Hidden Passage

the journal of glen canyon institute

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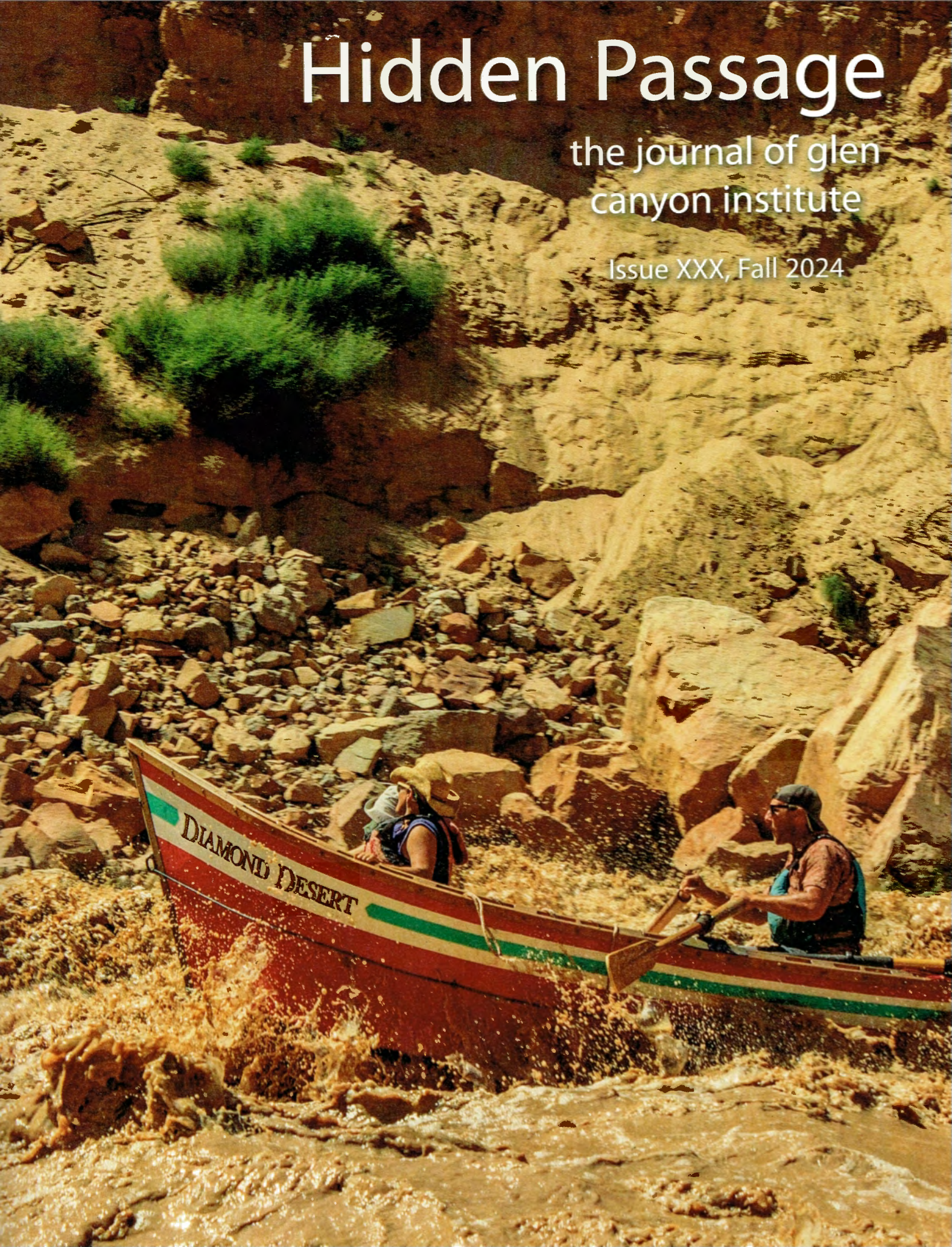

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Issue XXX Fall 2024

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Cover: Brin Finnegan rows his dory through a returned Gypsum Canyon Rapid. Photo by Morgan Sjogren, 2024.

