

Utah, Colo., N.M. are overusing Colorado River supplies, environmental group says

Three Colorado River Upper Basin states are overusing their river supplies and approaching a “cliff” from which climate change will force them to make large reductions in water use, says an environmental group’s new report.

The Utah Rivers Council report strikes hard at water use in Utah, Colorado and New Mexico. It says they currently use more water each year than their legally available supplies allow. Wyoming is the only Upper Basin state to get a “surplus” rating.

If this trend continues or worsens and river flows keep declining, the Upper Basin states could well become vulnerable to what’s known as a Colorado River “compact call” from the Lower Basin states to reduce their take from the river, the report says.

That would happen if the Upper Basin could no longer meet its obligation under the 1922 Colorado River Compact to deliver at least 75 million acre-feet and possibly more to the

Lower Basin over 10 years, says the report.

A compact call would require major water-use cutbacks by Upper Basin states to insure the Lower Basin states of Arizona, California and Nevada get their share of river water.

Aggravating this situation is that Upper Basin states plan to build a new series of dam and diversion projects that the report says could take river supplies from other users in the basin states.

Together, these projects could remove around 400,000 acre-feet from the river, says a list compiled by another environmental group, the Boulder, Colo.-based Save the Colorado. The Upper Basin states have said these projects would allow them to fully develop water rights as determined by the 1922 compact.

Most prominent of these projects is the proposed Lake Powell Pipeline, a hotly debated plan to ship river water 140 miles from the declining lake to the booming metropolitan area of St. George, Utah, to serve and potentially further encourage its rapid growth.

The pipeline, which would deliver almost as much water as Tucson gets in a year from the Central Arizona Project, has been estimated to cost from \$1.1 billion to \$2.4 billion.

The report comes as the river flows keep dropping and

tensions increase over use between the Upper and Lower basin states. Since 2000, the river's annual flow has shrunk 19% from the 20th century average of about 15 million acre-feet, to about 12.3 million to 12.4 million acre-feet a year.

The Lower Basin states have long acknowledged that even before climate change's effects on the river, they're taking more water out of the river each year, between normal use and evaporation, than nature puts in.

This "structural deficit" comes close to equaling the annual supply delivered to Arizona farms and cities, including Tucson, via the CAP's canal.

The Lower Basin states have collectively approved two sets of drought-related plans since 2019 to conserve at least 1 million acre-feet over two years and more over the longer term.

Many Upper Basin water officials have, in turn, said Lower Basin overuse has drained Lake Powell, which now is only 28% full and runs a risk of not being able to deliver electricity to more than 5 million customers in six states as early as 2023. They, too, have signed on to a drought contingency plan to save river water.

But they've made no commitments to save specific amounts yet, only to consider a blueprint for "demand management,"

to pay farmers and others to not use their supplies.

Accordingly, the new rivers council report finds “an alarming lack of discussion” about overuse across the Upper Basin.

“The Colorado River is like a household income source and the reservoirs are like a huge savings account. For the last 20 years, the household’s income has declined and the residents of the house have been living off their savings,” the report says. “Yet some house residents don’t realize they have been slowly draining their savings account.”

States’ reactions

With few exceptions, Upper Basin water officials contacted by the Arizona Daily Star and other media didn’t directly contest the accusation that they’re overusing legally available supplies.

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But officials of all four Upper Basin states emphasized that their states have more than met their legal obligations to deliver water to the Lower Basin. They said they’re closely watching the river’s tenuous condition.

For instance, in its annual report for the yearlong period ending Sept. 30, 2020, the Upper Colorado Basin Commission reports that the flow at Lees Ferry, Arizona, during the preceding 10-year period was 92,509,400 acre-feet, pointed out the Colorado River Authority of Utah. Lees Ferry is an official measuring station for the river's flow between the Upper and Lower basins.

Provisional data gathered by the U.S. Geological Survey suggests the flow at Lees Ferry for the 10 years ending on Sept. 30, 2021, was 88,049,400 acre-feet, said Amy Haas, the authority's executive director. The authority formed this year to "protect, preserve, conserve and develop our legal share of the Colorado River."

"The important thing to recognize is that this claim of overuse is not scientifically based," Gene Shawcroft, Utah's Upper Colorado River Basin commissioner, recently was quoted as telling Aspen Public Radio. "I don't know how we're overusing it when we have delivered more ... than what we are obligated to deliver." Shawcroft also chairs the Colorado River Authority's governing board.

Utah recognizes and is closely monitoring changing hydrology on the Colorado River, Haas told the Star in an email: "Because Utah's citizens are among millions who rely on the Colorado River, this is an issue of critical importance to our state and the West."

Regardless of future conditions, Utah is committed to living within its 23% legal share of the supply available to the Upper Basin, "whatever that amount may be," Haas wrote.

Utah is implementing a number of proactive measures, including a large investment of resources on conservation, reuse measures and farm irrigation efficiencies, she added, including a \$500 million proposed outlay for water conservation and restoration projects in the state's proposed fiscal year 2022-23 budget.

Colorado is also well aware of the current conditions in the Colorado River basin and the speculation related to future conditions, said Sara Leonard, a Colorado Water Conservation Board spokeswoman.

"We will continue to meet our legal obligations into the future and look forward to working towards fair, sustainable solutions for the entire basin," Leonard said.

She said Colorado has signed water rights settlements with two Colorado River tribes, the Ute Mountain Ute and Southern Ute. "Their water needs are allocated and protected within those settlements. The assertion that these rights are under any kind of threat is a misunderstanding," Leonard said.

