the California Aqueduct -- a system not used for bringing the Colorado River water to San Diego.

"While components of this case appear complex, it essentially boils down to whether MWD can force San Diego County to pay for a State Water Project supply it didn't want to buy and hasn't received," said Mark Muir, chairman of the Water Authority's Board of Directors.

"We are hopeful that the state's highest court will recognize that the Water Authority's Board of Directors did the right thing when it chose to invest billions of dollars to conserve water in Imperial County, rather than continue its heavy reliance on imported water supplies purchased from MWD, a substantial portion of which MWD obtains from the Bay-Delta," Muir said. "We also hope the Supreme Court will grant review in order to preserve bedrock limits on the power of government to impose fees and charges on ordinary Californians."

Lawyer Neal Katyal said the impact of the appellate court ruling will be felt statewide if not reversed by the high court.

MWD officials contend the Water Authority is trying to shift its cost onto ratepayers elsewhere in the state.

The Supreme Court justices have about two months to decide whether to accept the case. If they do, it could take 18 months to two years before a final decision is issued.

###

An Indian groundwater rights case is also headed for the U.S. Supreme Court

[Click here](#) to read this story in The Desert Sun by Ian James

07/31/17

Nuclear Revival is Set to Falter

[Click here](#) to read this story by Paul Brown of Climate News Network

See also:

USA Nuclear Comeback Stalls as Two Reactors are Abandoned

[Click here](#) to read this story by Brad Plumer of the New York Times about nuclear power development in South Carolina

Additional References

[Click here](#) to read stories about Utah's plans for a nuclear power plant by Blue Castle Holdings at Green River and using the same design as the South Carolina facility

[Click here](#) to read this story about the apparent insolvency of Utah's Blue Castle Holdings

07/25/17

Institute for Journalism & Natural Resources visits Moab,Utah

The website of Institute for Journalism & Natural Resources is [here](#).

Upper Colorado River Institute ([event webpage](#))

Colorado, Utah & New Mexico

July 22-29, 2017

Day three of the IJNR field trip (July 25) was in Moab, Utah; an early morning, half-day paddle boat trip down the Colorado River from Moab Boat Ramp to Potash Boat Ramp and arranged by local non-profits, Canyonlands Field Institute and Living Rivers/ Colorado Riverkeeper.

The journalists attending the float trip are listed [here](#)

Their stories are listed [here](#)

An Ecosystem Degraded: Human Impacts on Riparian and Riverine Systems

Mighty though the Colorado may be, it certainly isn't exempt from modern-day ecological issues. Human activities have offered a toe-hold for invasive species such as tamarisk, a fast-growing shrub that thrives along the river's banks, forces out native flora, contributes to salinity issues, and has been the focus of region-wide eradication programs for decades. In the river itself, ecologists are on the lookout for invasive Quagga and Zebra mussels, aquatic invaders that have taken other parts of the country by storm. Meanwhile, changes in flow and temperature mean that warmwater fishes - including some on the endangered species list - are struggling. We floated the river with fish biologists and riparian ecologists to hear what's being done to restore habitat and populations.

Lake Powell: Backup Bathtub or Evaporation Station?

Lake Powell, the nation's second-largest reservoir, was built in 1963 as a backup to Lake Mead, to store enough water to provide a consistent water supply to Lower Basin states in times of drought. The Colorado River Compact stipulates that Upper Basin states must provide 7.5 million acre feet of water annually to the Lower Basin states, and Powell is intended to help make that possible. The reservoir is also host to a 2-million-visitor-per-year recreation industry. Now, however, the cumulative impacts of dry winters, evaporation, and seepage mean that both Mead and Powell are far below

capacity. That has led some to argue for opening up the Glen Canyon Dam and draining Lake Powell -- a prospect that would have wide-ranging implications.

07/09/17

Is the Seven County Coalition Squandering Money Earmarked for Rural Utah?

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune
Related news of Utah's seven county coalition:

<http://www.livingrivers2.org/archives/article.cfm?NewsID=1261>

<http://www.livingrivers2.org/archives/article.cfm?NewsID=1256>

07/08/17

Feds' approval of expanded Gross Reservoir panned in Boulder County Environmental advocates may pursue legal action to stop project

[Click here](#) to read this story in the Daily Camera by Alexis Jaramillo

07/06/17

Law professor comments on national monuments review

Leading natural resource and environmental law professors comment on Trump review of national monuments

Eric Biber July 6, 2017

As we've been covering here on Legal Planet, the Trump Administration is conducting a review of national monuments created over the past 20 years, and has indicated it may seek to eliminate or shrink some of those monuments. Part of that process is a public comment period.

A group of 121 environmental, natural resource, and administrative law professors just submitted a comment to the Secretary of Interior arguing that the President does not have power to eliminate or shrink national monuments, and raising some important questions about the review process. (I am one of the signatories.) You can find the comment letter here: [national monuments comment letter from law professors_as filed](#)

The letter draws on a recent on-line law review article that lays out the relevant law about Presidential power to eliminate or shrink national monuments.

A link for that article is provided [HERE](#)

[Presidents Lack Of Authority To Abolish Or Diminish National Monuments](#)

[National Monuments Comment Letter From Law Professors](#)

07/06/17

To U.S. Supreme Court: Do Tribes Have Groundwater Rights

[Click here](#) to read this story by Ian James of The Desert Sun

06/15/17

White Mesa Uranium Mill: Public Meeting Announcement

MAKE YOUR VOICE HEARD!

WHAT: Offer your comments to the Utah Department of Environmental Quality about the renewal of the White Mesa uranium mill's radioactive materials license, the groundwater discharge permit, and final reclamation plan.

WHEN: June 15, 2017; 5 to 7 PM

WHERE: Blanding Arts and Events Center; 715 West 200; South Blanding, Utah

EMAIL: Comments can be sent via email to dwmrcpublic@utah.gov

For more information visit [Uranium Watch webpage](#)

06/13/17

To avoid insolvency, US Oil Sands Seeks to Leave Stock Market

[Click here](#) to read this story by Sharon Sullivan of Moab Sun News

[Click here](#) to read this story by Dennis Webb of Grand Junction Sentinel

[Click here](#) to read the announcement by US Oil Sands

06/09/17

Infrastructure investments must prioritize the Colorado River, one of the hardest-working rivers in the world

by Mike Connor and Lynn Scarlett

Mike Connor is an Environment Program Fellow with the Walton Family Foundation and a former Deputy Secretary of the Interior and Commissioner of the Bureau of Reclamation in the Barack Obama Administration.

Lynn Scarlett is the Global Managing Director for Public Policy at The Nature Conservancy and a former Deputy Secretary of the Interior in the George W. Bush Administration.

[CLICK HERE](#) to read the report called "Colorado River Critical Infrastructure Needs" by the Walton Family Foundation

With the significant prospect of declared shortages in the lower basin of the Colorado River in the next five years and a growing long-term supply-demand imbalance, the situation requires strategic investments that will help maintain both water supply reliability and watershed health. It also requires action, collaboration, and creativity. With the significant prospect of declared shortages in the lower basin of the Colorado River in the next five years and a growing long-term supply-demand imbalance, the situation requires strategic investments that will help maintain both water supply reliability and watershed health. It also requires action, collaboration, and creativity.

With the Trump administration focused on infrastructure this week, the Walton Family Foundation released a white paper to help guide a plan for one of the nation's most critical infrastructure needs. The paper, "Colorado River Critical Infrastructure Needs," highlights 15 projects across the basin that are essential for securing one of the most important – and overlapped – waterways in the country.

In Cadillac Desert, Mark Reisner's 1986 seminal work on water in the West, he noted that "[t]he Colorado River's modern notoriety, stems not from the fact that it is the most legislated, most debated, and most litigated river in the entire world. It also has more people, more industry, and a more significant economy dependent on it than any other comparable river in the world."

Much has changed over the past 31 years, but our dependency on the Colorado River has not. Fortunately, one change has been how states, water users, environmental interests, Indian tribes, and federal agencies collaborate with each other to address pressing challenges and avoid protracted courtroom battles. Indeed, this paper is the result of input from key players in the Basin, including states, water users, Indian tribes, and conservation groups. Stakeholders in the Colorado River basin have led efforts to forge innovative water management agreements between each other and across the international border with Mexico.

Of course, much of this collaboration is driven by necessity. As the paper highlights, the recent 16-year drought, while somewhat alleviated this year, took a toll on the river with a documented 19 percent reduction in average flows compared with the previous 95 years. Looking forward, scientific studies project an additional 20 percent reduction in flows by 2050, which would exacerbate the overallocation of this limited resource.

With the significant prospect of declared shortages in the lower basin in the next five years and a growing long-term supply-demand imbalance, the situation requires strategic investments that will help maintain both water supply reliability and watershed health. It also requires action, collaboration, and creativity.

Building on the spirit of cooperation within the Basin, the Walton Family Foundation and The Nature Conservancy are working with a broad array of constituencies to address the region's water resource challenges. In the Colorado River Basin, we have been working with states, tribes, agricultural interests, municipalities, and other nongovernmental organizations to identify a portfolio of projects to address specific challenges in the basin across a multi-state region.

The white paper, while not an all-inclusive list of needed actions, identifies over a dozen specific projects as well as some basin-wide initiatives that have significant water user support and represent a range of strategies to address water resource challenges, including traditional water supply improvements, habitat and stream restoration actions, and improved data-gathering networks.

Collectively, the projects would, as the white paper notes, "increase water reliability, improve the balance between supply and demand, and enhance the overall environment, while creating jobs and contributing to economic productivity." Furthermore, each project is poised to garner significant cost-share contributions to leverage federal investments.

Perhaps most importantly, the collaboration among multiple partners means that a lot of the hard work necessary to build support for infrastructure development has already been done with most of the projects. As Congress considers how to address infrastructure needs in this country, it's incredibly important to bridge the significant gap between essential water resource investments and identified sources of capital. It's equally important that these investments focus on watersheds where the potential for conflict is high because the stakes are high but where local collaboration is providing opportunities to resolve those conflicts.

The foundation's white paper presents many opportunities worthy of federal support, given the widespread benefits to sustainable management of the Colorado River. These opportunities are exactly the type we would have looked to support during our tenures at the Interior Department in the past two administrations. They are creative and collaborative and represent good progress in sustainable resource management.

05/25/17

US Oil Sands Has Investor Difficulties and Deficit is Now \$11 Million

[Click here](#) to read their latest update

05/22/17

Drought Erased 25 Cubic Miles of Central Valley's Groundwater

[Click here](#) to read this story by Matthew Renda of Courthouse News Service

[Click here](#) to read the supporting AGU paper called "How Much Groundwater Did California's Central Valley Lose During the 2012 - 2016 Drought?"

05/13/17

Rally and March to protect the White Mesa Ute Community from the White Mesa Uranium Mill

Saturday, May 13

Rally begins at 11 am

White Mesa Ute Community

Slightly off Highway 191

West side of the highway behind the Mobil gas station

Large red building

Sign says "White Mesa Community Center"

The rally is followed by the spiritual and protest walk to Energy Fuels White Mesa Uranium Mill (4.5 miles)

Wear comfortable shoes and bring plenty of water!

Photos of the march [HERE](#).

Sponsored White Mesa Concerned Community

Co-sponsored by: Canyon Country Rising Tide, Grand Canyon Trust, Greenaction for Health and Environmental Justice, Haul No, Living Rivers and Uranium Watch

For more information call White Mesa Concerned Community 435-485-0265

[Click here](#) to view the poster of this event

05/11/17

Moab Film Screening on Thursday May 11: To The Ends of the Earth

Star Hall

159 East Center Street

6:30 - doors open

7:00 - film begins

Followed by Q & A with panelists

Partially shot in the Uinta Basin near Moab. This feature documentary examines the failing economic paradigm of fossil fuels and its alternatives.

Sponsored by Living Rivers, Canyon Country Rising Tide and Southern Utah Wilderness Alliance

[Click here](#) to view the poster of this event

04/27/17

Moab March for Science draws large crowd

by Rose Egelhoff

The Times-Independent

Local residents and others march through downtown Moab during the April 22 March on Science. Marches were held in over 600 cities and towns across the country and internationally, including Salt Lake City and Moab.

Moab residents and visitors joined groups across the country and around the world on Earth Day, April 22, in taking to the streets to march in support of science.

More than a hundred people gathered at Swanny City Park for an introduction by organizer Katie Miller of Moab and speeches by teachers, students, scientists and land managers. A banner reading, "May the Facts Be With You," created by local environmental group Canyon Country Rising Tide, was stretched across the pavilion behind the speakers. At tables throughout the park several sponsoring organizations explained how they use science for their work.

Speakers addressed public understanding of science and spoke in support of using science and facts to guide public land management.

Richard Schwartz, known locally as Professor Purple, drew on his background as a high school physics teacher to explain how pure theory and basic research from the 19th century is important in daily life today.

“When your car tells you to turn left, give a hat tip to Albert Einstein’s theory of general relativity, which is essential to GPS,” Schwartz said. “We couldn’t work as a society without being able to use the theoretical, pure research of a hundred years ago. It’s become absolutely essential to the way we work today.”

Several speakers discussed climate change issues. John Weisheit, conservation director at the nonprofit Living Rivers, said that Colorado River users with junior water rights face their water being cut off. He added that scientists predicted today’s water shortages decades ago.

“[Scientists] told the policy people that the Colorado River is in trouble, and what have the water policy people done for the last 71 years? Absolutely nothing,” Weisheit said. “The shortages are here and it’s about to happen.”

He called for policymakers to listen more to scientists.

Rachel Nelson an adjunct professor in the department of environment and society at Utah State University-Moab, gave a demonstration of the scientific method — the way scientists use experiments to find out facts.

“We can all be citizen scientists and I think if we take that mystery out of science that people are more willing to embrace it and understand that it’s attainable for everybody, it’s understandable for everybody,” Nelson said. “It’s not just these super smart people who are telling us what to do.”

After the speeches, the group marched up 100 North and around downtown, carrying signs with messages such as “Science Saves Lives,” “There Is No Planet B,” and “Science Keeps America 1st and Great.”

According to the Southeastern Utah March for Science Facebook page, The March for Science was organized as “a celebration of our passion for science and a call to support and safeguard the scientific community. Recent policy changes have caused heightened worry among scientists, and the incredible and immediate outpouring of support has made clear that these concerns are also shared by hundreds of thousands of people around the world.”

“Speaking up for science is critically important because it is what drives society forward. From the technology we rely on, the medicine we need, the food we eat, science is the driving force for all of it,” local march organizer Katie Miller told The Times-Independent. “It is important right now because despite there being an abundance of information freely available to virtually everyone, there are still people who deny the viability of science.”

Miller said more than 600 cities around the world participated in the April 22 March for Science, and she hopes the connections made in the process of planning and executing the march will lead to more support for science-based policies and science education.

‘The result we want is a better-educated civilization that understands science and understands what is at stake if we do not act accordingly, most perilously in regards to climate change,’ she said.

Miller, a stay at home mother, said she had helped remotely organize national events, but had never organized a local march like this one.

Nationally, the March for Science was organized after several scientists on the website Reddit discussed their concerns that references to climate change had been deleted from the White House website, according to the Washington Post. Scientist Jonathan Berman from the University of Texas set up a March for Science website and social media pages. Other science advocates, concerned about a perceived disregard for science among national politicians, quickly joined. Thousands attended the march in Washington, D.C., according to NBC News.

“The March for Science champions robustly funded and publicly communicated science as a pillar of human freedom and prosperity. We unite as a diverse, nonpartisan group to call for science that upholds the common good and for political leaders and policy makers to enact evidence based policies in the public interest,” according to the national March for Science website.

In Moab, march participants came from the local community, Colorado and around the West.

Sam Foster of Durango, a retired scientist, and Dot Wehrly, also from Durango, came to Moab to participate.

“[Science] is being ignored in too many policy decisions now and we need to listen to science,” Wehrly said.

“It’s not well-funded,” added Foster. “It’s like one of the speakers said, when budgets get tight, they ... stop doing science. The problem is that a lot of science takes years or even decades and if you stopped right in the middle of it, you ruin what you’ve done. It’s got to be a solid investment.”

Another participant from Colorado, David Reed, held a sign that read, “In times of universal deceit, telling the truth is a revolutionary act.”

“I figured if there’s any place I should show up today that needed to support wilderness, it’s in the state of Utah,” Reed said, adding that it is unfortunate that science has become a political issue.

He said he hopes the march will “increase awareness and bring more people to promote the needs of science period that we need to be funding science, that we need to be respecting the findings of science, not just disregarding them.”

The march was followed by a performance by Meander Cat and poetry by Barbara Galler.

04/12/17

Fracking Threatens Colorado River, Endangered Species, Climate, Rocky Mountain National Park and Dinosaur National Monument

DENVER—(ENEWSPP)—April 11, 2017. Conservation groups have filed an administrative protest challenging a federal decision to offer for leasing in June more than 100,000 acres of federal public land in northern Colorado for oil and gas industry fracking. The leasing decision, being pushed by the Trump administration's Bureau of Land Management over local community opposition, threatens some of Colorado's most treasured and scenic landscapes and wildlife species.

"Fracking these pristine public lands would come at the cost of imperiled wildlife, clean air and clean water, meanwhile worsening climate change," said Michael Saul, senior attorney with the Center for Biological Diversity. "This is classic Trump corporate cronyism that sacrifices public values for oil industry profits."

The decision paves the way for thousands of new fracked oil and gas wells in the Piceance Basin, increasing the strain on the already overdrawn Upper Colorado River with water withdrawals and the threat of new oil spills. It would pave the way for fracking in largely untouched Grand County, the headwaters of the Colorado River and a world-famous destination for fishing, hiking and tourism.

"The water quality of the Colorado River headwaters is at an all-time low and water demand is at an all-time high. Awarding leases that allow fossil fuel extraction in the headwaters will not improve the looming water crisis," said John Weisheit, Colorado Riverkeeper with Living Rivers. "Restraint on all forms of consumptive use is the best and wisest solution for improving a damaged watershed. Public land management decisions must be based on this reality and BLM must take the lead in restraining those uses, not open the door to more."

This massive plan, casually dismissed by the BLM as having "no significant environmental impact," will harm a host of sensitive and listed species including Colorado River and greenback cutthroat trout, greater sage grouse, Canada lynx, black-footed ferrets, white-tailed prairie dogs, rare wildflowers, deer, elk and moose. Resulting greenhouse gas pollution would worsen climate change, whose impacts the region is already feeling with reduced Colorado River flows.

"Protecting the quantity and quality of Colorado River flows, which face overwhelming challenges from increased demand and reduced supply, is inextricably linked to management decisions on public lands that cut back on water use and protect water quality," said Kate Hudson, western U.S. advocacy coordinator with Waterkeeper Alliance. "BLM's pending decision to open over 100,000 acres of public lands in the headwaters of the Colorado River to oil and gas leasing, and the inevitable impacts that

fossil fuel extraction will have on the river, its tributaries and our climate, heads us in exactly the wrong direction. It will only hasten the collapse of this critical and fragile resource.”

The giant sale threatens to industrialize lands and pollute air and water at the doorsteps of Rocky Mountain National Park and Dinosaur National Monument. Groups filing today’s protest include the Center for Biological Diversity, Living Rivers, Waterkeeper Alliance, and Sierra Club.

Download the protest [here](#).

###

BLM removes 20 parcels from the June 2017 lease sale

News Release Bureau of Land Management Colorado

FOR IMMEDIATE RELEASE

April 17, 2017

Contact: Courtney Whiteman, Public Affairs Specialist, 303-239-3668 BLM modifies parcel list for June 2017 oil and gas lease sale

DENVER – The Bureau of Land Management Colorado has removed 20 parcels totaling 27,529 acres in Grand County from its June 8, 2017, oil and gas lease sale. The BLM will now offer 86 parcels totaling 73,288 acre in Jackson, Routt, Rio Blanco and Moffat counties.

The BLM removed these 20 parcels due to low energy potential and reduced industry interest in the geographic area, as well as concern from local government and the public. The parcels were nominated before the latest revision to the land use plan for the area was completed. “We understand concerns raised by Grand County and other stakeholders about offering these parcels at this time,” said acting BLM Deputy State Director for Energy Lands and Minerals Kent Walter. “We want to be sure they are still appropriate for leasing.”

To find out more about this and other BLM Colorado lease sales, visit

<https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/leasing/regional-lease-sales/colorado>

In Fiscal Year 2016, oil and gas development on public lands directly contributed \$796 million to Colorado’s economy. BLM Colorado received more than \$98 million in federal revenues, including royalties, rents and bonus bids, from oil and gas development on public lands. The state of Colorado receives 49 percent of these revenues. Statewide, more than 22,900 jobs are tied to mineral and energy development on public lands.

04/08/17

Nevada Resolution Would Call for Comprehensive Study of the Colorado River

[Click here](#) to read this story by Brian Bahouth of the Nevada Green Times

04/06/17

Lion's Back Resort Agreement Facing Legal Challenge

[Click here](#) to read this story in the Moab Sun News by Sam McLaughlin

[Click here](#) to read this story in the Moab Times-Independent by Lisa Church and Molly Marcello

SITLA Invokes "Hardball Tactics" for Development in Moab and Grand County

[Click here](#) to listen/read this story on Utah Public Radio by Jon Kovash

[Click here](#) to read this story by Rudy Herndon of the Moab Sun News

04/06/17

Native Waters Rising and Living Rivers and others Tesify in Nevada Legislature

AJR4 - Summary of Nevada Joint Resolution by Assemblywoman Swank and Senator Segerblom

Requests the National Research Council of the National Academy of Sciences to conduct an independent scientific and economic analysis of the current management practices of the Colorado River, the impact of these practices on water security, flood protection and biodiversity recovery, and alternative management options, including draining Lake Powell and decommissioning and destroying the Glen Canyon Dam. (BDR R-101) [AJR4 Long Version](#)

Read Senator's OpEd in the Las Vegas Review Journal [HERE](#)

[Presentation: Living Rivers](#)

[Testimony: Native Waters Rising](#)

[Testimony: Dr. Daniel Beard](#)

Others to testify include:

Dr. Victor Baker - Professor of Hydrology

Howard Watts - PLAN Nevada

Bob Fulkerson - PLAN Nevada

Eric Balken - Glen Canyon Institute

John Weisheit - Colorado Riverkeeper

SUBMISSIONS TO THE RECORD

1) ["LIGHT ON THE MEXICAN TREATY" \(of 1944\)](#). This is US Senate Document #249 from 1946. The important page # is 20.

It was originally presented to the Colorado River Water Users' Association in Salt Lake City, Utah by Northcutt Ely.

Northcutt Ely was, during the Hoover administration, the Deputy Secretary of Interior. On page 20 is an updated water budget of the Colorado River, which indicates there would be, in the future, a system-wide deficit of -1.8 million acre-feet.

This is the first document that clarifies that the demand for Colorado River water exceeds the supply. Northcutt Ely recommends to the assembled water governance of the seven states the following, "No sound planning can be done for new projects until the water budget is balanced again in some way."

In other words, 71 years ago the water managers understood that water shortages would occur in the future. This officially happened to the Colorado River basin in 2003 and the deficit today is -1.9 million acre-feet. It also means the plans for infrastructure in 1946 were overestimated and also needed to be revised (not to build redundant dams, for example). Unfortunately the seven states never did adjust their water allocations nor their planning documents to reflect the reality of nature.

2) ["Congressional Testimony of Colorado River Board of California on July 3, 1954 \(Northcutt Ely\)](#).

The state of California asks Congress to treat the upper and lower basins equally, which is the main purpose of the 1922 Compact. The CRSP legislation favors dam construction solely for repaying the construction loans with hydropower revenues. For example, total consumptive use for all CRSP irrigation projects is only 400,000 acre-feet, but reservoir evaporation from all the huge reservoirs is 700,000 acre-feet. Thus, overall, the CRSP projects will waste more water than the lower basin projects, even though lower basin evaporation rates are higher than the upper basin.

03/28/17

West's Challenge is Still Water Scarcity, Wet Winter or Not

[Click here](#) to read this combined six-part series by Zack Colman of the Christian Science Monitor; supported by the Bill Lane Center for the American West at Stanford University.

03/23/17

Lake Powell Pipeline Update

[Click here](#) to read the update provided by Conserve Southwest Utah & Taxpayer Association of Kane County

[Click here](#) to read the White Paper provided by Conserve Southwest Utah & Taxpayer Association of Kane County

03/17/17

Utah Records Panel Orders Release of Water Data

[Click here](#) to read this story by Emma Penrod of the Salt Lake Tribune

03/01/17

Have we underestimated the West's super-floods?

Note: please keep in mind that this science is about the Colorado River above the confluence with the Green River. The combined flow of the Green and Colorado River is not discussed in this article.

[Click here](#) to read this article in High Country News by Krista Langlois

[Click here](#) to read more about the paleoflood record on the Colorado and Green rivers above Lake Powell

[On The Colorado River - Resources - Floods](#)

02/20/17

Climate Change Is Already Sapping the Colorado River

[Click here](#) to read this story in University of Arizona News by Mari N. Jensen

[Click here](#) to read this blog post by John Fleck

This post is about the release of a hydrology paper authored by Brad Udall and Jonathan Overpeck.

ABSTRACT: Between 2000 and 2014, annual Colorado River flows averaged 19% below the 1906-1999 average, the worst 15-year drought on record. At least one-sixth to one-half (average at one-third) of this loss is due to unprecedented temperatures (0.9°C above the 1906-99 average), confirming model-based analysis that continued warming will likely further reduce flows. Whereas it is virtually certain that warming will continue

with additional emissions of greenhouse gases to the atmosphere, there has been no observed trend towards greater precipitation in the Colorado Basin, nor are climate models in agreement that there should be a trend.

Moreover, there is a significant risk of decadal and multi-decadal drought in the coming century, indicating that any increase in mean precipitation will likely be offset during periods of prolonged drought. Recently published estimates of Colorado River flow sensitivity to temperature combined with a large number of recent climate model-based temperature projections indicate that continued business-as-usual warming will drive temperature-induced declines in river flow, conservatively -20% by mid-century and -35% by end-century, with support for losses exceeding -30% at mid-century and -55% at end-century.

Precipitation increases may moderate these declines somewhat, but to date no such increases are evident and there is no model agreement on future precipitation changes. These results, combined with the increasing likelihood of prolonged drought in the river basin, suggest that future climate change impacts on the Colorado River flows will be much more serious than currently assumed, especially if substantial reductions in greenhouse gas emissions do not occur.

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####

Colorado River losing essential water flow, new research shows
March 21, 2017 By Ty Betts

An increase in temperatures has the ability to reduce the flow of water in the Colorado River by 20 to 30 percent by mid-century, according to new research done by Colorado State University and the University of Arizona.

The research done by Bradley Udall, a senior water and climate scientist for CSU, and UA professor Jonathan Overpeck, found that loss of water is driven by higher temperatures arising from an increase in greenhouse gas emissions.

There are a number of reasons that increased temperatures are leading to less water in rivers, Udall said. The first is that there is now a longer growing season for plants to utilize water. The second is that plants demand more water with increased temperatures. Third, more evaporation is taking place on soil, reservoirs and rivers. Lastly, the atmosphere retains more moisture with higher temperatures.

The water in the Colorado River is relied upon by 40 million people, according to the Bureau of Reclamation. The Colorado River provides water to seven U.S. states and makes up half of the water consumption along Colorado's Front Range, Udall said.

An assessment by the Bureau of Reclamation found that the Colorado River will face little to no change in levels because they anticipate an increase in precipitation to offset higher temperatures. Udall disagrees.

He said that the issue with their model is that they are combining a multitude of factors that are not necessarily certain. The bureau's calculations combine warm and hot projected climates with precipitation decreases and increases as well as varied emission scenarios.

"When you come up with one number and you blend certain and uncertain outcomes, you can get a rosier picture than we think is warranted," Udall said.

Udall and Overpeck's research instead isolated these variables and achieved their estimates with confidence that temperature is increasing.

Udall said with changes in water levels expected, regulations will have to be adapted. The 1922 Colorado River Compact currently regulates the amounts of water that Colorado has rights to. Udall believes that with a 20 percent reduction in flow, it would be difficult for Colorado to meet the output requirements set in place by the act.

The seven states that make up the Colorado River basin – Arizona, California, Colorado, New Mexico, Nevada, Utah and Wyoming have to work together to negotiate new water agreements. Udall said that while negotiations usually take a lot of time, these states are good at coming to agreements.

"I would argue that this basin, perhaps compared to any other basin in the world, has a good track record of settling water disputes," Udall said.

Other considerations Udall mentioned are that less water flow equates to less hydroelectric power. Hydroelectric power does not make up a large portion of total energy generation in the southwest, but is it essential to irrigation. Udall said farmers get inexpensive energy rates while using hydro-power generated from the Colorado River.

"Agriculture often runs on very small margins and increases in energy rates can cripple profits," Udall said.

Udall said he believes new sources of water will not come easily or be feasible. California's desalination work, or the process of extracting minerals from water, is too expensive for agricultural purposes. Furthermore, importing water into the Colorado River from other parts of the country is halted by high costs political push-back.

Udall and Overpeck's research points to one solution to the problem: the reduction of greenhouse gasses.

"The water cycle is driven by heat," Udall said. "When you add extra heat to the Earth as we are now doing because of greenhouse gas emissions, you change the water cycle in fundamental ways."

02/19/17

California Experience a Reason for Southern Nevadans to be Wary of Glen Canyon Dam

[Click here](#) to read this OpEd by Nevada State Senator Tick Segerblom in the Las Vegas Review Journal

[Click here](#) for this story and excellent photos by Paul Rogers that appeared in Mercury News

[Click here](#) to read this story in the Las Vegas Review Journal by Henry Brean called "Nevada and California Incidents Highlight Vulnerability of Nevada's 650 Plus Dams"

ADDITIONAL INFORMATION:

Scientists discover evidence of devastating floods on the Colorado River above Lake Powell

[Click here](#) to read this story by Julia Rosen in the Los Angeles Times (Science Now)

[Click here](#) to read the final report published in Water Resources Research (American Geophysical Union).

The purpose was to provide science to the Department of Energy to ensure that Moab's radioactive waste pile would be removed from the floodplain of the Colorado River, which is indeed happening. So far, 41% of the pile has been removed and taken by railroad to a burial site 30 miles north of town at a place called Crescent Junction adjacent to the I-70 corridor.

Highlights of this report include:

River: Upper Colorado River (above the Green River confluence and below the Dolores River, the last major tributary)

Site location: 10.5 miles above the Moab Bridge

Time frame: The last 2,140 years (+/- 220 years)

Number of floods: 44

Range of floods in cfs: 60,036 to 349,616

34 to 40 floods have exceeded the magnitude of the USGS 100-year flood determination

20 - 25 floods have exceeded the magnitude of the USGS 500-year flood determination

5 floods have exceeded a peak discharge of 282,000 cfs The two largest floods were slightly over 349,000 cfs

The 100-year flood would have a peak discharge ranging from 156,440 to 179,050 cfs

The 500-year flood would have a peak discharge ranging from 224,780 to 265,570 cfs

A 1000-year flood would have a peak discharge ranging from 256,740 to 310,770 cfs

ADDITIONAL INFORMATION

1) [Click here](#) - To read the report of 2006 that fulfilled the requirements of the grant that supported the preliminary research for this paleoflood research project.

2) [Updated Report \(2006b\)](#)

3) [Moab Mill Project Cover Letter](#)

4) [Moab Mill Project Brochure](#)

5) [Moab Mill Project Poster](#)

6) ["Investigation of the Hydrogeologic Connection between the Moab Mill Tailings and the Matheson Wetland Preserve," Philip Gardner and D. Kip Solomon, Department of Geology and Geophysics, University of Utah, December 11, 2003 \(with Addendum\) \[PFD 8.3m\]](#)

7) [Initial-Phase Investigation of Multi-Dimensional Streamflow Simulations in the Colorado River, Moab Valley, Grand County, Utah, 2004, Terry A. Kenney, US Geological Survey](#)

8) [Special newspaper supplement from the TIMES-INDEPENDENT about the Moab Mill Project](#)

9) [Special presentation by Dr. John C. Dohrenwend given at the Moab Information Center in 2006](#)

10) [Photo of Colorado River in flood \(1917 or 1921\) near the Colorado River bridge](#)

11) [Paleoflood study of Colorado River at Grand Canyon by O'Conner et al., 1994](#)

12) [Click here](#) to read Dam Failure Inundation Study by the Bureau of Reclamation (1998).

13) [Click here](#) to learn more about the flood of 1884 and the flood of 1983

01/13/17

Tar sands project "is back in action" after \$7.5M loan at high interest and corporate restructuring

[Click here](#) to read this story by Dennis Webb of the Grand Junction Sentinel

[Click here](#) to read the press release from US Oil Sands

01/11/17

Groups submit supplemental comments to BLM over Daneros Mine Expansion

[Click here](#) to read this story by Brian Maffly of the Salt Lake Tribune from August of 2016

[Click here](#) to read the group's comments for the Environmental Assessment

[Click here](#) to read the group's supplemental comment to the Environmental Assessment

[Click here](#) to read the scoping comments for the Environmental Assessment

[Click here](#) to read the 2011 decision from the group's appeal

01/10/17

BLM Finalizes Contentious Overhaul of Oil Shale Regs

[Click here](#) to read this story by Streater of E & E News

[Click here](#) to read this story by Dennis Webb of the Grand Junction Sentinel

[Click here](#) to read this story by Dennis Webb called "Leaseholder Likes Flexible Oil Shale Rules"

[Click here](#) to read the press release by the Bureau of Land Management

[Click here](#) to read the letter from Colorado Senator Michael Bennet to Secretary Sally Jewell

[Click here](#) to read the final rule (a pre-publication document)

01/04/17

Navajo Generating Station Threatened with Closure

[Click here](#) to read the story by Paul Davenport of the Associated Press

[Click here](#) to read this article by Ryan Randazzo of the Arizona Republic ([archived here](#)).

[Click here](#) to read this story by Nolan Madden of the White Mountain Independent

[Click here](#) to read this article by Brett Walton from Circle of Blue

12/28/18

Snowpack in Trouble Across the West and Around the Globe, Researchers Say

[Click here](#) to read this story by Tony Davis of the *Arizona Daily Star* about new research from the scientists at Scripps Institute

12/14/18

Fear and Grieving in Las Vegas: Colorado River Managers Struggle With Water Scarcity

[Fear and Grieving in Las Vegas: Colorado River Managers Struggle with Water Scarcity](#)
by Luke Runyon of KUNC Public Radio
[Utah, Other Southwestern USA States Get Jan. 31 Deadline for Drought Deal](#) by Ken Ritter of Associated Press

[Federal Official Threatens Takeover of Key Colorado River Decisions From States](#) by Tony Davis of Arizona Daily Star

[Upper Colorado River Basin States Approve Drought Management Agreements](#) by Brent Gardner-Smith of Aspen Journalism

12/13/18

Tribal Water Study released to the public

[2018 - Tribal Water Study of the Ten-Tribe Partnership](#) (all documents combined and starting with the press release). This study is a new feature of the 2012 Basin Study.

###

WASHINGTON (PRWEB) DECEMBER 13, 2018

Bureau of Reclamation Commissioner Brenda Burman announced today the release of the Colorado River Basin Ten Tribes Partnership Tribal Water Study that was conducted collaboratively with the member tribes of the Ten Tribes Partnership.

The study documents how Partnership Tribes currently use their water, projects how future water development could occur and describes the potential effects of future tribal water development on the Colorado River System. The study also identifies challenges

related to the use of tribal water and explores opportunities that provide a wide range of benefits to both Partnership Tribes and other water users.

"We face a prolonged drought that represents one of the driest 20-year periods on the Colorado River in the last 1,200 years," said Commissioner Burman. "This study is an important step forward that furthers our understanding of the challenges facing the Colorado River Basin and the actions we can take to collaboratively address them."

While not all federally-recognized tribes in the basin are members of the Ten Tribes Partnership, the Partnership Tribes have reserved water rights, including unresolved claims, to potentially divert nearly 2.8 million acre-feet of water per year from the Colorado River and its tributaries. In many cases, these rights are senior to other uses.

The study is the outcome of a commitment between Reclamation and the Partnership Tribes to engage in a joint study to build on the scientific foundation of the Colorado River Basin Water Supply and Demand Study, published by Reclamation in 2012.

"Reclamation recognized the need for additional analyses and work following the 2012 Colorado River Basin Study," said Reclamation Lower Colorado Regional Director Terry Fulp. "Working together, the Ten Tribes Partnership and Reclamation have produced a valuable reference that is the first of its kind in the Colorado River Basin."

The study highlights tribal observations and concerns, including lack of water security, incomplete distribution systems and regulatory and economic challenges to developing water systems in geographically diverse areas. "In light of the importance of tribal water rights in the Colorado River Basin, the Partnership and Reclamation collaborated to contribute crucial tribal-specific information to the discussions regarding Colorado River management," said Lorelei Cloud, Chairman of the Ten Tribes Partnership. "Without the hard work and dedication of Reclamation, tribal leaders, and tribal staff, this critical project would not have been possible."

The Ten Tribes Partnership was formed in 1992 by ten federally recognized tribes with federal Indian reserved water rights in the Colorado River or its tributaries. Five member tribes are located in the Upper Basin (Ute Mountain Ute Tribe, Southern Ute Indian Tribe, Ute Indian Tribe, Jicarilla Apache Nation and Navajo Nation) and five are in the Lower Basin (Fort Mojave Indian Tribe, Colorado River Indian Tribes, Chemehuevi Indian Tribe, Quechan Indian Tribe and Cocopah Indian Tribe).

The study is available at: <https://www.usbr.gov/lc/region/programs/crbstudy/tribalwaterstudy.html>

12/02/18

Las Vegas Water Planners Hedge Bets Prepare for Worst Case Scenario

[Click here](#) to read "Las Vegas Water Planners Hedge Bets to Prepare for Worst-Case Scenario" by Daniel Rothberg of *The Nevada Independent*.

[Click here](#) to read "Lake Mead Drinking Water Pumping Project Meets Milestone" by Henry Breaun of *The Las Vegas Review Journal*.

[Click here](#) to read "Project to Build Deeper Lake Mead Water Intake Passes Key Milestone."

11/27/18

Robert Kennedy Jr. in Las Vegas to Assist the Launch of New Program for Waterkeeper Alliance

[Click here](#) to read this story by Dana Gentry in *Nevada Current*

[Click here](#) for NBC coverage in Las Vegas

[Click here](#) to read this story by Ramona Giwargis of *Las Vegas Review Journal*

11/23/18

Delving Deeper Into Anticipatory Mandatory Curtailment In Colorado

[Click here](#) to read this story by Brent Gardner-Smith in *Aspen Times*

[Click here](#) to read this story by Brent Gardner-Smith in *Aspen Times*

[Click here](#) to read Draft Policy for Drought Contingency Planning in Colorado

[Click here](#) to read memo of strategic initiatives from Colorado River Water Conservancy District also be found at:

<https://www.usbr.gov/uc/envdocs/eis/LakePowellPipeline/index.html>

11/23/18

Managing Water in the Arid West

[Click here](#) to read this OpEd by Sarah Stock in *Moab Sun News*

11/13/18

Can the Outdoor Recreational Economy Save Colorado's Environment?

[Click here](#) to read this OpEd by Gary Wockner in *The Colorado Sun*

11/09/18

Environmentalists, Feds & Utah's Agree: Don't Send Green River Water to Colorado

[Click here](#) to read this story by Brian Maffly of *The Salt Lake Tribune*

[Click here](#) to read this story by Amy Joi O'Donoghue of *Deseret News*

11/06/18

Are taxpayers getting soaked by water district salaries?

[Click here](#) to view this video from KSL TV, Salt Lake City

11/02/18

Living Rivers Comments for Draft EA for Green River Block Water Rights Contract

[Click here](#) to read our letter to the Bureau of Reclamation

For More Information

[Click here](#) to visit: On The Colorado

10/29/18

The precarious plan for the Lake Powell Pipeline (Warring figures, hidden costs)

[Click here](#) to read this story by Emma Penrod in *High Country News*

10/24/18

Demand Management schemes in the Upper Basin need time and money to succeed

[River Official Praises Provisions In New Deals](#)

[Water Czar Unveils Wyoming Plan For a West-Wide Reckoning](#)

[Western Slope Wants Limits on Water Sent to Lake Powell](#)

10/22/18

Central Arizona Cities and Gila River Indian Community Balks at Arizona's DCP scheme

[Click here](#) to read this blog from John Fleck

[Click here](#) to read the letter from the Governor of the Gila River Indian Community

[Click here](#) to read this story by Ian James of *The Arizona Republic* called "Arizona Tribal Leader Aims to Help Reach Colorado River Water Deal." (22 November, 2018)

[Click here](#) to read the blog by John Fleck called "Arizona's efforts to cope with reduced Colorado River supplies, moving in reverse."