Director's Introduction

by Eric Balken

As 2024 draws to a close and the dust settles from the presidential election, the future of the Colorado River and surrounding lands has become more imperiled than ever. The incoming administration and Congress have been clear in their desire to slash environmental protections, defund critical science, and prioritize resource extraction over ecosystem protection. We will likely see the end of historic investments in infrastructure, clean energy, and climate resiliency. These changes are particularly relevant to the Colorado River where the bulk of recent water conservation has been funded by the Inflation Reduction Act.

The alternatives for the Post-2026 Environmental Impact Statement (EIS) were released in November, outlining competing visions for how to bring the demand for Colorado River water into balance with supply. Despite calls from GCI and many other stakeholders to include an analysis of Fill Mead First and a full bypass of Glen Canyon Dam in this process, the Bureau of Reclamation (BOR) stated that they won't study the idea because it is "not an infrastructure EIS." Yet most of the alternatives describe draining upstream reservoirs to protect the infrastructure of Glen Canyon Dam. And even with major reductions in water use, early BOR models of alternatives show multiple scenarios where lakes Powell and Mead drop near dead pool, jeopardizing the health of the Grand Canyon and water delivery to the 25 million people in the Lower Basin.

Making the situation more dire, it was revealed that Glen Canyon Dam's River Outlet Works, its lowest elevation release tubes, sustained cavitational damage during an environmental flood release last year—a result of operating the dam at low reservoir levels with air and sediment entraining in the tubes. It's clear that the structural problems at the dam are becoming a serious threat, one that won't be fully remedied by the Post-2026 EIS. This fall, we also witnessed the first large-scale harmful algal bloom in Lake Powell, an effect of increased temperatures interacting with stagnant water. Algal blooms are toxic to humans and animals and will likely become a larger and more frequent problem for the reservoir in years to come.

Yet amid all of the chaos, Glen Canyon has proven to be a beacon of hope in the Basin. Its emerging ecological, cultural, and geologic wonders continue to capture the public imagination. GCI's multi-year vegetation survey is showing that emerging riparian ecosystems are thriving with native plants. Featured on NPR's *All Things Considered*, our work is offering the world a glimpse of what a restored Glen Canyon will look like. Analysis by GCI and the Returning Rapids Project also shows that more than half of the waterways within the boundaries of Glen Canyon National Recreation Area are flowing rivers, not reservoir. Likewise, more than half of visitation to the park is not focused on Lake Powell; instead, people are rafting, hiking, and exploring the wonders of Glen Canyon.

Sometimes change happens slowly, then all at once. It's important to take stock of how far the Glen Canyon restoration movement has come. Only five years ago, the idea that Glen Canyon's emerging resources have value and deserve consideration was labeled as wishful thinking. But after years of GCI's consistent documentation of the landscape and waterways, Glen Canyon and all of its amazing features are now regularly mentioned in the media, at Colorado River conferences, and in policy papers. Nature doesn't care which political party is in the White House, and the realities of climate change will continue to put pressure on this system whether we're ready or not. Within the supply and demand crisis, one glimmer of hope is that Lake Powell has essentially been draining itself and Glen Canyon's massive restoration process is well underway. Regardless of what comes next, we are committed to continuing the fight for Glen Canyon and a free-flowing Colorado River.

Beavers Return to Glen Canyon

by Catlow Shipek

Catlow Shipek examines a newly created beaver dam in Glen Canyon, in a location approximately 60 feet below full pool. Photo by Jack Stauss.

Since 2018, Watershed Management Group (WMG), a non-profit based in Tucson, Arizona, has been working to restore healthy beaver populations to the bi-national San Pedro and Santa Cruz Rivers. We were excited that this work caught the attention of friends at Glen Canyon Institute. Restoring healthy beaver populations is fundamental to the health of our desert rivers, resulting in increased flows, restored groundwater aquifers, and climate resilience. We're pleased that our community science beaver survey can now help others understand and advocate for healthy beaver populations.