But if all tribes in the other Upper Basin states were to start

using their full Colorado River rights, the basin's total water use would rise by 440,000 acre-feet to total 5.04 million acre-feet, says the new report from the rivers council.

And in reality, the only reason Upper Basin states have met their water delivery obligations under the compact is that they've used "stored reservoir water to patch up the gaps between their overuse and their delivery obligation," said Nick Halberg, a rivers council research and policy analyst.

"In other words, the Upper Basin states are taking out more water than Mother Nature is putting into the reservoirs. This is a big reason why reservoirs in the basin have declined so substantially since the year 2000," Halberg said.

"If Upper Basin states continue on the path they are on now of developing more water (uses) and not reducing use, the reservoirs will soon deplete so much as to become unusable to the basin states."

The proposed diversions from the river are "irresponsible spending proposals which jeopardize existing water users inside the same state," said Zachary Frankel, the rivers council's executive director. "Proponents of such proposals must be held responsible for their ignorance about the current plight of the Colorado River Basin water supply."

Responding directly to Colorado's statement about tribal

water rights, Frankel said other tribes inside Colorado state boundaries have rights to develop 113,000 acre-feet of water which haven't been accounted for.

"Tribal water rights are *not* protected," Frankel said.

Specific findings

Some specifics from the new report:

It pegs the existing Upper Basin deficit at up to 504,000 acre-feet per year — if one assumes the Upper Basin has a legal obligation to deliver half of Mexico's annual share of 1.5 million acre-feet.

That has long been a point of legal contention among scholars and other water experts, however. It generally remains unsettled as to which viewpoint is valid. The question could be decided in court.

If the Upper Basin had no Mexican delivery obligation, it would be in surplus condition for now — nearly 250,000 acre-feet worth, the report finds.

But continued declines in river flows and/or increased tribal use of waters would ultimately push the basin into a deficit, possibly a major one, even with no obligation to deliver Mexico's river water share.

If the river's flow was to decline by 25% from 20th century averages, the deficit would jump to 742,000 acre-feet, even if no obligation exists to deliver part of Mexico's supply.

If Upper Basin tribes were to put into use all their Colorado River water rights, the deficit would be nearly 200,000 acre-feet even under the river's current flow regime and without any Mexican delivery obligation.

At a 25% river flow decline, and with full tribal water use, the basin's annual deficit would climb to 1.185 million acre-feet, with no Mexican delivery obligation, the report says. That's almost identical to the Lower Basin's structural deficit.

If the flow drops 40%, the Upper Basin would have only 1.5 million acre-feet of supply. Even with no Mexican delivery obligation, its deficit would then top 3 million acre-feet, meaning "all the Upper Basin states are essentially gutted" when it comes to river water, said Jeff Kightlinger, a former top water official in Southern California who reviewed the council's report for the Star.

Outside reviews of the report

Kightlinger and Eric Kuhn, a former water official in the Upper Basin, gave the report generally favorable reviews although Kightlinger in particular had some criticisms.

"My thoughts are that the authors' basic premise is correct," said Kightlinger, who retired early this year as general manager of the Metropolitan Water District, a wholesale water agency serving water suppliers in six Southern California counties.

"We currently have seen about a 20% loss in flow. We all expect it to get somewhat worse before stabilizing. All of the states will all have to reduce their current usage by varying amounts, except for perhaps Wyoming."

That said, some of the conclusions are overstated to make a case for dramatic use reductions and for freezing future diversions, Kightlinger said.

He faulted the report for not providing much evidence to back up its case that many new diversions are planned besides the Lake Powell pipeline.

"They assert the states are not working collaboratively and are resorting to 'tribalism,' again citing the Lake Powell pipeline as an example," he said.

But actually, Utah backed away from pushing for a speedy timetable for a federal review of the pipeline "when faced with the prospect of a united Upper and Lower Basin letter challenging the project and the environmental analysis and agreed to work with the other six states on the project's

analysis," he said.

Kightlinger also took issue with what he said is the report's view that the Upper Basin can only get water "leftovers" after the Lower Basin takes in its annual 7.5 million acre-foot water allocation.

"I do think it is the more correct view of the compact and provides the basis for a compact call, but most (experts) don't think the Lower Basin can take all the water in the river without adjustment. Most believe that the Lower Basin states will also have to share in the reductions," he said.

Kuhn, retired general manager of the Colorado River District in Glenwood Springs, said, "I have a few nits — but overall, they did an excellent job."

Much of the report matches what a report from Utah State University said in February: that major reductions in water use are needed to make the river and its reservoirs sustainable, said Kuhn, an author and researcher who worked on that report. The Utah State report did, however, put the obligation to cut water use onto both river basins.

"If the flows keep going down, the Upper Basin is on a cliff," Kuhn said. "That's why Lake Powell is almost empty. What other conclusion can you come to?"

Kuhn said he has no firm opinion on the basin's obligation to

deliver part of Mexico's supply, adding, "It all depends on a number of ways to interpret the compact."

Overall, "I liked the way they set it up. You look at the tables for each state. If the flows stay at this amount, this is what you have to develop or cut. It's good math," said Kuhn."No one can predict the future, but it gives a pretty good idea of what might happen under different assumptions of future flows."

Contact Tony Davis at 520-349-0350 or tdavis@tucson.com. Follow Davis on [Twitter@tonydavis987](https://twitter.com/tonydavis987).

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[Tony Davis](#)

Reporter

Tony graduated from Northwestern University and started at the Star in 1997. He has mostly covered environmental

stories since 2005, focusing on water supplies, climate change, the Rosemont Mine and the endangered jaguar.