[Click here](#) to read the letter from the Arizona Municipal Water Users Association

[Click here](#) to read this story by Ian James of *The Arizona Republic*

10/18/18

The Future of the Colorado River: a Moab community symposium

SPONSORED BY:

- Center for Colorado River Studies Quinney College of Natural Resources
- Utah State University

- Event Website is [HERE](#)

PRODUCTS

- [Event Poster](#)
- [Schmidt Powerpoint](#)
- [Rubin Powerpoint](#)
- [Udall Powerpoint](#)
- [Castle PowerPoint](#)
- [Budy Powerpoint](#)

NEWS

Times-Independent

- [River Symposium: Let's Figure Out How to Do a Good Job](#) by Nathaniel Smith.
- [New Normal: Dam Releases Help Offset Droughts Low Flows](#) by Emma Renly

LOCATION

- Star Hall
- Moab, Utah
- 8:45am to 1:00pm
- 13 October 2018

PROGRAM

8:45a: Introduction

- Jack Schmidt, Professor and Director, Center for Colorado River Studies, Utah State University (former: Chief, USGS Grand Canyon Monitoring and Research Center)

9a: Reading the rivers sediments: basic science applied to managed reservoir releases from Glen Canyon Dam

- David Rubin, researcher, University of California Santa Cruz (previously Senior Scientist, USGS Pacific Marine Geology)
- Paul Grams, hydrologist, USGS Southwest Biological Science Center, Grand Canyon Monitoring and Research Center

9:45a: How will the river run? Colorado River stream flow in a warming world

- Brad Udall, Senior Water and Climate Research Fellow, Colorado Water Institute, Colorado State University

10:15a: Panel Discussion: Meeting water supply, hydropower, and environmental objectives for the Colorado River can we have it all?

- Anne Castle, Getches-Wilkinson Center for Natural Resources, University of Colorado-Boulder (former Assistant Secretary for Water and Science, US Department of the Interior)
- Chris Harris, Executive Director, Colorado River Board of California

- Eric Kuhn, retired (former General Manager, Colorado River Water Conservation District)
- Clayton Palmer, environmental specialist, Western Area Power Administration
- John Weisheit, Conservation Director, Living Rivers and Colorado Riverkeeper

11:15a: The future of riparian vegetation communities along the big rivers

- Sasha Reed, ecologist, USGS Southwest Biological Science Center, Moab Research Station

11:45a: The future of the endangered big river fish

- Phaedra Budy, ecologist and Unit Leader, USGS Utah Cooperative Fish and Wildlife Unit, Utah State University

12:15p: Public Discussion: Does the river have a future?

- Jack Schmidt - facilitator

10/16/18

Colorado River District Leaders to Discuss Idea of Mandatory Water Cuts Across State

[Click here](#) to read this story by Brent Gardner-Smith at *Aspen Journalism*

10/11/18

A Call on the Yampa River Occurs for the First Time in History

[Click here](#) to read this story by Alan Best of *Mountain Town News*

10/10/18

Final Review Draft of Agreements for Drought Contingency Planning

October 5, 2018 - Final Review Draft Agreements for Drought Contingency Planning. Reclamation.

[CLICK HERE](#)

FROM TONY DAVIS OF ARIZONA DAILY STAR

It was another bad year on the Colorado River, and the numbers prove it.

- River flows into Lake Powell at the Arizona-Utah border were 43 percent of normal in water year 2017-2018, which ended at the end of last month. That's the lowest since the extreme drought year of 2002, when they were 24 percent of normal. It's the third lowest annual flow into Powell since records on river flows started being kept in 1906.

- The river's annual flows were above average in only four of the 19 years since 2000. This was the river's driest 19-year period on record.

- The combined storage of river water in Lake Powell and Lake Mead is about 41 percent of normal. It's the lowest combined storage since Lake Powell was filling during the mid-1960s after the closing of the gates at the newly constructed Glen Canyon Dam.
- This year's flows into Lake Powell were far less than the federal forecast back in April of about 52 percent of normal. One reason is that flows into Powell were 1 percent of normal in September — the driest on record — and 2 percent of normal in August — the second driest on record.

"We had a pretty good year in 2017, with an inflow into Powell of 110 percent of average. But unfortunately we lost that storage and a little bit more in 2018," said Dan Bunk, a U.S. Bureau of Reclamation hydrologist.

He presented these and other figures Wednesday at a meeting of the steering committee working on a proposed Drought Contingency Plan for the river's Lower Basin. "Really that buffer that we saw in Lake Powell, the extra storage that helped protect the Colorado River system, was lost this year," Bunk said.

The bureau predicts a 57 percent chance of the river's first shortage in 2020, with the odds of shortages increasing in future years. That would happen if Lake Mead drops below 1,075 feet at the end of 2019.

Without a formal Drought Contingency Plan in place, under which less water would be used, there's about a 75 percent chance of Mead dropping below 1,050 feet by 2026, which would require deeper cuts in deliveries, the bureau says. That's based on assuming the trends of declining river flows from 1988 to 2015 continues. With a drought plan, the odds of Mead dropping below 1,050 by then fall to a little over 50 percent.

Without a drought plan, there's also at least a 40 percent chance of Mead dropping below 1,025 feet from 2024 through 2026, bureau figures show, based on the same 1988-2015 flow record. With a plan, the odds of such low levels drops to less than 20 percent for all those years and to as low as 10 percent in 2024.

At 1,025 feet, a federal takeover of how the river's flows are divided is possible, as federal officials would want to keep the lake from sinking lower and approaching "dead pool" at 895 feet, when no water could be pulled from Mead.

09/21/18

Mandatory Curtailment of Water Rights in Colorado Raised as Possibility! Lake Powell Empty in Three Years?

[Click here](#) to read this story by Brent Gardner-Smith of *Aspen Journalism*

09/20/18

White River: Economic Feasibility of Off-Channel Dam and Reservoir Questioned.

[Click here](#) to read this story by Brent Gardner-Smith of *Aspen Journalism*
[Big Dam Proposal Seeking Supporters](#). *Grand Junction Sentinel*.

[Colorado Water Agencies Going Different Ways on White River Dam Project](#). *Aspen Journalism*.

For more information, visit: [On The Colorado](#)

09/18/18

A heavy week for news and opinion about water resource management in the State of Colorado

WINDY GAP PROJECT

[Click here](#) to read this story for *The Longmont Observer*

[Click here](#) to read this story by Brent Gardner-Smith of *Aspen Journalism*

RISKY BUSINESS CONFERENCE

[Click here](#) to read this story by Brent Gardner-Smith of *Aspen Journalism*

[Click here](#) to read this story by Dennis Webb of *The Grand Junction Sentinel*

[Click here](#) to read this story by Dennis Webb of *The Grand Junction Sentinel*

OPINION PIECE BY DANIEL BEARD AND GARY WOCKNER

[Click here](#) to read why Glen Canyon Dam should be decommissioned in *The Denver Post*

ADAPTING TO CLIMATE

[Click here](#) to read this story by Bruce Findley of *The Denver Post*

Soothing words on water, but little else

DENNIS WEBB

Grand Junction Sentinel

Sep 20, 2018

Western Slope water interests received verbal assurances but nothing more formal from the Colorado Water Conservation Board Wednesday in regard to concerns about interstate drought-response negotiations and the implications for agriculture west of the Continental Divide.

CWCB staff and board members sought to ease Western Slope worries that Colorado and other states are moving toward agreement about creating a dedicated account or

pool in Lake Powell or other reservoirs for storing water saved through a potential demand management program. Those worries arise from a lack of any rules that would govern such a program in Colorado.

"Our fear is as Western Slope water users that we may become the target for demand management, and we want to do whatever we can to ensure that doesn't happen," Tom Alvey, a Delta County fruit-grower who is president of the Colorado River District board of directors, told the state board at its meeting in Steamboat Springs.

Alvey was reiterating comments made Friday by the district's general manager, Andy Mueller, at a district forum in Grand Junction focused on contingency planning measures should the region's long-term drought continue. States in the Upper Colorado River Basin are working on ways to try to keep levels in Lake Powell from falling low enough that the states could no longer meet their water-delivery obligations to downstream states under a 1922 agreement, leading to curtailment of water uses in the Upper Basin. Among measures under consideration is a potential demand management program that could involve measures such as temporary fallowing of fields.

Mueller on Friday voiced frustration about not being able to see a demand-management document that James Eklund, Colorado's representative on the Upper Colorado River Commission, may soon be signing. The river district fears the agreement could help facilitate a demand management program in Colorado inconsistent with what criteria the river district believes such a program should have.

Mueller's understanding Friday was that Eklund might be signing such a document within a month, but Eklund told The Daily Sentinel that instead draft documents would likely be made public within a month or so, with the goal of reaching final agreements later.

Eklund also said the point of the interstate demand-management negotiations is to reach an agreement under which conserved water could be stored in a separate account in a location such as Powell without being subject to release under an existing interstate agreement that seeks to help balance water levels in Powell and Lake Mead downstream. He sees the particulars about what a demand-management program would entail within Colorado as something to be determined in separate, in-state discussions.

Karen Kwon, first assistant attorney general with the Colorado Attorney General's Office, reiterated that Wednesday at the CWCB meeting.

"If we did a demand-management program and we had nowhere to put the water, it's for naught. We did nothing," Kwon said.

The river district and other Western Slope entities including the Southwestern Water Conservation District are uncomfortable with the idea of working out the storage side of things without first spelling out what constraints a demand management program should

have. They asked the state board Wednesday to adopt a resolution stating that any such program should comply with a number of principles laid out by the districts, but the board took no action on the matter.

Among principles the Western Slope sought were that any water conserved in a demand-management program should be able to be stored free of charge; that participation by water users in the program should be voluntary, compensated and temporary; that the conserved water shouldn't be subject to release under the Powell-Mead equalization agreement; and that the program should not have disproportionate impacts on any single basin or region in the state.

Principles such as the free storage are ones Colorado officials already are negotiating with other states, according to Kwon.

The river district also was concerned ahead of Wednesday's meeting about a memo from CWCB staff talking about key issues for consideration should Colorado create a demand-management program. Among those issues were whether such a program should be limited to temporary, voluntary and compensated activities "or be expanded to include something more," and the potential for considering a pivot "to something more akin to mandatory curtailment."

CWCB staff member Brent Newman said at Wednesday's meeting that the memo was simply intended to summarize the full spectrum of discussions, concerns and opportunities as identified by water users when it comes to a possible demand management program. He said CWCB and Attorney General's Office staff aren't "assessing, pursuing or recommending to the board any type of involuntary or anticipatory curtailment scenario."

Peter Fleming, the river district's general counsel, told the state board that Newman's clarifications "were very helpful."

Fleming said the issue has resulted in "a little period of unfortunate tension" of the kind that sometimes arises in the state regarding water issues.

"Sometimes it's unavoidable and sometimes it needs to be aired and it happens and we work through it," Fleming said.

But he said the river district remains concerned about that range of options raised by the CWCB staff in the memo. He said the district is worried about the "unfettered use" of a new tool.

"It is demand management. It is a controversial topic and we can't shy away from that. The reduction of consumptive uses is something that is a new thing on the West Slope in particular."

Kathleen Curry, a former state lawmaker whose family in Gunnison runs a cattle and

hay operation, said the Western Slope wants to be part of the solution rather than part of the problem. But she also worried that measures aimed at avoiding compact curtailment could significantly impact the viability of Western Slope agriculture.

"I hope that the treatment isn't worse than the disease," she said.

Jim Lochhead, chief executive officer and manager of Denver Water, said he saw a media account describing the West Slope position as a "manifesto."

"From Denver Water's perspective, I don't believe we need manifestos. What we need is diplomacy and what we need is leadership," he said.

Referring to letters Western Slope and Front Range water entities sent to the CWCB, he said there's actually a lot of common ground in them, which is no coincidence because those groups have been in conversations with each other.

But he added that while Denver Water prefers a voluntary, temporary, compensated demand management program, not talking about the prospect of mandatory curtailment won't make the problem go away

"We need to be thinking about that and we need to be thinking about it proactively," he said.

In choosing against taking any action on the issue Wednesday, CWCB board members voiced a desire to wait to see what's in the draft negotiation documents once they're released. They also referred to what they viewed as the importance of addressing the storage aspect of demand management.

"The storage is vital," said board chair Jim Yahn. "How we use it, we can agree to figure that out."

###

Something more?

Grand Junction Sentinel Editorial Board
September 20, 2018

It's never fun to learn that authorities aren't on the same page about something as critical as water, which is the lifeblood of any Western community.

Over the last several years, we've seen greater harmony between the Front Range and the Western Slope when it comes to water. As the Colorado Water Conservation Board went about finalizing the state's first-ever water plan, entities from both sides of the state met often in public forums and hammered out a consensus that worked for all parties.

But old suspicions die hard. In a departure from this new spirit of collaboration, we got a

dose of old-school saber rattling last week from the Colorado River District. Warranted or not, it's a reminder how communication and transparency can go a long way toward easing long-held tensions.

On Friday, Andy Mueller, the general manager of the Colorado River District took advantage of a public forum to announce his concerns with a "demand-management document" and its implications for Western Slope water users. The states in the Upper Colorado River Basin are supposed to spell out how they intend to deal with falling water levels in Lake Powell.

As the Sentinel's Dennis Webb reported, Mueller said the district hasn't seen documents that would commit the state to a drought contingency plan to fulfill its downstream obligations under the 1922 Colorado River Compact. Mueller said that was "unacceptable."

He's right. It would be unacceptable for the state water board to keep the documents from the district or the public, but that doesn't appear to be the case. James Eklund, Colorado's representative on the Upper Colorado River Commission and a former director of the Colorado Water Conservation Board said the goal is to get documents ready for review by this month, but that the district and other stakeholders would have plenty of time to evaluate and analyze them before they're executed.

Reassuring as that is, Mueller pointed to a memo written by the Colorado Water Conservation Board staff ahead of Wednesday's board meeting asking if a demand-management program should be confined to temporary, voluntary and compensated activities "or be expanded to include something more."

The memo also raised the question of whether the program would be used to help assure continued compliance with the river compact "or something more." The memo later suggests that mandatory curtailment is an option, but Mueller said it's never been discussed by water roundtables around the state.

Clearly, there's enough concerning language in the memo to justify an inquiry about the status of the documents in question. But it seems a simple phone call from the district to the CWCB staff could have cleared up any confusion before it escalated into a public calling-out of Eklund and the board. Perhaps some outreach from the board staff to the district and roundtables might have headed off Mueller's public concerns that conserved water could somehow be co-opted by wealthy Front Range water interests.

###

High and dry irrigators getting a hand

DENNIS WEBB
Grand Junction Sentinel
Sep 19, 2018

The Grand Valley's largest domestic water provider and a leading energy company are stepping in to help area irrigators stretch out their watering season due to western Colorado's severe drought conditions.

The Ute Water Conservancy District board of directors has agreed to donate 4,000 acre-feet of contract water it owns in Ruedi Reservoir above Basalt to help keep water flowing in local canals. Meanwhile, ExxonMobil subsidiary XTO Energy is contributing 5,000 acre-feet that it maintains in Ruedi Reservoir for use downstream of the reservoir, including for irrigation needs in Mesa County and to help protect endangered fish in a crucial 15-mile stretch of the Colorado River in the county.

An acre-foot is about 326,000 gallons. XTO said in a news release that its donation is equivalent to the water needed for 1,500 homes or to irrigate 10,000 acres of farmland for a year.

"Oh man, the whole Grand Valley ought to be very appreciative of that water," Dan Crabtree, who manages the Palisade Irrigation District, said of the donations.

The donations come in a year when much of western Colorado is in extreme and in some areas even exceptional drought, the most extreme category. That drought has come to threaten even Grand Valley irrigation water that involves some of the most senior water rights on the river in Colorado. That makes it some of the last water to get cut off when supplies run out, and also helps protect upstream Colorado River flows that ensure delivery of that water.

Some Grand Valley irrigation water comes from what's called a historic users pool at Green Mountain Reservoir outside Kremmling. This year, Grand Valley irrigation water providers began tapping that 60,000-acre-foot pool earlier than usual due to the drought.

In August, the Colorado River District agreed to release water from Ruedi Reservoir to help trout suffering from low water flows in the Fryingpan and Roaring Fork rivers and help meet Grand Valley irrigation needs while taking pressure off the users pool.

Even with that donation, by Sept. 12, just 8,700 acre-feet remained in the pool, and irrigation providers were anticipating shortages affecting more than 45,000 acres in the Grand Valley.

Ute Water spokesman Joe Burtard said the amount of water in the pool has continued to dwindle since then, prompting Ute Water to step in with the water of its own.

Ute Water owns 12,000 acre-feet of contract water in Ruedi, and in June already agreed to lease half that amount to the state to help endangered fish in the so-called "15-Mile Reach" stretch of the Colorado.

Ute Water held on to the other 6,000 acre-feet for domestic use, in case drought conditions continued to worsen. It now believes the 2,000 acre-feet it is keeping is sufficient as a reserve for domestic use.

"We're being very conservative in maintaining the 2,000 acre-feet for domestic use should we be in a situation where we need it," Burtard said.

So far, Ute Water has been able to meet its water needs from supplies coming off the Grand Mesa.

The donation of the irrigation water could help avert heavier demand on Ute Water and other local domestic water suppliers. Reduced flows in irrigation canals would mean subdivisions would be without irrigation water and homeowners would turn to their domestic water services to water landscaping.

The Ute Water donation will benefit the Palisade Irrigation District, Grand Valley Irrigation Company, Grand Valley Water Users Association, Mesa County Irrigation District and Orchard Mesa Irrigation District.

Burtard said it's hard to put a dollar value on the water Ute Water is donating. It paid \$1,289.90 an acre-foot for the contract water, he said. It is receiving \$7.20 an acre-foot for the 6,000 acre-feet it leased in June to the Colorado Water Conservation Board, an amount intended to cover related operation and maintenance costs for the district.

XTO's water releases will be coordinated with the state's Division of Water Resources, and with the U.S. Bureau of Reclamation and Fish and Wildlife Service in terms of timing to best benefit endangered fish.

"XTO Energy shares the state of Colorado's concerns about the persistent drought that is affecting much of Colorado," Michael Johnson, vice president of XTO's Central Division, said in a news release. "Just as we did during the 2002 drought, we are making an effort to offer our assistance by donating water we would normally use for internal operational purposes to help mitigate drought impacts." Said Crabtree, "The Exxon(Mobil) water, that's to keep water in the river, not only for recreation or aesthetics or the fish. It is just good to keep the ecosystem healthy."

Burtard said the Colorado River District is working with other entities to secure another 1,900 acre-feet for Grand Valley irrigators.

Crabtree said irrigators already have cut back use substantially to extend the historic users pool, which otherwise probably would have run out last week or this week. Without the newly donated water, irrigation providers would have to rely on the river's natural flows, "and there would definitely be some shortages," he said.

Mark Harris, general manager of the Grand Valley Water Users Association, said in the XTO news release that XTO's contribution helps ensure the proper operation of his

association's diversion structures, which also benefit other irrigation districts.

Crabtree, a retired Bureau of Reclamation employee, said he's been doing water work for 40 years and never has seen conditions so bad.

Dennis Clark, owner of Clark Family Orchards in Palisade, said the river is "about as low as I've ever seen it."

He said his farm probably has been irrigating a bit more than normal and will continue to do so this fall "just because we've been so hot and dry."

Another concern is the potential for moss issues developing in the river's low water that could create problems with irrigation filtration systems, he said.

So far, he said, his farm has survived the drought fairly well.

"It's going to be dire straits if we don't have a winter," he said.

Alan Rossi, whose R Ranch in Mack raises hay and cows, said his operation has always had water this year, and has had to irrigate a little more than usual due to this year's hot and windy weather.

"If we don't get any snow this winter that's the big concern, but right now everything seems to be OK," he said.

He said that even in the case of senior water rights, if there's no snow and resulting snowmelt, "then we're out of luck too."

09/18/18

Utah's Mormon Republican Establishment is Backing Trump's Assault on Public Lands

[Click here](#) to read this OpEd by Stephen Trimble in *The Los Angeles Times*

09/17/18

Congress Restores Funds to 'Crucial' Colorado River Programs

Melissa Sevigny

KNAU Radio

September 17, 2018

The U.S. House and Senate have passed an appropriations bill that will restore full funding to environmental programs on the Colorado River for the next fiscal year.

KNAU's Melissa Sevigny reports, the programs were at risk of closing after the White House redirected their funding.

An amendment to the 2019 energy and water bill <https://www.congress.gov/115/crpt/hrpt929/CRPT-115hrpt929.pdf>

restores 21.4 million dollars to the Grand Canyon Monitoring and Research Center in Flagstaff and to other programs related to river management and endangered species recovery. President Trump has yet to sign the bill into law.

U.S. Bureau of Reclamation spokesperson Marlon Duke says he's pleased by the decision. "For us, these programs are crucial along the river. In addition to the science that they provide, it helps us in Reclamation to make sure that we stay compliant with the operation of our facilities along the river."

Duke says Reclamation will continue to work with Congress and stakeholders to find funding for future years. For decades the scientific research programs have been supported by hydropower revenues. The White House Office of Management and Budget ordered that money to go to the U.S. Treasury instead.

###

Jobs, Research At Risk After Government Defunds Grand Canyon Programs

[Click here](#) to read this story by Scott Buffon of *The Arizona Daily Sun*

[Click here](#) to read this story by Melissa Sevigny from *KNAU Radio*

[Click here](#) to read this OpEd by Kristina Young from Moab, Utah in *The Salt Lake Tribune*

09/14/18

Can We Operate Colorado River Differently Amid Climate Change?

[Click here](#) to read this story by Matt Weiser of *Water Deeply*. A conversation with Professor Jack Schmidt from Utah State University at Logan.

09/08/18

Warming Is Driving Much of the Colorado River's Decline, Scientists Say

[Click here](#) to read this story by Ian James of *The Arizona Republic*

[Click here](#) to read the paper, "On the causes of declining Colorado River streamflows," by Xiao et al., and published by *American Geophysical Union*

09/07/18

Southwest Colorado's Basins, Reservoirs are Parched; Blue Mesa Nears Historic Low

[Click here](#) to read this story by Haley Sanchez of *Colorado Public Radio and Associated Press*

09/05/18

Yampa River Placed

[Click here](#) to read this story by Eleanor C. Hasenbeck of *The Steamboat Pilot*

08/24/18

It's Hard to Fill a Bathtub When the Drain is Wide Open: The Case for Lake Powell

[Click here](#) to read this report by the Colorado River Research Group

[Click here](#) to visit CRRGs website

Conversation with former Chief Justice of Colorado Supreme Court, Gregory Hobbs, answers questions from John Ingold of *The Colorado Sun*," [HERE](#)

08/24/18

Notice of Intent to Sue Over Expansion of Boulder County's Gross Reservoir

[Click here](#) to read this story by Charlie Brennan of *The Daily Camera*

[Click here](#) to read the 60-day notice

[Click here](#) to read the testimony of the expert witness

[Click here](#) to read the coalition press release

[Click here](#) to read this story by Brent Gardner-Smith of *Aspen Journalism*

08/23/18

Is There Water Left To Be Developed In Colorado River Basin? Yes, says Water Horse Resources.

[Click here](#) to read this story by Luke Runyon of KUNC Radio.

08/21/18

Water Banking Bill Surfaces Amid Sea of Questions

[Click here](#) to read this story by Angus M. Thuermer Jr. in *WyoFile*

08/20/18

Doomsday For The Colorado River Approaches

[Click here](#) to read this story by Ry Rivard for *Voice of San Diego*

[Click here](#) to read this story by Dan Elliott of *Associated Press*

08/18/18

Arizona's Plan to Withdraw Years of Banked CAP Water Lagging

[Click here](#) to read this story by Tony Davis of *The Arizona Daily Star*

08/18/18

Nevada State Denies Applications to Pump Rural Water to Las Vegas

[Click here](#) to read this story by Benjamin Spillman of *The Reno Gazette Journal*

9/14/2018

Southern Nevada Water Authority vows to appeal the court order.

[Click here](#) to read this story by Ken Ritter of *The Associated Press*

08/18/18

Why One Arizona County Could Upend The Southwest's Drought Plan

[Click here](#) to read this story by Mark Weiser of *Water Deeply*

08/15/18

In California Desert Farm Baron Mike Abatti Builds Water Energy Empire

Two stories by Sammy Roth of *The Desert Sun*

[First Feature](#)

[Second Feature](#)

08/15/18

Utah's Big Water Grab

[Click here](#) to read this story by Mark Sundeen in *Outside Magazine*

08/11/18

Utah Records Committee Orders Utah Rep Mike Noel's Agency to Provide Lake Powell Pipeline Records to Public

[Click here](#) to read this story by Brian Maffly of *The Salt Lake Tribune*

[Click here](#) to read this story by *The Independent*

HUMOR

[Why Lake Powell Pipeline Is Good and Will Make Us All Rich](#)

08/10/18

Projections On Inflow Into Lake Powell In The Coming “Water Season”: They’ve Looked Better

[Click here](#) to read this feature from Arizona Department of Water Resources

08/08/18

Lakes Powell & Mead: The Quagga Muscle and Perched Sediment Problem

[Click here](#) to read this story by Kurt Repanshek in *National Parks Traveler Magazine*

[Click here](#) to view this photo essay by David Wallace of *The Arizona Republic*

07/13/18

Lake Powell Pipeline: Young people are writing Letters to the Editor

[Sarah Stock](#)
[Taylor Graham](#)

[Click here](#) to read this OpEd from the editorial board of *The Salt Lake Tribune*

07/09/18

Utahns Move Towards Water Conservation While Keeping an Eye on Lake Powell Pipeline

[Click here](#) to read and listen to this story by Judy Fahys of KUER (and KNPR)

06/29/18

Colorado River Managers See a Possible Future and It Doesn't Look Pretty

[Click here](#) to read this story by Luke Runyon of *KUNC Radio*

06/29/18

Plug Pulled on Program Paying Farmers to Conserve Colorado River

[Click here](#) to read this story by Brent Gardner-Smith of *Aspen Journalism*
[Click here](#) for more information about Drought Contingency Planning

06/27/18

Senior Calls on River & Fish Water in the 'Pan

[Click here](#) to read this story by Brent Gardner-Smith of *The Aspen Times*

06/02/18

Arizona Makes No Legislative Progress on Water Issues Despite Governor's Push

[Click here](#) to read this story by Tony Davis of *The Arizona Daily Star*

05/31/18

Fontenelle Reservoir: Draining the Bathtub

[Click here](#) to read this story by Angela Evans of *The Boulder Weekly*

05/31/18

The new model for saving the Colorado River might just kill it

[Click here](#) to read this OpEd from Joel Dryer of *The Boulder Weekly*

05/24/18

To the Last Drop: Planning for Water Shortage

[Click here](#) to read this story by Vanessa Barchfield and Tony Davis for *Arizona Public Media*

05/21/18

Decision on Shale Project Right of Way May Be Made in Early July

[Click here](#) to read this story by Dennis Webb of *The Daily Sentinel*
For additional information, please visit the website called On The Colorado [HERE](#)

05/15/18

Utah Scraps \$53 Million Plan to Ship Coal to Oakland

[Click here](#) to read this story by David DeBolt of the East Bay Times
May 15, 2018 - AP story about the result of the developer's lawsuit [HERE](#). And this story
by Brian Maffly of the Sal Lake Tribune [HERE](#)

Additional news

[Click here](#) to read this story called *Coal Industry Attorneys Threaten to Sue Oakland Over Records*

[Click here](#) to read this story by Molly Marcello of the Moab Times Independent

[Click here](#) to read about Oakland's City Council Ban from William Yardley of the LA Times

[Click here](#) to read this High Country News article by Sarah Troy

5/10/18

'We Need Action' Federal Officials Tells Colorado River States

[Click here](#) to read this story by Henry Brean of *Las Vegas Review Journal*

[Click here](#) to read this story by Tony Davis of *Arizona Daily Star*

"Lake Mead Shortage Declaration Would Do This To Arizona's Water Supply"

[Click here](#) to read this OpEd by Joanna Allhands in *The Arizona Republic*

05/02/18

Uinta Basin Now Ozone Nonattainment Area; Rio Blanco County Not Included by EPA

[Click here](#) to read this story by Gary Harmon for *The Grand Junction Sentinel*

04/27/18

Colorado Denies License for Paradox Uranium Mill

[Click here](#) to read this story by Jim Mimiaga in *The Journal*

[Click here](#) for detailed information about the uranium mill proposal at Paradox Valley

04/20/18

Five Things to Know About the Latest Colorado River Dust Up (manipulating the System Conservation Pilot Program)

[Click here](#) to read this story by Luke Runyon and Bret Jasper for KUNC and KJZZ radio

[Click here](#) to read letter from Upper Colorado River Commission

[Click here](#) to read letter from Denver Water

[Click here](#) to read the letter from the Pueblo Board of Water Works

[Click here](#) to read this story by Angela Evans in *The Boulder Weekly* called "A Drop in the Bucket."

03/29/18

In the Imperial Valley, a Fight Over Water is Heating Up

[Click here](#) to read this story by Ian James of *The Desert Sun*

03/16/18

Utah launching first comprehensive planning effort for Green, Colorado rivers

To participate in this process, please visit the following web page - [Far Country](#)

By Amy Joi O'Donoghue of Deseret News

Published: March 16, 2018 4:39 pm

SALT LAKE CITY — To ensure the long-term sustainability of the Green and Colorado rivers as they flow through portions of Utah, state sovereign land managers are launching a first-ever effort to craft comprehensive management plans for the waterways.

The plans affect those state-owned sovereign land sections of the rivers as they go through Uintah, Grand, Emery, Wayne, Garfield, Kane and San Juan counties. The beds of navigable waters are owned by the state but held in trust for the public.

Plans will be developed, with public input, under the purview of the Utah Department of Natural Resources' Division of Forestry, Fire and State Lands.

That division is required to regulate all uses on, beneath or above the bed of the rivers, including protecting navigation, fish and wildlife habitat, aquatic beauty, public recreation and water quality.

These first-ever comprehensive management plans will also include an update of mineral leasing plans impacting Green and Colorado river resources.

During March and April, the division — assisted by contractors SWCA Environmental Consultants; CRSA architects, planning and design; and Hansen, Allen & Luce — will present information regarding the plan development process at open house meetings in each county that contains state-owned sovereign land sections of the rivers.

The open houses, all from 6 to 8 p.m., are as follows:

- Uintah County, March 27, at the Uintah County Library in Vernal
- Kane County, April 10, at the Kanab City Library in Kanab
- Garfield County April 11, at the Escalante Senior Center in Escalante
- Wayne County, April 12, at the Hanksville EMS Building in Hanksville
- San Juan County, April 17, at the San Juan County Administration Building in Monticello
- Grand County, April 18, at the Grand County High School Auditorium in Moab

- Emery County, April 19, at the John Wesley Powell Museum in Green River

All residents are encouraged to attend the public open house meeting in their county.

"Public involvement is an important part of the Green and Colorado river planning process," said project manager Laura Vernon, adding "suggestions and concerns about the rivers can help us identify issues and develop management plan objectives."

Vernon said the state developed comprehensive management plans for the Jordan and Bear rivers, two distinctly different waterways facing sharply contrasting issues because Jordan is an urban river, while the Bear River flows through a rural setting.

"It is interesting to see the different issues that come up," she said. "I suspect we will see some here."

Draft plans and a range of management actions and alternatives, in addition to an assessment of each of the river's resources, will be available for review during a second round of meetings a year from now.

In the summer of 2019, those draft plans will be open for public comment.

The drafts should be finalized in December of 2019.

03/13/18

Ute Tribe Takes Feds to Court Over Theft of Land & Water in Historic Uncompahgre

[Click here](#) to read this story by Brian Maffly in *The Salt Lake Tribune*

03/07/18

Proposed railroad would haul freight from Uintah Basin to Craig

[Click here](#) to read this story in *Craig Press* by Ryan Collins

ADDITIONAL INFORMATION

[Panel Shifts Gears On Best Rail Route To Move Oil From Eastern Utah](#). *Salt Lake Tribune*.

[Feds Looking For Public Input On Uinta Basin Railway Proposed Route Through Moffat County](#). *Craig Daily Press*.

[A New Freight Train Route For Utah? Uinta Basin Hopes So](#). *Deseret News*

FOR MORE INFORMATION VISIT

[On The Colorado Blog](#)

02/27/18

Entrepreneur Revives Proposed Pipeline to Carry Green River Water from Utah to Colorado

[Click here](#) to read this story by Brian Maffly of *The Salt Lake Tribune*

[Click here](#) to read this story by Dennis Webb in *The Grand Junction Sentinel*.

Here is a link to documents for this water right (#41-3747) at the website of Utah Division of Water Rights: <https://www.waterrights.utah.gov/cgi-bin/docview.exe?Folder=41-3747>

Opportunities to file a PROTEST and REQUEST FOR A HEARING will be forthcoming and will appear as a public notice in the UDWR website (above paragraph) and also [HERE](#) (under Daggett County).

The administrative record for the previous pipeline proposal is archived at On The Colorado located [HERE](#)

The reason why the first application failed is provided here:

<http://www.riversimulator.org/Resources/UCRC/UCRCflamingGorgeWaterAvailabilityReclamation2007.pdf>

02/10/18

Snow Map for the Upper Basin the Colorado River (very dry)

[Click here](#) to view the snow map from the Bureau of Reclamation.

02/07/18

Arizona Lawmakers are Trying to Decimate Your Groundwater (Again)

[Click here](#) to read this Op Ed in the Arizona Republic by Kathleen Ferris

01/29/18

Utah Spent \$33 Million on Pipeline Application it Never Finished. The Feds Approved it Anyway

[Click here](#) to read this story by Emma Penrod of *The Salt Lake Tribune*

01/22/18

Snow Droughts

Nevada Researchers Warn of More "Snow Droughts," Even in Wet Years. Also "rain on snow events," and the wettest century of the last 4,000 years.

[Click here](#) to read this story by Henry Brean of *The Las Vegas Review Journal*

[Click here](#) to review the research paper *Exploring the Origins of Snow Droughts in the Northern Sierra Nevada, California*

01/20/18

Experts Warn About Dry Conditions In Colorado

[Click here](#) to read this article by H2O Radio as reported in Coyote Gulch

01/06/18

Utah Reluctantly Asks Feds to Push Pause on State's Lake Powell Pipeline

[Click here](#) to read this story by Emma Penrod of *The Salt Lake Tribune*

[Click here](#) to read this story by David DeMille of *The Spectrum*

12/20/19

Gila River Diversion: Feds Deny Extension of \$60 million

[Click here](#) to read this breaking story by the staff of *Silver City Daily Press*

12/19/19

Interior Secretary Skips Climate Change In Colorado River Users Speech

[Click here](#) to read this story by Laura Paskus of *Santa Fe Reporter*

[Click here](#) to read this story by Rebecca Leber of *High Country News* called "Pay to Play: Interior Secretary's Old Clients Spend Big Profit Bigly."

12/11/19

Water Cutbacks Set to Begin Under Deal Designed to buy down risk on the Colorado River

[Click here](#) to read this story by Ian James in *The Arizona Republic*

12/07/19

Moab Science on Tap: The Returning Rapids of Cataract Canyon

[Click here](#) to read this story by Maggie McQuire of *Moab Sun News*

12/06/19

Reclamation Seeks Alternatives to Colorados Earthquake Prone Paradox Valley Salinity Control Project

[Click here](#) to read this story by Rachel Fixsen of the *Moab Sun News*

[Click here](#) to read this story by Dennis Webb from *The Grand Junction Sentinel* called "What is Paradox Salt Injection Program's Future."

And this [story](#) of December 23, 2019 by Dennis Webb "Shaking Things Up in Paradox Valley"

[Click here](#) to read this story by Luke Runyon of *KUNC Public Radio*

[Click here](#) to read this Press Release from *Bureau of Reclamation*

Two public meetings will be held on:

- Tuesday, Jan. 14, 2020 in Paradox, Colorado at the Paradox Valley Charter School, 21501 6 Mile Rd., at 5 p.m
- Wednesday, Jan. 15, 2020 in Montrose, Colorado at the Holiday Inn Express & Suites, 1391 S. Townsend Ave., at 6 p.m.

The draft Environmental Impact Statement is available online at:

- www.usbr.gov/uc/progact/paradox/index.html
- or a copy can be requested by contacting Reclamation

Comments are due:

- 11:59 p.m. Mountain Standard Time on Feb. 4, 2020

Submit comments by email to:

- Via eMail: paradoxeis@usbr.gov

Via US Postal Service to:

Ed Warner, Area Manager
Bureau of Reclamation
445 West Gunnison Ave, Suite 221
Grand Junction, CO 81501

To view documents from the Scoping Period, please visit this post from 2012: [On The Colorado](#)

NEW DOCUMENTS FOR PARADOX UNIT

- [DEIS and Appendices \(combined\)](#). 2019.
- [DEIS Volume 1](#)

APPENDICES

- [DEIS Volume 2, Apps A to D](#)
- [DEIS Volume 3 Apps E to J](#)
- [DEIS Volume 4, Apps K to M](#)

TECHNICAL REPORTS AND MEMOS

- [Review: Geologic Investigations](#). Block, 2012.

- [Assessment 2nd Injection Well](#). Atkins, 2013.
 - [Paradox Valley 2nd Well Design Report](#). Petrotek, 2014.
 - [Far-field Reservoir Pressurization](#). USBR TM, 2016.
 - [2nd Well Site Investigation](#). Block, 2016.
 - [2nd Injection Well REPORT](#). CRBR, 2017.
 - [Injection Data \(csv file\)](#)
-

12/05/19

Reclamation announces scoping for Lake Powell Pipeline

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

[WEBSITE](#)

Notice of Intent to Prepare a Draft Environmental Impact Statement and Public Scoping Period for the Lake Powell Pipeline Project

AGENCY: Bureau of Reclamation, Upper Colorado Basin, Interior Region 7. **ACTION:** Notice of Intent; request for scoping comments. **(SUMMARY:** The Bureau of Reclamation (Reclamation) intends to prepare an Environmental Impact Statement (EIS) on the Lake Powell Pipeline (LPP) Project. Reclamation is requesting public scoping comments to identify significant issues or other alternatives to be addressed in the EIS.

DATES: Submit comments on or before January 10, 2020. (Three scoping meetings will be held during the scoping period from 6:00pm to 8:00pm on January 7-9, 2020.

ADDRESSES: Provide written scoping comments and requests to be added to the mailing list to:

Mr. Rick Baxter, Program Manager
Bureau of Reclamation, Provo Area Office
302 East Lakeview Parkway
Provo, UT 84606

Via submittal form: <https://www.usbr.gov/uc/envdocs/eis/LakePowellPipeline/index.html>

Via eMail: lpp@usbr.gov

The three scoping meetings will be held at the following locations:

- January, 7th 6PM - 8PM; Kanab Center, 20 North 100 East, Kanab, UT, 84741
- January, 8th 6PM - 8PM; Dixie Center, 1835 South Convention Center Dr., St. George, UT, 84790
- January, 9th 6PM - 8PM; Valley High, 325 West 11000 South, South Jordan, UT, 84095

FOR FURTHER INFORMATION CONTACT:

Mr. Rick Baxter, Program Manager, Bureau of Reclamation, Provo Area Office, 302 East Lakeview Parkway, Provo, UT 84606; telephone (801) 379-1078; facsimile (801) 379-1159; e-mail lpp@usbr.gov. Persons who use a telecommunications device for the deaf may call the Federal Relay Service (FedRelay) at 1-800-877-8339 TTY/ASCII to contact the above individual during normal business hours or to leave a message or question after hours. You will receive a reply during normal business hours. Information on this project may also be found at:

<https://www.usbr.gov/uc/envdocs/eis/LakePowellPipeline/index.html>

SUPPLEMENTARY INFORMATION:

Reclamation is issuing this notice pursuant to the National Environmental Policy Act of 1969, as amended (NEPA), 42 U.S.C. 4321 et seq.; the Council on Environmental Quality's regulations for implementing NEPA, 40 CFR parts 1500 through 1508; Department of the Interior's NEPA regulations, 43 CFR part 46; and Bureau of Land Management regulations at 43 CFR 1610.2.(Background.

Reclamation will prepare an EIS for the LPP Project as proposed by the Utah Board of Water Resources (UBWR). The LPP is a proposed 140-mile, 69-inch- diameter water delivery pipeline that begins at Lake Powell near Glen Canyon Dam in Page, Arizona, and ends at Sand Hollow Reservoir near St. George, Utah. The pipeline would deliver up to 86,249 acre-feet of water from Lake Powell to Sand Hollow Reservoir. UBWR proposes building the LPP in order to bring a second source of water to Washington and Kane Counties in Utah to meet future water demands, diversify the regional water supply portfolio, and enhance the water supply reliability.

UBWR previously proposed a pipeline project with an intake at Lake Powell that included a hydroelectric peaking station at Hurricane Cliffs, Utah. The Federal Energy Regulatory Commission (FERC) was the lead Federal agency for that project because it would have required a hydroelectric license issued by the FERC. The UBWR withdrew its application to the FERC on September 25, 2019, and the project was terminated effective October 10, 2019. (https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20191016-3069)

Reclamation has been designated the lead Federal agency by the Department for the LPP NEPA process. The Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (FWS), Bureau of Indian Affairs (BIA) and National Park Service (NPS) are cooperating agencies. Based on the changes to project design and the lead federal agency, Reclamation is initiating a new public scoping process, which will require interested parties to submit new comments on the current proposal. Reclamation is also reinitiating government to government consultation with Indian tribes under section 106 of the National Historic Preservation Act and in accordance with Executive Order 13175. Two pipeline alignments have been proposed: the Southern Alternative and the Highway Alternative. Both alternatives begin and end in the same locations. The Southern Alternative would travel south of the Kaibab Indian Reservation while the

alignment for the Highway Alternative would cross lands held in trust by the United States for the benefit of the Kaibab Band of Paiute Indians, following Arizona State Route 389. The Southern Alternative would cross land administered by the BLM in Utah and Arizona and would require multiple right-of-way (ROW) grants and an amendment to the Arizona Strip Resource Management Plan (RMP), because a small portion of the pipeline would go outside an approved utility corridor.