After becoming curious about beaver activity seen in the re-emerging side canyons of Glen Canyon, GCI reached out to WMG to help them observe beavers and organize a pilot trip with our team. GCI sought tools and systems that would help raise awareness and insight about this re-emerging riparian habitat. We were excited to partner with the Institute, whose goals for restoring Glen Canyon as a free-flowing Colorado River are similar to WMG's goals of increasing river flow and habitat restoration in southern Arizona.

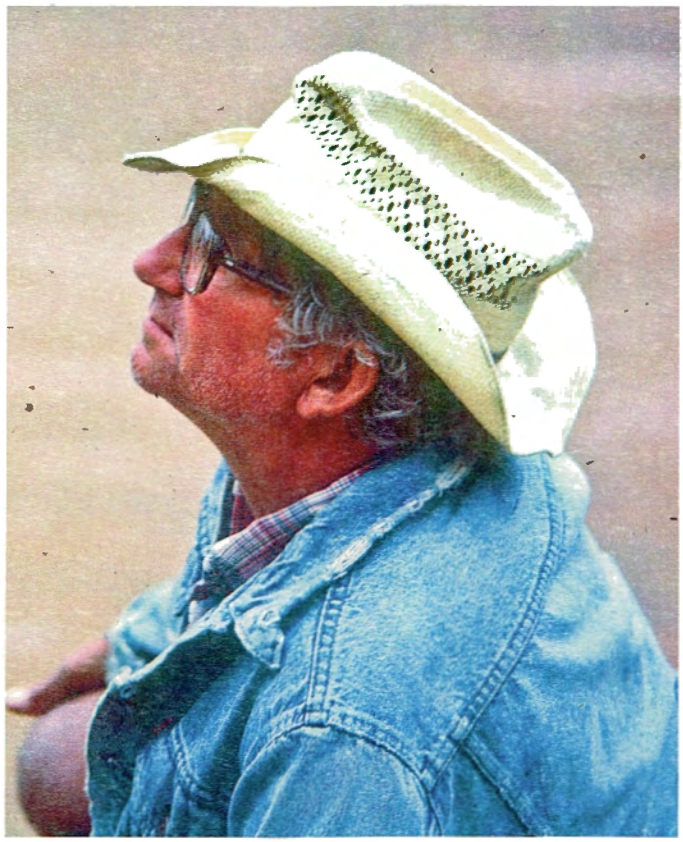
As WMG's Senior Program Director, I worked closely with GCI staff to plan an initial visit, providing opportunities for training and shared learning. Making the 10 hour road trip from Tucson to Glen Canyon in early June, WMG staff and GCI's Jack Stauss explored remote canyons and riparian environments to document evidence of beavers. The pilot trip was a success, documenting fresh evidence of beavers in three canyons, including chews, dams, and several beaver lodges. In fact, we even swam right into a beaver lodge, thinking it was a rock cave before seeing the beaver bedding, tracks, and chewed branches.

GCI aims to incorporate beaver conservation into their broader environmental research and restoration efforts. We were honored, and delighted, to visit Glen Canyon—a breathtaking and extensive canyon system with astonishingly rich and diverse riparian ecosystems beginning to emerge from the flooded reservoir as water levels drop in response to drought and water management decisions. This unique opportunity allowed us to share our experience, adaptable survey tools, and provide recommendations for future monitoring and conservation efforts.

To learn more about WMG's survey results and methodology, head to www.WatershedMG.org/BeaverSurvey2024.

The Unrelenting Howl for Glen Canyon

by Martha Ham



Ken Sleight in his element. Photo by Steve Trimble,

"My problem is that I know what is underneath that blue water." -Ken Sleight

Glen Canyon isn't forgotten. The legacy of the accidental Glen Canyon activist, Ken Sleight, now 95 years of age, is that he has never left Glen Canyon's side and continues to believe that Glen Canyon will resurface. And he has been barking about it for over 60 years now.