The Highway Alternative would cross BLM and Tribal trust lands, which would require the BLM and BIA to issue ROW grants and require a tribal resolution from the Kaibab Band of Paiute Indians. Both alternatives would cross lands administered by Reclamation and the NPS, requiring Reclamation to issue a license agreement and the NPS to issue a ROW permit under either alternative.

In addition, UBWR has requested a water exchange contract with Reclamation. Under the exchange contract, UBWR would forbear the diversion of a portion of the natural flows to which UBWR is entitled and allow these flows to contribute to meeting the Endangered Species Act Upper Colorado River Recovery Implementation Program requirements in the Green River. In exchange, UBWR would deplete an equal amount of water released from Flaming Gorge Dam throughout the year and available at Lake Powell. This exchange contract would not entitle UBWR to call for releases from Flaming Gorge. (Public Disclosure.)

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment - including your personal identifying information - may be made publicly available at any time. While you may ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Brent Esplin,
Regional Director,(Upper Colorado Basin
Interior Region 7, Bureau of Reclamation.
[FR Doc. 2019-26357
Filed: 12/5/2019 8:45 am
Publication Date: 12/6/2019

Intro and Project Overview

In accordance with the National Environmental Policy Act of 1969, the Bureau of Reclamation will prepare an Environmental Impact Statement for the Lake Powell Pipeline Project proposed by the Utah Board of Water Resources. The LPP is a 140-mile, 69-inch-diameter water delivery pipeline that begins at Lake Powell near Glen Canyon Dam in Page, Arizona, and ends at Sand Hollow Reservoir near St. George, Utah. UBWR proposes building LPP in order to bring a second source of water to Washington and Kane Counties in Utah to meet future water demands, diversify the regional water supply portfolio, and enhance the reliability of the water supply.

A map showing two proposed alternatives for the Lake Powell Pipeline project: The Highway Alternative and the Southern Alternative. Both alternatives begin and end in the same locations. The Southern Alternative would travel south of the Kaibab Indian Reservation. The Highway Alternative would cross lands held in trust by the United States for the benefit of the Kaibab Band of Paiute Indians, following Arizona State Route 389.

This [MAP](#) shows the two proposed alternative water conveyance systems for the Lake Powell Pipeline to carry water from Lake Powell to Sand Hollow Reservoir. The Highway Alternative is shown in blue while the Southern Alternative is shown in green.

UBWR previously proposed a pipeline project with an intake at Lake Powell that included a hydroelectric peaking station at Hurricane Cliffs, Utah. The Federal Energy Regulatory Commission was the lead Federal agency for that project because it would have required a hydroelectric license issued by the FERC. The UBWR withdrew its application to the FERC on September 25, 2019, and the project was terminated effective October 10, 2019. (https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20191016-3069)

Reclamation has been designated the lead Federal agency by the Department of the Interior for the LPP National Environmental Policy Act process. Based on the changes to project design and the lead federal agency, Reclamation is initiating a new public scoping process, which will require interested parties to submit new comments on the current proposal. Reclamation is also reinitiating government-to-government consultation with Indian tribes under section 106 of the National Historic Preservation Act and in accordance with Executive Order 13175.

EIS Process

General Information

Scoping is the first step in the NEPA process and can include various means of information-gathering activities. It is to be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. (40 CFR 1501.7)

Public participation is an integral part of scoping because it gives the public an opportunity to help Reclamation identify issues of special concern and alternatives to the proposed action that may be included in the Environmental Impact Statement. Public scoping period for Reclamation's Notice of Intent to prepare an EIS for the pipeline project was announced in the Federal Register on December 6, 2019, and in a press release from Reclamation. The purpose of soliciting input is to identify relevant issues, alternatives, mitigation measures, and analytical tools so that they can be incorporated into the EIS. Comments may be submitted by 11:59 p.m. MST on January 10, 2020.

Getting input from as many affected and interested parties as possible is an important part of preparing an EIS. These usually include:

Citizens who live, work, or play in the area where the proposed project may occur.

Public interest groups and Native communities that have concerns about possible impacts to environmental, social, or economic resources.

Federal, State, and local government agencies that have responsibilities for managing public resources or services.

Scientists and other technical experts with knowledge of the area's natural resources and the possible impacts of the project development.

Impact Analysis

An EIS analyzes the environmental concerns that were identified for each alternative. The objective of the analysis is to determine the nature, severity, and duration of impacts that might occur and to compare the impacts of the alternatives. Numerous technical aids are used in making the assessment, including 23 ecological and socioeconomic studies that were completed when Federal Energy Regulatory Commission was the lead agency. These studies will be updated and incorporated as appropriate for Reclamation's EIS.

Draft EIS and Public Review

The impact analysis is first documented in a draft EIS. The draft EIS is made available to the public for 45 days for review and comment. The availability of the draft EIS is announced in a Federal Register notice and in press releases. Copies of the document are made available to the public on our web page. Requests for hard copies can also be submitted by email or phone using the "Contact Us" information. In order to make sure Reclamation can adequately respond to issues or concerns raised by the public, we ask that all comments be written and submitted via the methods described in the Notice of Intent or in the "Contact Us" section of this web page.

Final EIS

The principal objective when developing the final EIS is to address public comments on the draft EIS. The final EIS includes a summary of comments and Reclamation's responses.

After the comments on the draft EIS are reviewed, Reclamation will revise the document to correct technical errors and add any relevant new information that became available since the draft EIS was published. Once again, the availability of the final EIS is announced in a Federal Register Notice and press releases.

###

ON THE COLORADO

Articles about the Lake Powell Pipeline

- September 23, 2019: [The Administrative History of Lake Powell Pipeline](#)
 - October 22, 2018 - [The Water Rights of Central Utah Project, including Ultimate Phase](#)
 - September 18, 2018 - [Green River Block Environmental Assessment for a Federal Water Contract for Eastern Utah Counties](#)
 - August 22, 2018- [Lake Powell Pipeline Permitting Process Renewed](#)
 - June 28, 2018 - [Proposal to amend the Arizona Strip Resource Management Plan \(RMP\)](#)
 - December 26, 2017 - [Lake Powell Pipeline Approved for Environmental Analysis \(Temporarily Suspended\)](#)
 - March 21, 2011 - [Lake Powell Pipeline Documents](#)
 - June 03, 2010 - [Ultimate Phase Water Rights Stored at Flaming Gorge Reservoir](#)
 - May 06, 2008 - [Announcing: Scoping of environmental issues for the proposed Lake Powell Pipeline Project in Utah and Arizona](#)
-

12/05/19

Sinking Feeling: How Ignoring Inconvenient Science Drained the Colorado.

[Click here](#) to read this OpEd by Eric Kuhn and John Fleck in *The Tucson Weekly*

[Click here](#) to read this interview by Jeff Gardner with Eric Kuhn and John Fleck in *The Tucson Weekly*

12/02/19

At Least 1,680 Dams in USA Pose Potential Risk

[Click here](#) for this story by David A. Lieb, Michael Casey, and Michele Minkoff in *The Associated Press*

[Click here](#) to read this story by Bruce Finley of *The Denver Post* called "Colorado Rethinks Dam Safety as Climate Change Heightens Risk for 27 Dams"

[Click here](#) to read this story by Sofia Jeremias in *The Deseret News*

12/01/19

New paleoflood hydrology research paper: 700-year record of floods on Lower Green River in Stillwater Canyon

[Paleoflood Hydrology on the lower Green River, Upper Colorado River Basin, USA: An example of a naturalist approach to flood-risk analysis](#). 2019, Liu et al.

###

SUMMARY OF FINDINGS

Approach: analysis of physical evidence from past flood phenomena

Physical evidence: slackwater deposits (sediment) and paleostage indicators (perched driftwood is an example)

Year of obtaining samples: 2012

Dating techniques: Accelerator Mass Spectrometry, radiocarbon, optically stimulated luminescence

Number of sites: 6

Location of sites: Stillwater Canyon; lower Green River, Utah. Beginning 21 miles above confluence with the Colorado River, in Canyonlands National Park.

Basin: Colorado River in southwest USA

Time-frame: the last seven centuries

Total number of floods: 27

Magnitude (range in cubic meters per second): 500 to 7,500

Magnitude (range in cubic feet per second): 17,657 to 264,860

Highest peak from gage record: 68,122 cubic feet per second

Number of floods greater than gage record: 14

11/27/19

How the Fossil Fuel Industry Deliberately Misled Americans About Climate Change

"Climate scientists are as sure that burning fossil fuels causes global warming as public health scientists are sure that smoking tobacco causes cancer."

Over the past few decades, the fossil fuel industry has subjected the American public to a well-funded, well-orchestrated disinformation campaign about the reality and severity of human-caused climate change. The purpose of this web of denial has been to confuse the public and decision-makers in order to delay climate action and thereby protect fossil fuel business interests and defend libertarian, free-market conservative ideologies. The fossil fuel industry's denial and delay tactics come straight out of Big Tobacco's playbook. As a result, the American public have been denied the right to be

accurately informed about climate change, just as they were denied the right to be informed about the risks of smoking by the tobacco industry. While fossil fuel companies attacked the science and called on politicians to “reset the alarm,” climate-catalyzed damages worsened, including increased storm intensities, droughts, forest damage and wildfires, all at substantial loss of life and cost to the American people.

This report explores the techniques used to mislead the American public about climate change, and outlines ways of inoculating against disinformation.

[Click here](#) to read this report

11/25/19

Journal of Hydrology: Paleoflood hydrology research at Lower Green River in Stillwater Canyon, Utah

Through a comprehensive paleoflood investigation, employing the abductive mode of inference, we document natural evidence of 70 paleofloods at six sites on the Lower Green River, Utah. Hydraulic analysis, using the Sedimentation and River Hydraulic-2D model (SRH-2D), shows that the responsible peak paleoflood discharges ranged between 507 (18,000 cfs) and 7499 m³/s (264,824 cfs). At least 14 of these paleoflood discharge peaks exceed a level twice that of the maximum systematic gauged flow of 1929 m³/s.

Geochronological analysis, employing optically stimulated luminescence (OSL) and radiocarbon dating techniques, demonstrates that these 14 paleoflood peaks occurred in the past 700 years. Integrated of these paleoflood data into flood frequency analyses (FFA) showed higher values for the upper tails of the flood distribution than did an FFA based only on the systematic record, showing that extreme floods are more frequent than indicated by the relatively short gauged records. Through philosophical examination the three approaches to extreme flood estimation, FFA, probable maximum flood estimation, paleoflood hydrology, we show the significance of the natural evidence for advancing the scientific understanding of extreme floods.

[Paleoflood hydrology on the lower Green River, upper Colorado River Basin, USA: An example of a naturalist approach to flood-risk analysis](#). Journal of Hydrology, 2019, Liu et al.

11/24/19

Arizona Homebuilders Study Says: Embattled Water District an Economic Boon

[Click here](#) to read this story by Tony Davis in *The Arizona Daily Star*

11/19/19

Whatever happened to the water wars? (they never left)

"So, whatever happened to the water wars? The answer is that they continued—and that repeated forecasts did nothing to reduce the risk of bigger conflicts."

[Click here](#) to read this story by *The Economist*

11/13/19

OpEd: Minnesota groundwater should not be sold to Colorado River Basin

https://www.ifallsjournal.com/news/opinion/editorial/our-view-water-not-for-sale/article_b741043a-46c6-5387-ac2a-00cf6f6df6a1.html

OUR VIEW: Water not for sale

Laurel Beager
November 13, 2019

The water that makes up the Land of 10,000 Lakes is a precious and valuable resource. But that value shouldn't come in the form of money to allow other states to use.

The Minnesota Department of Natural Resources was right when it told a company it's not likely Minnesota will grant a permit allowing it to supply 500 million gallons each year of groundwater from Minnesota to the Southwestern United States by rail car.

Empire Builder Investments, based in Lakeville, Minn., submitted a preliminary well assessment request to the state in hopes of drilling two wells in Dakota County. The water produced from the wells would go on to be shipped by train to Southwestern states surrounding the Colorado River. A preliminary well assessment, required under state law, is an early stage review designed to identify potential issues before a proposer invests in equipment or well drilling.

Under Minnesota law, the DNR regulates the use of groundwater and surface water, and must manage public water resources for the benefit of the state of Minnesota, including future generations. The agency said in a statement that it must ensure that water appropriations are reasonable, practical, and adequately protect public safety and promote the public welfare.

The agency did all but outright reject the Empire Builder request after its initial review.

Minnesota DNR Commissioner Sarah Strommen stated “we see virtually no scenario where the DNR would grant a water appropriation permit for the project, as it does not appear it could meet applicable statutory requirements, including significant restrictions on use of the Mt. Simon aquifer.”

State restrictions limit the pumping of that aquifer for only for drinking water, and only when there’s no other feasible source.

The Minnesota Water Well Association, or MWWA, strongly opposes the proposal. The MWWA is a nonprofit organization representing water well drilling and pump contractors, geologists, hydrologists, engineers, state and local government employees, and groundwater industry suppliers and manufacturers.

Don’t get us wrong. Our hearts go out to the residents of drought-stricken states in the Southwest of our nation. We get that those states need water to avoid and fight devastating fires, and produce some of the vegetables and fruit we eat.

But we must join with others who also believe that the water resources in the Land of 10,000 Lakes are too precious and valuable to sell now and in the future.

11/13/19

White paper & story: Now is the time to prepare for shortages, water watchers say

https://www.gjsentinel.com/news/western_colorado/now-is-the-time-to-prepare-for-shortages-water-watchers/article_a5cffe08-069b-11ea-b08d-20677ce07cb4.html

[The Risk of Curtailment under the Colorado River Compact](#). 2019, Anne Castle and John Fleck.

DENNIS WEBB
Grand Junction Daily Sentinel
November 12, 2019

Trying to come up with water demand management programs is hard, but the alternative is a riskier future that could involve a forced curtailment of Colorado River use in Colorado, a speaker said Wednesday at Colorado Mesa University.

Demand management "is a form of insurance," Anne Castle said at the ninth annual Upper Colorado River Basin Water Forum, which continues today and is presented by CMU's Ruth Powell Hutchins Water Center.

Castle was a longtime water attorney and served from 2009-14 as assistant secretary for water and science at the U.S. Department of Interior. She now is a senior fellow at the Getches-Wilkinson Center for Natural Resources, Energy, and the Environment at the University of Colorado.

Castle and John Fleck, director of the University of New Mexico Water Resources Program, recently released a report evaluating the risk of future curtailment of river water use in Upper Colorado River Basin states under a 1922 river basin compact. The report discusses the concept of working to take an insurance-based approach to address the risk of curtailment.

"As with any form of risk, you can insure against it," Castle said.

The new paper's issuance comes amidst concern that potential droughts and a warming climate increase the likelihood of a future compact call on the river. That would force reduction in municipal, agricultural and other uses in the state, at least in the case of some water rights junior to the 1922 compact.

Earlier this year, Congress approved legislation allowing implementation of drought contingency agreements involving both Upper and Lower basin states. The agreements are aimed at helping keep water levels in Lake Powell and Lake Mead from falling so low as to jeopardize hydropower production and force water supply reductions. In the Upper Basin, an agreement allows in part for any water conserved by possible demand management programs to be stored in a separate account in Lake Powell to protect the reservoir's water levels.

Colorado and other Upper Basin states since have begun exploring the possibility of pursuing demand management programs. Becky Mitchell, director of the Colorado Water Conservation Board, said at Wednesday's forum that in Colorado, nearly 100 members of work groups have been meeting as the state begins "to investigate just the feasibility of that program."

Colorado is looking into issues surrounding the idea of a possible program involving temporary, compensated, voluntary reductions in use by agricultural and other water users.

Castle said demand management is complex and "not an easy solution but it does give us the opportunity to plan and we can hedge our bets a little bit."

The other option is going without insurance against the risk of curtailment, or "going bare," Castle said.

"Going bare is rolling the dice. It could work but it also could have very significant adverse economic impact," she said.

The curtailment threat derives from the 1922 compact requirement that Upper Basin states including Colorado not cause the flow of the river at Lee Ferry, which is below Lake Powell, to be depleted below 75 million acre feet over any 10-year period. A treaty with Mexico effectively ups that requirement to 82.5 million acre feet.

Castle said a legal question surrounds whether the 1922 requirement not to deplete water means a requirement to deliver it.

"We don't know the answer and this is the underpinning of risk to the Upper Basin," she said.

If it only means don't deplete, the Upper Basin is fine as long as it doesn't use more than 7.5 million acre feet a year under the 1922 compact, she said. But if it must deliver that much, it bears all the risk of climate change and reduced river flows in future years, she said.

The paper she and Fleck wrote points out that just a repeat of the drought in the first decade of this century could drop Powell levels so low in just four years that its hydropower generation would be threatened, and below those levels not enough water could be pushed through the dam to move 7.5 million acre feet a year downstream.

Meanwhile, climate scientists have projected a 20 to 30% reduction in the river's flows by mid-century, and a 35 to 55% drop by the end of the century.

"Those are conceivable situations that we just don't have any means of dealing with right now," Castle said.

Projected future water development projects in the Upper Basin further add to the concerns about curtailment potentially occurring.

The Upper Basin could go to court to try to deal with river compact issues, but Castle called litigation "not a basket where you want to put all your eggs."

"Litigation is very high-stakes poker. It is lengthy, it is costly and it is uncertain, and the biggest risk in litigation is that you lose," she said.

She said demand management would have costs, including payments to water users and secondary impacts. Some on the Western Slope want to ensure that temporary cutbacks in use aren't borne disproportionately by agricultural users, harming rural economies.

Castle said the costs of curtailment need to be considered as well, and those costs could be greater, could last longer and potentially can't be planned for.

Curtailment would particularly affect municipal transmountain diversions of Colorado River water to the Front Range, because those generally involve more junior water rights.

But Castle and Fleck note in a white-paper, summary version of their report, "While that might sound superficially attractive to West Slope agricultural interests, such a prospect could motivate affected municipal water providers to buy or lease pre-Compact West Slope irrigation water rights, possibly in substantial volume. Although these would almost certainly be market-based, arms-length transactions, the resulting economic impact could be geographically concentrated and tremendously disruptive to commodity supply chains and rural communities."

The white paper says that when it comes to demand management, "There are many barriers — legal, operational, economic, and political — that must be addressed. While it is not clear that a demand management program is the right, or the only, appropriate form of contingency plan, it does seem to be the only viable insurance policy proposed thus far."

10/29/19

Lake Powell Pipeline: Reclamation will become the agency to led the environmental review process

[Click here](#) to read this story by Lexi Perry of *The Spectrum and Daily News*

[Click here](#) to read this story by Ami Joi O'Donoghue of *The Desert News*

10/25/19

Appeals court panel hears Lions Back arguments. Attorney: lower court decision a 'travesty of justice'

- October 25, 2019 - [Appeals court panel hears Lions Back arguments. Attorney: lower court decision a 'travesty of justice'](#). McMurdo, *Times Independent*.
- July 5, 2019 - [Court of Appeals to Hear Lions Back Case In Moab. McMurdo](#), *Times Independent*.
- [Click here](#) to read the announcement from the Utah Court of Appeals
- The hearing is on October 18, 2019 and begins at 10:00 A.M. at the Grand County Courthouse.

[Click here](#) to read the opinion of the Appellate Court that upheld the complaint from citizens.

10/23/19

Bill Hudson: The Murder and Resurrection of the Colorado River (Parts I to VI)

By Bill Hudson · October of 2019 Pagosa Springs Daily Editor

[Part One to Six, combined as a pdf.](#)

10/19/19

Arizona will struggle to find enough water for suburban growth, report says

By Tony Davis of *The Arizona Daily Star*

Oct 19, 2019 Updated 6 hrs ago

https://tucson.com/news/local/arizona-will-struggle-to-find-enough-water-for-suburban-growth/article_570e2de4-f13e-5753-b3c2-38ff731fc221.html

Some suburbs of Tucson and Phoenix will struggle to find enough water to keep growing without damaging underground aquifers by overpumping groundwater, a new report warns.

This could lead to land subsidence, including ground fissures; lower water quality; and even the possibility of wells drying up.

The report from Arizona State University's water institute also warns of potentially catastrophic financial problems for the agency that finds renewable water supplies for development in far-flung suburban areas.

That, in turn, could ratchet up already soaring rates for homeowners there. The state's system for ensuring there's enough water for much of the new suburban growth — in accord with the landmark 1980 Groundwater Management Act — is environmentally unsustainable and needs an overhaul, the report suggests.

- [Click here](#) to read the Kyl Center Report of 2019
- [Click here](#) to read the Pollack Report of 2017
- [Cadillac Desert Revisited: Property Rights, Public Policy and Water Resource Depletion](#). 2001; Holland.

The findings raise questions about how much more growth should continue in areas without renewable supplies such as Central Arizona Project water, said Kathleen Ferris, a former Arizona Department of Water Resources director and chief counsel who co-authored the report. CAP water comes to Arizona's cities and farms from the Colorado River via a 336-mile-long canal system.

"Failure to find solutions to these problems could have devastating consequences down the road. Taking action to address them is the only way to protect Arizona's water supplies for its current and future citizens," said the report, prepared by ASU's Kyl Center for Water Policy.

At issue is where authorities will find enough water to replenish aquifers in fast-growing areas of Pima, Pinal and Maricopa counties where groundwater is or will be pumped to supply new homes, because they don't have access to CAP water.

The report focuses on the work of the Central Arizona Groundwater Replenishment District, a part of the CAP, whose job is to find the renewable supplies for those homes in the three counties. Under state law, the homes in these areas can be built only if renewable supplies can be found to compensate for the water pumped to serve them. In the Tucson area, such development is occurring or is projected to occur over the next few decades in unincorporated areas north, south, northwest and southeast of the city. The areas include the Green Valley and Quail Creek areas south of Tucson, the SaddleBrooke area just north of the Pinal County border, and the Vail area southeast of Tucson.

Far more intense future development and pressure on water supplies is expected for Pinal County closer to Phoenix and for the Buckeye area west of Phoenix.

These supply issues could get worse if climate change continues to reduce Colorado River supplies, said Sarah Porter, the report's co-author and director of the Kyl Center. During a CAP shortage, water earmarked for the suburban areas would be among the first supplies to be cut. So climate change will have a bigger impact on such water users than on cities with their own CAP supplies. Those cities have higher priorities for the water during shortages, Porter said.

Specifically, the report found:

- Because pumping for these subdivisions often occurs far from where renewable supplies are recharged — placed on the ground to seep into the aquifers — groundwater levels under these subdivisions are falling.
- Membership in the water district by homes needing groundwater replenishment has hit 286,000 homes statewide, including more than 24,000 in 122 subdivisions in the Tucson area. By 2024, about 383,000 homes statewide are expected to be district members, far more than previously expected, putting additional pressure on water supplies.
- The potential exists for a huge gap between the amount of renewable water that's available for replenishing aquifers and the amount that new development will need over the next century. Statistics from the report suggest it could be up to 300,000 acre-feet a year —enough to serve Tucson for three years.
- The three-county district says there's plenty of water potentially available for future development. But the report says the availability of these supplies is questionable.
- Various fees and assessments imposed on homeowners living in the areas served by the water district have escalated. The annual charge assessed on homes to pay for water supplies, water rights purchases and administrative costs, for instance, jumped in the Tucson area from \$188 an acre-foot per home in 2000 to \$738 this year. It's expected to hit \$775 by the mid-2020s.

Over the years, the three-county replenishment district has taken considerable criticism from environmentalists and others who say its practices encouraged unsustainable urban sprawl.

But the district isn't to blame for problems outlined in the report, said Ferris, because it has carried out all that state law requires it to do: "The problem is that the statutes are too lenient."

Responding through a spokeswoman, the water district said it won't comment on the report specifically, because it just received it Thursday. In a statement, the district said it's fulfilled its legal duties effectively, "demonstrating fiscal responsibility while securing a robust water supply portfolio that will be available through the mid-2030s."

The district said it conducts thorough analyses of water supplies and costs to monitor their viability and changes. Due to leadership and oversight by its governing board, the

district said, it is positioned as “a strong and stable component in the fabric of Arizona’s water policy.”

Here are details of the problems the new report says have been caused by allowing groundwater pumping for new growth away from where aquifers are recharged:

Despite replenishment, well levels fall

The law sets up a disconnect between groundwater pumping and recharge that’s “problematic.”

Because no CAP is delivered to developing areas such as SaddleBrooke and Green Valley, private water companies and other utilities continue pumping groundwater there. To compensate for that pumping, the water replenishment district recharges aquifers in areas far away, such as the Pima Mine Road Recharge Project south of Tucson, the Avra Valley Recharge Project west of Tucson and the Lower Santa Cruz Recharge Project adjacent to the Santa Cruz River and northwest of Avra Valley Road. So the water table under developing areas keeps falling.

“When replenishment does not take place near the site of groundwater withdrawal, the replenished water will not reduce the local geological impacts of pumping and will do nothing to recharge the aquifers that CAGRD members are counting on to supply groundwater,” the report said, using an acronym for the replenishment district.

One problem is that in some of these areas, it’s highly uncertain whether even enough groundwater is physically available. Just last week, for instance, the Arizona Department of Water Resources released information showing that Pinal County has 8 million acre feet less groundwater than is expected to be demanded over the next 100 years.

An aquifer that keeps falling can trigger land subsidence, or a settlement of the ground that causes earth fissures. Groundwater quality can also worsen and pumping costs invariably rise. Once aquifers collapse from subsidence, they can’t be restored, the report said.

The biggest problem with the pumping is that it’s unsustainable, leading to eventual groundwater depletion, said the report, adding: “This grim reality leads to a crucial question: Who will provide water to homeowners and businesses on CAGRD member lands if their wells run dry?”

Since groundwater may legally be pumped to 1,000 feet below land surface in the Phoenix and Tucson areas and 1,100 feet deep in the Pinal County area, “this is not an academic question. It is a serious likelihood, with major consequences that must be considered.”

Escalating water demands By 2114, the district expects to have legal obligations to recharge 113,000 acre feet of renewable water, nearly three times what it does today. That doesn't account for massive growth expected in Pinal County and in Buckeye in Maricopa County.

Bold predictions, uncertain supplies

The water replenishment district says it has identified up to 980,000 acre-feet of what it calls "potentially available" supplies it expects to have access to by 2114. Even if only half that amount turns out to be realistic, that's still far more than it expects to need by then.

But it's questionable whether many of those supplies will be available, the Kyl Center report said.

A big chunk of that expected supply, for instance, would come from CAP water that other urban and tribal users don't want. But that "excess" supply has rapidly diminished in recent years as cities have used more of their water. It's expected to go away once CAP shortages get worse, the report said.

The replenishment district has also projected it could buy a large amount of Colorado River water from on-river users in places such as Mohave County.

But since then, the district has canceled efforts to buy water rights from there and from Quartzsite in neighboring La Paz County. Residents of Mohave and La Paz counties fought the plan because they didn't want their own water supplies drained.

The district has also projected that it could buy and import groundwater from Western Arizona and buy and recharge treated sewage effluent. But those supplies both look uncertain today, said Porter.

Importing groundwater will be very expensive, in part because it may require some treatment before putting it into the CAP canal. As for effluent, "the (municipal) water providers that have effluent already have a plan for their effluent. A lot of water providers are looking to effluent as an important part of their growth portfolio," Porter said.

The replenishment district did strike a deal last year that virtually doubled its total supply: a \$95 million water rights purchase from the Gila River Indian Community that will bring the district 900,000 acre-feet over 25 years.

But about half that water has lower priority during shortages than what's typical for Indian-owned CAP water. So "the full amount of this supply is not likely to be available every year," the report said.

Runaway costs

As costs escalate for homeowners and subdivisions to join the replenishment district and pay it to recharge renewable water, some water district members — subdivisions and homeowners associations — are finding cheaper alternatives.

They include two types of credits that water rights owners can buy, letting them pump groundwater and avoid having to recharge surface water to compensate for it.

With one, someone who owns a historic “grandfathered” water right can give up that right in exchange for such credits. With another, people or government entities can buy long-term storage credits from others who have recharged CAP water or effluent into the ground. That gives the purchaser the right to pump groundwater.

If these practices continue, declining customers for the water district could force rates to rise further, triggering a painful cycle of rising rates and declining customers, said Ferris. The ultimate result for the district could be catastrophic financially.

Reactions

The Arizona Department of Water Resources, which enforces the 1980 groundwater law, won’t comment until it reviews the report, a spokesman said.

Southern Arizona Home Builders Association President David Godlewski said the link between the groundwater replenishment district and Arizona’s economy is “undeniable,” and that “everything in our power must be done, including acquisitions of additional water resources, to protect and enhance it.”

Efforts to change or weaken it pose serious economic risks, said Godlewski, adding that without the district, “new economic development, as well as the existing economy in Tucson, would be adversely impacted.”

The CAP said it wants to be part of the discussion about appropriate growth, but “it may not be the appropriate agency to lead it because the focus of this debate would go beyond its legal responsibilities,” it said.

Kathy Jacobs, who helped write the 1993 rules to assure Arizona’s growing areas have water supplies for 100 years, called the report “excellent, very well researched and documented.” She agrees with all but one of its recommendations.

She has reservations only about its proposal to require that all pumping of groundwater be done in the same places where recharge occurs. Exceptions to such a rule should definitely be allowed, she said. An example includes recharging water away from pumping areas to restore riparian habitat.

There were practical reasons for creating the groundwater replenishment district, “but with the benefit of hindsight it is clear that certain components of the Assured Water Supply program need to be tightened up,” said Jacobs.

One oversight in past water management, she said, has been its failure to fully acknowledge, until recently, the implications of climate change and the chronic overuse of the Colorado River.

University of Arizona law professor Robert Glennon, who has written two books about water supply issues, gave the report high marks.

“The CAGRDR (water district) has been a house of cards from its inception. Facing the problems with it is long past due,” Glennon said. “I hope our legislators, the Governor’s Office, the Department of Water Resources, and the CAP district pay close attention to the findings in this report and take swift action.”

10/12/19

A Documentary Debut: The Unfinished Fight of Seldom Seen Sleight

A film by Chris Simon and Susette Weisheit
Narrated by Hal Cannon
Produced by Sageland Media and Living Rivers

October 12, 7:00 PM @ Star Hall; 159 E. Center St.; Moab, UT 84532
Reception at 6:00 PM @ the adjacent Sun Court
Live music performance by Sand Sheff and Tamara Frieida

Suggested Donation: \$10
Donations for this event were approximately \$2,500. THANK YOU!!

[TRAILER](#)

[Poster](#)

[Click here](#) to read this story by Maggie McQuire of *Moab Sun News*

[Click here](#) to read this story in the *Moab Happenings*

[Click here](#) to listen to this podcast from Podship Earth at the Wild and Scenic Film Festival in Nevada City, California.

Star Hall was packed for this event!



10/01/19

Eco-groups sue feds, allege Glen Canyon Dam Plan ignores climate change

[Click here](#) to read this story by Brian Maffly of *The Salt Lake Tribune*

[Click here](#) to read this story by Felicia Fonseca of *The Associated Press*

[Click here](#) to read the press release from *The Center for Biological Diversity*

[Click here](#) to read the Complaint

[Click here](#) to read the administrative history of the LTEMP EIS

09/28/19

Lake Powell Pipeline: Department of Interior will likely be the lead agency for permitting process

[Click here](#) to read this story by Mori Kessler of *St. George News*

[Click here](#) to read this OpEd by Lisa Rutherford in the *Utah Independent*

09/28/19

Little Colorado River Gorge: Four new dams proposed for hydropower pump back project

[Click here](#) to read this story by Felicia Fonseca of *The Associated Press*

[Click here](#) to read this story by Debra Utacia Krol of *The Arizona Republic*

[Click here](#) to read more detailed information at *On The Colorado*

09/12/19

Lawsuit: Climate change impacts ignored in gas leases

SALT LAKE CITY (Associated Press) — A coalition of environmental organizations allege in a new lawsuit that the U.S. government failed to adequately analyze climate change impacts while approving 130 oil and gas leases in Utah.

The lawsuit filed Thursday accuses Bureau of Land Management officials of violating the National Environmental Policy Act in approving leases on about 274 square miles (710 square kilometers) of land in rural Utah from 2014 to 2018.

Bureau of Land Management spokeswoman Kimberly Finch declined comment since it's a pending lawsuit.

The lawsuit accuses the agency of "dutifully" implementing President Donald Trump's push to ramp up oil and gas drilling on public lands.

[Click here](#) to read the press release from Southern Utah Wilderness Alliance, Center for Biological Diversity and Living Rivers/Colorado Riverkeeper

08/25/19

Grand Bargain: Colorado River Water Rights Debated As Climate Change Depletes Supply

[Click here](#) to read this story by Bruce Findley in *The Denver Post*

08/19/19

This Country Gave All Its Rivers Their Own Legal Rights

[Click here](#) to read this story by Sigal Samuel of Vox

08/16/19

USGS: Evaluation of Groundwater Resources in the Spanish Valley Watershed, Grand and San Juan Counties, Utah

[Click here](#) to read this story by *Moab Sun News* called "USGS Study Shows Less Water Than Previously Reported"

[Click here](#) to read this story by Dennis Webb in the *Grand Junction Sentinel* about how the Western Slope of Colorado and Grand County, Utah are warming at a faster pace than the rest of the USA

[Click here](#) to read this story by Carter Pape of *Times Independent* called "Moab Watershed 30 to 40 Percent Smaller Than Previously Reported"

[Click here](#) to read this story by Carter Pape of *Times Independent* called "How Water Ends Up In Moab"

[Click here](#) to read this story by Carter Pape of *Times Independent* called "USGS Confirms Valley Water Budget"

[Click here](#) to read the summary, report and to view three plates (graphics and maps)

08/15/19

Colorado River: First-ever mandatory water cutbacks will kick in next year along the Colorado River

[Click here](#) to read this story by Ian James of *The Arizona Republic*

[Click here](#) to read the August, 2019 "24-month Report"

[Click here](#) to read the press release by the Bureau of Reclamation

08/15/19

Seldom Seen: A Poignant Look Back At Glen Canyon Before The Dam

[Click here](#) to visit this site from Yale School of Forestry & Environmental Studies; a film by Taylor Graham.

08/07/19

HEAL Utah Hosts Forum on Small Nuclear Reactors In Response To Upcoming Project

[Click here](#) to read this story by Emily Means of *KPCW*

[Click here](#) to read the report by *HEAL Utah*

[Click here](#) to read this story by Taylor Stevens of *Salt Lake Tribune*

[Click here](#) to read this story by Amy Joi O'Donoghue of *Deseret News*

FOR MORE INFORMATION PLEASE VISIT

[Uranium Watch](#)

[HEAL Utah](#)

07/18/19

For a while in 1983, sheets of plywood were all that kept the mighty Glen Canyon Dam from overflowing

"Lake Powell wasn't always half empty. In 1983, the reservoir filled nearly to overflowing, and saved by resourceful engineers and a lot of concrete."

Living Rivers would like to remind readers that spillways are not how an agency properly manages a big snow melt. Foresight planning and prudent reservoir management is how an agency should manage a flood. This incident was a human mistake that nearly caused an incomprehensible, catastrophic tragedy of epic proportion.

[A story](#) by John D'Anna in the Arizona Republic

This article is archived [here](#)

07/18/19

Panel Shifts Gears On Best Rail Route To Move Oil From Eastern Utah

[Panel Shifts Gears On Best Rail Route To Move Oil From Eastern Utah](#). *Salt Lake Tribune*.

[Feds Looking For Public Input On Uinta Basin Railway Proposed Route Through Moffat County](#). *Craig Daily Press*.

[A New Freight Train Route For Utah? Uinta Basin Hopes So](#). *Deseret News*
FOR MORE INFORMATION VISIT

[On The Colorado Blog](#)

07/17/19

Aurora & Colorado Springs seek to drill on lower Homestake Creek dam sites

[Click here](#) to read this story by Brent Gardner-Smith of *Aspen Journalism*

7/11/19

A Presentation by Professor Victor Baker about Paleoflood Hydrology Research on the Green and Colorado Rivers

[Click here](#) to view the poster for this event.

[Click here](#) to read the story in the *Moab Sun News* by Sharon Sullivan

[Click here](#) to learn more about floods on the Colorado

Title: History of the Great Floods of the Colorado and Green Rivers

Where: Grand County Library 257 East Center Street, Moab

When: Thursday, July 18, 6 pm

Free and open to the public

Professor Baker is the leading scientist of paleoflood hydrology research and the former president of the Geological Society of America.

07/11/19

The Colorado River needs a long-term plan for drought

[Click here](#) to read this OpEd by Brad Udall, Douglas Kenney and John Fleck

07/05/19

Court of Appeals to Hear Lionsback Case In Moab

Hearing is on October 18, 2019 and begins at 10:00 A.M. at the Grand County Courthouse.

[Click here](#) to read this story by Doug McMurdo in the *Moab Times-Independent*

[Click here](#) to read the announcement from the Utah Court of Appeals

[CLICK HERE](#) for more information by visiting FarCountry.org

06/21/19

Lake Powell Pipeline: ACOE Wants Quagga Muscle Plan Before 404 Permitting

[Click here](#) to read this story by the *Associated Press*

[Click here](#) to read the letter from the Army Corps of Engineers to Utah Division of Water Resources

06/20/19

Moab Event on June 22 & 23: “Weaving narratives and policy: storytelling on the Colorado Plateau”

[Click here](#) to read the the news story from the *Moab Sun News*.

Moab is one of the largest communities along the Colorado River, and will serve as the venue for a two-day event sponsored by the [SCREE expedition](#) and Living Rivers on June 22 and 23, 2019. Taking place at the Moab Arts & Recreation Center Dance Hall, the two-day event will feature storytellers, dancers, authors, artists, and academics. As described in detail below, these activities will attract local community members, students, rafters, artists, and water managers.

EVENT LOCATION

Moab Arts and Recreation Center (MARC) The Dance Hall 100 East and 100 North

SCHEDULE FOR SATURDAY

June 22: Public Lands

- 9:30 a.m.: Light breakfast refreshments
- 10:00 a.m.-10:15 a.m.: Introduction to the event and invocation by with Howard Dennis, Hopi Tribe, Second Mesa, AZ.
- Note: This brief introduction will be a welcome, description of themes and events, quick background on SCREE, acknowledgements, etc.
- 10:15-10:45 a.m.: Hopi Dancers
- 10:50 a.m.-11:30 a.m.: USGS – Perspectives of the SCREE trip so far.
- Note: Question and Answers
- 11:30 a.m.-12:30 p.m.: Dan McCool “Climate Change and Public Lands” Note: A legal follow-up to the themes of Bears Ears. 15 minutes of audience questions included.
- 12:30 p.m. – 1:15 p.m.: Light lunch and social hour.
- 1:20 p.m.-2:00 p.m.: Serena Supplee, renowned local artist - “Painting the Colorado Plateau”

Note: A visual presentation of artwork and the process of creation. The artists may describe the adventure in going to sites to paint, what areas spark interest from an artist's perspective, and contrast experiences.

- 2:00 p.m. – 2:20 p.m.: Patrick Kikut – SCREE Lead Artist Note: Art and Inspiration on the SCREE trip so far
- 2:30 p.m. – 3:15 p.m.: Chris Warren of Beatnik Prints – Present his artwork and discuss methods and how landscape as inspired his work
- 3:15-3:45: Hopi Dancers

SCHEDULE FOR SUNDAY

June 23: Water

- 9:30 a.m.: Light breakfast refreshments
- 10:00 a.m. – 11:00 a.m.: John Weisheit & Tom Minckley, Introduction – “Relationship of water and the community of Moab”
- Note: A local connection between the town, economies, and culture of Moab. Potential issues in the future: groundwater, drought, pollution, etc.
- 11:15-11:45: Hopi Dancers
- 11:45 a.m. – 12:30 p.m.: Robert Adler, “Water Law and Climate Change”
- 12:30-1:15: Lunch
- 1:15 p.m. – 2:15 p.m.: Cody Perry, Rig to Flip - The Story of Chicken Raper; the Story Behind One of the Most Infamous Rapids on the Dolores River – Note: Q&A and presentation from the filmmaker.
- 2:15 p.m. – 3:15 p.m.: Taylor Graham, Glen Canyon Rediscovered film showing and Q&A with The filmmaker.

06/19/19

Uinta Railway: Disputed rail project seeking to ship eastern Utah oil to more lucrative markets clears hurdle with \$21 million funding boost

[Click here](#) to read this story by Brian Maffly of *Salt Lake Tribune*

For more information, please visit: [Colorado River Connected](#)

05/29/19

Fontenelle Reservoir Completion Put On Hold Until Absolutely Necessary

[Click here](#) to read this story by Melodie Edwards of *Wyoming Public Media*

OTHER NEWS ABOUT FONTENELLE

[Click here](#) to read this story called "Draining the Bathtub." by *Wyoming Public Media*

[Click here](#) to read this story by Alanna Elder of *Wyoming Public Media*

[Click here](#) to read the water strategy of the state of Wyoming (Governor Mead)

05/29/19

MEETING: Demand Management Stakeholder Workshop Sponsored by the Upper Division States

WORKSHOP LOGISTICS

When/Where

Friday, 21 June, 2019; 9:00 am to 4:00 pm

Utah Department of Natural Resources 1594 W. North Temple Salt Lake City, UT

Participation: Anyone interested in the topic of Demand Management (DM) in the Upper Basin is welcome to attend. However, YOU MUST RSVP to Susan Jenkins at susan.jenkins@wyo.gov or (307) 777- 6150. on or before June 14, 2019 if you do plan to attend to enable us to adequately plan for the appropriate number of attendees.