Hailing from Paris, Idaho and a traditional background, Ken Sleight ran a river outfitting company in the 1950s on the Colorado River through Glen Canyon. Those river expeditions came to a screeching halt with the building of Glen Canyon Dam. He witnessed the foot-by-foot inundation of Glen Canyon, "I knew the water was going to come up, but I wasn't prepared for it. Watching it all go, Cathedral in the Desert. . . . beavers drowning. It was more than I could take, I have been an activist ever since."

Since the 1960s, Ken's activism has taken many forms including writing articles, leading and supporting protests, filing lawsuits, speaking publicly, lobbying, and God-only-knows what else to keep the memory of Glen Canyon in the minds of the public and decision makers. So, at the age of 87, he tried something else: education. In 2016, he inspired Ryann Savino and me to join him in creating a museum exhibit at the John Wesley Powell River History Museum in Green River, Utah, featuring the history of Glen Canyon from the perspective of a river guide. Ryann had never curated an exhibit before nor had I produced one. The exhibit ran in 2018 and 2024 reaching a total of 25,000 visitors. Most visitors were not river runners or Glen Canyon devotees. Indeed, the uninitiated public to the wondrous landscape lost was our target audience!

Making an Exhibit

Venue: In 2016, The John Wesley Powell River History Museum stepped up to host the exhibit when other venues didn't see the relevance. I think old JWP himself was involved in making this happen as it rankled him that the reservoir bears his name.

Archivists: Ken tapped several outfitters (or their survivors) who ran Glen Canyon back in the day requesting photos or memorabilia to build a first-person, folk style portrayal of Glen Canyon pre-inundation. Ron and Jana Smith, the Quist family of Moki Mac fame, Carolyn Short, daughter of river poet Vaughn Short, and Stuart Reeder were invaluable in sharing their striking archives.

The Money: Ken, Ryann and myself, along with the John Wesley Powell River History Museum, counted on you, Glen Canyon loyalists, for the funding to bring the exhibit forward. And you generously delivered! 84 of you donated in 2017 and 82 donors helped in 2023. Colorado River and Trail Expeditions (CRATE), Holiday River Expeditions, and Jennifer Speers delivered generous checks as did Mark and Gay Sleight. Utah Humanities pitched in as well. All told we raised about $42,000 that funded both years of exhibition development and installation.

A military raft from the early days of river running. Dawn Kish Photo.

Clockwise from left: exhibit curator Ryann Savinno, Martha Ham fires up the room, dozens gather in the museum for one last howl . Dawn Kish Photos.

The Creatives and Consultants: It took mapmakers, writers, photographers, filmmakers, historians, archeologists, carpenters, and a host of others to put this exhibit together. As producer of the project, I was astonished at the willingness of so many outstanding professionals answering our call for assistance and collaboration. Not one person turned down the request for help!

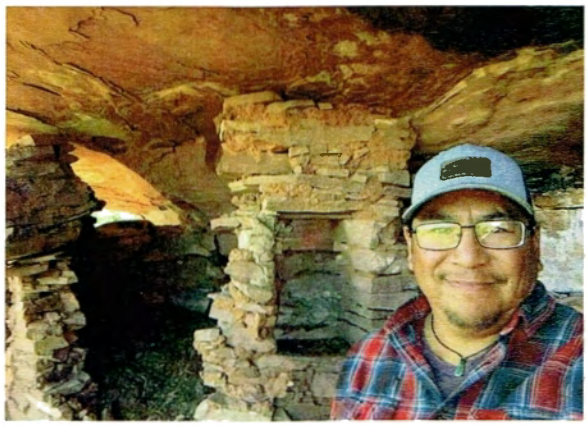
A special thanks goes to Roy Webb, Frederick Swanson, Stephen Trimble, Brad Dimock, ML Lincoln, Maria Sykes, Kevin Jones, Lyle Balenquah, Buzz Belknap, Eric Balken, Isabel Adler, John Weisheit, Elliot Ross, and Lynn Hamilton. The exhibit would not have been possible without our sponsors Epicenter, Glen Canyon Institute, Utah Public Radio, Utah Rivers Council, the Kitchen Sisters, as well as the 48 volunteers who contributed their time and energy.

We concluded the project with a rollicking, well attended and joyful two-day celebration, titled "Howling for Glen Canyon," featuring artists, filmmakers, writers, musicians, and journalists. And believe me, we howled! The likes of Craig Childs and Greg Istock graced us with a unique and magnificent multimedia presentation titled "Blood River," Dawn Kish presented her award-winning film "Tad's Emerging World, Glen Canyon Exposed," and Zak Podmore gave a talk based on his now released book: *Life After Dead Pool, Lake Powell's Last Days and the Rebirth of Glen Canyon*. Cole Jackson and Jackson Emmer were the troubadours for the evening belting out several tunes which were written while on a GCI trip to Lake Powell. Lyle Balenquah offered a transfixing acknowledgement of what Glen Canyon historically and currently means to Indigenous peoples, especially the Hopi.

It has been 61 years since the hydraulic gates closed and the flooding of Glen Canyon began. Ken is far from alone in the commitment to stand by its memory and have faith in the future of Glen Canyon. If he doesn't live to see Glen Canyon restored, he knows that you will. Until then. . . the howling goes on!

Hopisinmuy Wu'ya'mat Hisat Yang Tupqa'va Yeesiwngwu
Hopi Ancestors Lived in These Canyons

by Lyle Balenquah, Hopi,
Greasewood Clan, Paaqavi Village



Left: Lyle conducting field work at Bears Ears National Monument. Right: Lyle and Autry Lomahongva at Petroglyph Panel in Glen Canyon.

From a Hopi perspective, the Glen Canyon region is recognized as a vast landscape that safeguards monuments of Hopi culture and history. This is land of the ancestors, known in Hopi as Moti'sinom, "The First People" and following them, the Hisat'sinom, "The People of Long Ago." These two concepts describe not only the cultural evolution of Hopi ancestry, but also acknowledge the longevity of their presence, spanning millennia back into time periods designated as "Paleo" and "Archaic." Hopi ancestors were among the very first to experience this landscape and call it Home. Who were these people? And where did they go?

Hopi oral traditions recall that many ancestral clans comprised these groups. They include, among others, the Flute, Deer, Fire, Bearstrap, Water, Butterfly and Rattlesnake clans. For generations they occupied this area, raising their families, and marking their presence upon the landscape. We see traces of their lives within the archaeological record as artifacts, which include ancestral villages, ceramics, stone tools, textiles, and burials of departed ones. Hopi people believe these are the metaphorical "footprints of the ancestors," left behind as testimony of their time in the sculpted sandstone canyons and mesas.

Eventually the clans moved on, embarking on a series of migrations in search of their final destination. During these movements, knowledge was accumulated: medicine, technology, architecture, language, arts, celestial understandings to track the seasons, and ultimately, the development of agriculture. We believe this farming tradition, dedicated to the cultivation of corn and other crops, heralds a cultural shift that led us on the path to "Becoming Hopi". Finally, after thousands of generations, the migrations are completed with the great gathering of the clans at Tuuwanaasavi, "The Center of the Universe"—the Hopi Mesas of today.

This history underscores the cultural continuity between modern-day Hopi and our ancestors. How this connection manifests, often daily, is in the traditional know-how a Hopi person maintains: the crops we grow, the art we create, the ceremonies we perform, and the language we speak. Our ancestral history, the invisible strands of genetic code, and the visible evidence of material culture, are continued in the modern expressions of Hopi people.

These connections are also maintained within Hopi songs and prayers that commemorate landforms found in and around Glen Canyon, such as Toko'navi—Paiute/Navajo Mountain, Namiqw-wunu—Rainbow Bridge, Pisis'vayu—The Colorado River and Yotse'vayu—The San Juan River. An ancient oral history from the Rattlesnake clan details the adventures of Tiyo, a young Hopi boy who journeyed down the San Juan and Colorado Rivers in a cottonwood raft, centuries before John Wesley Powell claimed to be the first to do so.