05/20/19

A signing ceremony at Hoover Dam: Colorado River Basin Drought Contingency Plan

[Click here](#) to read this summary by Bureau of Reclamation

[Click here](#) to read BOR Transmittal Statement for Drought Contingency Planning

[Click here](#) to read the Seven States Transmittal Statement for Drought Contingency Planning

[Table: Shortage amounts and elevation triggers at Lake Mead / Hoover Dam](#)

05/20/19

LAWSUIT FILED: THE Enefit Oil Shale Project Would be a Disaster For the Colorado River Basin

[Click here](#) to read this story by Meteor Blades of *DailyKos*

[Click here](#) to read the complaint (Living Rivers vs. Dept. of Interior)

[Click here](#) to read the press release from the coalition of plaintiffs

04/18/19

Colorado Rivers's Biggest Champion: Walmart Heirs

[Click here](#) to read this story by Jeffrey P. Jacobs of *Greenwire*

04/09/19

Summary: Colorado River Basin Contingency Plans

[Click here](#) to read this summary by Bureau of Reclamation

[Click here](#) to read BOR Transmittal Statement for Drought Contingency Planning

[Click here](#) to read the Seven States Transmittal Statement for Drought Contingency Planning

03/22/19

Navajo Nation Vote to End Efforts to Purchase Coal-fired Power Plant Sealing Its Fate

[Click here](#) to read this story by Ryan Randazzo and Noel Lyn Smith of *The Arizona Republic*

03/21/19

Lawsuit Challenges Utah's New Green River Water Contract

[Click here](#) to read this story by Brady McCombs of *The Associated Press*

[Click here](#) to read this story by Mori Kessler of *St. George News*

[Click here](#) to read this story by Tim Ryan of *Courthouse News Service*

[Click here](#) to read this article by Jeremy Jacobs of *E & E News; Greenwire*

###

For Immediate Release, March 21, 2019

Lawsuit Challenges Utah's New Green River Water Contract

Trump Administration Failed to Consider Other Water Deals, Climate Change

Contacts:

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Zachary Frankel, Utah Rivers Council, (801) 699-1856, zach@utahrivers.org

[CLICK HERE](#) to read the complaint

WASHINGTON - Conservation groups sued the Trump administration today to challenge the Interior Department's decision allowing additional water to be taken from the Green River below Utah's Flaming Gorge Dam. The decision was made without a full accounting of reduced Colorado River basin flows or how the region's persistent drought and climate change could harm endangered species and recreation.

Today's lawsuit, filed in U.S. District Court in Washington, D.C., says Interior's Bureau of Reclamation failed to consider other pending water contracts, including the Lake Powell Pipeline, which could further deplete the Green and Colorado rivers.

The agency claimed in its environmental assessment that the new Green River Water Rights Exchange contract, signed Wednesday, would have no significant environmental impact. But it did not consider climate change, drought or over-allocation of water.

“The water resources of the Colorado River Basin are already headed toward irretrievable decline in both quantity and quality,” said John Weisheit of Living Rivers and Colorado Riverkeeper. “The environmental review ignored the reality of declining river flows in the Green River and the rest of the Colorado basin and the connected impacts of this contract and the proposed Lake Powell Pipeline water contract.”

“This review was appalling. The Green and Colorado river systems need a full accounting,” said Robin Silver, a cofounder of the Center for Biological Diversity.

“Drought, climate change and over-allocation are sucking the Colorado River basin dry right in front of our eyes. But officials ignored declining river flows, pretended this new Green River contract stands alone and ignored multiple proposed water projects like the Lake Powell Pipeline. We’ll fight to defend these spectacular rivers.”

Four endangered fish could be harmed by changes to water flows and timing contemplated under the Green River Water Rights Exchange contract and other pending water deals. Changes to Flaming Gorge Dam operations necessary to accommodate the water contracts and drought-contingency planning could be devastating for these fish and other species. Endangered species at risk include the Colorado pikeminnow, razorback sucker, humpback chub and bonytail chub.

The river includes fragile riparian areas and wetlands, as well as breathtaking canyons popular with rafters. It winds through Browns Park National Wildlife Refuge, Dinosaur National Monument, Ouray National Wildlife Refuge and Canyonlands National Park before joining up with the Colorado River.

“The Bureau’s Green River Block environmental review is a disingenuous facade that ignores the agency’s own climate change warnings and myriad scientific studies about water-supply shortfalls to advance the largest new proposed diversion of the Colorado River, the Lake Powell Pipeline,” said Zach Frankel, executive director of Utah Rivers Council.

The groups are represented by attorneys from the Center for Biological Diversity.

###

The Center for Biological Diversity is a national, nonprofit conservation organization with more than 1.4 million members and online activists dedicated to the protection of endangered species and wild places.

03/20/19

State, Federal Officials Sign Green River Block Water Exchange Contract

[Click here](#) to read this story by Mori Kessler of *St. George News*
March 21, 2019

[Click here](#) to read this story by Brady McCombs of *The Associated Press*

[Click here](#) to read this story by Tim Ryan of *Courthouse News Service*

03/12/19

LA's Water District Votes to Contribute IID's Water; IID Threatens to Sue Them

[Click here](#) to read this story by Janet Wilson of *The Desert Sun*

03/10/19

Pair of Lawsuits Challenges Need for More Colorado River Water

[Click here](#) to read this story by Linday Fendt of *Aspen Journalism*

02/26/19

Lawsuit Launched Over Massive Utah Oil Shale Development Project; Threatens Endangered Species, River Flows, Climate

[Click here](#) to read this story in *The Moab Times-Independent*

[Click here](#) to read this story by Brian Maffly of *The Salt Lake Tribune*

[Click here](#) to read this story by Brady McCombs of *The Associated Press*

[Click here](#) to read the 60-Day Notice

PRESS RELEASE of Conservation Groups

Contacts:

- John Weisheit, Living Rivers and Colorado Riverkeeper
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- Jonny Vasic, Utah Physicians for a Healthy Environment

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• Maia Raposo, Waterkeeper Alliance
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Lawsuit Launched Over Massive Utah Oil Shale Development Project Threatens Endangered Species, River Flows, Climate

SALT LAKE CITY— Conservation groups today issued a notice of intent to sue the Trump administration for approving rights-of-way for pipelines and powerlines that pave the way for the nation's first commercial oil shale development. The massive Enefit project in Utah's Uintah Basin would drain billions of gallons of water from the Green River, threaten endangered species and generate enormous amounts of greenhouse gas pollution.

Oil shale is one of world's most carbon-intensive fuels whose strip mining can require several barrels of water for each barrel of oil, or kerogen, produced. At full buildout, Enefit's facility would produce 50,000 barrels per day of oil from the Green River Formation.

"This project would be a disaster for the climate, the Colorado River and endangered species," said Taylor McKinnon, a senior campaigner at the Center for Biological Diversity. "Draining rivers to mine high-carbon fossil fuels will accelerate climate change that's already drying the Colorado River Basin. The West needs to chart a sustainable future, but the Trump administration is paving the road to catastrophe."

Today's notice says the Bureau of Land Management and U.S. Fish and Wildlife Service failed to protect several endangered species when they approved electricity, oil, gas and water lines across public lands. The notice argues that federal agencies violated the law by ignoring the potential harm to imperiled fish, studying only the harm from water depletions necessary to build the pipeline, not to operate it.

"The BLM approved the rights-of-way to service the oil-shale development based on an utterly inadequate analysis of its potentially devastating environmental impacts," said Michael Toll, a staff attorney at the Grand Canyon Trust. "Considering the rights-of-way are a public subsidy of an otherwise economically unfeasible oil-shale facility, the public has a right to know exactly how Enefit's project will impact the environment."

The water pipeline will allow the Estonia-owned Enefit American Oil to drain more than 10,000 acre feet annually from the Green River, harming critical habitat for endangered fish, including the Colorado pikeminnow and the razorback sucker. Mining the oil shale will destroy habitat for two rare wildflower species for which Endangered Species Act protections are proposed. The project comes as western states struggle with record droughts and climate-driven declines in river flows in the Colorado River Basin.

“The water resources of the Colorado River Basin are already headed toward irretrievable decline in both quantity and quality,” said John Weisheit with Living Rivers Colorado Riverkeeper. “Opposing the Enefit Project is a no brainer; it epitomizes exactly what inappropriate development looks like.”

Enefit intends to strip-mine about 28 million tons of rock a year over thousands of acres of high-desert habitat. It will also construct a major production facility to bake the rock at high temperatures. The half-square-mile processing plant, about 45 miles south of Dinosaur National Monument, will turn pre-petroleum stones into refinery-ready oil.

“There are very levelheaded reasons why the United States hasn’t invested in commercial oil shale extraction before – and this project in particular would be uniquely destructive in Utah,” said Alex Hardee, an attorney at Earthjustice. “The Fish and Wildlife Service has a duty to ensure that federal approvals do not drive endangered species off the cliff of extinction. But the agency turned a blind eye to the devastating effects this oil shale project would inflict by only paying attention to the water it would suck up to build this nonsensical pipeline but not to actually operate it.”

“Every resident of the state should be alarmed. This oil shale project would exploit, degrade, and exhaust Utah’s most precious natural resources – our water, our air, and our beautiful natural landscapes,” said Dr. Brian Moench, president of Utah Physicians for a Healthy Environment. “It threatens public health, will tie Utah’s future to dirty energy, and will accelerate climate the crisis. Even worse, the only beneficiary of this scheme is a foreign oil company.”

“BLM is essentially telling the public not to worry because the pipes and power lines themselves won’t have much impact, while turning a blind eye to the large-scale destruction that this infrastructure will enable,” said Ann Alexander, senior attorney with Natural Resources Defense Council.

The project would produce 547 million barrels of oil over three decades, spewing more than 200 million tons of greenhouse gas — as much as 50 coal-fired power plants produce in a year. Those emissions would contribute to global warming and regional drought already afflicting the rivers and their endangered fish.

“Everything related to this project represents a worst case scenario for this severely climate change impacted region and the planet,” said Dan Mayhew, conservation chair of the Utah Chapter of the Sierra Club. “Rampant destruction of public lands and large

scale water dependency while adding pollution to an already challenged airshed. This project needs to be stopped in its tracks now.”

The 60-day notice gives the agencies an opportunity to comply with the Endangered Species Act and avoid a lawsuit.

“The Colorado River is disappearing due to mismanagement, drought and accelerating climate change, putting at risk not only multiple endangered species but also the drinking water for nearly 40 million people,” said Daniel E. Estrin, advocacy director at Waterkeeper Alliance. “In the face of this crisis, FWS and BLM’s approvals could cause 100 billion gallons of water to be removed from the basin over the next three decades, harming government-protected endangered species and hastening the collapse of a critical water supply system already teetering on the brink of failure.”

###

The Center for Biological Diversity is a national, nonprofit conservation organization with more than 1.4 million members and online activists dedicated to the protection of endangered species and wild places.

02/21/19

Arizona Lawmaker Withdraws Bill That Angered Tribe Imperiled Drought Contingency Plan

["Gila River Indian Community Moves Ahead With Colorado River Deal"](#) by Ian James of *The Arizona Republic* (2/24/19)

[Click here](#) to read this story by Ian James of *The Arizona Republic* (2/19/19)

[Click here](#) to read this story by Tony Davis of *Arizona Daily Star* "Arizona Lawmaker Withdraws Bill That Angered Tribe, Imperiled Drought Contingency Plan"

[Click here](#) to read this story by Tony Davis in *Arizona Daily Star* "Arizona, Other Western States Unlikely to Meet Colorado River Drought Plan Deadline"

[Click here](#) to read the *Associated Press* story by Jonathan J. Copper entitled: "Officials - Arizona Will Miss US Deadline For Key Water Plan"

[Click here](#) to read this story in *Cronkite News* by Lauren Schieler "Arizona Lawmakers Agree On Crucial Drought Contingency Plan"

02/15/19

Arizona Lawmaker Accused of Endangering Colorado River Drought Plan

[Click here](#) to read this story by Jonathan J. Cooper of *The Associated Press*

[Gila River Tribe Backs Away From Arizona Drought Plan](#) By Elizabeth Whitman of *Phoenix New Times*

02/04/19

Changes Proposed To Flaming Gorge Operations

[Click here](#) to read this story by Jack Gillund of *Uintah Basin Standard/Vernal Express*
Reclamation (Provo Office) has scheduled the following Flaming Gorge Working Group coordination Meeting for:

March 7th, 2019
11:00 am to 2:00 pm
Carbon County Event Center in Price UT
310 South Fairgrounds Rd.

02/04/19

Feds says 2 States Missed Deadline On Colorado River Drought Plan

Felicia Fonseca, Associated Press:

[US Says 2 States Missed Deadline on Colorado River Drought Plan](#)

Luke Runyon, KUNC:

[What is Happening With the Colorado River Drought Plans?](#)

Reclamation Press Release:

[Reclamation Seeks Formal Input from Governors to Protect Colorado River Basin](#)

Commission Burman:

[Speech at Colorado River Water Users Association Conference in December 2018](#)

Federal Register Notice:

[Drought Contingency Planning](#)

Additional News:

Christopher Conover, Arizona Public Media:
[Not So Fast On Drought Plan: State & Feds Disagree](#)

Ian James, Arizona Republic:
[With Colorado River Drought Deal Not Done Federal Government Steps In](#)

Priscilla Totiya, Arizona Republic:
[What's Next for Arizona After Passing Colorado River Drought Plan](#)

KSAZ:
[Arizona Joins Colorado River Drought Plan](#)

Tony Davis, Arizona Daily Star:
[Arizona Drought Plan Tab Could Hit 280 Million](#)

Jose Ivan Cazares, Cronkite News:
[Late Push for Salton Sea Improvements Complicates Colorado River Drought Plan](#)

Tom Bodus, Imperial Valley Press:
[Federal Register Notice on DCP Draws Ire From IID](#)

Michael Hiltzik, LA Times:
[Despite Signs of Interstate Cooperation the Decline of Lake Mead Isn't Near Being Solved](#)

Brent Gardner-Smith, Aspen Times:
[Officials Explain Drought Measures in Lower Colorado River Basin](#)

01/25/19

OpEd by Ron Thompson: Invest in New Water Infrastructure (Read: stay on autopilot and never mind the cliff ahead)

[Click here](#) to read Ron Thompson's OpEd in Deseret News

And, let's continue to just make things up:
[Aaron Million's pipeline from the Green River in Utah to the Front Range of Colorado](#)

01/20/19

Lake Powell Could Become 'Dead Pool' As Climate Change, Political Wars and Unabated Growth Drain Its Waters

[Click here](#) to read this story by Brian Maffly of *The Salt Lake Tribune*
Also from Brian Maffly:

[Click here](#) to read this story called "Scientists Study Lake Powell Sediments to See How Climate Change, Humans Are Affecting the Water"

[Click here](#) to read a rebuttal by John Fleck called "No, Lake Powell Is Not Inexorably Headed Toward Dead Pool."

[Click here](#) to read this OpEd by the Editorial Board of *The Salt Lake Tribune* called "If We Build Powell Pipeline, Will the Water Come?"

[Click here](#) to read this story by Allen Best of *Mountain Town News* called "Again, The Question About Whether Lake Powell Is Doomed."

[Pat Bagley Editorial Cartoon](#) from *The Salt Lake Tribune* "There will be mud!"

01/15/19

Babbitt: Colorado River drought plan just the beginning of tough decisions needed

[Click here](#) to read this story by Tony Davis in the *Arizona Daily Star*

01/15/19

Yale University: Crisis on the Colorado River (A Series)

[Click here](#) to visit the website for a special look into the Colorado River by Yale University

FIRST IN THE SERIES

[The West's Great River Hits Its Limits: Will The Colorado Run Dry?](#)

SECOND IN THE SERIES

[On The Water-Starved Colorado River Drought Is The New Normal](#)

THIRD IN THE SERIES

[Running Dry: New Strategies For Conserving Water On The Colorado](#)

FOURTH IN THE SERIES

[In Era Of Drought: Phoenix Prepares For Future Without Colorado River Water](#)

FIFTH IN THE SERIES

[Restoring The Colorado Bringing New Life To Stressed River](#)

12/31/2020

Proposed Cove Reservoir off the East Fork of Virgin River in Kane County, Utah

NEWS

[Kane County Looking to Dam Virgin River Latest Major Project](#). Brian Maffly of *Salt Lake Tribune*.

[Last Chance to Comment for Cove Reservoir](#). Helene Jorgensen of *Southern Utah News*.

[Water Managers Promote Cove Reservoir Near Zion National Park](#). Joan Meiners of *St. George Spectrum & Daily News*.

[Water Officials Propose New Reservoir Off Virgin River To Benefit Kane & Washington Counties](#). Mori Kessler of *St. George News*.

###

For more information, visit On The Colorado [HERE](#)

12/24/2020

Suite of Stories by The Arizona Republic: The Lack of Clean Water for the Hopi and Navajo Nations

The following articles in The Arizona Republic were written by Ian James with photographs by David Wallace and Nick Oza

[With Drought And Pumping Hopi Natural Springs Are Drying Up](#)

[The Navajo Nations Wait For Water Persists With Few Answers](#)

[Hopi Tribe Pushes For Solutions For Many Without Clean Drinking Water](#)

[For The Hopi Tribe Withering Corn Crops Show Impact Of Climate Change](#)

[PHOTO GALLERY](#) of Hopi Springs by the photographers of *The Arizona Republic*

###

Additional Indigenous News in Arizona by *The Arizona Republic*

[Click here](#) to read this story by Ryan Randazzo of *The Arizona Republic* called "Coal Stacks at Navajo Generating Station in Arizona Demolished."

12/18/2020

A Controversial Highway Through Book Cliffs Is Tabled For Now Due to Local Opposition

[Click here](#) to read this story by Carter Pape in *Times-Independent*

[Click here](#) to read this story by Kate Groetzinger of *KUER Radio*

###

FOR ADDITIONAL INFORMATION

[Click here](#) to visit the Far Country website

12/14/2020

Fossil Fuel Fund Set Aside to Help Utahns Being Returned to Industry Lawsuit Says

[Click here](#) to read this story by Robin Kaiser-Schatzlein of *The Guardian*

For more information visit these sites:

Colorado River Connected

2019 - [Community Impact Board uses public funds to promote expansion of oil and gas development in the Uintah Basin](#)

On The Colorado

2014 - [The Eastern Utah County Coalition for the Development of Oil and Gas Infrastructure](#)

2016 - [The Utah CIB and a Public Give-Away](#)

2019 - [Uinta Basin Railway Environmental Impact Statement](#)

12/11/2020

Proposed Green River Nuclear Reactor Dead in the Water

NEWS RELEASE

Sarah Fields
Program Director
Uranium Watch
PO Box 1306
Monticello, Utah 84535
435-260-8384

Green River Nuclear Reactor Dead in the Water
San Juan Water Conservancy District Terminates Blue Castle Project Water Rights

Moab, Utah. December 11, 2020 - Blue Castle Holdings Inc. (BCH) no longer holds a lease for 24,000 acre feet of water from the Green River for the proposed Blue Castle Project nuclear reactor near Green River, Utah. The 2007 Water Rights Lease Agreement between the San Juan Water Conservancy District (SJWCD) and BCH was terminated on March 25, 2019. BCH also has a Water Rights Lease Agreement with the Kane County Water Conservancy District (KCWCD) for 29,600 acre feet of water, for a total of 53,600 acre feet (~ 87 million gallons per day) for a 2-unit AP-1000 reactor. This means that BCH no longer has a right to 45% of the water appropriated for the Blue Castle Project.

A nuclear reactor at Green River would have had extreme long-term adverse impacts to the Colorado River Basin, the health and well-being of the citizens of Green River and nearby Utah and Colorado communities, the Canyonlands of South East Utah, local recreation and agricultural economies, endangered and threatened fish species, and all aspects of the local and regional environment.

The Lease Agreement was terminated by the SJWCD because BCH defaulted on its payment obligations. Without informing the Districts, BCH failed make the expected lease payments, starting in 2016. BCH finally made payments to the District from 2018 to 2020. The status of the Water Rights Lease Agreement between the KCWCD and BCH for 29,600 acre feet for the Blue Castle Project is unclear.

BCH had no experience in the licensing, construction, or operation of a nuclear reactor. BCH never submitted an Early Site Permit Application (ESPA) to the Nuclear Regulatory Commission (NRC). BCH last contacted the NRC in 2011, informing the NRC that they would submit an ESPA in late 2012.

BCH has never admitted publicly that they defaulted on the Water Rights Lease payments, that one of the lease agreements has been terminated, or that the Blue Castle Project is dead.

According to Sarah Fields, Uranium Watch Program Director, “All along protesters and plaintiffs asserted that the Blue Castle Project was not economically feasible.” “Protestors and plaintiffs questioned whether BCH could raise the money necessary to submit a license application and construct and operate a nuclear reactor.” “It turned out they did not even have the money to pay the Water Conservancy Districts for the Green River water.”

Background

From 2009 to 2016, BCH and the San Juan and Kane County Water Conservancy Districts convinced the State Engineer, Division of Water Rights; the Utah 7th District Court, and the Utah Court of Appeals that the BCH proposal to license, construct, and operate a 2-unit reactor about 4 miles west of Green River was economically feasible.

2007 — Water Rights Lease Agreements:

BCH (formerly Transition Power Development LLC) signed Water Rights Lease Agreements with the San Juan and Kane County Water Conservancy Districts for a total of 53,600 acre feet from the Green River for a proposed 2-unit nuclear reactor. The Agreements required the Districts to submit applications to change the use, place of use, and point of diversion for the Water Rights.

2009 — Water Rights Change Applications

March 30, 2009, and August 27, 2009, the KCWCD and SJWCD, respectively, submitted Applications for Permanent Change to the Division of Water Rights.

2009 — Water Right Change Public Notice and Protests

The proposed Water Rights Change Applications were noticed in September 2009. Protests and hearing requests were filed by Uranium Watch, Living Rivers, HEAL Utah, Center for Water Advocacy, Sierra Club, Grand County, Moki Mac River Expeditions, Holiday River Expeditions, Utah Rivers Council, and others.

2009 — Administrative Hearing

A DWR informal administrative hearing was held in Green River on January 12, 2010. Additional information was filed with the Division by the respective parties.

2012 — State Engineer Approves Change Applications

The State Engineer approved the appropriation of water from the Green River for the Blue Castle Project on January 20, 2012.

2012 — Request for Reconsideration and Denial

Uranium Watch et al. and HEAL Utah et al. requested reconsideration of the State Engineer’s decision In early February 2012. The State Engineer denied the requests for reconsideration on February 28, 2012.

2012 — Appeal of State Engineer’s Decision

Then, on March 27, 2012, attorneys for Uranium Watch, Living Rivers, HEAL Utah, Center for Water Advocacy, Holiday River Expeditions, Utah Rivers Council, and others filed an appeal of the State Engineer's decision regarding the SJWCD and KCWCD Change Applications in the 7th Utah District Court for Emery County.

2013 — District Court Hearing

Starting September 23, 2013, Judge M. George Harmond, Jr. of the Utah 7th District Court held a 5-day hearing in Price, Utah, on the appeal of the State Engineer's appropriation of water from the Green River for the proposed Blue Castle Project. The proceeding was the culmination of a 4-year effort to bring some sense to the allocation of Utah waters for an ill-advised, risky, and speculative energy project.

2013 — 7th District Court Decision

On November 27, 2013, Judge George M. Harmond, Jr. issued a decision upholding the Utah State Engineer's appropriation of 53,600 acre feet from the Green River for the proposed Blue Castle Project.

2014 — Appeal of 7th District Court Decision

On May 16, 2014, attorneys for the Plaintiffs filed a Notice of Appeal of the 7th District Court's decision to the Utah Court of Appeals.

2016 — Oral Arguments and Court of Appeals Decision

Oral arguments were held on January 26, 2016, before the Utah Court of Appeals. The opinion of the Court of Appeals, upholding the 7th District Court's decision was issued on July 21, 2016.

2016 — State Engineer's Decision Becomes Final

Plaintiff's did not file a petition to the Utah Supreme Court for review of the Appeals Court decision within 30 days, finalizing the Appeals Court decision upholding the State Engineer's decision

2016 — Conclusion of Court Challenges

The court challenges concluded in September 2016, when plaintiffs did not appeal the Court of Appeals affirmation to the Utah Supreme Court. Soon after, the first pre-operational payments to the Districts were due: \$80,000 to SJWCD and \$100,000 to KCWCD. Those initial Water Rights Lease Agreement payments were not made. BCH had defaulted on its Water Rights Lease Agreement obligations.

2018 — SJWCD letter to BCH

On March 15, 2018, SJWCD informed BCH that they had 120 days to cure the default, or they would receive a Notice of Termination.

2019 — Notice of Termination

The Notice of Termination was issued on March 25, 2019. BCH did arrange a payment schedule with the District and made payments to the SJWCD over the next year.

2020 — Final BCH Payment to SJWCD

BCH made a final payment to the SJWCD, for a total of \$258,533.69 paid to the District.

Additional Information:

- Lease Termination Letter:
https://uraniumwatch.org/sjwcd/SJWCD_toBCH_LeaseTermination_032519.pdf
- Lease Payment:
https://uraniumwatch.org/sjwcd/SJWCD_toBCH_PaymentsDue_100119.pdf
- Lease Payment Schedule:
https://uraniumwatch.org/sjwcd/SJWCD_BCH_PaymentSchedule_093919.pdf

- Blue Castle Project Water Rights History and Links to Documents:
<https://uraniumwatch.org/bluecastle.waterrights.htm>

- No Green River Nuke! 2012 Protest:
<https://www.youtube.com/watch?v=2xpX4l3kc8c>

- No Green River Nuke! 2015 Protest:
<https://www.youtube.com/watch?v=4KZNt8uLUn0>

11/26/2020

Thanksgiving Day: Suite of News and Opinion from High Country News

[Click here](#) to read three articles published by High Country News on Thanksgiving Day 2020, and as follows:

1. 20 signs that the climate crisis has come home to roost From Alaska to Wyoming, evidence shows the climate is off-kilter in the West. Jonathan Thompson | Nov. 26, 2020
 2. Public lands top Rep. Debra Haaland's agenda One of the first Native American women elected to Congress is fighting fossil fuel development on 'the most pristine and beautiful places in our country.' Jimmy Tobias | May 24, 2019
 3. Tom Udall: It's past time we confront the climate and nature crises. For our survival, we can look to my father's vision as an alternative to our current path. Tom Udall | OPINION | Jan. 31, 2020
-

11/19/2020

Utah's State Engineer Rejects Plan to Divert Green River Water for Colorado Entrepreneur

[Click here](#) to read this story by Brian Maffly of *The Salt Lake Tribune*

11/16/2020

Are We Really Past the Point of No Return on Climate? Scientists Respond To Controversial New Study

[Click here](#) to read this climate study from Norway.

A controversial new climate study has found that, even if greenhouse gas emissions were halted tomorrow, it might not be enough to stop temperatures from continuing to rise.

The study, published in Scientific Reports Thursday, was conducted by two researchers at the BI Norwegian Business School. They used the ESCIMO climate model to determine that, even if emissions ceased tomorrow, the permafrost would continue to thaw for hundreds of years.

"According to our models, humanity is beyond the point-of-no-return when it comes to halting the melting of permafrost using greenhouse gas cuts as the single tool," lead author and professor emeritus of climate strategy Jorgen Randers told AFP. "If we want to stop this melting process we must do something in addition – for example, suck CO₂ out of the atmosphere and store it underground, and make Earth's surface brighter."

However, other scientists have pointed to the simplicity of the model Randers and his colleague Ulrich Goluke used and cautioned against misinterpreting their findings as a reason to give up on climate action.

"This paper clearly may be cited in support of a misleading message that it is now 'too late' to avoid catastrophic climate change, which would have the potential to cause unnecessary despair," University of Exeter climate scientist professor Richard Betts said in response. "However, the study is nowhere near strong enough to make such a frightening message credible."

So what exactly does the study say? The researchers used their model to see what would happen by 2500 if emissions stopped today and if they slowly declined to zero by 2100, as AFP explained. In the first scenario, temperatures would still rise to around 2.3 degrees Celsius above pre-industrial levels within the next 50 years, taper off, then rise again starting in 2150. By 2500, the world would be around three degrees Celsius warmer and sea levels would rise by around three meters (approximately 9.8 feet). In

the second, temperature and sea level rise would end up in the same place, but the temperature increase would be much faster.

The reason for the persistent increase comes from three feedback loops, the model found.

1. The melting of sea ice, which means that the sun's heat is absorbed into the darker ocean instead of reflected back by the bright ice.
2. The thawing of permafrost, which releases more greenhouse gases into the atmosphere.
3. Increased moisture in the atmosphere, which in turn raises temperatures.

The only way to have prevented runaway climate change would have been to have stopped burning fossil fuels between 1960 and 1970, the model found, as USA TODAY reported. In order to stop temperatures and sea levels from rising now, we would have to remove at least 33 gigatons of carbon dioxide from the atmosphere every year starting this one.

The study authors were the first to admit their findings were limited to one model.

"We encourage other model builders to explore our discovery in their (bigger) models, and report on their findings," they wrote.

However, Betts noted that their model was not the model used by the Intergovernmental Panel on Climate Change (IPCC) and did not realistically simulate how the climate works.

Penn State University meteorologist Michael Mann agreed. He told USA TODAY that it was not very complex and did not accurately reproduce atmospheric and ocean circulation systems.

"While such models can be useful for conceptual inferences, their predictions have to be taken with great skepticism. Far more realistic climate models that do resolve the large-scale dynamics of the ocean, atmosphere and carbon cycle, do NOT produce the dramatic changes these authors argue for based on their very simplified model," he said. "It must be taken not just with a grain of salt, but a whole salt-shaker worth of salt."

That said, even the models used by the IPCC show that we will need to draw down carbon dioxide from the atmosphere to reach the Paris agreement goal of limiting warming to 1.5 degrees Celsius above pre-industrial levels, even if we achieve zero emissions by 2050.

"What the study does draw attention to is that reducing global carbon emissions to zero by 2050 is just the start of our actions to deal with climate change," University College London climate professor Mark Maslin said in response.

09/30/2020

Utes Fear Uranium Mill is Becoming Radioactive Waste Dump

[Click here](#) to read this story in Utah's *Public News Service*

09/29/2020

OpEd about speculators buying up water rights near Grand Junction

[Click here](#) to read this five-part series by Bill Hudson, Editor of the Pagosa Daily Post

09/24/2020

Extension requested of Bureau of Reclamation on Lake Powell Pipeline timeline

[Click here](#) to read this story by Brian Maffly of *The Salt Lake Tribune* called "After Insisting on Expedited Review Utah Now Asks Feds to Delay Lake Powell Pipeline" KUTV story by Jennifer Weaver

The Utah Division of Water Resources and Washington County Water Conservancy District have requested an extended timeline from the Bureau of Reclamation to consider comments received on the Lake Powell Pipeline's draft Environmental Impact Statement (EIS) from the public, tribes, non-government organizations, and fellow Colorado River Basin states.

"The Lake Powell Pipeline is a critical water infrastructure project for Utah," stated Todd Adams, director, Utah Division of Water Resources, in a news release. "The extension will allow more time to consider the comments and complete further analysis, which will contribute to a more comprehensive draft and final EIS."

Thousands of comments expressing both support and questions were received during the recent public comment period, which ended on Sept. 8.

"We're grateful to all those who have participated in the NEPA process," stated Zach Renstrom, general manager, Washington County Water Conservancy District. "Thoughtful comments were submitted, and thoughtful responses are deserved. This is the purpose and process of NEPA."

The Bureau of Reclamation will establish a new timeline for the water delivery project that will provide water to 10 communities in southern Utah in response to this request. The extension will allow the bureau time to prepare a supplement to the draft EIS, which is common during NEPA.

[Read](#) the letter from Utah Division of Water Resources

09/16/2020

Five-Year Projection by USBR: Dips in Lake Powell Colorado River Reminder Water Supply Isn't Unlimited

[Click here](#) to read this story by Sam Metz of *The Associated Press*

[Click here](#) to read this story by Tony Davis of *Arizona Daily Star*

[Click here](#) to read this story by Ian James of *Arizona Republic*

###

[Reclamation Website](#) for Colorado River System Mid- to Long-term Projections

[The documents of the Five Year Projection by Bureau of Reclamation](#)

09/13/2020

Why Some in Nevada See Utah Pipeline Plan as 'First Salvo in Coming Water Wars'

[Click here](#) to read this story by Brian Maffly of *Salt Lake Tribune* called "Surrounding States Bash Utah's Lake Powell Pipeline Project"

[Click here](#) to read this story by Hillary Davis from *Las Vegas Sun* called "Why some in Nevada see Utah pipeline plan as 'first salvo in coming water wars?'"

[Click here](#) to read this OpEd by Tick Segerblom called "Utah Pipeline Plan An Affront to Nevada"

[Click here](#) to read this OpEd by Kyle Roerink called "St. George's Water Grab Worth Fighting"

[Click here](#) to read this story by Rachel Christiansen of *Nevada Public Radio*; a discussion between Kyle Roerink, executive director of Great Basin Water Network, and Zachary Renstrom, the general manager of the Washington County Water Conservancy District.

###

PUBLIC COMMENTS

- [Nevada](#)
 - [Six States](#)
 - [LPP Coalition Comments](#). Conserve Southwest Utah.
 - [Utah Rivers Council](#)
 - [Living Rivers & Colorado Riverkeeper](#)
 - [Great Basin Water Network & Great Basin Waterkeeper](#)
 - [National Parks and Conservation Association](#)
 - [Arizona Game and Fish](#)
 - [Peter Mayer](#). Technical Memo.
 - [Harding & Lynker](#). Technical Memo.
-

09/08/2020

PUBLIC COMMENTS & News on Lake Powell Pipeline DEIS

PUBLIC COMMENTS

- [Nevada](#)
- [Six States](#)
- [LPP Coalition Comments](#). Conserve Southwest Utah.
- [Utah Rivers Council](#)
- [Living Rivers & Colorado Riverkeeper](#)
- [Great Basin Water Network & Great Basin Waterkeeper](#)
- [National Parks and Conservation Association](#)
- [Arizona Game and Fish](#)
- [Peter Mayer](#). Technical Memo.
- [Harding & Lynker](#). Technical Memo.
- [WaterDM](#). Technical Memo.

ADDITIONAL INFORMATION

WEBINAR: [Western Resource Advocates](#) on August 25, 2020 "Lake Powell Pipeline Leaky Proposal Doesn't Hold Water Under Scrutiny"

- [Slide presentations](#) for the webinar
- [Transcript](#) for presentation by Eric Kuhn.

Surrounding states bash Utah's Lake Powell pipeline project

By Brian Maffly of Salt Lake Tribune on September 9, 2020

All of Utah's partner states sharing the Colorado River's water are urging the federal government to halt the Lake Powell pipeline, opening a schism in the interstate compact

that has divvied up the mighty river's flow for the past century.

In a joint letter to Interior Secretary David Bernhardt on Tuesday, those states asked the secretary to block the Bureau of Reclamation from completing its ongoing environmental impact statement (EIS) "until such time the seven Basin States and the Department of the Interior are able to reach consensus regarding outstanding legal and operational concerns raised" by the project.

Lower basin states have agreed to cutbacks needed to stabilize levels at Lake Mead and Lake Powell. But that hasn't deterred Utah from pursuing its plan to suck 86,000 acre-feet a year from Lake Powell to feed further growth around St. George.

On Tuesday, the public comment period expired on Reclamation's draft EIS, paving the way for a final decision in the coming months.

Environmental opponents of the project contend Utah's fast-growing Washington County can meet its water needs from local sources and conservation and its construction costs will lead to crushing tax hikes. Major southwestern cities have achieved sharp reductions in per-capita water use while St. George continues to consume water at some of the fastest rates in the region.

But until Tuesday, Utah's compact partners had remained silent on their opposition, at least publicly. Their letter to Interior contends the project, should it win approval, would be bogged down in litigation for years.

Todd Adams, director of the Utah Division of Water Resources, sounded an optimistic note that the states' differences can be worked out.

"As Colorado River Basin States, we've resolved complex challenges and concerns before, and we will do the same now. We remain committed to working with the other basin states to mitigate their legal and operational concerns raised by Utah's intent to use a portion of its Colorado River allotment to provide water to Washington County," Adams said in a statement.

"We will use the next several months to address their concerns," he promised.

"More than 20 years of planning have gone into the Lake Powell Pipeline to meet the needs of Washington County's growing population and to diversify the area's water supply," Adams said. "Without the project, the county's economic viability and water security will be harmed."

The Salt Lake Tribune will update this story.

[Click here](#) to read this story by Hillary Davis from *Las Vegas Sun*

[Click here](#) to read this OpEd by Tick Segerblom called "Utah Pipeline Plan An Affront to Nevada"

[Click here](#) to read this OpEd by Kyle Roerink called "St. George's Water Grab Worth Fighting"

[Click here](#) to read this story by Sam Metz and Felcia Fonseca in *The Associated Press*

08/15/2020

Controversy Over Pine Valley Pipeline (groundwater over appropriation)

NEWS

- [Beaver County Hopes to Block Neighbor's Groundwater Pumping Project](#). SL Trib.
 - [Sister County Controversy Over Pine Valley Pipeline](#). SGN.
 - [Cedar Valley Moves Ahead with Pine Valley Water Pipeline Project](#). SGN.
 - [Iron County Water District Accomplishes Monumental Steps to Importing Water into Cedar Valley](#). SGN.
 - [OpEd: Iron County Water Needs are 1st Priority](#). SGN.
 - [Overappropriation Water Rights Threatens Iron County](#). SGN.
 - [Pine Valley Water Supply Project Scoping Meeting Draws Few Attendees](#). SGN.
 - [Searching New Water Sources: Ways to Balance Aquifer](#). SGN.
 - [Water Board One Step Closer to Securing New Water Rights](#). SGN.
-

08/13/2020

Lion's Back litigation now moot in favor of Plaintiffs. Original 2008 plan moving forward, but incrementally due to Covid and economic downturn

[Click here](#) to read this story by Rachel Fixsen of *Moab Sun News*

[Click here](#) to read this story by Doug McMurdo of *Times-Independent*

08/12/2020

Trump Admin backs off oil & gas drilling near national parks in Grand County & Moab

[Click here](#) to read this story by Amy Joi O'Donoghue of *Deseret News*

[Click here](#) to read this story by Anna M. Philips of *Los Angeles Times*

08/04/2020

PR: Lawsuit Challenges Nearly \$28 Million in Public Funding for Utah Oil Railway

For Immediate Release, August 4, 2020

Contact:

• **Wendy Park**, Center for Biological Diversity, (510) 844-7138,
wpark@biologicaldiversity.org

• **John Weisheit**, Living Rivers, (435) 260-2590, john@livingrivers.org

Lawsuit Challenges Nearly \$28 Million in Public Funding for Utah Oil Railway

Project Would Harm Local Communities, Escalate Climate Crisis

SALT LAKE CITY - Conservation groups sued the Utah Permanent Community Impact Fund Board today for granting \$27.9 million in public money to a proposed railway that would move oil from the Uinta Basin to refineries in other states.

Under state law the funds administered by the board must go toward public projects that help communities deal with harms from mineral development on federal public lands. Today's lawsuit, filed in Utah district court in Salt Lake City, says the board broke state law when it transferred money to the Seven County Infrastructure Coalition to advance the Uinta Basin Railway. The coalition, which sought the grant funding, is also named as a defendant in the suit.

"This money is meant to help repair damage done by the fossil fuel industry, not subsidize it," said Wendy Park, an attorney at the Center for Biological Diversity. "The board is supposed to help rural communities build health centers, libraries, and other community facilities. Instead it's giving gifts to private oil companies and buying more pollution."

The proposed 85-mile Uinta Basin Railway would lead to a significant increase in oil extraction in the region. New drilling and fracking would damage roads, strain public facilities and services, worsen the climate crisis and harm public health.

Before the board's June 2019 vote to fully fund the project, a state assistant attorney general [WARNED](#) that issuing the grant would be illegal.

“The Uinta Basin Railway has been designed for one thing only: oil,” said John Weisheit, conservation director at Living Rivers. “The railroad ends at two places, a major oil producer’s doorstep and the middle of a remote drilling field. The basin’s residents would never set foot on this railroad, but their money is being taken to build it.”

In May the Office of the Legislative Auditor General released an audit raising serious concerns about the Community Impact Board, including improper funding of economic development projects. The report found that the board often failed to follow rules and guidelines limiting awards to \$5 million and requiring matching funds. The [AUDIT](#) highlighted the Uinta Basin Railway as one of the projects demonstrating the need to improve the board’s policies and practices.

The railway could lead to a quadrupling of oil production in northeast Utah’s Uinta Basin, worsening smog in an area that already violates federal pollution standards because of oil and gas extraction. The railroad, along with access roads, well pads, pipelines and increased trucking, would also fragment wildlife habitat, strain precious water supplies and cause greenhouse gas emissions.

The Center for Biological Diversity is a national, nonprofit conservation organization with more than 1.7 million members and online activists dedicated to the protection of endangered species and wild places.