In modern times, Hopi people continue to visit the Glen Canyon area. We come as any visitor wanting to see and explore these lands. Yet we also come to pay respects to our forebears. We know that below the waters of Lake Powell there is a landscape that contains memories of Hopi history. I would like to see Glen Canyon restored to its former, natural beauty: hallowed ground that is imbued with the spirits of ancestors, who remain as stewards over a Hopi cultural landscape.

Lyle Balenquah, Hopi, is a member of the Third Mesa Greasewood Clan from the Village of Paaqavi (Reed Springs Place). He has worked as a field archaeologist for over 20 years, documenting and preserving Hopi history across the Southwest. Through his work, he advocates for the protection of ancestral landscapes, including the preservation of traditional Hopi knowledge about their ancient past. When he isn't doing archaeology, he also works as a river and hiking guide, and creating unique turquoise mosaic jewelry inspired by his Hopi ancestry.

Glen Canyon by the Numbers: More Than a Reservoir

by Mike DeHoff and Eric Balken

Boaters float down a section of the San Juan River once submerged under the reservoir. Photo by Elliot Ross.

There was a lot of hoopla about last year's visitation figures released by the National Park Service at Glen Canyon National Recreation Area (GCNRA). And for good reason: they are noticeably higher than years past—a reported 5 million visits (up from 3 million in 2022) to the park unit based on preliminary data from the National Park Service.

There is a prevailing assumption that every visit to Glen Canyon equals a visit to the reservoir, or that the reservoir is the only attraction for visitors. But upon closer inspection of NPS's breakdown of locations visited, the numbers tell a different story: most visitors coming to Glen Canyon are not there for the reservoir. Acknowledging this reality would go a long way toward fostering the diverse and evolving recreational, ecological, and cultural resources of Glen Canyon—and working toward the Park Service's sustainability commitments.

We exported and analyzed the annual visitation numbers from the NPS website. The breakdown shows us that the reservoir is not the main focus of interest in the region. We can assume with high confidence that Escalante, Hite, Lee's Ferry, and Horseshoe Bend are nearly all non-reservoir districts. These areas include visits from river runners coming down Cataract Canyon and launching Grand Canyon Trips at Lee's Ferry, hikers in the Paria and Escalante regions, and sightseers at the Horseshoe Overlook. Based on these figures alone, we see that at least 51% of visits were to non-reservoir areas.

GCNRA Visitaion 2023		PCT of Total
Non-Reservoir Visits: Hite, Lee's Ferry, Horseshoe Bend, Escalante	2,543,761	51%
Reservoir Visits: Wahweap, Bullfrog, Halls Crossing	2,424,459	49%

While the other districts of Bullfrog, Wahweap, and Halls are marina-focused, not every visitor to these areas necessarily comes to recreate on the reservoir. Some are campers, RVers, or road trippers checking out a number of the plateau's parks.

Take a look at the visitation numbers for Halls Crossing, for example. Halls had significantly more recreation visits than Bullfrog (the main marina for the northern reservoir), despite its boat ramp being closed for almost half the year and the Halls Ferry itself being out of operation. The Halls area has no hotel or restaurant, and far fewer services than Bullfrog Marina, so it's hard to believe that the region saw more reservoir traffic than Bullfrog.

If the Halls numbers are accurate, they must include land-based recreation and river running, as the district also includes the takeout for the San Juan River. How do those users contribute to GCNRA's visitation totals? The figures released by NPS don't make that distinction.