Living Rivers is a nonprofit environmental membership organization, based in Moab, Utah. Living Rivers promotes river restoration and seeks to revive natural habitat and the spirit of rivers by undoing the extensive damage done by dams, diversions and pollution on the Colorado Plateau. Learn more at www.livingrivers.org

[DOWNLOAD the Petition and Exhibits](#)

###

Story by Brian Maffly of *Salt Lake Tribune* [HERE](#)

[Click here](#) to read this story by John Thompson of UB Media and called "Developer Agrees to Purchase Railway Intellectual Property."

UB Media website: <https://ubmedia.biz/news/17422/developer-agrees-to-purchase-railway-intellectual-property/>

07/29/2020

How a tiny fish is helping Utah and the West tackle big questions about the Colorado River’s future

[Click](#) here to read this story by Judy Fahys of *Inside Climate News*

07/10/2020

USA Commissioner Demands Mexico Deliver Rio Grande Water to USA

[Click here](#) to read this story by Nathaniel Puente of Fox News.

06/21/2020

Gila River Diversion Project Halted by vote of Interstate Stream Commission

[Click here](#) to read this story by Geoffrey Plant of *Silver City Daily Press*

News of August 11, 2020 by Kendra Chamberlain of *The NM Political Report*: ["ISC mulls water projects after diversion project scrapped"](#)

ADDITIONAL INFORMATION

[Visit On The Colorado](#)

06/10/2020

**Feds Release Environmental Analysis on Possible Powell Pipeline Routes, Critics and Tribes Point to Flaws
NEWS**

- Salt Lake Tribune by B. Maffly, June 2020: [Feds Release Environmental Analysis on Possible Powell Pipeline Routes, Critics Point to Flaws](#)
- Salt Lake Tribune by B. Maffly, June 2020: [Lake Powell Pipeline Will Make River Angry, Southern Paiutes Warn as Feds Release Analysis](#)

Website for the Draft Enviromental Impact Statement (DEIS) is [HERE](#)

DUE DATE: 90 day public comment period ends September 8, 2020

Comments on the draft EIS/draft RMPA and requests to be added to the mailing/ notification list may be submitted by mail, e-mail or fax to:

Lake Powell Pipeline Project
Bureau of Reclamation
Provo Area Office
302 East Lakeview Parkway
Provo, Utah 84606
lpp@usbr.gov
801-379-1159

DEIS DOCUMENT ARCHIVE

- [Federal Register Notice for LPPP DEIS](#)
- [Draft EIS Vol 1](#)
- [Appendix A: Consultation and Coordination](#)
- [Appendix B: Purpose and Need Report](#)
- [Appendix C-13: Vegetation Communities](#)
- [Supplement 01: Vegetation Species of Tribal Concern](#)
- [Appendix C-19: Visual Resources](#)
- [Appendix C-20: Cultural Resources](#)
- [Appendix C: Supplemental Information \(Part One\)](#)
- [Appendix C Supplemental Information \(Part Two\)](#)
- [Appendix D: Analysis and Perspective of the Tribes](#)
- [Supplement 03: Environmental Justice](#)
- [Supplement 04: Cultural Affiliation & Cultural Ethnographic Resources](#)
- [Supplement 05: FERC Appendix on Cultural & Ethnographic Resources](#)
- [Appendix E: Plan of Development](#)
- [ALL DOCUMENTS ABOVE COMBINED](#)

ADDITIONAL INFORMATION

ON THE COLORADO: Articles about the Lake Powell Pipeline

- September 23, 2019: [The Administrative History of Lake Powell Pipeline](#)
- October 22, 2018 - [The Water Rights of Central Utah Project, including Ultimate Phase](#)
- September 18, 2018 - [Green River Block Environmental Assessment for a Federal Water Contract for Eastern Utah Counties](#)
- August 22, 2018- [Lake Powell Pipeline Permitting Process Renewed](#)
- June 28, 2018 - [Proposal to amend the Arizona Strip Resource Management Plan \(RMP\)](#)
- December 26, 2017 - [Lake Powell Pipeline Approved for Environmental Analysis \(Temporarily Suspended\)](#)
- March 21, 2011 - [Lake Powell Pipeline Documents](#)
- June 03, 2010 - [Ultimate Phase Water Rights Stored at Flaming Gorge Reservoir](#)
- May 06, 2008 - [Announcing: Scoping of environmental issues for the proposed Lake Powell Pipeline Project in Utah and Arizona](#)

06/03/2020

Water & Tribe Initiative: Making Sense of the Basin (Colorado River Tribes)

About this Report

This report summarizes the results of more than 100 confidential interviews, three workshops, and countless conversations with tribal and other leaders throughout the basin -- all focused on designing a collaborative process to develop the next set of

guidelines for the Colorado River. The Colorado River provides water to more than 40 million people in two countries, seven states, and 29 Indian tribes. The demand for water currently exceeds available supply in any given year and is complicated by chronic drought and the uncertainty of impacts from climate change. The river is governed by a set of laws, policies, and institutions collectively referred to as the “Law of the River.” Several key components of this framework, including the 2007 Interim Guidelines, Minute 323, and the 2019 Drought Contingency Plan all expire in 2026, creating a unique opportunity to revise and update the framework for managing the river. Since 2017, the Water & Tribes Initiatives has pursued two complimentary objectives: to enhance tribal capacity to participate in basin-wide policy decisions and to advance sustainable water management in the basin through collaborative decision-making.

[Press Release](#)

[Document: *Making Sense of the Basin*](#)

[Distribution List](#)

05/23/2020

Company Plans Dams in Canyon Next to Little Colorado River

[Click here](#) to read this story by Ian James of *The Arizona Republic*

Additional Information:

[Click here](#) to read the a few stories about the original project proposal in the gorge of the Little Colorado River

05/21/2020

Utah Court of Appeals Reverses 7th District Court's Decision: Citizens Prevail on Lack of Due Process about Wind Energy Development in San Juan County

NEWS

- 2020, May - [San Juan County Loses Appeal Involving the Wind Farm and Northern Monticello Alliance](#). The Petroglyph.
- 2020, February - [Wind Farm Fails to Mitigate Noise, Light and Flicker Impact for Local Property Owners](#). The Petroglyph.
- 15, November - [Wind Farm Hearing on County Corruption](#). The Petroglyph.

- 2015, November - [Last Minute Save by Adams and Benally Benefits sPower](#). The Petroglyph.
- 2015, September - [Open Meeting Laws Ignored by Planning Zoning Chairman](#). The Petroglyph.

LEGAL

- [Appellate Decision on Due Process Reversed](#). NMA vs SJC.

05/20/20

Questions Simmer About Lake Powell's Future As Drought Climate Change Point To Drier Colorado River

[Click here](#) to read this story by Gary Pitzer of Water Education Foundation

05/15/2020

Supreme Court Rejects City's Effort To Avoid Public Involvement In Contentious Lion's Back Development

- [Click here](#) to read this story by Doug McMurdo of *Times-Independent*
- [Click here](#) to read the opinion of the Appellate Court that upheld the complaint from citizens.
- [Click here](#) to read this story by Maggie McQuire of *Moab Sun News*

Additional news about Lion's Back Resort

- [Click here](#) to read this story about Appellate Court overturning Judge Lyle Anderson's decision. By Doug McMurdo pf *Moab Times Independent*
- [Click here](#) to read this story about Appellate Court ruling in favor of Citizens. By Maggie McQuire of *Moab Sun News*
- Part One: [Click here](#) to listen to Molly Marcello and the attorneys on KZMU Radio: News and Public Affairs
- Part Two: [Click here](#) to listen to Molly Marcello and Doug McMurdo on KZMU Radio: News and Public Affairs
- October 25, 2019 - [Appeals court panel hears Lions Back arguments. Attorney: lower court decision a 'travesty of justice'](#). McMurdo, *Times Independent*.

- July 5, 2019 - [*Court of Appeals to Hear Lions Back Case In Moab. McMurdo*](#) , Times Independent.
 - [Click here](#) to read the announcement from the Utah Court of Appeals
 - The hearing is on October 18, 2019 and begins at 10:00 A.M. at the Grand County Courthouse.
-

05/08/2020

Utah Oil and Gas Regulators Fail to Issue Fines to Polluters

- [Click here](#) to read this story by Mark Richardson of Utah's Public News Service.
 - [Click here](#) to read this report by Center for Western Priorities (April, 2020)
-

04/20/2020

Plan calls for diverting, storing water from Gila River

Project website is here: <https://www.nmuniteis.com/documents>

Comments will be accepted through June 8.

By The Associated Press Friday, April 17, 2020 10:12 PM

SILVER CITY, N.M. – Water from two rivers that span parts of New Mexico and Arizona would be diverted and stored under a project proposed by the New Mexico Central Arizona Project Entity.

The proposal calls for storing water from the Gila and San Francisco rivers at sites in the Virden Valley or along the San Francisco River in New Mexico.

The U.S. Bureau of Land Management [actually, Bureau of Reclamation] and the New Mexico Interstate Stream Commission are gathering public comments on an environmental review of the proposal.

The fight over the Gila River has prompted protests and legal fights over the years. Environmentalists have suggested the effort to divert water would result in a \$1 billion boondoggle, but supporters argue that the project is vital to supplying communities and irrigation districts in southwestern New Mexico with a new source of water as drought persists.

Under the Arizona Water Settlements Act, New Mexico is entitled to 14,000 acre-feet of water a year, or about 4.5 billion gallons. State officials opted to build a diversion

system, as that alternative opened the door to more federal funding. The state would have received less had it pursued other water projects in the region.

It missed a deadline in December to have an environmental review completed and approved by federal officials in order to free up additional funding. Still, the New Mexico Central Arizona Project Entity has more than \$60 million it could spend on a diversion and regional water projects.

The draft environmental review that's up for review now considers four alternatives to construct, operate and maintain the proposed project. Officials don't have a preferred alternative, saying it's likely a "no action" alternative will be selected until funding is secured.

"We need public feedback and encourage commenters to focus on the analysis of costs and benefits of the alternatives to make any future decisions," said Alexander Smith, the deputy area manager for the Bureau of Reclamation's Phoenix office.

Comments will be accepted through June 8.

04/18/20

Water authority won't appeal blocked Nevada pipeline project

By Alex Chhith / Las Vegas Review-Journal April 16, 2020 - 7:03 pm

The Southern Nevada Water Authority said Thursday it would not appeal a recent court ruling that blocked the agency's plans for a controversial eastern Nevada pipeline project.

In March, a District Court judge upheld a 2018 ruling to block the water authority's plans to pump billions of gallons of groundwater from four rural valleys in White Pine and Lincoln Counties. He also overturned older rulings from the state engineer who previously granted the water authority the right to pump out of Spring, Cave, Dry Lake and Delamar valleys.

In a statement, the authority said, "After the current pandemic passes and normal operations are restored, SNWA management will present an update to its 50-year Water Resources Plan for its Board of Directors to consider that focuses on strengthening beneficial partnerships with other Colorado River states as well as further advancing Southern Nevada's world-recognized water conservation efforts."

Organizations opposing the pipeline took the announcement as a win but said more work needs to be done.

“Great Basin residents can breathe a great sigh of relief,” Kyle Roerink, executive director of the Great Basin Water Network, said in a statement following the announcement. “Our attorneys, White Pine County officials, tribes and front-line communities have said this project was illegal for more than three decades. Today’s news vindicates their fierce opposition and years of fighting a David vs. Goliath battle. But SNWA must revoke its remaining water rights applications and withdraw its right-of-way application.”

Patrick Donnelly, the Nevada director for the Center for Biological Diversity, said in a statement that he with “thrilled” with the decision, calling the pipeline project a “boondoggle.”

“Eastern Nevada’s fragile ecosystems and rural communities have won a reprieve, but the fight isn’t over,” he said. “As long as permits are still alive, our struggle continues.”

Las Vegas water officials have been pushing plans to pipe in groundwater from up to 300 miles away since 1989. The proposed multibillion-dollar pipeline project was expected to supply at least 170,000 homes.

More news:

[Click here](#) to read this story by Daniel Rothberg on 5/22/20 for *The Nevada Independent* called "Water Authority Board Votes to Withdraw Remaining Water Right Applications Permits for Pipeline Project."

[Click here](#) to read this interview from *Nevada Public Radio* between Pat Mulroy and Abby Johnson called "Two Former Foes on the Death of a 'Water Grab.'"

04/17/2020

Kane County (Utah) Opts Out of Lake Powell Pipeline NEPA Process

FROM THE OFFICIAL INFORMATION SOURCE OF THE PIPELINE PROJECT
(Washington County Water Conservancy District)

At the request of the Kane County Water Conservancy District (KCWCD), the Bureau of Reclamation will not consider Kane County’s future water supply needs in the National Environmental Policy Act (NEPA) review of the Lake Powell Pipeline (LPP).

KCWCD’s decision to opt out of the NEPA process was made after further review of the county’s projected population growth and available water supply, which indicated the county did not currently have a foreseeable need for the water.

“We continue to support the Lake Powell Pipeline and consider it absolutely essential to the future of southwestern Utah,” said Mike Noel, general manager of KCWCD.

A similar review of Washington County’s projected population growth and available water supply deemed the project essential.

“Washington County is the fastest growing and one of the driest regions in Utah,” said Todd Adams, director of the Utah Division of Water Resources. “The county is projected to triple in the next 40 years and is currently dependent on a single river basin that is almost fully developed. A second, reliable water source is vital for Washington County’s growing population and economy.”

KCWCD was anticipated to receive up to 4,000 acre feet of water per year from the LPP, or approximately 5% of the project’s yield. The water rights for the 4,000 acre feet of water remain with the Utah Board of Water Resources. If the need arises, KCWCD can complete a separate NEPA process and connect to the LPP in the future.

KCWCD’s decision will eliminate an approximately 10-mile pipeline from the LPP into Kane County; no other project changes are needed. The project’s timeline and process are unaltered. Reclamation’s work on the Environmental Impact Statement is ongoing with a draft anticipated for public review and comment this summer.

FROM LEXI PEERY OF THE ST. GEORGE SPECTRUM

Kane County pulls out of Lake Powell Pipeline project ahead of federal review

The Kane County Water Conservancy District has decided to pull out of the Lake Powell Pipeline project, leaving Washington County as the sole proposed user of the pipeline going forward.

The decision comes as the federal government continues and environmental review of the project. The Bureau of Reclamation is developing an environmental impact statement (EIS) for the project as required by the National Environmental Policy Act. The NEPA process will determine if the project will go forward and what route it will take.

This one-year review process began in December 2019 and a decision on the pipeline is expected in early 2021. Over 1,000 public scoping comments were submitted until the beginning of January in preparation for the draft EIS, which is expected this summer.

KCWCD made the decision based on “further review” of the county’s population projections and available water, according to the press release announcing the news.

“We continue to support the Lake Powell Pipeline and consider it absolutely essential to the future of southwestern Utah,” Mike Noel, the general manager of KCWCD, said in the release.

Population projections for the state are developed by the University of Utah's Kem C.

Gardner Policy Institute. The latest projections have Kane County growing by more than 50% by 2065, which would put it at about 11,400 people.

“KCWCD’s decision was made after reviewing the population projections and currently available water supply. Kane County is fortunate to have local water resources that they can develop to meet its currently projected growth. If Kane County grows more than currently projected, KCWCD has the option to complete the necessary NEPA and connect to the LPP in the future,” WCWCD spokesperson Karry Rathje stated.

The environmental work for the project began in 2007, and at the time Iron County was part of it. In 2012, the county’s water district decided to leave the project, finding their current water sources would be sustainable for the future.

The plans for the 140-mile pipeline are unchanged, except for a 10-mile pipeline that would have diverted water from the LPP to Kane County. Rathje stated the pipeline to Kane County was estimated to cost \$35 million.

The latest estimated cost of the project is between \$1.1 and \$1.8 billion. The project would be repaid by impact fees, water rates and property taxes, according to the LPP project website.

The pipeline would bring 86,000 acre-feet annually to the region from Lake Powell. KCWCD would have received about 5% of the project’s total or 4,000-acre feet. The water rights that would have been held by KCWCD would now be held by the Utah Board of Water Resources, according to the release.

The WCWCD has done similar population reviews and found the pipeline to be essential given the expected increase in population, according to the release. The larger county, where the St. George metro area makes up most of the population, is forecasted to grow to more than 500,000 people by 2065.

“Washington County is the fastest growing and one of the driest regions in Utah,” said Todd Adams, director of the Utah Division of Water Resources, in the release. “The county is projected to triple in the next 40 years and is currently dependent on a single river basin that is almost fully developed. A second, reliable water source is vital for Washington County’s growing population and economy.”

FROM BRIAN MAFFLY OF THE SALT LAKE TRIBUNE

Kane County Utah does an about-face, pulls out of Lake Powell pipeline project

For the past decade, Kane County leaders have argued that their southern Utah community will need water piped from the Colorado River to meet future needs, but the local water district abruptly announced Thursday it was pulling out of the costly Lake Powell pipeline project, leaving Washington County as the only remaining recipient of the water.

The controversial project would divert 86,000 acre-feet of water a year from the chronically depleted Lake Powell into a 143-mile pipeline terminating in a reservoir near St. George. Along the way, the billion-dollar pipeline was to offload 4,000 acre-feet in Johnson Canyon east of Kanab.

But now the Kane County Water Conservancy District has decided it didn't have a "foreseeable need" for the water after reviewing the county's projected population growth and available water resources, according to a release posted Thursday.

"We continue to support the Lake Powell pipeline and consider it absolutely essential to the future of southwestern Utah," said Mike Noel, the district's general manager and the retired Kanab state lawmaker who has long championed the project.

Zach Frankel, executive director of the Utah Rivers Council, and other critics have long pointed to Kane County's ample groundwater supplies as evidence that there was not much need for the project, which would be financed by Utah taxpayers and tap an already over-allocated Colorado River. More than \$25 million has been spent on environmental reviews, with a new one underway by the U.S. Bureau of Reclamation, which assumed federal oversight of the project after the Federal Energy Regulatory Commission withdrew.

Kane's pullout eliminates the need to construct a 10-mile pipe to direct the county's share of the water to a spot hardly a mile from Noel's extensive ranch properties in Johnson Canyon.

The project has shrunk substantially from its original version, first unveiled in 2006 legislation. Last year, the Utah Division of Water Resources removed the hydroelectric generation components, which would have enlarged the project's costs and environmental footprint. Iron County, another original participant, exited years ago, citing the high cost of delivering the water all the way to Cedar City.

But state officials, pointing to the mushrooming growth in and around St. George, maintained there is still a need for the pipeline.

"Washington County is the fastest growing and one of the driest regions in Utah," said Todd Adams, director of the Utah Division of Water Resources. "The county is projected to triple in the next 40 years and is currently dependent on a single river basin that is almost fully developed. A second, reliable water source is vital for Washington County's growing population and economy."

The project's timeline and process remain unaltered. The Bureau of Reclamation's review is ongoing with a draft environmental impact statement anticipated for public comment this summer.

FROM UTAH RIVERS COUNCIL

Good News: Kane County Backs Out of Lake Powell Pipeline Fiasco

2nd of 3 Utah Counties Have Now Backed Out of Destructive, Unnecessary, Expensive Lake Powell Pipeline

As a glimmer of good news during uncertain times, Utah water agencies announced today that the Kane County Water District is backing out of the proposed \$3 billion Lake Powell Pipeline.

For the last 14 years, the Kane County Water District, claimed that Kane County needed water from the proposed Lake Powell Pipeline. The Kane County Water District is a small water supplier that delivers water to a very small percentage of Kane County's population. Led by former Utah legislator Mike Noel, the water agency was widely criticized for failing to prove its claims for needing the water or coming up with a viable plan to pay for the water.

In 2013, a group of Utah economists performed a lengthy analysis of Pipeline repayment obligations on Kane County residents and found that massive increases to water rates, impact fees and property taxes would be required to pay for the water. The Utah Division of Water Resources and the Kane County Water District claimed they could repay Pipeline costs but provided no substance to their claims.

Then in March 2018, the Utah Rivers Council filed a complaint with the Utah Attorney General's Office seeking an investigation of Rep Noel and what role the Utah Division of Water Resources had in changing the official documents for the proposed Lake Powell Pipeline. Our complaint requested a formal investigation to determine if Mr. Noel used government resources to benefit his own private land holdings. The complaint alleges that Mr. Noel may have used his position as both a legislator and as the Executive Director of the Kane County Water District to advance the proposed Lake Powell Pipeline, which might have delivered water to his land holdings in Kane County, estimated to be valued at roughly \$4-9 million.

The map below shows Mr. Noel's personal properties and the proposed Lake Powell Pipeline alignment, as shown in yellow. Roughly 10 miles before the Pipeline reached Kane County's largest town of Kanab, the Pipeline was slated to make a 90 degree corner and head ~7 miles up Johnson Canyon road, where project documents state the entire Pipeline water supply would be pumped into the ground, just a stone's throw from Mr. Noel's properties.

Roughly 10 miles before the Pipeline reached Kane County's largest town of Kanab, the Pipeline was slated to make a 90 degree corner and head ~7 miles up Johnson Canyon road, where project documents state the entire Pipeline water supply would be pumped into the ground, just a stone's throw from Mr. Noel's properties.

The Division of Water Resources has never responded to why the agency revised the

official Lake Powell Pipeline planning documents to alter the alignment of the Pipeline to travel towards Mr Noel's land holdings.

"Kane County residents dodged the bullet on this costly water project" said Zach Frankel, Executive Director of the Utah Rivers Council. "Too bad Washington County residents are still stuck paying a 500% increase in water rates and a doubling of property taxes for water they don't need and \$3 billion in debt they can't repay" said Frankel.

The Utah Division of Water Resources continues to claim that Washington County needs water from the \$3 billion Pipeline, but its justification for the project is based on bogus water demand projections. The Draft Environmental Impact Statement for the Lake Powell Pipeline is slated to be released in June 2020 by the Bureau of Reclamation.

03/23/2020

Lisbon Valley Mining Company Closes: Lays Off Workers and Owes Back Payroll and Property Taxes

- [Click here](#) to read this story by *The San Juan Record*.
 - [Click here](#) to read this story by Zak Podmore of *The Salt Lake Tribune*
 - [Click here](#) to read this Emergency Order by Utah Division of Oil, Gas and Mining about the Lisbon Valley Copper Mine Closure.
 - [Click here](#) to read this story by Zak Podmore of *The Salt Lake Tribune*, about the then proposed expansion of this copper mine in January of 2020.
 - [Click here](#) to read a fact sheet prepared by Uranium Watch about the expansion of Lisbon Valley Copper Mine.
 - [Click here](#) to read about the 2018 Public Meeting for the expansion of the Lisbon Valley Copper Mine.
-

03/10/20

Judge Again Rejects Las Vegas Water Pipeline from Rural Valleys

- [Click here](#) to read this story by Ken Ritter of *Associated Press*
 - [Click here](#) to read about this victory by Great Basin Water Network
-

03/10/2020

Tribal Water Initiative: 'This System Cannot be Sustained'

- [Click here](#) to read this story by Anna V. Smith of *High Country News*
 - [Click here](#) to read this story by Ian James of *Arizona Republic*
 - [2018 - Tribal Water Study of the Ten-Tribe Partnership](#) (documents combined and starting with the press release). This study is a new feature of the 2012 Basin Study.
 - [2018 - Water and Tribes Initiative of the Colorado River Basin](#). Center for Natural Resources and Environmental Policy. University of Montana at Missoula.
-

03/07/20

Pumpback Project Dam Would Create 10-Mile Finger Lake on San Francisco River (Gila River)

- [Click here](#) to read this story by Geoffry Plant of *Silver City Daily Press*
 - [Go to "Docket Search" at FERC Online](#)
 - Project Number: P-14995
 - [Click here](#) to read all the reports as of March 7, 2020.
-

03/04/2020

The Colorado River Past and Future: How Will the States Manage a Drier Future

- [Click here](#) to read this story by Rachel Fixson of *Moab Sun News*
 - [Website for The Center for Colorado River Studies](#)
-

02/29/2020

Lion's Back Resort: Moab City Seeks Help From Utah Supreme Court

[Click here](#) to read this story by Doug McMurdo in *The Times-Independent*

02/21/2020

7D REVIEW BY DEPARTMENT OF INTERIOR

Memo (2/7/20) from Bureau of Reclamation about the Section 7.D review of Interim Guidelines, now underway until December of 2020. In his 12/13/2019 remarks at Annual Conference of Colorado River Water Users Association ([video](#)), Interior Secretary Bernhardt stated:

- 'Section 7.D of the 2007 Guidelines [the update of 12/10/2007, listed below] calls for Reclamation to initiate work prior to Dec. 31, 2020 on a formal review of the effectiveness of the 2007 Guidelines.'
- 'This provision provides an opportunity to take an objective look at where we've been, and where we are, with our operational rules.'
- 'We want to wrap up this effort, culminating in the 'Section 7.D Report,' around this time next year.'
- 'The report will be a Reclamation product but it will rely on important input from the Basin States, Tribes, NGOs and the public, as the report is developed.'

7D DOCUMENTS

- [Updated Draft Guidelines of December 10, 2007](#); [Section 7 only](#) - (pages 34-36)
- [2007 Record of Decision of December 13, 2007](#)
- [2007 Final EIS \(October\)](#)

Approach

- The Section 7.D Review will be retrospective; a '**look-back**' at past operations and not a consideration of future activities.
- The Review will result in a Report that: 1) evaluates the effectiveness of the Guidelines and 2) documents our operational experience with the Guidelines.
- Through this Review, we hope to build a solid foundation that informs decision-makers in future negotiations and bring partners, stakeholders and the public to a common understanding of past operations and their effectiveness.
- Input from the Basin States, Tribes, NGOs, other Federal agencies, and the public will be factored into the Review.
- Outreach with Basin States, Tribes, NGOs, and other Federal agencies will occur at 2 primary milestones: 1) at the start of the Review, with a discussion of the Report scope, approach, and schedule and 2) when the draft Report is ready for review.
- In March, we anticipate holding webinar(s) to present and discuss the Report scope, approach, and schedule with the Basin States, Tribes, and NGOs. Additional meetings with groups of tribes and individual tribes will follow as requested.
- In late summer, we anticipate holding webinar(s) to provide the draft Report to the Basin States, Tribes, and NGOs for review. Received comments will be considered and factored into the draft Report as appropriate. Additional meetings with groups of tribes and individual tribes will follow as requested.
- We anticipate publishing the final Report near the end of 2020.

PUBLIC PARTICIPATION OF 7D REVIEW

- **Public Webinar:** posted at <https://www.usbr.gov/lc/region/programs/strategies.html>
- **Draft Comments:** due May 1, 2020. However, this is not a hard deadline due to the Covid-19 pandemic.
- **Send comments to:** 7DReview@usbr.gov

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02/20/2020

Uinta Railway/Inland Port: Utah Coalition to Protest Misuse of Public Money on Fossil Fuel Projects

[Click here](#) to read this Press Release from Center for Biological Diversity

02/16/2020

How Climate Change Is Redesigning Canyonlands National Park

[Click here](#) to read this story by Patrick Cone for *National Parks Traveler*

[Archived here](#)

Climate Change at Glen Canyon National Recreation Area

[Click here](#) to read this story by Patrick Cone for *National Parks Traveler*

[Archived here](#)

02/07/2020

Lion's Back Deal Violated Moab Law: Judge Rules SITLA & City Council Contract Can't Avert Public Hearings

[Click here](#) to read this story by Doug McMurdo of *Moab Times Independent*

[Click here](#) to read this story by Maggie McQuire of *Moab Sun News*

Part One: [Click here](#) to listen to Molly Marcello and the attorneys on KZMU Radio: News and Public Affairs

Part Two: [Click here](#) to listen to Molly Marcello and Doug McMurdo on KZMU Radio: News and Public Affairs

01/22/2020

We know the earth is warming. We know that will stress water in the West. But we don't know how.

[Click here](#) to read this story by Mark Jaffe of *Colorado Sun News*

[Click here](#) to read this story from *Science Daily* called "Sea level rise could reshape the United States, trigger migration inland"

01/10/2020

Divisive Southern Utah Sand Mine Project Will Not Move Forward

[Click here](#) to read this story by David Fuchs of *KUER Radio*

PREVIOUS NEWS

By *Southern Utah News*

<https://www.sunews.net/article.cfm?articleID=2685>

To view the proceedings for the water rights of this mining project, [CLICK HERE](#)

Keep Kanab Unspoiled (KKU), a community-based group that was formed to protect the quality of life in Kanab, a historic western town in southern Utah, filed a protest last week to the city's application to divert water for a frac sand mine and processing plant. There were more than 30 protests filed, including from ranchers worried about their future access to water, as well as Kanab Irrigation Company and Best Friends Animal Society.

The request for the water diversion stems from a contract the City of Kanab signed this summer with Southern Red Sands (SRS), a start-up mining operation backed by Kem Gardner, a Salt Lake City developer. SRS has mining claims on more than 11,000 acres of land on the plateau just above Kanab, just over 10 miles from Zion National Park. Its claims on this scenic plateau go up to tourist attractions like Peekaboo slot canyon and Diana's Throne, as well as the boundaries of Best Friends Animal Sanctuary.

The City of Kanab agreed to sell up to 600 acre-feet of water annually for 20 years, with SRS having the option for three 10-year renewals. SRS has also contracted with the Kane County Water Conservancy District for the same amount of water.

Dean Baker, a member of Keep Kanab Unspoiled, commented, "This frac sand mine threatens the future of Kanab, most immediately by taking away the water we need, but also by ruining an environmental treasure."

The protest was filed with the Utah State Water Engineer, listing a variety of reasons, most importantly that the City of Kanab does not have a surplus of water to sell. Utah state law, as well as the state constitution, prohibits the city from selling water outside its boundaries unless it has a surplus.

Kanab has been widely projected to face water shortfalls in coming decades, as continued growth puts a strain on its water supply. This projected shortfall is the reason many officials in the area have supported the construction of the Lake Powell Pipeline as a future source of water.

The projection of a shortfall was also confirmed in a newly released study commissioned by Best Friends Animal Society, by Dr. Kenneth Kolm. The study projected that if SRS uses all the water contracted, it could cause several lakes and streams in the area to dry up, in addition to reducing the flow of water from the wells owned by Best Friends and the City of Kanab.

The protest was filed by Steven Clyde of Clyde-Snow Law firm in Salt Lake City.

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[Click here](#) to read this story called "Kane County Residents Worry: Proposed Frac Sand Mine May Jeopardize Aquifer" by *KUER Radio*

###

Additional Information

[Protest by Best Friends with Exhibits.](#)

[Kanab City Water Plan, 2018.](#)

[Summary of Spring Flow Decline Local Hydrogeologic Studies at Pipe Spring National Monument, 2007. NPS.](#)

01/10/2020

Living Rivers Scoping Letter for Lake Powell Pipeline

LIVING RIVERS ET AL: Submissions to the Public Scoping Process

- [Coalition Letter submitted to Reclamation](#)

Submitted References

- [LR References Section 1A](#)
- [LR References Section 3A](#)
- [LR References Section 3B](#)
- [LR References Section 3C](#)
- [LR References Section 3D](#)
- [LR References Section 3E](#)
- [LR References Section 3F](#)
- [LR References Section 3G](#)
- [LR References Section 3I](#)
- [LR References Section 3J](#)
- [LR References Section 3K](#)
- [LR References Section 3L](#)
- [LR References Section 3L Part 1](#)
- [LR References Section 3L Part 2](#)
- [LR References Section 3L Part 3](#)
- [LR References Section 3L Part 4](#)
- [LR References Section 3L Part 5](#)
- [LR References Section 3L Part 6](#)
- [LR References Section 3L Part 7](#)
- [LR References Section 3L Part 8](#)
- [LR References Section 3L Part 9](#)
- [LR References Section 3L Part 10](#)
- [LR References Section 3L Part 11](#)
- [LR References Section 3L Part 12](#)
- [LR References Section 3L Part 13](#)
- [LR References Section 3O](#)
- [LR References Section 3P](#)
- [LR References Section 3Q](#)
- [LR Appendix A](#)

ON THE COLORADO

Articles about the Lake Powell Pipeline

- September 23, 2019: [The Administrative History of Lake Powell Pipeline](#)
- October 22, 2018 - [The Water Rights of Central Utah Project, including Ultimate Phase](#)

- September 18, 2018 - [Green River Block Environmental Assessment for a Federal Water Contract for Eastern Utah Counties](#)
 - August 22, 2018- [Lake Powell Pipeline Permitting Process Renewed](#)
 - June 28, 2018 - [Proposal to amend the Arizona Strip Resource Management Plan \(RMP\)](#)
 - December 26, 2017 - [Lake Powell Pipeline Approved for Environmental Analysis \(Temporarily Suspended\)](#)
 - March 21, 2011 - [Lake Powell Pipeline Documents](#)
 - June 03, 2010 - [Ultimate Phase Water Rights Stored at Flaming Gorge Reservoir](#)
 - May 06, 2008 - [Announcing: Scoping of environmental issues for the proposed Lake Powell Pipeline Project in Utah and Arizona](#)
-

01/08/2020

Lake Powell Pipeline: Desert Pipeline Tests Colorado Rivers Future

[Click here](#) to read this story by Jahn Wang of *S & P Global Markets*

01/08/2020

Utah Water Managers Retire

- [Click here](#) to read this story by Lexi Perry of *The Spectrum*
 - [Click here](#) to read this story by *The Daily Herald*
 - [Click here](#) to read this story by Becky Ginos of *The Davis Clipper*
-

01/03/2020

BLM's controversial chief: Pendley's tenure extended again without nomination, despite protests

- [Click here](#) to read this article by Judy Fahys in *Inside Climate News*
 - [Click here](#) to read this story by Maggie McQuire of *Moab Sun News*
 - [Click here](#) to read this story by Rebecca Leber of *High Country News* called "Pay to Play: Interior Secretary's Old Clients Spend Big Profit Bigly."
-

12/16/21

Litigation continues against Gross Dam Reservoir Expansion Project

Save the Colorado, The Environmental Group, WildEarth Guardians, Sierra Club, Waterkeeper Alliance, and Living Rivers/Colorado Riverkeeper remain in litigation against Denver Water to stop the expansion of Gross Reservoir for reasons that the permit application, and especially the climate modeling for the environmental review, does not properly consider the cumulative impacts that global warming has, and will continue to have, on the natural environment.

This is a trans-basin water diversion project from the Colorado River Basin. Since Year 2000 the 30-year average for the Colorado River has decreased by 2.4 million acre-feet. The demand for Colorado River water exceeded the natural supply in Year 2003. Water curtailments in the Colorado River Basin officially begin on January 1, 2022 and the [two-year projection](#) indicate that the curtailments will triple in magnitude in 2023.

For a second opinion, please read this [OpEd by Seth Cousins](#)

This OpEd was written for this event:

["Powerless Against Denver Water Boulder County OKs Deal to Triple Size of Gross Reservoir"](#) by Michael Booth for *The Colorado Sun*.

12/13/21

New Report: 3 of 4 Upper Colorado River Basin States Overusing Colorado River Water

Shrinking Snowpacks in Utah, Wyoming, Colorado require states to cut their water use from Colorado River and its tributaries or risk 'Call on the River.'

Virtual Press Conference Scheduled for 10:00 am Mountain Time Dec 13 on Zoom, with the following organizations:

- Host: Zach Frankel, Executive Director, Utah Rivers Council
- River activists - upstream to downstream:
- Jen Pelz, Wild Rivers Program Director at WildEarth Guardians
- John Weisheit, Conservation Director Living Rivers & Colorado Riverkeeper
- Kyle Roerink, Executive Director of the Great Basin Water Network
- Robin Silver, Senior Staff, Cofounder Center for Biological Diversity
- Margarita Diaz, Executive Director of Proyecto Fronterizo de Educación Ambiental, the Tijuana Waterkeeper

[Click here](#) to read the press release: "3 of 4 Upper Colorado River Basin States Overusing Colorado River Water."

[Click here](#) to read the new report -" The Colorado River on Borrowed Time: Colorado River Shortages & the New Normal of Climate Change."

###

Coalition in the news:

[Click here](#) to read this story by Kyle Dunphey for *The Deseret News*

[Click here](#) to read this story by Brian Maffly for the *Salt Lake Tribune*

12/13/21

Zoom Water Conference ‘Dam the Status Quo’ Today, Monday Dec. 13

Friends of the Colorado River,

We’re delighted to tell you about an event taking place today, Monday, December 13, at 1pm Mountain Time and entitled: “Dam The Status Quo”.

[The Poster](#)

The online event — which you can watch on Zoom — includes Save the Colorado board member, Daniel P. Beard, a former Commissioner of the U.S. Bureau of Reclamation appointed by President Clinton. Dan also wrote the book, *Deadbeat Dams: Why We Need To Abolish the Bureau of Reclamation and Tear Down Glen Canyon Dam*.

Tick Segerblom, a former Nevada State Senator and now Clark County (Las Vegas) Commissioner, is hosting the event.

Additional featured speakers will include Jeff Lukas, lead author of the 2014 report, ‘Climate Change in Colorado’; David Kremer, former Director of the Interdisciplinary Water Resources graduate program at the University of Nevada; Forrest Cuch, Ute Indian Tribe; Nikki Cooley, Diné (navajo) Nation; Timothy Williams, Fort Mojave Indian Tribe; Eric Balkan, Director of Glen Canyon Institute; and others.

The sign-in for the 1pm event is:

<https://us02web.zoom.us/j/84902356675?pwd=MEJpVC9SQVdoTEpSQ2ZnS0pNczhvZz09>

Passcode: 245783

As climate change grips the Colorado River basin, it’s time for consequential and provocative changes to the management of the river that restore the river and the environment. We think you’ll enjoy this two-hour event (which will also be recorded for viewing afterwards).

[The Recording.](#)

Dam The Status Quo, indeed!

Millie Mummery
Las Vegas, NV

11/02/21

Dangerous Precedent: Feds Say No to Controlled Flood on the Colorado River

[Click here](#) to read this story by Blake Apgar for *The Las Vegas Review Journal*.

[Click here](#) to read this story by Brandon Loomis for *The Arizona Republic*

11/01/21

Citizen Science: Glen Canyon Photo Rematching Project

Dirty Devil Confluence to Bullfrog Creek

- Date: September and October of 2021
- By staff and volunteers for the fiscally sponsored projects of Living Rivers: River Runners for Wilderness and Colorado Riverkeeper.
- [CLICK HERE](#) to view this presentation via *VIMEO*.

Note: Stay tuned for a more detailed narratives that will include landscape and aerial photos at this website:

[On The Colorado](#)

09/17/21

White Mesa Ute Community Protest & Spiritual Walk

[CLICK HERE](#) to read the poster for this event.

- **WHEN:** Saturday October 9th at 11 am.
- **WHERE:** White Mesa Community Building adjacent to the gas station (Marathon Oil); Hwy 191 south of Blanding, Utah and north of Bluff, Utah.
- **WHO:** The White Mesa Concerned Community and Ute Mountain Ute Tribe.

- **WHAT:** A Spiritual Walk and Protest against Energy Fuels' uranium mill.

SPECIAL INSTRUCTIONS:

- The walk from the community center to the uranium mill will be Covid-safe, masks please!
- A caravan will be provided for those that cannot make the 4 mile walk) to the entrance to the mill.
- Please spread the word and come down to White Mesa on October 9th.
- Wear comfortable shoes and bring plenty of water!

FOR MORE INFORMATION:

Call White Mesa Concerned Community at (435) 459-2461.

Sponsored by White Mesa Concerned Community

Co-sponsors: Bears Ears Inter-Tribal Coalition, Canyon Country Rising Tide, Earthworks, Greenaction for Health and Environmental Justice, Grand Canyon Trust, Great Old Broads for Wilderness, HEAL Utah, Living Rivers, Multicultural Alliance for a Safe Environment, PANDOS, SLC Air Protectors, Southern Utah Wilderness Alliance, Uranium Watch, Utah Chapter of the Sierra Club.

STAY TUNED:

- For a regional conference.
- The co-sponsors will host this program and virtually on zoom.
- October 7th (5-7 pm)
- October 8th; morning/afternoon.
- We will share the schedule and registration info asap.

Thanks!!

08/16/21

First Ever Declaration of Water Shortage On The Colorado

August 16,2021 - [24-Month Report and Shortage Declaration](#). Reclamation.

- August 16, 2021 - [Appeal Challenges Federal Approval of Water Contract Threatening Utah's Green River / Agency Failed to Consider Climate Change Science, Future Water Shortages Amid Megadrought](#). Press Release from *Center for Biological Diversity*.
- August 16, 2021 - [First CAP shortage for Colorado River declared; more cuts may be coming soon](#). Tony Davis for *Arizona Daily Star*.

- August 16, 2021 - [In a First, U.S. Declares Shortage on Colorado River, Forcing Water Cuts](#). Henry Fountain for *New York Times*.
- August 16, 2021 - [As Colorado River Basin states confront water shortages, it's time to focus on reducing demand](#). Robert Glennon for *The Conservation; Univ of AZ*.
- August 17, 2021 - [First-ever water cuts declared for Colorado River in historic drought](#). By Rachel Ramirez for *CNN*.
- August 16, 2021 - [OpEd: Climate upheaval is upon Utah, and we can't dither, Robert Gehrke explains](#). By Robert Gehrke of *Salt Lake Tribune*.
- August 16, 2021 - ["St. George is not going to get their pipeline." Some look to Utah amid Colorado River cuts](#). By Joan Meiners for *St. George Spectrum & Daily News*.
- August 16, 2021 - [Water shortage declared on the Colorado, triggering cuts to Arizona, Nevada and Mexico Declining flows don't bode well for Utah's dreams of expanding its share of the West's mightiest river](#). By Brian Maffly for *Salt Lake Tribune*.
- August 25, 2021, - [Forecasters couldn't predict how quickly Colorado River reservoirs would dry up this year. Scientists are trying to improve their models. As climate change disrupts weather patterns in mountain regions across the world, scientists are recognizing the need to innovative new research models](#). By Zak Podmore for *Salt Lake Tribune*.
- August 26, 2021 - [Anatomy of a drought: How the West may change for decades to come. Water woes are gripping no fewer than 17 states](#). By Amy Joi O'Donoghue for *Deseret News*.

07/19/21

Request for Investigation of Central Utah Water Conservancy District Use of Congressional Appropriations

[Click here](#) to read this story by Owen Tucker-Smith & Brian Maffly of *Salt Lake Tribune*.

[Click here](#) to read the letter from the conservation groups to the U.S. Office of the Inspector General.

07/16/21

Damn the Status Quo On The Colorado River

[Click here](#) to read this story by Rachel Fixsen of *Moab Sun News* and called "Colorado River Users Stand Together: Diverse Group of Stakeholders Asks for Pause on New Water Projects."

[Click here](#) to read about our press conference at Hoover Dam on June 15, 2021.

[Click here](#) to read all the press coverage combined into one file.

06/07/21

SUMMARY: The Woes of Water Managers in the Colorado River Basin

NEWS & OPINION

News by Date

- February 26, 2021 - [USU Study #6: Alternative Management Paradigms for the Future of the Colorado and Green Rivers](#). (archived [here](#)).
- April 15, 2021 - [The Water Report: Saving the Colorado River \(demand management\)](#). James Eklund.
- April 19, 2021 - [The April 2021 24-Month Study was a shocker, but is it too optimistic?](#) Eric Kuhn.
- April 27, 2021 - [Pumping up fear along the Colorado River](#). George Sibley.
- April 29, 2021 - [9th Circuit Revives Navajo Nation's Water Rights Claim Against DOI](#). Rueters.
- May 4, 2021 - [New normals: The Southwest has grown hotter and drier over the past decade, data shows](#). NOAA 30-year averages since 1901. Ian James of *Arizona Republic*.
- May 11, 2021 - [Arizona Legislature Urges Congress to study feasibility of harvesting Mississippi River floodwaters to replenish Colorado River supply](#). Rep. Dunn.
- May 13, 2021 - [Colorado River water community can solve problems without tossing compacts](#). Tyrell (response to Sibley).
- May 14, 2021 - [The Hoover Dam made life in the West possible. Or so we thought](#). Timothy Egan in NY Times.
- May 14, 2021 - [9th Circuit rebukes U.S. on Native interests in Colorado River rights](#). Hank Lacey of *Law Week Colorado*.
- May 18, 2021 - [Arizona's aquifers remain at risk from "unsustainable" pumping](#). Tony Davis of *Arizona Daily Star*.

- May 27, 2021 - [Predicting the future: Science Moab speaks with Dr. Kevin Wheeler about the future of the Colorado River](#) in *Moab Sun News*.
- May 27, 2021 - [Epic drought tests Hoover Dam as water levels In Lake Mead plummet](#). Ian James of *Arizona Republic*.
- June 2, 2021 - [Foreign firms sucking "virtual" water from America's parched Southwest](#). Diana Kruz of *Mother Jones*.
- June 2, 2021 - [Mega-Dairies: Disappearing wells and Arizona's deepening water crisis](#). Tony Davis in *The Guardian*.
- June 2, 2021 - [Amid dire Colorado River outlook States plan to tap their Lake Mead savings accounts](#). Brett Walton of *Circle of Blue*.
- June 6, 2021 - [Dry times, dire consequences, poor runoff, adds to water woes](#). Dennis Webb of *Grand Junction's Daily Sentinel*.
- June 10, 2021 - [Red Alert: Lake Mead declines to new low as Colorado River crisis deepens](#). Ian James of *Arizona Republic*.
- June 13, 2021 - [Lake Powell Pipeline targets water promised to Utes in scheme Tribe sees as another racially based scheme](#). Emma Penrod and special for *Salt Lake Tribune*.
- June 14, 2021 - [Salton Sea, long a disaster, is on the brink of major collapse](#). OpEd by Frank Ruiz in *The Desert Sun*.

News by Subject: Drought Contingency Planning (DCPs)

- [Dry times, dire consequences, poor runoff adds to water woes](#). Dennis Webb of *Grand Junction's Daily Sentinel*.
- [Wall Street eyes billions in Colorado's Water](#). Howe of *New York Times*.
- [Exclusive hedge funds eye water markets that could net billions as levels drop in Lake Powell](#), Podmore of *Salt Lake Tribune*.
- [Here's how to save the Colorado River](#). Babbitt in *Writers on the Range*.
- [Western Slope needs to suspend irrigation to replenish Lake Powell](#). Richter in *Denver Post*.
- [Don't hurt farmers to save the Colorado River](#). Mueller in *Writers on the Range*.
- [Letter to Colorado River District Board](#). Communication by Richter.
- [Saving the Colorado River](#). James Eklund in *The Water Report*.
- [Colorado is examining water speculation, and finding it's 'all the problems' in one](#). Heather Sackett of *Aspen Journalism*.

News by Subject: Tribal Water

- [Is hope on the horizon for Western Tribe's water woes?](#) Teirstein of *Grist Online Magazine*.
- [9th Circuit revives Navajo Nation's water rights claim against DOI](#). Reuters.
- [9th Circuit rebukes U.S. on Native interests in Colorado River rights](#). Hank Lacey of *Law Week Colorado*.
- [Lake Powell Pipeline targets water promised to Utes: Tribe sees another racially based scheme](#). Emma Penrod and special for *Salt Lake Tribune*.

News by Subject: River Augmentation

- [Arizona Legislature urges Congress to study feasibility of harvesting Mississippi River floodwaters to replenish Colorado River supply](#). Rep. Dunn.

News by Subject: The Salton Sea (geologic through)

- [Salton Sea, long a disaster, is on the brink of major collapse](#). OpEd by Frank Ruiz in *The Desert Sun*.

News by Subject: Central Arizona Project and Groundwater Depletions

- [Arizona's aquifers remain at risk from "unsustainable" pumping](#). Tony Davis of *Arizona Daily Star*.
 - [The Myth of Safe-Yield: Pursuing the Goal of Safe-Yield Isn't Saving Our Groundwater](#). Kathleen Ferris of Kyl Center at Morrison Institute; ASU.
-

06/07/21

SUMMARY: The Woes of Water Managers in the Colorado River Basin

NEWS & OPINION

News by Date

- February 26, 2021 - [USU Study #6: Alternative Management Paradigms for the Future of the Colorado and Green Rivers](#). (archived [here](#)).
- April 15, 2021 - [The Water Report: Saving the Colorado River \(demand management\)](#). James Eklund.
- April 19, 2021 - [The April 2021 24-Month Study was a shocker, but is it too optimistic?](#) Eric Kuhn.
- April 27, 2021 - [Pumping up fear along the Colorado River](#). George Sibley.
- April 29, 2021 - [9th Circuit Revives Navajo Nation's Water Rights Claim Against DOI](#). Rueters.
- May 4, 2021 - [New normals: The Southwest has grown hotter and drier over the past decade, data shows](#). NOAA 30-year averages since 1901. Ian James of *Arizona Republic*.
- May 11, 2021 - [Arizona Legislature Urges Congress to study feasibility of harvesting Mississippi River floodwaters to replenish Colorado River supply](#). Rep. Dunn.
- May 13, 2021 - [Colorado River water community can solve problems without tossing compacts](#). Tyrell (response to Sibley).
- May 14, 2021 - [The Hoover Dam made life in the West possible. Or so we thought](#). Timothy Egan in NY Times.
- May 14, 2021 - [9th Circuit rebukes U.S. on Native interests in Colorado River rights](#). Hank Lacey of *Law Week Colorado*.

- May 18, 2021 - [Arizona's aquifers remain at risk from "unsustainable" pumping](#). Tony Davis of *Arizona Daily Star*.
- May 27, 2021 - [Predicting the future: Science Moab speaks with Dr. Kevin Wheeler about the future of the Colorado River](#) in *Moab Sun News*.
- May 27, 2021 - [Epic drought tests Hoover Dam as water levels In Lake Mead plummet](#). Ian James of *Arizona Republic*.
- June 2, 2021 - [Foreign firms sucking "virtual" water from America's parched Southwest](#). Diana Kruz of *Mother Jones*.
- June 2, 2021 - [Mega-Dairies: Disappearing wells and Arizona's deepening water crisis](#). Tony Davis in *The Guardian*.
- June 2, 2021 - [Amid dire Colorado River outlook States plan to tap their Lake Mead savings accounts](#). Brett Walton of Circle of Blue.
- June 6, 2021 - [Dry times, dire consequences, poor runoff, adds to water woes](#). Dennis Webb of Grand Junction's *Daily Sentinel*.
- June 10, 2021 - [Red Alert: Lake Mead declines to new low as Colorado River crisis deepens](#). Ian James of *Arizona Republic*.
- June 13, 2021 - [Lake Powell Pipeline targets water promised to Utes in scheme Tribe sees as another racially based scheme](#). Emma Penrod and special for *Salt Lake Tribune*.
- June 14, 2021 - [Salton Sea, long a disaster, is on the brink of major collapse](#). OpEd by Frank Ruiz in *The Desert Sun*.

News by Subject: Drought Contingency Planning (DCPs)

- [Dry times, dire consequences, poor runoff adds to water woes](#). Dennis Webb of Grand Junction's *Daily Sentinel*.
- [Wall Street eyes billions in Colorado's Water](#). Howe of New York Times.
- [Exclusive hedge funds eye water markets that could net billions as levels drop in Lake Powell](#), Podmore of Salt Lake Tribune.
- [Here's how to save the Colorado River](#). Babbitt in *Writers on the Range*.
- [Western Slope needs to suspend irrigation to replenish Lake Powell](#). Richter in *Denver Post*.
- [Don't hurt farmers to save the Colorado River](#). Mueller in *Writers on the Range*.
- [Letter to Colorado River District Board](#). Communication by Richter.
- [Saving the Colorado River](#). James Eklund in *THE Water Report*.
- [Colorado is examining water speculation, and finding it's 'all the problems' in one](#). Heather Sackett of *Aspen Journalism*.

News by Subject: Tribal Water

- [Is hope on the horizon for Western Tribe's water woes?](#) Teirstein of *Grist Online Magazine*.
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- [Lake Powell Pipeline targets water promised to Utes: Tribe sees another racially based scheme](#). Emma Penrod and special for *Salt Lake Tribune*.

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- [Arizona's aquifers remain at risk from "unsustainable" pumping](#). Tony Davis of *Arizona Daily Star*.
- [The Myth of Safe-Yield: Pursuing the Goal of Safe-Yield Isn't Saving Our Groundwater](#). Kathleen Ferris of Kyl Center at Morrison Institute; ASU.

05/18/21

Lake Powell approaching historic low levels

Nifty graphics in this report by Max Roth at Fox13 Now, Salt Lake City.

[Click here](#) to review this information.

[Archived here](#)

05/05/21

Appeal Filed to Sustain Colorado River Flows and Stop Gross Dam Expansion

[Click here](#) to read this story by Johnson Kuhn of *North Forty News*

###

A coalition of conservation groups filed a notice of appeal recently in the Tenth Circuit Court of Appeals seeking to halt Denver Water's proposed expansion of Gross Dam in Boulder County and to protect sustainable flows in the Colorado River. The appeal challenges the dismissal by the lower court and asks the appeals court to order review of the merits of the case to ensure the health of the Colorado River, its native and

imperiled species, and communities across Colorado that will be negatively impacted by the project.

“We believe the court simply got this wrong, and we’re excited to move forward with the appeal,” said Gary Wockner, the director of Save The Colorado. “This massive dam project would further drain and destroy the Colorado River, as well as cause irrevocable damage in Boulder County, and thus we are firmly committed to defending the river and the environment to the fullest extent of the law.”

The conservation coalition, including Save The Colorado, The Environmental Group, WildEarth Guardians, Living Rivers, Waterkeeper Alliance, and the Sierra Club, originally filed suit on December 19, 2018, in the federal district court of Colorado. The groups’ litigation sought to halt Denver Water’s expansion of Gross Reservoir in Boulder County and prevent an additional diversion of water from the Colorado River through its Moffat Collection System due to violations of federal environmental laws including the Clean Water Act, Endangered Species Act, and the National Environmental Policy Act. The project would triple the storage capacity of Gross Reservoir and the dam would become the tallest dam in the history of Colorado.

On March 31, 2021, the district court dismissed the coalition’s case finding that it was not before the proper court because the Federal Power Act provides the federal court of appeals with sole authority over hydropower licensing by the Federal Regulatory Commission.

“Given the climate, water and biodiversity crises upon us, we need to be restoring river ecosystems, not destroying them,” said Jen Pelz, Wild Rivers Program Director at WildEarth Guardians. “This battle against the powerful water institution is not over and we will continue to fight for water and climate justice by working to reform this broken system of laws and policies.”

“The Sierra Club opposes the Gross Reservoir expansion because of the massive environmental damage it would cause,” said Rebecca Dickson, Chair of the Sierra Club-Indian Peaks Group. “If this project proceeds, hundreds of thousands of trees will be chopped down, countless habitats destroyed, and yet another waterway will be diverted from its natural course to the Front Range. On top of this, immeasurable amounts of greenhouse gasses will be released into the atmosphere during the construction and transportation process.”

“Denver Water’s plan to build the tallest dam in Colorado history will hurt the 40 million people in seven states and two countries who depend on the Colorado River for their water supply,” said Daniel E. Estrin, general counsel and advocacy director at Waterkeeper Alliance. “The basin is slowly dying a proverbial ‘death by a thousand cuts’ as its communities and ecosystems face a water crisis driven by unsustainable demand, prolonged drought, and runaway climate change. We stand with our fellow conservation groups in continuing to oppose this misguided and reckless water grab.”

“The expansion of Gross Dam is a shortsighted response to a long-term problem,” said Beverly Kurtz the President of The Environmental Group. “Denver Water should lead the way in finding sustainable solutions to the challenge of water scarcity, rather than destroying pristine areas of western Boulder County and further threatening the Colorado River with an antiquated dam proposal. Recent data confirm that predicted shortages of water in the Colorado River Basin due to climate change are happening even sooner than expected. Building a bigger dam does not increase the amount of water available. The District Court needs to hear the merits of our case rather than establishing a dangerous precedent by deferring authority to FERC and the federal court of appeals.”

“The year of decision, to not divert more water from the Colorado River, came and went about twenty years ago,” said John Weisheit, conservation director of Living Rivers in Moab, Utah. “We know this is true because the development of contingency planning agreements to avoid water shortages began in 2014 and the urgency to resolve this threat still remains. Yet the contradictions and absurdities to also develop a suite of diversion projects in the Colorado River Basin also remains. If the basin’s water managers will not even adapt to the hydrology they accept, how could they possibly adapt to the hydrology of the future? Our lawsuit is an appeal to accept the truth that the Colorado River has nothing left to give.”

05/01/21

Court Breathes Life into Navajo Fight for Colorado River

[Click here](#) to read this story by Jeremy Jacobs of *E&E News*

[Click here](#) to read "9th Circuit Revives Navajo Nations Water Rights Claim Against DOI" from *Rueters: Westlaw Today*

[Click here](#) to read the opinion of the 9th Circuit

04/27/21

Writers on the Range: Pumping up fear along the Colorado River

Opinion by George Sibley

[The Vail Daily](#)

[Archived here](#)

Some Colorado River tribulations today remind me of a folk story: A young man went to visit his fiancé and found the family trembling and weeping. They pointed to the ceiling, where an axe was embedded in a rafter.

“That could fall,” the father quavered. “It could kill someone!”

Puzzled, the young man climbed onto a chair, and pulled the axe out of the rafter. Everyone fell all over themselves thanking him. But he quickly broke off the engagement, concerned that such inanity might be inheritable.

This resembles ongoing dithering over the 1922 Colorado River Compact, a 99-year-old agreement among the seven states through which the Colorado River meanders, on how the consumptive use of the river’s water should be divided to give each state a fair share. The agreement was necessary to get federal participation (money) to build dams to control the erratic river.

The best they were able to do, given the sketchy information they had about each state’s future development and also about the flow of the river, was to divide the river into two “basins” around the natural divide of the Colorado River canyons: Colorado, Utah, Wyoming and New Mexico in the Upper Basin; and California, Arizona and Nevada in the Lower Basin. Each basin would get to consume 7.5 million acre-feet of the river’s water.

This placed a responsibility on the Upper Basin states to “not cause the flow of the river at Lees Ferry (the measuring point in the canyons) to be depleted” below the Lower Basin’s share.

A generous reading of that lawyerly clause in the Compact would say the upper states should just be careful that their water development doesn’t dip into the lower states’ allocation.

A less generous reading would say that if for any reason the flow at Lees Ferry fell below the average of 7.5 million acre feet — whether due to over-appropriation by the upper states, or to a natural cause like a 20-year headwaters drought — the lower

states would place a call on the upper states, which would have to cut their own uses and send their water downriver, whether they “caused” the shortage or not.

To maintain that flow in a drought, the upper states would bear the full pain of the drought for the whole river.

Guess which interpretation the upper states chose for their own 1948 compact? Never mind that a Compact call led by California for its share of water is nowhere mentioned in the 1922 Compact. The axe was planted in the rafter.

They might better have asked how the 1922 Compact creators themselves envisioned the unknown future. The transcripts of the 27 Compact meetings show that the seven state commissioners and their federal chairman Herbert Hoover were concerned, as late as their twenty-first meeting, that they did not know enough about the river’s flows to make a permanent equitable division of the waters.

Hoover summarized their concern, and their intent: “We make now, for lack of a better word, a temporary equitable division,” leaving the further apportionment of the river’s use “to the hands of those men who may come after us, possessed of a far greater fund of information.” They even included in the Compact (Article VI) instructions for reconvening to consider “claims or controversy... over the meaning or performance of any of the terms of this compact.”

By the drought years of the 1930s, it was already obvious that the 7.5 million-acre feet Compact allocations were unrealistic. That would have been a logical time for the upper states to pull the axe out of the rafter, before the river was so fully developed.

But they didn’t, and as the Compact began to take on the aura of something carved in stone on a holy mountain, the fear of the “Compact call” gradually descended into expensive paranoia.

The vastly expensive 24 million acre-feet of storage in Powell Reservoir just upstream from Lees Ferry was created there to fulfill the Upper Basin’s self-assumed “delivery obligation,” come hell or low water.

But now, hellish low water has come to Powell, and Upper states are developing costly “demand management” programs whereby someone yet unspecified would pay ranchers to fallow fields so their water can be “banked” in Powell against the dreaded “Compact call.”

The seven states are now — finally — initiating negotiations on a more reality-based governance of the Colorado River. Let’s hope they have the good sense to pull that axe out of the rafters before negotiating fair water use under it.

George Sibley is a contributor to Writers on the Range, a nonprofit dedicated to spurring lively discussion about Western issues. He has written extensively about the Colorado River.

04/23/21

Reed raft stands the test of one of the West's most epic journeys

[Click here](#) to read this story by Jonathan Romeo of the *Lewistown Sentinel*

This article is about replicating an indigenous Tule reed boat and testing its performance on a river trip through the Grand Canyon.

04/20/21

The April 2021 24-Month Study was a Shocker, but is it too Optimistic?

By Eric Kuhn as published here on John Fleck's website called *Inkstain* [HERE](#)

And also archived [HERE](#)

03/19/21

Moab May Be Running Out Of Water. That's Prompting Residents To Rethink Conservation And Development.

[Click here](#) to read this story by Kate Groetzinger of *KUER Radio*

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More more information, visit [FarCountry.org](#)

02/21/21

USU Study #6: Alternative Management Paradigms for the Future of the Colorado and Green Rivers

[White Paper # 06](#). Full White Paper # 06 called "Alternative Management Paradigms for the Future of the Colorado and Green Rivers."

[White Paper Summary # 06](#)

###

NEWS In regards to the responses from representatives of Upper Colorado River Commission about demand projections

Note: In the news pieces below by Joan Meiners and Heather Sackett, the request of the Upper Colorado River Commission to the scientists won't change the results of the study and indicates that the Upper Colorado River Commission will not take responsibility for their share of the water budget imbalance in the Colorado River, which is about 27% of the total; approximately 640,000 acre-feet.

[Click here](#) to read this story by Joan Meiners of *The Spectrum* called "Climate Change and Climate Denial on the Colorado River."

[Click here](#) to read this story by Heather Sackett of *Aspen Journalism* called of "Estimates of Future Upper Colorado River Basin Water Use Confound Planning Report, Shows Study."

[2007 Depletion Schedule for Upper Colorado River](#)

[2016 Depletion Schedule for Upper Colorado River & 2017 Resolution](#)

###

[All news combined from Allen Best and Tony Davis](#). Four stories combined. Individual stories are presented below:

[Colorado River Outlook Darkens Dramatically in New Study](#) by Tony Davis of Tucson Daily Star

[Lake Powell Could Become Dead Pool as Climate Change, Political Wars, and Unabated Growth Drain its Waters](#) by Tony Davis of Arizona Daily Star

[A Deep Rethink of the Colorado River](#) by Allen Best of Mountain Town News

[Again the Question About Whether Lake Powell is Doomed](#) by Allen Best of Mountain Town News

02/11/21

Moab's Aquifer May Be Maxed Out, Prompting City To Explore Water Conservation

By Kate Groetzinger of KUER Public Radio

The Glen Canyon Group Aquifer is refilled by snowpack in the La Sal Mountains, located southeast of Moab. New research shows there's less water in the aquifer than previously thought.

The city of Moab is planning to implement water conservation measures in the coming months based on a recent study [new study](#) that found the Moab Valley may hold less water than previously thought.

Researchers from the University of Utah and the U.S. Geological Survey used carbon dating and other modern techniques to determine there are around 2,500 acre feet of unused water flowing into the Colorado River each year from the valley — not 11,000, as a 1971 study reported.

They also found Moab may have less drinking water than previously thought. They determined the Glen Canyon Group aquifer is split into two sections. The lower part is where Moab gets its drinking water, which emerges through natural springs near the city's golf course, while the water in the upper part cannot be easily captured.

The researchers estimate Moab is using around 4,000 acre feet, or 1.3 billion gallons, of water each year from the deep section of the aquifer, which is approximately its recharge rate as well.

"This is a very good time to contemplate the negative impacts of future development," said Vic Heilweil, one of the researchers. "Because we think that any additional development of groundwater from the main aquifer may not be sustainable."

Heilweil said he and his colleagues recommended the city begin monitoring the outflow of the springs, which supply Moab's drinking water, in order to determine exactly how much water is coming out of the aquifer. Using that data, they suggested the city create a numerical model that can be used to simulate the effects of additional pumping. That, Heilweil said, would allow the city to better understand the effects of future development.

Council Member Kalen Jones said he's concerned about the new findings, but it could be worse. "We're in a better position than many places, in that other places have gone into an overdrawn situation and are playing catch up," he said.

Jones added that Moab still has the opportunity to manage its water well, and the city council recently directed staff to draft an ordinance that would limit irrigation to certain times of day to help save water.

But the fate of the aquifer will also depend on other water users in the valley. He said the city will likely participate in a watershed management planning process with the state's Division of Water Resources sometime soon.

"Since currently we have very little of anything incentivizing water conservation, we should be doing basic conservation as we enter conversations about the aquifer with other water users in the valley," he said.

But some residents think conservation measures don't go far enough. John Weisheit is the director of a Moab-based non-profit called Living Rivers and he said the city and county should put a moratorium on all new development until they know exactly how much water is available in the aquifer.

"Water conservation is good, but when water conservation goes from one use to another, it's not water conservation," he said. "That's called demand hardening."

Jones said that's not likely to happen, but the city already has a moratorium on new hotels and is ready to look at creative ways to conserve water without making residents give up things like gardening and landscaping.

News from KSL on February 12, 2021

[Click here](#) to read this story by Graham Dudley called "How Much Water Is Really Under Moab? Scientists Say Less Than Thought."

###

For more information visit this resource page at the [Far Country website](#)

02/07/21

Exclusive: Hedge Funds Eye Water Markets That Could Net Billions As Levels Drop In Lake Powell

[Click here](#) to read this story by Zak Podmore of *The Salt Lake Tribune*

Excerpt from Living Rivers:

For John Weisheit, conservation director of the Moab-based nonprofit Living Rivers, initiatives to cut back on water are too often used for more growth, despite declining runoff.

“What really has to happen is you have to balance the water budget,” he said. “All they’re doing is moving water from this place to the other. They call it savings, but it’s not; it’s just transferring uses. You take out a lawn in Las Vegas and then they build 10 more houses. Where are the savings?”

Weisheit, who has also advocated for the decommissioning of Glen Canyon Dam, doesn’t think drought contingency plans will fundamentally alter the trend.

“We knew the Colorado River was going to run out of water 30 years ago,” he said, adding if hedge funds step into the vacuum and offer a new approach, it is only a “consequence of [water managers’] inaction.”

“This system is on its way to crash,” Weisheit continued. “The train is one mile away from going over the cliff.”

Weisheit doesn’t believe creating private markets will help the problem, but he thinks the question water managers should be asking themselves isn’t whether private water markets will be a fix, but why they’re being considered at all as a response to the crisis. “The question isn’t, should this happen? It’s, why did this happen?” he said. “And, what are you going to do?”

01/22/21

OpEd: Railway For Oil Diverts Millions From Utah Communities

[Click here](#) to read this OpEd by Deeda Seed of Center for Biological Diversity and John Weisheit of Living Rivers & Colorado Riverkeeper

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For more information, please visit:

[Center for Biological Diversity](#)

[Colorado River Connected](#)

[2020, EIS: On The Colorado](#)

[2016, Analysis: On The Colorado](#)

01/22/21

Plan by Utah Governor Cox will put rural Utah in the ditch

[Click here](#) to read this OpEd from the Editorial Board of *The Salt Lake Tribune*

[Click here](#) to read the proposed planning document from Governor Cox

###

Recent OpEds by Grand County Citizens

[Click here](#) - Kya Marienfeld & Vera Smith: "Restore Science and Accountability to BLM's Management of Western Landscapes"

[Click here](#) - Mike Coronella: "Spencer Cox's Centrist Plan Follows the Far Right Agenda"

[Click here](#) - John Weisheit and Deeda Seed "Railway For Oil Diverts Millions From Utah Communities"

01/16/21

Colorado Sues BLM Over Western Slope Management Plan from William Perry Pendley

[Click here](#) to read this story by Jason Blevins of *The Colorado Sun*

01/12/21

Groups Ask For Investigation Of Proposed Dam On Virgin River

[Click here](#) to read the press release

[Click here](#) to view the letter to the Inspector General of US Department of Agriculture

01/11/21

New Film Chronicles Environmental Outlaw Ken Sleight's Fight To Restore Glen Canyon

UPDATE: Live Stream - The Unfinished Fight of Seldom Seen Sleight

FREE SCREENING OF THIS DOCUMENTARY IS NOW SOLD OUT

If you would like to watch the film, it is still available through Cinema On Demand with proceeds benefiting Living Rivers and various film makers of the Colorado River [HERE](#). The admission fee is \$9.99 and this offer ends January 31, 2021.

Please view the Q & A session [HERE](#)

DATE: January 12th, 2021 at 7 p.m.

[News clip from *The Salt Lake Tribune* by Zak Podmore on January 19, 2021](#)

- [The One-Dam Solution](#) & archived [here](#)

###

FREE FILM SCREENING and presented nationally by the Utah Film Center
January 12, 2020; 7 pm (Mountain time)
Question/answer session to follow

[REGISTER](#) for this event here

[LINK](#) to the official website of Utah Film Center

[LINK](#) for this documentary at the website for the Wild & Scenic Film Festival in Nevada City, California.

[Podcast](#) from *Podship Earth* that includes an interview about the making of this documentary about Sleight.

[Click here](#) to read this story by Maggie McQuire of *Moab Sun News*

[Click here](#) to read this story in the *Moab Happenings*

PHOTO (below): Moab's Star Hall, the venue for the debut of this documentary.



01/08/21

Lake Powell Pipeline: Desert Pipeline Tests Colorado Rivers Future

[Click here](#) to read this story by Richard Martin of *S & P Global Market Intelligence*

01/08/21

Sarah Stock Appointed to Grand County Commission (Utah)

[Click here](#) to read this story by Carter Pape of *Moab Times-Independent*: "Commission Appoints Sarah Stock to Vacant Seat"

[Click here](#) to read this story by Rachel Fixsen of *Moab Sun News*: "Sarah Stock Appointed to Grand County Commission"

Note: Living Rivers has accepted the resignation of Sarah Stock as Program Director of Living Rivers & Colorado Riverkeeper. The citizens of Grand County have gained a wonderful public servant.

###

Moab News: Water Scarcity Issues Confronting Moab-Spanish Valley

[Click here](#) to read this story by Rachel Fixsen of *Moab Sun News*: "Thirsty Valley: City Officials Take Hard Look At Water Resources Nearing Max"

[Click here](#) to read this story by Doug McMurdo of *Moab Times-Independent*: "Got Water? More Questions Than Answers On Aquifer Capacity"

01/01/21

Climate's toll on the Colorado River: 'We can weather maybe a couple of years'

The warming climate is intensifying drought, contributing to fires and drying out the river's headwaters, sending consequences cascading downstream.

Ian James, Arizona Republic 7:37 a.m. MST Jan. 1, 2021

[Click here](#) to read the story

12/20/22

Scoping Letter by Living Rivers and allies to Reclamation for Supplemental EIS about modifying the missteps of 2007 Interim Guidelines

[Click here](#) to read our statements and recommendations to Reclamation and the seven states.

ADDITIONAL INFORMATION

Information about the Supplemental Environmental Impact Statement can be found at On The Colorado, [HERE](#)

Archive of SEIS comment letters

- [Living Rivers et al.](#)
 - [Major NGOs](#)
 - [Save The Colorado](#)
 - [Southern Nevada Water Authority](#)
 - [Grand Canyon Trust](#)
 - [Wyoming](#)
 - [Upper Colorado River Commission](#)
 - [New Mexico](#)
 - [Colorado](#)
-

11/17/2022

Reclamation announces process for Supplemental Environmental Impact Statement (SEIS) for operations at Glen Canyon Dam and Hoover Dam

**FROM THE FEDERAL REGISTER NOTICE: Bureau of Reclamation
Proposed SEIS for 2007 Interim Guidelines**

Notice of Intent to Prepare a Supplemental Environmental Impact Statement (SEIS) for December 2007 Record of Decision Entitled Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations For Lake Powell and Lake Mead.

Federal Register Notice:<https://www.federalregister.gov/documents/2022/11/17/2022-25004/notice-of-intent-to-prepare-a-supplemental-environmental-impact-statement-for-december-2007-record>

Reclamation requests that the public submit comments concerning the scope of the analysis, potential alternatives, and identification of relevant information, and studies on or before December 20, 2022.

Reclamation anticipates utilizing the work of this SEIS to also inform operating guidelines for the 2025-26 period, which will also undergo NEPA analysis in the near future.

NEWS

- December 1, 2022 - [Drought threatens Colorado River with complete 'doomsday scenario' officials say](#). Joshua Partlow for Washington Post.
- December 3, 2022 - [Arizona Thinks Desalination Will Offer The Water It Needs. It won't](#). Robert Glennon OpEd for *The Arizona Republic*.
- December 4, 2022 - [Colorado River Reckoning: Not Enough Water](#). Tony Davis for *The Arizona Daily Star*.

Special Feature by Tony Davis for *Arizona Daily Star* on December 5, 2022

- All 7 Articles combined - [Colorado River Special Series](#). By Tony Davis for *Az Daily Star*.
- [01- USA West's water management system on edge of collapse, expert Says](#).
- [02 - At Glen Canyon receding waters reveal cathedral and shift debate](#)
- [03 - Lake Powell's record low levels confound tourists businesses Park Service](#)
- [04 - Plunging water levels flip activists goal for Glen Canyon Dam](#)
- [05 - The Colorado River we rely on is likely to get even drier](#)
- [06 - Our water future we will pay more and use much less here's how](#)
- [07 - Feds announce plan for massive cuts in Colorado River deliveries](#)

For more information regarding the proposed SEIS and the virtual meetings, please go to:

<https://www.usbr.gov/ColoradoRiverBasin/SEIS.html>

Questions can be directed to:

Ms. Dedina Williams
Bureau of Reclamation
Lower Colorado Basin Region
(702) 293-8010
email: dfwilliams@usbr.gov

Ms. Marcie Bainson
Bureau of Reclamation
Upper Colorado Basin Region
(801) 524-3604
email: mbainson@usbr.gov

Send written comments and/or questions to Reclamation:

SEIS Project Manager
Upper Colorado Basin Region
125 South State Street, Suite 8100
Salt Lake City, Utah 84138
eMail: CRinterimops@usbr.gov

The draft supplemental EIS is anticipated to be available for public review in Spring 2023 and the final supplemental EIS is anticipated to be available for with a Record of Decision, as appropriate, in late Summer 2023. This schedule will allow decisions to become effective for 2023-2024 operations.

The Secretary is directing this action because the existing operating guidelines are insufficient given current hydrology and reservoir conditions and in light of plausible low runoff conditions in the Colorado River Basin over the next four years. Through this Federal Register notice, Reclamation is providing an overview of the purpose and need for the SEIS, as well as its anticipated approach and timeframe for decisions on revised operating guidelines for Lake Powell and Lake Mead.

WEBINARS FOR THE PUBLIC

Official Reclamation Webpage is [HERE](#)

Tuesday, November 29, 2022, 10 a.m. – 12 p.m. MT

Join on your computer, mobile app or room device:

[Click here](#) to join the meeting

Meeting ID: 245 351 605 478

Passcode: VKkNQn

[Download Teams](#) | [Join on the web](#)

Or call in (audio only)

+1 202-640-1187,,456269621#

Phone Conference ID: 456 269 621#

Friday, Dec. 2, 2022, 11 a.m. – 1 p.m. MT

Join on your computer, mobile app or room device:

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BACKGROUND

NOTE: At the end of this federal narrative, On The Colorado (OTC) will provide additional background materials for our readers; essentially a recommended reading list to help you prepare your SEIS comments to the Bureau of Reclamation.

On August 16, 2022, the Department of the Interior announced: “Prolonged drought and low runoff conditions accelerated by climate change have led to historically low water levels in Lakes Powell and Mead. Over the last two decades, Department leaders have engaged with Colorado River Basin partners on various drought response operations. However, given that water levels continue to decline, additional action is needed to protect the System.” Recognizing that the Colorado River Basin is facing unprecedented risks, the development of revised operating guidelines for Lake Powell and Lake Mead represents one of many Departmental efforts underway to respond to the rapidly changing conditions in the Basin in order to better protect the System.

Available at: <https://www.doi.gov/pressreleases/interior-department-announces-actions-protect-colorado-river-system-seis-2023>

In a Federal Register notice published on June 24, 2022 (87 FR 37884), the Bureau of Reclamation noted the dire circumstances facing the Colorado River Basin: “The Colorado River Basin provides essential water supplies to approximately 40 million people, nearly 5.5 million acres of agricultural lands, and habitat for ecological resources across the Southwestern United States and Northwestern Mexico. The limited water supplies of the Colorado River are declining, and the Colorado River Basin is currently experiencing a prolonged period of drought and record-low runoff conditions resulting in historically low reservoir levels at Lake Powell and Lake Mead. The period from 2000 through 2022 is the driest 23-year period in more than a century and one of the driest periods in the last 1,200 years. Absent a change in hydrologic conditions, water use patterns, or both, Colorado River reservoirs will continue to decline to critically low elevations threatening essential water supplies across nine states in the United States and the Republic of Mexico (Mexico). It is foreseeable that without appropriate responsive actions and under a continuation of recent hydrologic trends, major Colorado River reservoirs could continue to decline to ‘dead pool’—elevations at which water cannot be regularly released from a reservoir—in coming years.” The June 24, 2022, Federal Register notice requested public input prior to initiating a scoping process on the proposed development of post-2026 Colorado River Operational Strategies for Lake Powell and Lake Mead Under Historically Low Reservoir Conditions. The SEIS announced in today’s Federal Register notice does not interfere with, supplant, or supersede that separate post-2026 guidelines development process. Rather, this SEIS will inform and complement the development of post-2026 guidelines. Further, the dire hydrologic and climate conditions described in the June 2022 Federal Register notice also inform the need for the SEIS efforts announced in today’s Federal Register notice.

In the June 2022 Federal Register notice, the Department anticipated the potential for the process initiated in this document: “While previous actions, especially the DCP [in 2019], were intended to preserve Reclamation's ability to undertake post-2026 planning with a stable system and avoid crisis planning, very dry hydrology since the adoption of the DCP has resulted in Lake Powell and Lake Mead nearing critically low elevations. Should the conditions continue or worsen, we recognize that in addition to post-2026 planning under the anticipated NEPA process(es), Reclamation may likely need to also prioritize implementation of near-term actions to stabilize the decline in reservoir storage and prevent system collapse. Reclamation has not yet determined what additional actions or processes may be required to address these near-term operational risks. It is anticipated that near-term response actions and development of post-2026 operations will need to proceed on parallel timelines.” [87 FR 37888 \(June 24, 2022\)](#).

Over the past two years, the Department has undertaken a number of unprecedented actions to respond to the historic drought and low-runoff conditions in the basin that are being exacerbated by higher temperatures and the impacts of climate change. In particular, in both 2021 and 2022, additional releases from upstream reservoirs have

been implemented to enhance water elevations at Lake Powell. In 2022, Reclamation implemented modifications to monthly releases from Glen Canyon Dam, and also reduced downstream annual volume releases by 480,000 acre-feet.

Furthermore, on October 20, 2022, the National Oceanic and Atmospheric Administration's Climate Prediction Center issued its U.S. Winter Outlook for the December 2022-February 2023 period finding: "The greatest chances for drier-than-average conditions are forecast in portions of California, the Southwest, the southern Rockies," and "[w]idespread extreme drought continues to persist across much of the West, the Great Basin, and central-to-southern Great Plains."

Available at <https://www.noaa.gov/news-release/us-winter-outlook-warmer-drier-south-with-ongoing-la-nina>.

The Department currently lacks analyzed alternatives and measures that may be necessary to address such projected conditions. Recognizing the risks facing the Colorado River Basin, the Department has concluded that immediate development of additional operational alternatives and measures for Lake Powell and Lake Mead are necessary to ensure continued "operations that are prudent or necessary for safety of dams, public health and safety, other emergency situations ... 2007 Interim Guidelines at Section 7.D," published at [73 FR 19892 \(April 11, 2008\)](#).

Through this Federal Register notice, Reclamation is initiating efforts to revise operating guidelines for the operation of Glen Canyon and Hoover Dams in 2023 and 2024 operating years in order to address the potential for continued low-runoff conditions in the Colorado River Basin. Reclamation has concluded that the potential impacts of low runoff conditions in the coming winter (2022-23) pose unacceptable risks to routine operations of Glen Canyon and Hoover Dams during the interim period (prior to Jan. 1, 2027) and, accordingly, modified operating guidelines need to be expeditiously developed. Development of modified operating guidelines will also inform potential operations in the 2025 and 2026 operating years; however, due to the critically low current reservoir conditions, and the potential for worsening drought, the Department recognizes that operational strategies for 2023-2024 may need to be further revisited for subsequent operating years. Given the potential risks to infrastructure and public health and safety, the Department will promptly identify and analyze modified operating guidelines to address current and foreseeable hydrologic conditions.

PURPOSE AND NEED

The purpose of the SEIS is to supplement the EIS completed in 2007 for the 2007 Interim Guidelines in order to modify operating guidelines for the operation of Glen Canyon and Hoover Dam to address historic drought and low runoff conditions in the Colorado River Basin. The need for the revised operating guidelines is based on the potential that continued low runoff conditions in the Colorado River Basin could lead Glen Canyon Dam to decline to critically low elevations impacting both water delivery and hydropower operations in 2023 and 2024. In order to ensure that Glen Canyon Dam continues to operate under its intended design, Reclamation may need to modify

current operations and reduce Glen Canyon Dam downstream releases, thereby impacting downstream riparian areas and reservoir elevations at Lake Mead. Accordingly, in order to protect Hoover Dam operations, system integrity, and public health and safety, Reclamation also may need to modify current operations and reduce Hoover Dam downstream releases. Such revised Hoover Dam operations would, among other issues, address Section 7.B.4 of the 2007 Interim Guidelines as well as the commitments set forth in Section V.B.2 of Exhibit 1 to the Lower Basin Drought Contingency Plan Agreement (2019). Both the 2007 Interim Guidelines and the 2019 DCP contemplate the need for additional measures to protect Lake Mead elevations, with the DCP adding the commitment of participating Lower Basin DCP parties to “individual and collective action in the Lower Basin to avoid and protect against the potential for the elevation of Lake Mead to decline to elevations below 1,020 feet.” As noted above, Section 7.D of the 2007 Interim Guidelines contemplates that modified operating provisions may be required if “extraordinary circumstances arise. Such circumstances could include operations that are prudent or necessary for safety of dams, public health and safety, other emergency situations, or other unanticipated or unforeseen activities arising from actual operating experience.” The Department finds that such circumstances exist at this time. Preliminary Proposed Action – Overview Reclamation anticipates proposing modifications for the 2023 and 2024 period, and potentially for subsequent years, to the following sections of the 2007 Interim Guidelines published at [73 FR 19881 \(April 11, 2008\)](#):

Section 2. Determination of Lake Mead Operation During the Interim Period Reclamation anticipates revising Section 2.D (“Shortage Conditions”), including potential modifications to Sections 2.D.1.b and 2.D.1.c to decrease the quantity of water that shall be apportioned for consumptive use in the Lower Division States (Arizona, California, and Nevada). Any modifications to these sections would be based on current and anticipated reservoir and hydrologic conditions in the Colorado River Basin, including any potential modifications to Glen Canyon Dam operations pursuant to this SEIS.

Section 6. Coordinated Operation of Lake Powell and Lake Mead During the Interim Period

Reclamation anticipates revising Sections 6.C (“Mid-Elevation Release Tier”) and 6.D (“Lower Elevation Balancing Tier”) to modify and/or reduce the quantity of water released from Glen Canyon Dam. Any modifications to these sections would be based on current and anticipated reservoir and hydrologic conditions in the Colorado River Basin, including any potential modifications to Hoover Dam operations pursuant to this SEIS. Section 7. Implementation of Guidelines Reclamation anticipates revising Section 7.C (“Mid-Year Review”) to allow for potential determinations in a mid-year review that would allow for reduced deliveries from Lake Mead pursuant to Section 2 of the 2007 Interim Guidelines.

The foregoing potential modifications to the 2007 Interim Guidelines are presented in this Federal Register notice only as a preliminary overview of the Proposed Action. Reclamation will carefully review the 2007 Interim Guidelines and will formally publish a

Proposed Action in its forthcoming Draft SEIS, which is anticipated to be published in Spring 2023.

PRELIMINARY ALTERNATIVES

Overview

For purposes of the NEPA process for the SEIS, Reclamation anticipates three primary alternatives will be considered:

No Action – The No Action Alternative will describe the continued implementation of existing agreements that control operations of Glen Canyon and Hoover Dams. These include the 2007 Interim Guidelines and agreements adopted pursuant to the 2019 Colorado River Drought Contingency Plan Authorization Act (Pub. L. 116-14) (the 2019 Drought Contingency Plan (DCP) Act). Reclamation notes that intensive efforts are underway to facilitate water conservation actions in the Basin under a number of programs, including the recent Congressional prioritization of funding through 2026 for drought mitigation in western states, with priority given to the Colorado River Basin and other basins experiencing comparable levels of long-term drought. Pub. L. 117- 169, at § 50233 (Aug. 16, 2022). The ongoing implementation and effectiveness of these efforts will inform the assessment of existing operations and agreements.

Framework Agreement Alternative – This alternative would be developed as an additional consensus-based set of actions that would build on the existing framework for Colorado River Operations. This Alternative would likely build on commitments and obligations developed by the Basin States, Basin Tribes, and non-governmental organizations that were included in the 2019 DCP. This alternative would facilitate implementation of Section 7.B.2 of the 2007 Interim Guidelines.

Reservoir Operations Modification Alternative – This alternative would be developed by Reclamation as a set of actions and measures adopted pursuant to Secretarial authority under applicable federal law. This alternative would likely be developed based on the Secretary's authority under federal law to manage Colorado River infrastructure, as necessary, and would consider any inadequacies or limitations of the consensus-based framework considered in the above alternative. This alternative would consider how the Secretary's authority could complement a consensus-based alternative that may not sufficiently mitigate current and projected risks to the Colorado River System reservoirs.

This Federal Register notice presents the foregoing potential alternatives only as a preliminary overview of the alternatives that will be analyzed in the DEIS. For planning purposes, Reclamation's analysis will assume that additional releases pursuant to the Drought Response Operating Agreement (DROA) will be administered according to the terms approved in the DCP Act, and that Reclamation will simultaneously pursue system conservation actions in the Upper and Lower Basins. Through the scoping process, Reclamation welcomes public input on how human health and safety considerations can be more expressly integrated into Colorado River operational decision-making, both in this SEIS and other future decision-making processes. Reclamation will carefully review the appropriate range of alternatives for review and will

include appropriate alternatives for consideration in its forthcoming Draft SEIS, which is anticipated to be published in Spring 2023.

SUMMARY OF EXPECTED IMPACTS

The SEIS will evaluate reasonably foreseeable impacts from proposed modifications to the 2007 Interim Guidelines. Impacts are not fully known at this time; impact analysis will build upon and utilize information described in the 2007 Final EIS and subsequent relevant analyses. The analysis in the SEIS may consider potential effects on wildlife, threatened and endangered species habitat, recreation, water supplies (agricultural, municipal, environmental), water resources, air quality, cultural resources, hydropower resources, social and economic conditions, and other resources and uses. Reclamation will use an interdisciplinary approach that incorporates the expertise of specialists in the relevant resource fields.

Schedule for the Decision-Making Process Reclamation will provide additional opportunities for public participation consistent with the NEPA process, including an anticipated 45-day comment period on the draft SEIS. The draft SEIS is anticipated to be available for public review in Spring 2023 and the final SEIS is anticipated to be available with a Record of Decision, as appropriate, in late Summer 2023. This schedule will allow decisions to become effective for 2023-24 operations. During this process, the Secretary retains all applicable authority to operate Colorado River facilities to respond to emergency or other unforeseen conditions.

LEAD AND COOPERATING AGENCIES

The Secretary is responsible for the operation of Glen Canyon Dam and Hoover Dam pursuant to applicable federal law. The Secretary is also vested with the responsibility of managing the mainstream waters of the lower Colorado River pursuant to federal law. This responsibility is carried out consistent with the body of compacts, treaties, statutes and other legal documents commonly referred to as “the Law of the River.” Reclamation, as the agency that is designated to act on the Secretary’s behalf with respect to these matters, is the lead federal agency for the purposes of NEPA compliance for the development and implementation of the proposed SEIS interim guidelines.

During the preparation of the 2007 Interim Guidelines, five federal agencies were cooperating agencies for purposes of assisting with environmental analysis and preparation of the Final EIS. These cooperating agencies were the Bureau of Indian Affairs (BIA), the United States Fish and Wildlife Service (FWS), the National Park Service (NPS), Western Area Power Administration (Western), and the United States Section of the International Boundary and Water Commission (USIBWC). Reclamation anticipates inviting these same five agencies to serve as cooperating agencies for the purpose of this SEIS. Reclamation is committed to continue to work with the USIBWC to ensure that efforts under this SEIS are communicated and coordinated with the Republic of Mexico with the goal of continued alignment of operations and responsive actions in both the U.S. and Mexico.

RESPONSIBLE OFFICIAL

Consistent with the process and final determinations reached for the 2007 Interim Guidelines, the Secretary of the Interior is the deciding official for this undertaking.

NATURE OF DECISION TO BE MADE

The Department anticipates the nature of the decision to be made will be revised reservoir operating guidelines, pursuant to appropriate revisions of the Record of Decision for the 2007 Interim Guidelines, for the operation of Glen Canyon and Hoover Dams in 2023 and 2024 operating years, and potentially subsequent years if necessary and appropriate, in order to address the likelihood for continued low-runoff conditions in the Colorado River Basin based on the best available scientific and technical information.

ADDITIONAL INFORMATION

As noted in the June 2022 Federal Register notice, Reclamation anticipates initiating a NEPA process to develop the post-2026 operational strategies through a Federal Register notice of intent to prepare an EIS in early 2023. Nothing in today's Federal Register notice supersedes or displaces Reclamation's efforts in that upcoming process.

This SEIS addressing modified operating guidelines for the period prior to 2026 is necessary to address the unacceptably high risks facing the Colorado River Basin between now and the post-2026 period. Current conditions warrant the flexibility to modify operations before the post-2026 operational strategies are thoroughly identified, analyzed and ultimately adopted. In addressing operations for 2023-24, Reclamation is committed to using the best available information to develop near-term operating guidelines while longer-term approaches are developed. Reclamation anticipates using the work and analysis from this SEIS process to also inform operating guidelines for the 2025-26 period, which will also undergo any additional NEPA analysis as required. Lastly, separate from the development of the SEIS, Reclamation anticipates publishing an informational report in 2023 addressing potential methodologies to support assessments for evaporation, seepage and other system losses in the Colorado River Basin in future years. This information will assist in development of potential interim measures as well as the post-2026 operational strategies.

PUBLIC DISCLOSURES AND COMMENTS

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time.

While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Tommy P. Beaudreau,

Deputy Secretary, Department of the Interior.

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RECOMENDED READING LIST AND PREPARED BY OTC

- [AZ v CA: Recommended Decree And Dissent](#). US Supreme Court; 1962.
- [General Operating Criteria for Glen Canyon Dam](#). Secretary Udall; 1962.
- [Prescoping Comment Letter](#). ASU Engineering; 2022.
- [DROA Comment Letter](#). Living Rivers and Center for Biological Diversity; 2022.
- [7D Report Comments](#). Living Rivers; 2020.
- **Drought Contingency Planning**: The public was never asked to participate.
- [Tribal Basin Study](#). Ten Tribe Partnership; 2018.
- [Basin Study Comment Letter](#). Living Rivers; 2011.
- [Basin Study Comment Letter](#). Living Rivers and Center for Biological Diversity; 2013.
- [Shortage DEIS](#). Living Rivers and Center for Biological Diversity; 2007.
- [Shortage EIS Scoping Comment Letter](#). Living Rivers; 2005.

QUOTES FROM CALENDAR YEAR 2018

Brent Gardner-Smith for Vail Daily ([Link](#))

• “After experiencing the fourth driest year on record last year, Lake Powell and Mead’s combined storage sits today at 46 percent (33% as of October 1, 2022). That is the lowest level since 1966, when Lake Powell was initially filling and cutting off water supplies down south. To put it in more personal terms, these are the lowest reservoir levels in my lifetime.” — Brenda Burman, commissioner of the U.S. Bureau of Reclamation, on Dec. 13, at the annual meeting of the Colorado River Water Users Association (CRWUA) at Caesars Palace in Las Vegas.

• “If we were to have a repeat of the 2000-to-2005 drought, with current demands and current levels of operations, we would essentially drain Lake Powell. It would go down to nothing.” — Eric Kuhn, former general manager of the Colorado River District, on Sept. 14, at the district’s annual seminar in Grand Junction.

• “It does not look good. It is a real and present danger for us to be facing the hydrology that we have today, and the 24-month outlook for that.” — Peter Nelson, chairman of the Colorado River Board of California, on Dec. 13 at a CRWUA meeting.

• “Today’s level of risk is unacceptable, and the chance for crisis is far too high.” — Burman, on Dec. 13 at a CRWUA meeting.

• “We’ll be in crisis mode if DCP isn’t completed.” — Pat Tyrrell, state engineer for Wyoming and commissioner on the Upper Colorado River Commission, on Dec. 13, at a CRWUA meeting.

“It’s not a drought-contingency plan, it’s a survival plan due to current conditions.” — Bill Hasencamp, manager of Colorado River resources for the Metropolitan Water District of Southern California, on Aug. 22, at the summer meeting of the Colorado Water Congress in Vail.

- “It’s important to understand that we are looking at giving up a very large amount of Colorado River water in central Arizona, nearly half. That’s a painful conversation. And, of course, everyone thinks that their own water use is justified and no one else’s is.” — Kathryn Sorensen, director of City of Phoenix Water Services, on Dec. 13 at a CRWUA meeting.
 - “We are teetering on the brink of a shortage today, and we see real risk of rapid declines in reservoir elevations, particularly at Lake Mead in the very near future.” — Burman on Dec. 13 at a CRWUA meeting.
 - “If we have the worst-case hydrology, it is possible that our state may need to move to an involuntary (water-curtailment) system. But we want that done through a public process. We want the stakeholders at the table.” — Andy Mueller, general manager of the Colorado River District, on Sept. 14 at a district seminar.
 - “To me, the best way of conserving water is not to use it, is not to grow, is not to continue to drain the Colorado River. But realistically looking at it, that is not going to happen.” — Keith Moses, vice chairman of the Colorado River Indian Tribes, on Dec. 13 at a CRWUA meeting.
 - “As we get hot and dry, we just have less available water and we see more demand.” — Taryn Finnessey, senior climate change specialist for Colorado on Aug. 24, at a CWC meeting.
 - “(The water entities in Arizona) have grasped that concept — that we’re going to be in a drier future with less water.” — Thomas Buschatzke, director of the Arizona Department of Water Resources, on Dec. 13 at a CRWUA meeting.
 - “We see this train that’s coming at us at 5 miles an hour, and if it hits us, it’s our own damn fault, because you can just see that reservoir level going down.” — Jim Lochhead, CEO of Denver Water, on Aug. 23 at a CWC meeting.
 - “We will act, if needed, to protect this basin.” — Burman, on Dec. 13 at a CRWUA meeting.
 - “The law of the river isn’t carved on stone tablets.” — John Entsminger, general manager of the Southern Nevada Water Authority, on Dec. 13 at a CRWUA meeting.
 - “Someone’s going to have to use less water.” — Kuhn on Sept. 14 at a Colorado River District seminar.
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10/26/22

White Mesa Ute Concerned Community hosts a protest rally and spiritual walk to end uranium processing in San Juan County, Utah

[Click here](#) to read a collection of news clippings about this event and compiled by staff at the Grand Canyon Trust.

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The 2022 Rally and Spiritual Walk is co-sponsored by the Bears Ears Inter-Tribal Coalition, Ute Mountain Tribe, White Mesa Concerned Community, Greenaction for Health and Environmental Justice, Uranium Watch, Indigenous Environmental Network, Grand Canyon Trust, Multicultural Alliance for a Safe Environment, Southern Utah Wilderness Alliance, Living Rivers, HEAL Utah, SLC Air Protectors, Utah Chapter of the Sierra Club, Great Old Broads for Wilderness, National Parks Conservation Association, PANDOS.

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For more information about uranium mining in the Colorado Plateau, please visit the website of [Uranium Watch](#)

9/30/2022

Gross Reservoir Expansion (Moffatt Project): The 10th Circuit Appellate Court rules in favor of citizen activists defending the ecosystem integrity of the Colorado River

On Friday, September 30, the United States Court of Appeals for the Tenth Circuit handed conservation groups — Save the Colorado, The Environmental Group, WildEarth Guardians, Living Rivers, Waterkeeper Alliance, and Sierra Club — a significant victory in their appeal of a U.S. District Court’s dismissal of their challenge to a Clean Water Act permit that is required for the expansion of the Moffat Collection System and Gross Dam in Colorado.

The conservation groups allege in their lawsuit that a “dredge and fill” permit issued for the project by the Army Corps of Engineers was unlawful on several grounds, including violations of the federal Clean Water Act, Endangered Species Act, and National Environmental Policy Act. The District Court had dismissed the groups’ complaint on the grounds that a challenge to the Army Corps permit needed to be brought in the Court of Appeals in the first instance because Denver Water, the permit holder, also holds a FERC hydroelectric license for a portion of its Moffat Collection project. In its ruling on Friday, the Court of Appeals disagreed, concluding that based on the plain language of

the Federal Power Act, the groups correctly brought their case in the District Court. The Court of Appeals remanded the matter to the District Court for further proceedings.

The proposed Gross Reservoir Expansion Project would add an additional 900,000 cubic feet of concrete to the existing dam, effectively tripling the size of the reservoir. If completed, the Gross Dam would be the tallest in Colorado and the tallest roller-compacted concrete dam in the United States. The Colorado River Basin, the main water source for communities across Colorado, Wyoming, New Mexico, Arizona, California, Nevada, Utah and Mexico, is in a crisis of increased demand and reduced supply, magnifying shortfalls of an already over-allocated system and facing forecasts of worsening climate change driven water shortages. In the face of this crisis, putting the water supply for 40 million people at imminent risk of collapse, Denver Water continues to move forward with building the largest dam in Colorado history in order to further drain the Upper Colorado River at the expense of downstream users and ecosystems.

“This important victory will now allow us to prove in court that the Clean Water Act permit for this ill-advised and untenable water grab was unlawfully issued,” said Daniel E. Estrin, General Counsel and Advocacy Director for Waterkeeper Alliance. “The river, its communities, and its ecosystems are dying a proverbial ‘death by a thousand cuts’ as they face unsustainable demand, prolonged drought, and runaway climate change, and cannot afford to be further drained to fill another enormous reservoir. We look forward to presenting our legal challenge to this permit in federal court as soon as possible.”

“We will not stand by and silently watch our rivers be drained and our native fish and wildlife be pushed to extinction,” said Daniel Timmons, Wild Rivers Program Director for WildEarth Guardians. “We will keep fighting for living rivers and the human and non-human communities who depend on clean water and healthy flows.”

The conservation groups are represented by the Washington, DC public interest law firm Eubanks & Associates, PLLC. For more information about their successful track record of precedent-setting legal victories, please visit www.eubankslegal.com.

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Additional Information

- [Click here](#) to read this story by Michael Booth for *The Colorado Sun*
 - Read the decision of the 10th Circuit [Save The Colorado et al Vs Spellmon et al](#)
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9/15/2022

Utah advancing fantasy Lake Powell Pipeline despite lack of water

[Click here](#) to read this press release in your browser.

Contact: Utah Rivers Council at 801-822-7990

Utah Advancing Fantasy Lake Powell Pipeline Despite Lack of Water

Water Agency Meets Thursday to advance Pipeline to Divert Water that Doesn't Exist & Utah Doesn't Have a Right to Use

In the face of the lowest Colorado River reservoir levels in history, Utah Governor Spencer Cox's water agency is moving forward with the controversial Lake Powell Pipeline in a meeting at 10:00 a.m., MDT on Thursday, September 15th. The Pipeline will exacerbate the epic megadrought and impair downstream water users. Utah's actions fly in the face of the Bureau of Reclamation's call to cut 2 - 4 million acre-feet of Colorado River water.

"The Lake Powell Pipeline is just one big con game on Utah taxpayers and water users across the Basin," said Zach Frankel, the Executive Director of the Utah Rivers Council. "Utah should be embarrassed for being so out of touch about climate change and the 100 years of agreements on sharing Colorado River water," said Frankel.

Utah's Governor continues to insist there is "surplus" water available for Utah to put in the Lake Powell Pipeline, even though published science demonstrates Utah is overusing its rights to Colorado River water. Lake Powell water levels have dropped so low that boat ramps have been closed and hydropower generation is nearing the end of its useful life. Yet the Utah Board of Water Resources, the official proponent of the Lake Powell Pipeline, will extend a contract with one of the Pipeline contractors. Utah has spent \$45 million on permitting for the destructive diversion.

"This bogus extension exemplifies what Lake Powell Pipeline is all about — making money for a select few interests," said Kyle Roerink, the Executive Director for the Great Basin Water Network. "The motives behind the contract are not in the public interest."

The Bureau of Reclamation has issued dire warnings on the Colorado River, mandating that the states cut 2–4 million-acre feet of Colorado River water to avoid a catastrophe, most notably a water delivery crisis in the lower basin states.

"With the entire Colorado River Basin in crisis mode, it's laughable that Utah would even think about moving forward with a new diversion from the river," said Eric Balken, the Executive Director of the Glen Canyon Institute.

Governor Cox's water agency, the Utah Board of Water Resources, is the official proponent of the Lake Powell Pipeline. Utah has spent \$45 million on permitting for the destructive diversion. While other states in the Colorado River Basin are scrambling to cut their water use, Utah state leaders are misleading the public into believing Utah has a surplus of Colorado River water for the Pipeline.

"In the most critical water year ever, the response from most of the water managers was a state of surrender. Utah, on the other hand, decided to charge into the battlefield of absurdity," said John Weisheit, the co-founder of Living Rivers and Colorado Riverkeeper.

If completed, the 140-mile Lake Powell Pipeline would divert 86,000 acre-feet of water out of Lake Powell and deliver it to Washington County, Utah. Washington County residents use 306 gallons of water per capita per day, which is over double what residents in Las Vegas use. At a cost to taxpayers of \$3 billion, the Pipeline is completely unnecessary since Washington County has enough water to provide for its projected growth without Pipeline water until at least 2060.

The other six states in the Colorado River Basin are widely opposed to the proposed Lake Powell Pipeline because of its impacts on their shrinking water supply. All six other states co-signed a letter to the Secretary of Interior in 2020 noting their opposition to the Pipeline and openly threatening litigation. The Bureau of Reclamation is preparing a Supplemental Draft Environmental Impact Statement for the Pipeline now, even while the same federal agency is asking states to cut their water use by 2 -4 million acre-feet of water because of infrastructure problems at Glen Canyon Dam.

Watch the meeting [at this link](#)

7/20/2022

Why Did Utah Oil Shale Developers Give Away Priceless Water Rights?

LATEST NEWS

- [Why Did Utah Oil Shale Developers Give Away Priceless Water Rights?](#) Brian Maffly for *Salt Lake Tribune*.
- [Could Dispute Over Water Rights Derail Utah Oil Shale Plant?](#) Jennifer Yachnin for *E&E News*.

SUBMITTED COMMENT LETTERS

Comments were due on July 9, 2018

- July 2 - Letter from Living Rivers, Colorado Riverkeeper, Green River Action Network, Upper Green River Network, and Canyon Country Rising Tide is [HERE](#).
- July 9 - Letter from NGO Coalition is [HERE](#)
- July 9 - Letter from river guides and outfitters [HERE](#)

LAWSUIT

- 2019 - [Enefit Complaint: Living Rivers v. Bureau of Land Management](#)
-

6/19/2022

Colorado River Crisis: Proposed next steps to begin on October 1, 2022

- [Reclamation Commissioner to testify on extreme drought](#). Jennifer Yachnin for *EE News*.
- [Testimony of Commissioner Touton for Senate Committee on Energy and Naural Resources](#).
- [Colorado River System Mid-term Projections as of June 16, 2022](#). Dr. James Prairie of Reclamation.
- [2022 - Scientists Have Long Warned Of Colorado River Crisis](#). Ian James for LA Times.
- [2005 to 2008 - Chronology of events for Shortage Criteria EIS \(2007 Interim Guidelines\)](#).
- [Major Water Cutbacks Ordered Amid Colorado River Shortages](#). Ian James for *LA Times*.
- [Big Colorado River Water Cuts Needed Next Year Top USA official](#). Tony Davis for *Arizona Daily Star*.

- [Under federal pressure Colorado River water managers face unprecedented call for conservation](#). Alex Hager for KUNC.
- ['The system is at a tipping point' Feds say unprecedented cuts needed to balance Colorado River water](#). Zak Podmore for Salt Lake Tribune.
- [OpED: Time for realism on Lakes Powell and Mead](#). Commissioner Segerblom for Las Vegas Review Journal.

ADDITIONAL INFORMATION FROM NGOS

Presentations and Comment Letters

- [2021 - A Future On Borrowed Time: Colorado River Shortages & the New Normal of Climate Change](#). Utah Rivers Council.
 - [DROA comment letter](#) by Save The Colorado.
 - [DROA comment letter 01](#) by Living Rivers and Center for Biological Diversity
 - [DROA comment letter 02](#) by Living Rivers, Center for Biological Diversity, WildEarth Guardians, Utah Rivers Council and Great Basin Water Network.
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5/4/2022

Lake Powell and Glen Canyon Dam in a Crisis

DROA News and Additional Information (The Fix)

[Letter](#) from Interior to the seven states

- [Ailing Lake Powell to get short-term fix, but warnings continue](#). Tony Davis for *Arizona Daily Star*.
- [City assures residents in Page that their water supply is not compromised](#). Douglas Long for *Lake Powell Chronicle*.
- Opinion: [Were still in the dark as western water framework unravels](#). David Schaller for *Tucson Sentinel*.
- Opinion: [Lake Powell will get water: It's not enough!](#) Joanna Allhands for *Arizona Republic*.
- [New Plan Lays Out Ways to Protect Lake Powell from Drought](#). Lexi Peery for *KUER*.
- [Feds, 4 Colorado River states, unveil DROA as 2022 forecast shifts](#). Allen Best for *Water Education Colorado*.

Additional information at:

[On The Colorado River: 2022 - Year of Decision?](#)

[On The Colorado River: Science at Glen Canyon National Recreation Area \(GCNRA\)](#)

3/6/2022

Utah rail line could bring 10 crude oil trains through Denver daily, drawing concern across Colorado

The proposed 85-mile project would worsen climate change, pose risks to Colorado communities and ecosystems, critics say.

By Stephanie Mencimer of Mother Jones Magazine

[An oil train is set to destroy pristine Utah mountains \(plateaus\): Why won't Biden stop it?](#)

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By Conrad Swanson for *The Denver Post*

- [March 5, 2022 - Utah rail line could bring 10 crude oil trains through Denver daily, drawing concern across Colorado.](#) By Conrad Swanson for The Denver Post.

Additional Press

- [January 2021 - OpEd by Deeda Seed and John Weisheit](#)
 - [December, 2020 - Fossil Fuel Fund Set Aside To Help Utahns Being Returned To Industry, Lawsuit Says.](#) *The Guardian*.
 - [A New Freight Train Route For Utah? Uinta Basin Hopes So.](#) *Deseret News*
 - [Feds Looking For Public Input On Uinta Basin Railway Proposed Route Through Moffat County.](#) *Craig Daily Press*.
 - [Panel Shifts Gears On Best Rail Route To Move Oil From Eastern Utah.](#) *Salt Lake Tribune*.
-

2/7/2022

It's Time to Drain Lake Powell: The West is in severe drought and this is the moment to bypass one of the region's biggest dams and rewild Glen Canyon

[Click here](#) to read this story by Petter Deneen for *Gizmodo*

[Click here](#) to read this story by Dave Marston for *Writers on the Range*

[Interview with Rural Utah Project and Living Rivers](#). Molly Marcello for *KZMU Public Radio*.

Check our website called [Rewilding the Colorado River](#)

02/05/22

Special to the Guardian: A Third of Americans are already facing above-average warming

By Oliver Milland (Graphics) and Andrew Witherspoon

[Click here](#) to read this special story in *The Guardian*

Ventura County, CA is 1st
Grand County, UT is 2nd
Roseau County, MN is 3rd
Kittson County, MN is 4th
Montrose County, CO is 5th
Mesa County, CO is 6th
Santa Barbara County, CA is 7th
Rio Blanco County, CO is 8th
Benzie County, MI is 9th
Ouray County, CO is 10th

01/21/22

Our comment letter for Upper Basin Drought Response Operations Agreement (DROA)

[DROA comment letter 01](#) to Reclamation from Living Rivers and Center for Biological Diversity

[DROA comment letter 02](#) by Living Rivers, Center for Biological Diversity, WildEarth Guardians, Utah Rivers Council and Great Basin Water Network.

[Reclamation's DROA Upper Basin Website](#)

Comments will be accepted through Thursday, **Feb. 17**, 2022, and can be submitted by:

Email to: Droa@usbr.gov

Or by mail to:

Bureau of Reclamation

Mr. Robert Henrie

125 South State Street, Rm 8100

Salt Lake City, Ut 84138

Additional information:

[Upper Basin DROA documents combined](#). pdf.

December 11, 2023

Living Rivers comment letter to Reclamation for revised draft SEIS; operations of Glen Canyon Dam and Hoover Dam through Year 2026

[Click here](#) to read the coalition comments submitted to Reclamation this afternoon by Living Rivers.

November 27, 2023

Public Meeting: General Construction Permit for Kings Bottom near Moab, Utah

[ANNOUNCEMENT](#) from Utah Division of Water Quality.
[PRESENTATION](#) by John Weisheit, conservation director of Living Rivers & Colorado Riverkeeper

Zoom credentials:

[https://utah-gov.zoom.us/j/82526987466?
pwd=Zy9WWUFXdXITR0JXMTR2NjIFVtBxZz09#success](https://utah-gov.zoom.us/j/82526987466?pwd=Zy9WWUFXdXITR0JXMTR2NjIFVtBxZz09#success)

HEARING INFORMATION

PERMIT: UPDES, Construction General Permit, Permit Number UTRC0000

AGENCY: Utah Department of Environmental Quality, Division of Water Quality

HEARING LOCATION: Virtual

[https://utah-gov.zoom.us/j/82526987466?
pwd=Zy9WWUFXdXITR0JXMTR2NjIFVtBxZz09#success](https://utah-gov.zoom.us/j/82526987466?pwd=Zy9WWUFXdXITR0JXMTR2NjIFVtBxZz09#success)

DATE: Monday, November 27, 2023

MEETING TIME: 6:00-7:00 PM

STAFF PRESENTATION: 6:00-6:20 PM

QUESTIONS: 6:20-7:00 PM

Meeting ID: 825 2698 7466

Passcode: gOfR^Y4t

In compliance with the Americans with Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact the Utah State Accessibility website at

<https://www.utah.gov/accessibility.html>

September 11, 2023

LTEMP SEIS comment letters by Living Rivers and Center for Biological Diversity

[Living Rivers et al](#)

[Center for Biological Diversity et al](#)

Additional Information:

[Public comments for Small Mouth Bass Environmental Assessment of March 2023](#)

September 12, 2023

Estonian Oil Shale Giant Abandons Federal Oil Shale Lease, Loses Colorado River Basin Water Deal

[Click here](#) to read this story by Dennis Webb for Grand Junction Sentinel.

[Click here](#) to read this story in The Salt Lake Tribune by Tim Fitzpatrick on August 13, 2023.

[Click here](#) to read this story by Jennifer Yachin for Greenwire.

[Click here](#) to read this story by Naveena Sadasivam for Grist.

FOR IMMEDIATE RELEASE

September 12, 2023

Estonian Oil Shale Giant Abandons Federal Oil Shale Lease, Loses Colorado River Basin Water Deal

Contacts:

- Michael Toll, Grand Canyon Trust, mtoll@grandcanyontrust.org, 303-309-2165
- Ted Zukoski, Center for Biological Diversity, tzukoski@biologicaldiversity.org, 303-641-3149
- Lori Harrison, Waterkeeper Alliance, lharrison@waterkeeper.org, 703-216-8565
- Perry Wheeler, Earthjustice, pwheeler@earthjustice.org, 202-792-6211
- Josh Mogerman, Natural Resources Defense Council, jmogerman@nrdc.org, 312-651-7909
- Dr. Brian Moench, Utah Physicians for a Healthy Environment,

drmoench@yahoo.com, 801-243-9089

- Stephen Bloch, Southern Utah Wilderness Alliance (SUWA), steve@suwa.org, 801-428-3981

- John Weisheit, Living Rivers and Colorado Riverkeeper, john@livingrivers.org, 435-260-2590

SALT LAKE CITY, UT—Estonian state-owned oil shale company Enefit American Oil is abandoning its lease to mine oil shale on federal public land in northeastern Utah's Uinta Basin. The decision marks the end of the George W. Bush-era federal oil shale leasing program and came just weeks before a settlement agreement cut the oil shale giant's planned strip mine and processing facility off from its water supply. The settlement prevents Enefit from exploring a previous deal to siphon billions of gallons of water from the Green River, above where it flows into the Colorado River, to build the first commercial-scale oil shale mine and processing plant in the U.S. in the Utah desert.

On August 9, 2023, Enefit notified the U.S. Bureau of Land Management (BLM) that it was voluntarily relinquishing its 160-acre oil shale research, development, and demonstration (RD&D) lease in northeastern Utah's Uinta Basin and would not mine for oil shale on federal public land, citing "extensive consideration of business plans regarding federal oil shale leasing and development." Surrendering the RD&D lease, issued in 2007, means the company is also abandoning efforts to mine an adjacent 4,960-acre "preference lease right area" of federal public lands.

"The good news is that the Bush-Cheney nightmare vision of strip mining thousands of acres of wildlife habitat on public lands to produce the most carbon-polluting gasoline in the world appears to finally be ending," said Ted Zukoski, senior attorney at the Center for Biological Diversity. "Enefit was the last company holding an oil shale research lease on BLM land that hadn't expired or been relinquished." Major players Chevron and Shell had pulled out of their leases by 2017."

Just two weeks after Enefit announced it was abandoning its RD&D lease, on August 25, 2023, Deseret Generation & Transmission Cooperative (DG&T), which owns the sizable water right (15 cubic-feet per second, or 3.5 billion gallons per year) that Enefit intended to use to mine and process oil shale on the federal lease and on its 13,000 acres of private land, settled an administrative challenge before the Utah Division of Water Rights. The settlement stipulates that neither DG&T nor any other entity can use the water right for fossil fuel development, including oil shale, effectively cutting Enefit's planned oil shale project off from its water supply.

"It sure looks like DG&T was taking advantage of Utah law to help Enefit develop what would have been an environmentally catastrophic oil shale mine and processing plant. This settlement ensures that this very large water right can't be siphoned from the Upper Colorado River Basin to develop oil shale or other fossil fuels. Between the settlement and the abandonment of the federal lease, we're hopeful that Enefit's oil shale plans may finally be gone for good," said Michael Toll, staff attorney for the Grand Canyon Trust, architect of the water right settlement. Enefit's original plans called for building the nation's first commercial-scale oil shale mine and processing plant on

private and nearby federal land in Utah's Uinta Basin, strip mining hundreds of millions of tons of oil shale rock and churning out more than 18 million barrels of synthetic crude oil every year for more than 30 years, all with well-to-wheel carbon emissions up to 75 percent higher than conventional oil. In the process, Enefit would consume more than 100 billion gallons of water over the next three decades from the upper Colorado River Basin — about as much as is consumed by all existing municipal and industrial users in the Uinta Basin combined. Additionally, massive amounts of pollutants would flow into nearby rivers and degrade the basin's already unhealthy air.

"This oil shale scheme would have been an enormous misuse of dwindling water resources, and an environmental, climate, and public health disaster. We are relieved to see the project has unraveled and the relevant parties have seemingly come to their senses," said Dr. Brian Moench, president of Utah Physicians for a Healthy Environment. "This is a big win for everyone that depends on Colorado River water, and for everyone that has been fighting to prevent more air pollution in Utah."

A lawsuit in federal district court challenging the rights-of-way for the project across federal public land is ongoing.

"Oil shale has never been commercially viable in the United States, and Enefit's decision to abandon its federal lease is further proof of this," said Michael Hiatt, deputy managing attorney at Earthjustice. "It is well past time to end the oil shale pipe dream and instead embrace energy solutions that won't worsen the water and climate crises we face in the intermountain West."

"Enefit's abandonment of its oil shale lease is a major victory for the overstressed Colorado River Basin and the tens of millions of people and imperiled wildlife that this fragile water system supports," said Daniel E. Estrin, general counsel and legal director for Waterkeeper Alliance. "We must immediately end development of all new fossil fuel projects on our public lands and justly transition to low-carbon energy sources and smart water management strategies if we stand any chance of protecting our planet and waters from the harshest impacts of climate change."

"Enefit walking back its plans reinforces what everyone has known for some time—extreme oil is not viable. Besides being hugely destructive, it simply cannot compete economically. It's having its lunch eaten by renewable energy," said Ann Alexander, senior attorney at the Natural Resources Defense Council.

"For decades mining oil shale in Utah has been the quintessential bad idea that just wouldn't go away: an activity that never penciled out and which in every iteration would have hugely damaging environmental consequences for public lands," said Stephen Bloch, legal director at the Southern Utah Wilderness Alliance (SUWA). "We're glad to be finally closing the book on this doomsday proposal."

ADDITIONAL INFORMATION

[Enefit's August 9th relinquishment notification to BLM](#)

[Water Right Settlement Agreement between DG&T and PVR, Inc.](#)

More about the water right settlement: The Grand Canyon Trust recently finalized a settlement agreement to resolve the administrative protest filed in 2021 before the Utah Division of Water Rights challenging the huge water right (15 cubic-feet per second, or 3.5 billion gallons per year) that Enefit, an Estonian state-owned oil shale company, intended to use to supply its planned oil shale mine and processing facility in the Uinta Basin.

The settlement agreement is with Deseret Generation & Transmission Cooperative (DG&T), the owner of the Bonanza power plant in the Uinta Basin. DG&T owns the water right, and under Utah law, it was limited to using the water right for electrical generation to meet the public's future power needs. Yet, DG&T signed a contract entitling Enefit to use the entire amount of the water right to mine and process oil shale. The Trust's administrative protest challenged this unlawful arrangement, hoping to prevent Enefit from using the water right, which it planned to use to supply more than 99 percent of the oil shale project's staggering water needs. Among other things, the settlement agreement ensures that neither DG&T nor any other entity can use the water right for fossil fuel development.

August 18, 2023

Federal Appeals Court strikes down Uinta waxy crude railroad approval and siding with environmentalists

[Click here to read the court decision](#)

- The court's decision also ruled that John Weisheit (declarant) of Living Rivers & Colorado Riverkeeper has standing.

[Click here](#) to read the press release by Center for Biological Diversity

[Click here](#) to read the story by Sam Metz for The Associated Press.

August 15, 2023

Post 2026 Operations scoping letter from Living Rivers to Reclamation

[Click here](#) to read this coalition letter to US Bureau of Reclamation for new operating guidelines for the Colorado River Basin.

[Click here](#) to read The-One Dam Solution. This is a proposed preferred alternative we have formally submitted to Reclamation staff.

June 21, 2023

Water and Tribes Initiative: Conference of June 8th and 9th, 2023

VIDEOS: Getches-Wilkinson Center; University of Colorado at Boulder

Thursday, June 8th

Day 1, Part 1: <https://youtu.be/egKHhNzk3Hk>

- 00:00 - Welcome and Introduction
- 19:13 - Understanding the Challenges (and Opportunities)
- 2:00:40 - Current Negotiations and the NEPA Process
- 2:39 - Charles Wilkinson Tribute

Day 1, Part 2: <https://youtu.be/yzzLTnhgHFM>

- 00:00 - The Evolving Role of Tribes
- 2:30:52 - Insights from the Basin States

Friday, June 9th

Day 2, Part 1: <https://youtu.be/OLXX8vyMf50>

- 00:46 - Thinking About a Sustainable Future
- 2:01:13 - Some Specific Questions to Answer

Day 2, Part 2: <https://youtu.be/Yfyb6dNLsx0>

- 00:00 - Some Specific Questions to Answer (Continued)
- 2:30:26 - Themes, Lessons and Concerns: Can We Turn Crisis into Opportunity?

ADDITIONAL INFORMATION

- [Event Program](#)

NEWS

- [How California agriculture is the problem and solution to Colorado River water crisis](#). Paige Sutherland & Meghna Chakrabarti for WBUR.
- [Expert \(Udall\) says permanent Colorado River reductions still needed](#). By Marianne Goodland for Colorado Politics.
- [Colorado River states need to think bigger](#). By Robert Glennon for The Conversation.
- [Colorado River states are ready to work on a longer term deal to share water](#). By A Martinez for NPR.
- [Clinton's Interior Secretary Bruce Babbitt says Colorado River Compact a raw deal for Wyoming and other states](#). By Mark Heinz for Cowboy State Daily.

- [Ahead of new Colorado River talks governments and tribes weigh in on future.](#) By Alex Hager for KUNC.
 - [Fixing the flawed Colorado River Compact.](#) By Shemin Ge et al for Eos (American Geophysical Union).
 - [Tribes push for greater involvement in Colorado River talks.](#) By Ian James for The Los Angeles Times.
 - [The Grand Canyon and Colorado River are in Crisis.](#) By Raymond Zhong for The New York Times.
-

June 18, 2023

Scoping for Reconsultation of Interim Guidelines by Year 2026

Read the [One-Dam Solution](#) by Living Rivers & Colorado Riverkeeper from 2005.

To review last year's "prescoping" process, [CLICK HERE](#)

NEWS

- [June 16, 2023 - Fixing the flawed Colorado River Compact.](#) By Shemin Ge et al for Eos (American Geophysical Union).
- [June 16, 2023 - Tribes push for greater involvement in Colorado River talks.](#) By Ian James for The Los Angeles Times.
- [June 6, 2023 - The Grand Canyon and Colorado River are in Crisis.](#) By Raymond Zhong for The New York Times.
-

During the public scoping meetings for the development of *2007 Interim Guidelines*, the water managers in attendance were emphatic; that reductions greater than 20% would be "impossible" to achieve. This is why the seven states did not participate in the voluntary prescriptions of the original *Guidelines*, until reservoir elevations approached the level where intakes begin to suck air.

Note: *The proposed reductions from the Lower Basin States, as of this date, is about 12% per year. The ask from Reclamation was a range of 14% to 27%. It would appear that the Upper Basin states will not be participating in any reductions at this time. The Upper Basin states are building and enlarging dams at the present time, and other diversion contracts have been proposed. Consequently, the grassroots have intervened by engaging the judicial branch of government.*

At the end of the next decade, reductions of 30% will be necessary; and then 40% in the following decade. Especially if the municipalities continue to sprawl across the deserts of the American Southwest, and fueling that growth by purchasing water from farmers that take the responsibility of feeding the nation very seriously.

Proposed new sources of water, such as constructing desalination facilities, and the electric generating stations that will power them, and the pipelines, and the pump stations, and the transmission wires, will not be operational in the 2030s, nor in the 2040s.

So these are the decades when the system will crash and the assets of 50 to 60 million people become stranded.

If your thinking otherwise, consider that it took parts of four decades to negotiate the Law of the River, and to finish the construction of Hoover Dam, the All American Canal, and the Colorado River Aqueduct.

We can anticipate the depletion of our groundwater supplies as the third and final bad planning decision.

Rather than kicking a rusty can in the wrong direction, let's stop this madness and take a completely different pathway.

- **Read our 2022 prescoping comment letter [HERE](#)**
- **Review the prescoping process for 2022 [HERE](#)**

COMPARING THE PROCESS OF 2005 WITH THE PROCESS OF 2022

Federal Register Notices

- [Click here to review the Federal Register Notice of June 16, 2023](#)
- **Note:** this document avoids important subjects such as, the changing characteristics of the atmosphere and ocean, floods, evaporation, sublimation, and sedimentation; the looming problems that are always dismissed at every level of future planning.
- [Click here to review the Federal Register Notice of June 15, 2005](#)

Scoping Summaries

- [Click here to read the summary of pre-scoping in 2022](#)
- [Click here to read the summary of scoping in 2005](#)

TERMINATION DATES OF 2007 INTERIM GUIDELINES

Termination date of 2007 Guidelines

See: [2007 Record of Decision](#).

- "Except as provided in Section 8.B., these Guidelines shall terminate on December 31, 2025 (through preparation of the 2026 Annual Operating Plan)."

Termination dates of "Special Provisions"

- 1. "The provisions for the delivery and accounting of ICS in Section 3 shall remain in effect through December 31, 2036, unless subsequently modified, for any ICS remaining in an ICS Account on December 31, 2026."

- 2. "The provisions for the creation and delivery of Tributary Conservation ICS and Imported ICS in Section 3 shall continue in full force and effect until fifty years from the date of the execution of the ROD."
- 3. "The provisions for the creation and delivery of DSS in Section 4 shall continue in full force and effect until fifty years from the date of the execution of the ROD."

COMMENTS ARE DUE: Tuesday, August 15, 2023 (60 days)

Send comments to:

eMail address: crbpost2026@usbr.gov

Or. via postal service to:

Bureau of Reclamation
Attn: Post-2026 (Mail Stop 84- 55000)
P.O. Box 25007, Denver, CO 80225
[Press Release](#)

More information will be provided at a later time. Please return.

May 23, 2023

Our thoughts on Reclamation's Supplemental EIS process

May 22, 2023: Update from Reclamation about the Supplemental EIS

The Department of the Interior today announced that it is temporarily withdrawing the draft Supplemental Environmental Impact Statement published last month so that it can fully analyze the effects of the proposal under the National Environmental Policy Act.

Reclamation will then publish an updated draft SEIS for public comment with the consensus-based proposal as an action alternative. Accordingly, the original May 30, 2023, deadline for the submission of comments on the draft SEIS is no longer in effect.

The Department plans to finalize the SEIS process later this year.

For more information: [Press Release](#)

Marcie Bainson
SEIS Team Member
[Send Email](#)

###

States issue formal plans on May 22, 2023

- [Deal is reached to keep Colorado River from going dry for now](#). By Christopher Favelle for New York Times.
- [Seven States Final Plan](#)
- [Lower Basin Final Plan](#)
-

OUR ANALYSIS

How the Colorado River Basin is managed in the next three years by this SEIS process, or how it is managed in the next 3 decades by the pending process to develop new guidelines by 2026, the outcomes will not be significantly different. There is only one goal: how will water reduction programs be equitably distributed to humans without ecosystem or societal collapse?

The intent, since 2007, has **always** been about avoiding water shortages due to human accountability errors that have already disrupted the economy and the environment of our homeland inheritance. The collaborative solutions provided since the initiation of 2007 Guidelines were grossly insufficient and the sixteen years of potential progress hence, was squandered.

The narrative of the SEIS does acknowledge that...

- The hydrology of the Colorado River Basin is impacted by heat, evaporation, dry soils and by sublimation (implied); specifically a 20% reduction in annual streamflow, and that this negative consequence will continue to increase.
- Proposed construction projects for water diversions and water augmentation are speculative.
- The characteristics of groundwater resources are important.
-

The narrative of the SEIS does not acknowledge that...

- Human behaviours have become problematic. For example: denial, recalcitrance, procrastination and gradualism.
- Leadership to reduce global greenhouse gas emissions is not a shared responsibility for water managers.
- The decomposition of organic materials in reservoirs do emit greenhouse gases.
- The negative characteristics of vacated reservoirs will compromise the downstream ecosystems of our national parks and wildlife refuges.
- Dams and powerplants have lifespans; a day of reckoning will confront future generations; the cost will exceed the benefits.
-

THE ISSUES OF THE UPPER BASIN

- Previous scenario planning documents predict Upper Basin shortages will range between 2 to 3 million acre-feet between now and Year 2060.
- The first priority to consider are the arrival times of approaching deadlines, as mandated by the 1922 Colorado River Compact and the 1944 Mexican Treaty (a "Compact Call").

- The approaching Lower Basin deadline: When will 75 million acre-feet in a ten-year period **fail** to pass the Compact Point, located one mile below the mouth of the Paria River near Lee's Ferry, Arizona? This is a fixed number set in perpetuity; see Article IIIId of the 1922 Compact.
- The approaching deadline to Mexico: When will half of the annual water treaty allocation to Mexico, which is 750,000 acre-feet per year, **fail** to pass the Compact Point near Lee's Ferry, Arizona? See Article IIIc of the 1922 Compact. This amount must be adjusted down to 675,000 acre-feet, to honor a present-day shortage agreement with Mexico called Minute 323.
- Water demand reduction programs, such as Demand Management and System Conservation, are not producing significant contributions in the range of the required 2 to 3 million acre-feet.
- The accounting systems to measure water consumption is yet to be perfected.
- Glen Canyon Dam was not engineered for the extremes of the natural hydrology, augmented by climate disruptions from greenhouse gas emissions.

THE ISSUES OF THE LOWER BASIN

- Previous scenario planning documents predict Lower Basin shortages will be 3 to 4 million acre-feet between now and Year 2060.
- Not subtracting the evaporation and transit losses from the fixed allocations that happens between Hoover Dam and Morelos Dam (the "structural deficit") and estimated to range as high as 1.5 million acre-feet

THE ISSUES FOR BOTH BASINS

- Efficiency programs are confined by the limits of Nature. Perpetual growth was never an option; there is no physical law that supports such a concept.
- There is a planning and zoning problem, more than a water resource problem.
- Is this river basin based on a prior appropriation system, or not? If not, then the legal foundations must be changed.
- Sustainability, resilience and equity is achieved by respecting the merits of functioning ecosystems; work with Nature.
- The floodplain is occupied by critical infrastructure, which includes an immense structural depression below sea level called the Salton Through.

NEWS

- [Colorado River deal outlines water cuts to California](#). By Ian James for Los Angeles Times.
- [Deal is reached to keep Colorado River from going dry for now](#). By Christopher Favelle for New York Times.
- [Wet year amid Colorado River drought puts water use cuts in question](#). By Tony Davis for *Arizona Daily Star*.
- [Colorado River talks near deals as California Arizona Nevada agree to conserve water use](#). By Joshua Partlow for *Washington Post*.

- [Three states agree on plan to save Colorado River water](#). By Tony Davis for *Arizona Daily Star*.
- [Water saved through Upper Basin program unlikely to move needle in Lake Powell](#). Heather Sackett for Aspen Journalism.
- [Wet year amid Colorado River drought puts water use cuts in question](#). Tony Davis for *Arizona Daily Star*.
- ['We can't be living in an economy of 40 million people this close to the edge.'](#) By Dan Ross for Capital And Main.
- [The very bad math behind the Colorado River crisis](#). By Daniel Penner for Grist.
- [White House proposes evenly cutting water allotments from Colorado River](#). By Christopher Flavell for NY Times.
- [Crisis on the Colorado: The Indigenous fight for water rights](#). By Megan O'Toole and Jillian Kestler-D'Amours for Aljazeera.
- [Proposed cuts to the Colorado River: What it means for those who rely on it](#). Nika Anschuetz for University of Denver.

THE DOCUMENTS OF THE DRAFT SEIS

- [Fact Sheet](#). Biden & Harris Administration.
- [Volume One](#)
- [Appendix A](#)
- [Appendix B](#)
- [Appendix C](#)
- [Appendix D](#)
- [Appendix E](#)
- [All Documents COMBINED](#) (searchable).

ADDITIONAL INFORMATION

- [24-Month Report for April 2023, including minimum and maximax snow melt forecast](#) (documents combined).

March 10, 2023

Comments for smallmouth bass Environmental Assessment and the Adaptive Management Program for operations at Glen Canyon Dam

STATEMENT: US Bureau of Reclamation; Upper Basin Division

The Bureau of Reclamation's Upper Colorado Basin recently prepared a targeted Environmental Assessment to pursue implementation of flow options at Glen Canyon Dam to respond to invasive smallmouth bass below the dam. With the extended drought, water levels in Lake Powell continue to decline to historically low levels, which

has contributed to record high water temperature releases through Glen Canyon Dam. Below the dam, these warm water releases are creating ideal spawning conditions for smallmouth bass, a predatory invasive fish species, which poses a threat to the federally protected humpback chub and other native fish.

To respond to the threat of smallmouth bass establishment below Glen Canyon Dam, a targeted EA was prepared that identified various flow options designed to disrupt and prevent smallmouth bass from spawning in the Colorado River between Glen Canyon Dam and the confluence of the Little Colorado River.

Reclamation appreciates the many comments received on the draft Environmental Assessment. The Comment Analysis Report is available now at the link below. Consistent with the NEPA process, we will transition this analysis to an Environmental Impact Statement process which will be initiated through a Notice of Intent in the Federal Register. Comments received on the Draft EA will be considered in the future EIS.

[Draft Environmental Assessment](#). USBR.

[Public Comment Analysis](#). USBR.

[Click here](#) to read the comments written by Taylor McKinnon of Center for Biological Diversity

[Click here](#) to read the comments written by John Weisheit of Living Rivers & Colorado Riverkeeper.

February 06, 2023

Living Rivers and Great Basin Water Network submitted supplemental comments for the SEIS about new dam operations in 2023

SCOPING COMMENT PERIOD HAS CLOSED

If you submitted comments on time (December 20, 2022), you may still provide supplemental information and records to Reclamation. Especially after reading the following letters and news about plans from the states that are off target and overdue by 50-years.

Two alternatives from the Seven States

- January 31, 2023 - [Supplemental Scoping Letter from Six States to model negotiated water reductions](#)
- January 31, 2023 - [Supplemental Scoping Letter from California to model negotiated water reductions](#)

Alternative from Living Rivers, Great Basin Water Network and Colorado Riverkeeper

- February 6, 2023 - [Supplemental Comments by Great Basin Water Network, Living Rivers, and Colorado Riverkeeper](#)

Listen:

- January 31, 2023 - [New York Times Podcast](#)

Read:

- January 27, 2023 - [New York Times: As the Colorado River Shrinks, Washington Prepares to Spread the Pain](#). By Christopher Flavelle for *The New York Times*.
- February 1, 2023 - [Utah joins five states in plan to keep feds from making cuts in Colorado River](#). By Felicia Fonseca and Suman Naishadham for *The Associated Press*.

Observe:

- February 1, 2023 - [Plan is elusive as river shrinks](#). By Ian James for *The Los Angeles Times*.
- February 1, 2023 - [California Opposes Colorado River Plan](#). By Tony Davis for *Arizona Daily Star*.
- February 1, 2023 - [California releases its own plan for Colorado River cuts](#). By Kathleen Ronayne and Suman Naishadham for *The Associated Press*.
- February 1, 2023 - [Conservation organizations emphasize need to protect environmental priorities in CR Basin](#). Major NGOs.
- February 2, 2023 - [California's Colorado River plan would hit Arizona hard](#). Tony Davis for *The Arizona Daily Star*.
- February 2, 2023 - [State pushes its plan to save water](#). Ian James for *The Los Angeles Times*.
- February 3, 2023 - [Biden administration is caught between California and its neighbors in Colorado River fight](#). By Camille Von Kaenel & Annie Snider for *Politico*.
- February 3, 2023 - [Why is California going it alone in Colorado River talks](#). By Ian James for *The Los Angeles Times*.
- February 4, 2023 - [Law of the River is at the heart of water crisis](#). By Hayley Smith and Ian James for *The Los Angeles Times*.
- February 4, 2023 - [Game of chicken or chess game: Colorado River solution elusive](#). Tony Davis for *Arizona Daily Star*.
- February 5, 2023 - [Key Colorado River reservoirs unlikely to refill in our lifetimes](#). By Rong-Gong Lin II and Ian James for *The Los Angeles Times*.

Solutions: will not arrive until the limits of this geography and its climate are respected and embedded into new and different policies for long-term regional planning. The adherents to the Colorado River Compact of 1922 are perpetuating system failure and societal collapse.

Comment Letters

- [Complete list of all public comments](#)
- [Living Rivers et al.](#) (Clean Copy)
- [Major NGOs](#)
- [Save The Colorado](#)
- [Southern Nevada Water Authority](#)
- [Grand Canyon Trust](#)
- [Wyoming](#)
- [Upper Colorado River Commission](#)
- [New Mexico](#)
- [Colorado](#)
- [Utah](#)
- [Municipalities of Lower Basin](#)
- [California](#)
- [Arizona](#)

Federal Register Notice: <https://www.federalregister.gov/documents/2022/11/17/2022-25004/notice-of-intent-to-prepare-a-supplemental-environmental-impact-statement-for-december-2007-record>

Reclamation anticipates utilizing the work of this SEIS to also inform operating guidelines for the 2025-26 period, which will also undergo NEPA analysis in the near future.

OFFICIAL RECLAMATION WEBPAGE FOR THIS SEIS

- [CLICK HERE](#)

January 27, 2023

The Los Angeles Times Podcasts and Videos: The Colorado River in Crisis

COLORADO RIVER IN CRISIS

A Six-Part Series by LA Times staff and interviewing the people of the Colorado River Basin with sound and visuals

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VIDEOS

- December 26, 2022 - [Desert suburbia is growing. But the Colorado River, and Arizona's groundwater, cannot keep up.](#) YouTube.
- January 13, 2023 - [The Colorado River is drying up. Climate change and drought have taken a major toll.](#) YouTube.
- January 20, 2023 - [Colorado Riverkeeper says day of reckoning is here: 'This river can't sustain 40 million people'.](#) YouTube.
- January 27, 2023 - [Agriculture under pressure: The Imperial Valley braces for a future with less water.](#) YouTube.
- January 31, 2023 - [Reclaiming the river: Tribes push for change on the Colorado River.](#) YouTube.
- January 31, 2023 - [Reviving the river: A pulse of water revives the dry Colorado River Delta.](#) YouTube.

PODCASTS

- **Part One: A Dying River** - [Podcast.](#) YouTube.
- **Part Two: The Source** - [Podcast.](#) YouTube.
- **Part Three: The Dam** - [Podcast.](#) YouTube.
- **Part Four: The Tribe** - [Podcast.](#) YouTube.
- **Part Five: The Valley** - [Podcast.](#) YouTube.
- **Part Six: The End** - [Podcast.](#) YouTube.

PHOTO JOURNALISM

- January 26, 2023 - [The Colorado River: Where the West quenches its thirst.](#) Luis Sinco for Los Angeles Times.

NARRATIVES

- June 14, 2022 - [Major water cutbacks loom as shrinking Colorado River nears 'moment of reckoning.'](#) Ian James for *The Los Angeles Times*.
- June 20, 2022 - [As water crisis worsens on Colorado River, an urgent call for Western states to 'act now.'](#) Ian James for *The Los Angeles Times*.
- June 23, 2022 - [Where Colorado River no longer meets the sea, a pulse of water brings new life.](#) Ian James for *The Los Angeles Times*.
- July 15, 2022 - [They sounded alarms about a coming Colorado River crisis. But warnings went unheeded.](#) Ian James for *The Los Angeles Times*.
- December 19, 2022 - [Federal Officials Urge Action on Shrinking Colorado River.](#) Ian James for *Los Angeles Times*.
- December 26, 2022 - [In Arizona, Colorado River crisis stokes worry over growth and groundwater depletion.](#) Ian James for *The Los Angeles Times*.
- January 19, 2023 - [These farmers dominate the Colorado River. Cross them at your peril.](#) Sammy Roth for *The Los Angeles Times*.
- January 26, 2023 - [The Colorado River is overused and shrinking. Inside the crisis transforming the Southwest.](#) Ian James & Molly Hennessy-Fisk for *The Los Angeles Times*.
- January 26, 2023 - [The Colorado River: Where the West quenches its thirst.](#) Luis Sinco for *Los Angeles Times*.
- January 26, 2023 - [A river guide's view of Lake Powell's decline and the depths of the Colorado River crisis.](#) Ian James for *The Los Angeles Times*.
- January 26, 2023 - [Inside the water crisis: A journey across the Colorado River Basin.](#) Ian James for *The Los Angeles Times*.
- January 26, 2023 - [The Colorado River is overused and shrinking. Inside the crisis transforming the Southwest.](#) Ian James for *The Los Angeles Times*.
- January 27, 2023 - [In California's Imperial Valley, farmers brace for less Colorado River water.](#) By Ian James for *The Los Angeles Times*.
- January 29, 2023 - [How Las Vegas declared war on thirsty grass and set an example for the desert Southwest.](#) By Molly Hennessy-Fiske and Ian James for *LA Times*.
- January 29, 2023 - [Why desert golf courses and artificial lakes remain untouched by the Colorado River crisis.](#) By Ian James for *The Los Angeles Times*.
- January 31, 2023 - ["A Living Spirit" Native People Push for Changes to Protect the Colorado River.](#) By Ian James for *The Los Angeles Times*.
- February 1, 2023 - [Plan is elusive as river shrinks.](#) By Ian James for *The Los Angeles Times*.
- February 2, 2023 - [California pushes its plan to save water.](#) Ian James for *The Los Angeles Times*.
- February 2, 2023 - [From high above an Atmospheric River a deep dive for data.](#) Ian James for *The Los Angeles Times*.
- February 3, 2023 - [Why is California going it alone in Colorado River talks.](#) By Ian James for *The Los Angeles Times*.
- February 4, 2023 - [Law of the River is at the heart of water crisis.](#) By Hayley Smith and Ian James for *The Los Angeles Times*.

- February 5, 2023 - [Key Colorado River reservoirs unlikely to refill in our lifetimes](#). By Rong-Gong Lin II and Ian James for *The Los Angeles Times*.
- February 7, 2023 - [Why California is so far apart from other states in Colorado River water cuts plan](#). Ian James and Sean Greene for *The Los Angeles Times*.
- February 18, 2023 - [Officials study overhauling dam: Lake Powell's low level imperils the ability to generate power, release water & Front Page Edition](#). Ian James for *The Los Angeles Times*.

Opinion

- [California and its neighbors are at an impasse over the Colorado River: Here's a way forward](#). Eric Kuhn for *The Los Angeles Times*.

Additional Information

- [The 2023 Supplemental Environmental Impact Statement \(SEIS\) for operations at Glen Canyon Dam and Hoover Dam](#)

January 20, 2023

Colorado Riverkeeper says day of reckoning is here: 'This river can't sustain 40 million people'



"I want a different system. Because this is a system that comes to an end."

The Los Angeles Times

FEATURED ARTICLE: Ian James, Carolyn Cole and Sean Greene with [Colorado Riverkeeper, John Weisheit](#)

VIDEO: Ian James and Albert Brave Tiger Lee

[Interview with John Weisheit](#)

PODCAST: Denise Guerra and Ian James

[Interview with John Weisheit](#)

End of Posts for 2023

Regional News

02/07/2024

Glen Canyon Dam: In managing Colorado River dam Feds ignored climate change, conservationists tell Appeals Court

NEW INFORMATION

The appellate court denied our appeal: It is important to understand that Reclamation did decide to reconsultate the LTEMP EIS in 2023 and while the judges were deliberated this case.

- Here is the news store: [In blow to green groups Ninth Circuit upholds federal plan for Colorado River dam](#). By Alanna Mayham for Courthouse News.
- Here is the decision: [Ninth Circuit Order for legal challenge about Glen Canyon Dam and LTEMP EIS of 2016](#).
- Here is the new: [2023 Draft SEIS for GC Dam operations by Bureau of Reclamation](#).

###

Regional News

10/15/24

Groups sue Utah state engineer over lithium mining on the Green River
[Click here](#) to read this story by Anastasia Hufham for the Salt Lake Tribune.
[Click here](#) to review the plaintiffs complaint.
[Click here](#) to review the administrative record for this mining project by Blackstone Minerals and Anson Resources.

FOR ADDITIONAL INFORMATION
Please visit the website called [On The Colorado](#)

###

Regional News

10/16/24

Gross Dam Expansion Violates Federal Law, Court Says

[Click here](#) to read the order by Judge Christine Arguello.

###

[Click here](#) to read this story by Wyatt Myskow for Inside Climate News.

[Click here](#) to read this news story by Tyler Hickman for the Boulder Weekly.

Civil Action No. 18-cv-03258-cma

The Petitioners are: Save the Colorado, the Environmental Group, Wildearth Guardians, Living Rivers, Waterkeeper Alliance, and Sierra Club,
Vs.

The Respondents: Todd T. Semonite, in His Official Capacity as the Chief of the U.s. Army Corps of Engineers, Ryan Zinke, in His Official Capacity as Secretary of the Interior, and

Margaret Everson, in Her Official Capacity as Acting Director of the U.S. Fish and Wildlife Service.

And the Respondent-intervenor: City and County of Denver, Acting by and Through Its Board of Water Commissioners.

###

Press Release

10/18/24

Environmental, Public Health Groups File Brief Opposing Utah Oil Train's Supreme Court Appeal

For Immediate Release, October 18, 2024

Environmental, Public Health Groups File Brief Opposing Utah Oil Train's Supreme Court Appeal

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WASHINGTON — Environmental and public health groups defended the nation's landmark environmental law in a brief filed today with the U.S. Supreme Court in a case challenging the law's scope.

Utah's Seven County Infrastructure Coalition and a Utah railway company are asking the Supreme Court to overturn a federal appeals court decision tossing out the approval of an 88-mile railway through the Uinta Basin in northeastern Utah. The case considers the scope of the National Environmental Policy Act.

The railway's sole purpose is to transport waxy crude oil from the Uinta Basin through the Colorado Rockies to Gulf Coast refineries. If completed, the railway would quintuple oil production in the Uinta Basin, up to an additional 350,000 barrels per day, by linking the Utah oil fields to national rail networks.

"Communities in the Uinta Basin and Gulf Coast will suffer the most from this oil railroad, while oil companies enrich themselves at the expense of the environment and people's health," said Wendy Park, a senior attorney at the Center for Biological Diversity. "It's disgraceful that the railroad's backers want federal agencies to turn a blind eye to those harms. A robust environmental review that takes a hard look at all the train's threats is crucial for protecting communities near and far from this railway."

In August 2023 a federal appeals court ruled that the U.S. Surface Transportation Board — the agency tasked with reviewing the proposed railway's potential environmental harms — violated numerous environmental laws, including the National Environmental Policy Act, by failing to

consider the risks of increased oil extraction in the Uinta Basin and the potential harm from refining to Gulf Coast communities in Texas and Louisiana.

The agency also failed to address the railway's downline threats, such as derailments and wildfires, to wildlife, the Colorado River and public health and safety.

The National Environmental Policy Act, passed by Congress and signed by President Richard Nixon in 1970, requires the government to engage with communities, analyze a project's potential environmental harms, and disclose those potential harms to the public before approving a project.

The railway's backers are asking the court to narrow what environmental impacts federal agencies can review and disclose to the public. That would mean federal agencies could ignore and hide from the public damage to clean air, water and wildlife habitats that destructive projects could cause.

The groups defending NEPA include the Center for Biological Diversity, the Sierra Club, Living Rivers, WildEarth Guardians and Utah Physicians for a Healthy Environment.

"The oil and gas industry in the Uinta Basin already produces an enormous amount of regional air pollution," said Dr. Brian Moench, president of Utah Physicians for a Healthy Environment. "A University of Colorado study from 10 years ago found levels of highly toxic volatile organic compounds in the Basin '200-300 times background levels.' The authors said it was as much as you would expect from '100 million cars.' The whole purpose of this railway is to quintuple oil production in the area. The amount of air pollution would be staggering, a true public health nightmare. The petitioners are even trying to do away with this type of robust impact analysis, leaving communities like ours in the dark about the consequences of these projects."

"Sending billions of gallons of oil for hundreds of miles along the Colorado River would be a disaster waiting to happen for the communities and wildlife that rely on that critical water source," said John Weisheit, conservation director of Moab-based Living Rivers.

"The Uinta Basin Railway will harm the public's quiet enjoyment of the Colorado River for rafting and watching wildlife," said Kelly Fuller, climate and energy program director at WildEarth Guardians. "It's hard to spot beavers and bighorn sheep when heavy oil trains are roaring past the Colorado River, much less if the oil trains overturn and spill oil into the river, contaminating everything in sight."

The Supreme Court will hear arguments on the case on Tuesday, Dec. 10.

The Center for Biological Diversity is a national, nonprofit conservation organization with more than 1.7 million members and online activists dedicated to the protection of endangered species and wild places. www.biologicaldiversity.org

- [Press Release from Senator Bennet and Congressman Neguse](#)

ADDITIONAL INFORMATION

- [Complete Docket at the official website of the US Supreme Court](#)
- [Opinion of US Appeals Court](#)
- [US Supreme Court Brief](#)

Earlier News

- June 25, 2024 - [A court struck down approval for an oil railroad in Utah: the US Supreme Court could revive it. By Anastasia Hufham for The Salt Lake Tribune.](#)

###

Press Release

12/10/24

Supreme Court Hears Arguments Over Utah Oil Train in Case Challenging Scope of Nation's Landmark Environmental Law

For Immediate Release, December 10, 2024

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Supreme Court Hears Arguments Over Utah Oil Train in Case Challenging Scope of Nation's Landmark Environmental Law

WASHINGTON— The U.S. Supreme Court will hear arguments today in *Seven County Infrastructure Coalition v. Eagle County*, a case challenging the scope of the National Environmental Policy Act, the nation's landmark environmental law.

[Click here to hear the audio recording](#)

Utah's Seven County Infrastructure Coalition and a Utah railway company are asking the Supreme Court to overturn a federal appeals court decision tossing out the approval of an 88-mile railway through the Uinta Basin in northeastern Utah. That decision said the U.S. Surface Transportation Board violated NEPA by failing to fully analyze the railway's potential harm to the climate, wildlife, the Colorado River and people, including environmental justice communities along the Gulf Coast.

Environmental groups, public-health advocates and communities along the proposed route say the lower court's decision should stand. The groups held a virtual press briefing last week to discuss the stakes of the case.

"This case is bigger than the Uinta Basin Railway," said Earthjustice vice president of programs Sam Sankar. "The fossil fuel industry and its allies are making radical arguments that would blind the public to obvious health consequences of government decisions. The court should stick with settled law instead. If it doesn't, communities will pay the price."

The railway's backers are asking the court to narrow what environmental impacts federal agencies must review and disclose to the public. That would mean federal agencies could ignore — and hide from the public — damage to clean air, water and wildlife habitats that destructive projects could cause.

"Analyzing the Uinta Basin Railway's impacts without considering the air pollution and habitat destruction from pumping billions of additional gallons of oil a year is like diving headfirst into a pool without knowing how deep it is," said Wendy Park, a senior attorney at the Center for

Biological Diversity. “This is a disgraceful attempt to get federal agencies to ignore the many harms the railway will cause to the air and public health of Uinta Basin and Gulf Coast communities. A robust review of all the train’s threats is what the law requires, and it’s crucial for protecting people near and far from this railway.”

NEPA, passed by Congress and signed by President Richard Nixon in 1970, requires the government to engage with communities, analyze a project’s potential environmental harms, and disclose those potential harms to the public before approving that project.

“In 2013 the amount of volatile organic compounds pollution in the Uinta Basin was equal to what you would expect from 100 million cars, eight times more cars than are registered in the Los Angeles Basin. That is unquestionably a public health nightmare,” said Dr. Brian Moench, president of Utah Physicians for a Healthy Environment. “I have been to the basin myself to measure VOCs, in some places the fumes were physically overpowering. That the backers of this project would not only dismiss all that pollution, but propose that it’s okay for them to make it even five times worse, is a stunning disregard for the lives and wellbeing of the people in the basin.”

The proposed Uinta Basin Railway’s undisputed purpose is to transport waxy crude oil from the Uinta Basin through the Colorado Rockies to Gulf Coast refineries. If completed the railway would quintuple oil production in the Uinta Basin, up to an additional 14.7 million gallons per day, by linking the Utah oilfields to national rail networks.

The train would also threaten the health and safety of communities through Colorado and eventually in the Gulf of Mexico region, where the waxy crude oil would eventually arrive for refining. Derailments and other accidents along the route could contaminate the Colorado River, which provides drinking water to 40 million people across the West.

“Sending billions of gallons of oil in railcars along the Colorado River each year without understanding the damage from inevitable spills is a risk we can’t afford,” said John Weisheit, conservation director at Living Rivers. “Conducting a thorough environmental impact study is the bare minimum that must happen to protect wildlife and communities from this catastrophe in waiting.”

“In addition to destroying important wildlife habitat that supports iconic Western critters, including the greater sage-grouse, oil companies and their enablers are working overtime to slash bedrock American environmental laws and sacrifice our planet for their profits,” said Kate Merlin, staff attorney at WildEarth Guardians. “The future of the West’s clean water, healthy communities and abundant wildlife is at stake.”

Earthjustice and the Center of Biological Diversity are representing Utah Physicians for a Healthy Environment, the Sierra Club, Living Rivers, and WildEarth Guardians. Eagle County is representing itself. Attorney Willy Jay of Goodwin Procter LLP will argue the case for Eagle County.

ADDITIONAL INFORMATION

[Click here](#) to read this story by Antonia Juhasz for Rolling Stone on December 27, 2024.

[Click here](#) to read this story by Stephanie Mencimer for Mother Jones on December 18, 2024.

[Click here](#) to read this story by Brock Merchant for the Salt Lake Tribune on December 18, 2024 about the very poor air quality of the Uinta Basin.

[Click here](#) to read this story by Chase Woodruff for Colorado Newsline on December 11, 2024.

[Click here](#) to read this story by Taylor Cramer for The Post Independent on December 11, 2024.

[Click here](#) to read this story by Wyatt Myskow for Inside Climate News on December 9, 2024.

[Click here](#) to read this story by Anastasia Huffman for the Salt Lake Tribune on December 11, 2024.

###

For Immediate Release, August 18, 2023

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Appeals Court Throws Out Permit for Utah's Uinta Basin Railway

WASHINGTON— A federal appeals court today [rejected](#) the U.S. Surface Transportation Board's permit for the proposed Uinta Basin Railway, designed to quadruple oil production in Utah's Uinta Basin and move crude through the Colorado Rockies to Gulf Coast refineries. Today's ruling by the U.S. Court of Appeals for the D.C. Circuit said the board violated the National Environmental Policy Act by failing to fully analyze the railway's potential harm to the climate, wildlife, the Colorado River and people, including environmental justice communities along the Gulf Coast. The decision strips the railway of the permitting required for its construction.

"This is an enormous victory for our shared climate, the Colorado River and the communities that rely on it for clean water, abundant fish and recreation," said Deeda Seed, a senior campaigner at the Center for Biological Diversity. "The Uinta Basin Railway is a dangerous, polluting boondoggle that threatens people, wildlife and our hope for a livable planet. The Biden administration needs to dismantle this climate bomb and throw it in the trashcan where it belongs."

The proposed 88-mile-long railway would spur increased oil production — estimated at an additional 350,000 barrels a day — by linking Uinta Basin oil fields to national rail networks. Most of the crude would travel through the Colorado Rockies for more than 100 miles and then on to Gulf Coast refineries, increasing the risk of fires and oil spills along the vulnerable Colorado River corridor.

"This ruling is a win for communities across the West and is critical for ensuring a sustainable climate future," said Carly Ferro, executive director of the Utah Sierra Club. "From its onset, this project's process has been reckless and egregious. But today, the people and the planet prevailed. We will continue to advocate for accountable processes to ensure a healthy environment where communities can live safely, and this win will help make that possible."

The appeals court found that the Surface Transportation Board failed to consider harm to the environment and downstream communities, the risk of wildfires and derailments along the drought-stricken route, and the project's "uncertain financial viability."

"The deficiencies here are significant," the ruling said, including failure to "quantify reasonably foreseeable upstream and downstream impacts on vegetation and special-status species of increased drilling in the Uinta Basin and increased oil-train traffic along the Union Pacific Line,

as well as the effects of oil refining on environmental justice communities the Gulf Coast.” The court also said that the agency failed to “take a hard look at wildfire risk as well as impacts on water resources downline; and explain the lack of available information on local accident risk.”

“The court's rejection of this oil railway and its ensuing environmental damage is a victory for the climate, public health and wild landscapes,” said Samantha Ruscavage-Barz, legal director for WildEarth Guardians. “The public shouldn’t have to shoulder the costs of the railway's environmental degradation while the fossil fuel industry reaps unprecedented profits from dirty energy.”

In addition to climate damage, the railway would harm public lands, rare plants and wildlife habitat. According to a now vacated federal [environmental analysis](#), the railway would dig up more than 400 Utah streams and strip bare 10,000 acres of wildlife habitat, including crucial areas that pronghorn and mule deer need to survive. In Emma Park, a remote sagebrush valley known to birdwatchers, bulldozers and train traffic could drive imperiled greater sage grouse out of their mating and nesting grounds.

“When Congress approved the Energy Policy Act of 2005, which became the incentive to exploit the unconventional fuels of the Colorado River Basin, our hope was that this very bad energy policy might incite a popular movement to address and counter the impacts of global warming,” said John Weisheit, conservation director for Living Rivers in Moab, Utah. “Yes, we need to thank the judges for making the right decision today, but this brighter day belongs to the climate justice movement.”

“This decision is a win for public health and the environment,” said Jonny Vasic, executive director for Utah Physicians for a Healthy Environment. “The court ruled the Surface Transportation Board conducted an environmental review that failed to meet the requirements of the law. The people of Utah can breathe a sigh of relief. Hopefully this is the beginning of the end for the Uinta Basin Railway.”

###

07/02/25

Lawsuit takes aim at Echo Canyon water rights in Grand County Utah

NEWS COVERAGE ON THIS LITIGATION

- July 2, 2025 - [Lawsuit takes aim at Echo Canyon water rights](#). By Doug McMurdo for Moab Times-Independent and Salt Lake Tribune.

###

Press Release for immediate release as of June 28, 2025

LIVING RIVERS AND KANE CREEK DEVELOPMENT WATCH CHALLENGE KANE CREEK LUXURY RESORT'S WATER RIGHTS

Note: The developers have recently changed the name of their luxury resort from Kane Creek Preservation and Development, LLC to Echo Canyon, a Preliminary Municipality.

Note: The citizen's group known as Kane Creek Development Watch has a nickname: "The Watch"

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- Dave Closser at The Watch: 303-859-1080; daveclosser@gmail.com

Living Rivers and Kane Creek Development Watch (hereafter referenced together as "Watch") have filed a lawsuit in the Seventh Judicial District Court of Grand County challenging the validity of the water rights claimed by Kane Creek luxury resort developers ("Developers"). Watch's lawsuit states that the Developers' groundwater and Colorado River water rights were not put to beneficial use for more than seven years, which, under Utah law, means the water rights are subject to forfeiture. Development, even the preliminary bulldozing, cannot legally continue without a water supply.

Local opposition to the proposed Kane Creek luxury resort has been strong and consistent, with residents voicing concerns at standing-room only public hearings. "This project does nothing to address Grand County's affordable housing crisis—in fact, it makes it worse," said Laura Long, a Watch activist and frequent speaker at the hearings. "It's an exclusive enclave for wealthy investors that would drive up land prices, strain local infrastructure, cost local taxpayers money, and destroy the natural character of the canyon and the Colorado River floodplain." The resort proposal (which has changed several times) calls for over 550 high-end housing units, 70,000 square feet of commercial space, and 100 overnight accommodations in the heart of the Kings Bottom area.

Bob Phillips, a water right owner and Moab Mosquito Abatement District manager for 23 years who frequently observed and assessed the proposed project site, says, "Utah law is very clear that if water rights aren't put to beneficial use for seven years, those water rights are no longer good. Anyone who has spent time in the Kane Creek development area knows that there's barely been any irrigation there for decades. Therefore, the developers have lost their right to this water--and there are plenty of other people who want it."

In their prior protest to the use of these water rights, the U.S. Bureau of Land Management (BLM) noted that several natural springs on public lands adjacent to development could shrink or dry up due to increased groundwater use at the development. The BLM's springs are critical for wildlife and nearby native plants and hanging gardens--places like Moonflower Canyon, Hunter Canyon, Pritchett Canyon, Kane Canyon, and the Behind the Rocks Wilderness Study Area.

John Weisheit, Colorado Riverkeeper and director of Living Rivers agrees: "We need to show respect to the Colorado River and our water supplies in times of prolonged drought, water scarcity, flood events and in land use. The Developers of this luxury resort on the Colorado River fail to do so."

Dave Closser, a Moab resident, has been monitoring the resort's progress from the beginning. He is concerned about safety and delays on Kane Creek Boulevard, a rough and narrow gateway access road for public recreation traversed daily by tourists and Grand County residents alike. "The resort construction and massive infrastructure development will make accessing all of Kane Creek Boulevard, and nearby recreation areas, difficult and dangerous for years. There will be long delays on the narrow road along the River, and there are no go-arounds. Local businesses could be forced to cancel or reduce their operations which will trickle down to their bottom line and the pockets of their employees. And who is going to pay for the road expansion? It's going to cost millions of dollars, and the federal government has already declined to fund it."

Several local tourism business owners submitted statements in support of the lawsuit, noting that the resort and its water use could damage their businesses.

Kane Creek Development Watch is a grassroots citizen's group based in Moab. It sprung up in 2024, in response to this resort proposal. Its strong network of donors and activists have been pushing back against the well-funded and politically-connected Developers, including by funding this lawsuit (which is funded entirely by hundreds of local residents and visitors) and collecting 17,850 signatures from residents and others opposed to this massive resort. Watch is dually focused on (a) mitigating impacts from the development on the unique area it would decimate, the surrounding ecosystem, and adjoining public lands, as well as (b) preventing additional strain on the water supply of the Colorado River and its tributaries, which are over-appropriated.

###

DOCUMENTS:

- [The complaint and exhibits](#)
- [The complaint only](#)
- [The exhibits only](#)

ADDITIONAL WEBSITES:

- <https://kanecreekwatch.org/>
- <https://www.livingrivers.org/nonprofit/moab-ut>

###

02/21/25

Legal Intervention Defends Clean Air from Fossil Fuel Industry in Utah's Uinta Basin**Contact:**

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Legal Intervention Defends Clean Air from Fossil Fuel Industry in Utah's Uinta Basin

DENVER— Environmental and public health groups [filed a motion](#) Thursday to join a federal lawsuit defending the Environmental Protection Agency's efforts to strengthen clean air safeguards in northeastern Utah's Uinta Basin.

"We're fighting back against greedy polluters asking the court for a get-out-of-jail-free pass to keep poisoning the air Utahns breathe," said Ryan Maher, an attorney at the Center for Biological Diversity. "The Trump administration's fixation with dismantling bedrock environmental laws and thrusting the door open for toxic industries means it's up to us to help defend clean, breathable air in court."

In 2024 the EPA found that the Uinta Basin, a large oil and gas extraction region, exceeded health-based limits for toxic ground-level ozone, the key ingredient of smog. The decision requires the state of Utah to develop a stronger clean air plan and reduce pollution in the region.

The Utah Petroleum Association, joined by the state of Utah, several Utah counties and Ute Tribe oil and gas interests, sued in federal appeals court to overturn the EPA's decision. The motion to intervene asks the court to allow the environmental and public health groups to join the EPA in fighting the lawsuit and defending clean air for the Uinta Basin.

"Clean air in the Uinta Basin continues to be undermined by unchecked fossil fuel extraction, putting people and communities at risk. Ozone pollution can have broad adverse health effects, including destroying lung tissue, and even causing failed pregnancies and still births, said Jonny Vasic, executive director of Utah Physicians for a Healthy Environment. "We won't sit back and let the oil and gas industry and its cronies in Utah state government fight to put polluters ahead of our health."

Ozone in the Uinta Basin has soared to levels normally experienced in big cities, the result of unchecked oil and gas extraction. Drilling, fracking, pipelines and tanker trucks in the region release enormous amounts of pollution, including volatile organic compounds and nitrogen oxide gases.

A poisonous gas, even at very low levels ozone is a [serious respiratory irritant](#) that can harm lungs, trigger asthma attacks, worsen lung disease and cause premature death. "This intervention is about defending the Uinta Basin from the oil and gas industry's relentless push to despoil the region's air, waters and lands for its own profit," said John Weisheit, conservation director for Living Rivers. "The Uinta Basin's smog problem won't go away unless and until the industry stops getting a free pass to pollute."

Plans to construct a [new oil railroad](#) in the Uinta Basin could quintuple oil production and worsen air quality. The Uinta Basin railway, which was [blocked](#) by a federal court in 2023, is still under consideration as the [U.S. Supreme Court weighs](#) approval. In 2018 the Uinta Basin was declared a "dirty air" area under the Clean Air Act because of unhealthy ozone. The region has continued to suffer from high pollution. Under the federal Clean Air Act, the EPA was required to find the Uinta Basin failed to comply with ozone health standards, a finding that triggered stronger clean air safeguards.

More information about the Center's fight against air pollution is available at:

[Protecting Air Quality Under the Clean Air Act.](#)