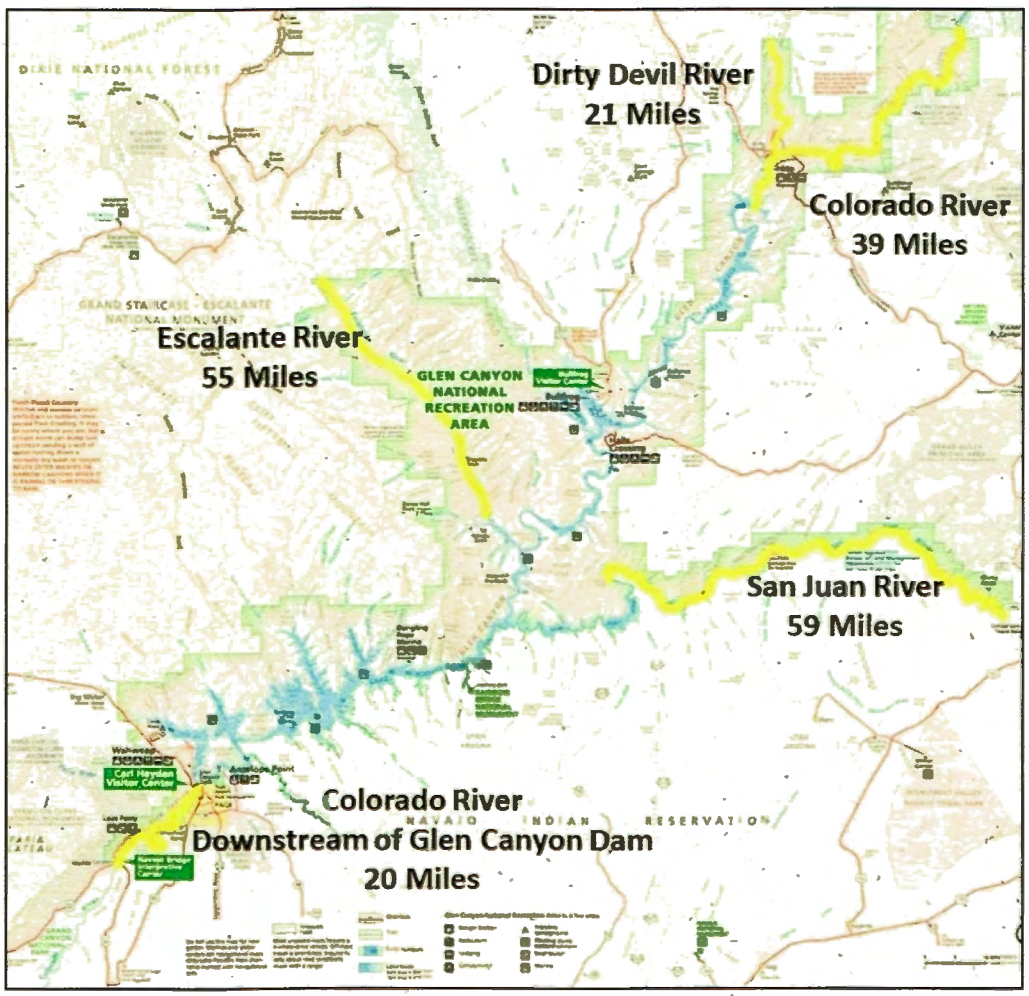
GCNRA District	2023 Visits
Wahweap District	1,979,942
Bullfrog District	202,115
Halls Crossing District	242,402
Hite District	221,429
Lees Ferry District	1,402,788
Horseshoe Bend	787,465
Escalante District	132,079
Total	**4,968,220**

The Hite district numbers also beg for explanation. The region, which used to be home to the reservoir's northernmost marina, has since become a flowing river cutting through large sediment deposits. There is a sparsely used campground near the old marina site, as well as the takeout for river runners coming off of Cataract Canyon. The records show 14,356 visitors in November and 9,726 in December—months when there is little to no river running traffic. The numbers we see in December could reflect only Highway 95 traffic, picked up by counting vehicles on the road. A more clear picture of the specific types of recreational visits to these areas would be extremely helpful for land managers and advocacy groups, as this region has gone through extensive change in the past decade.

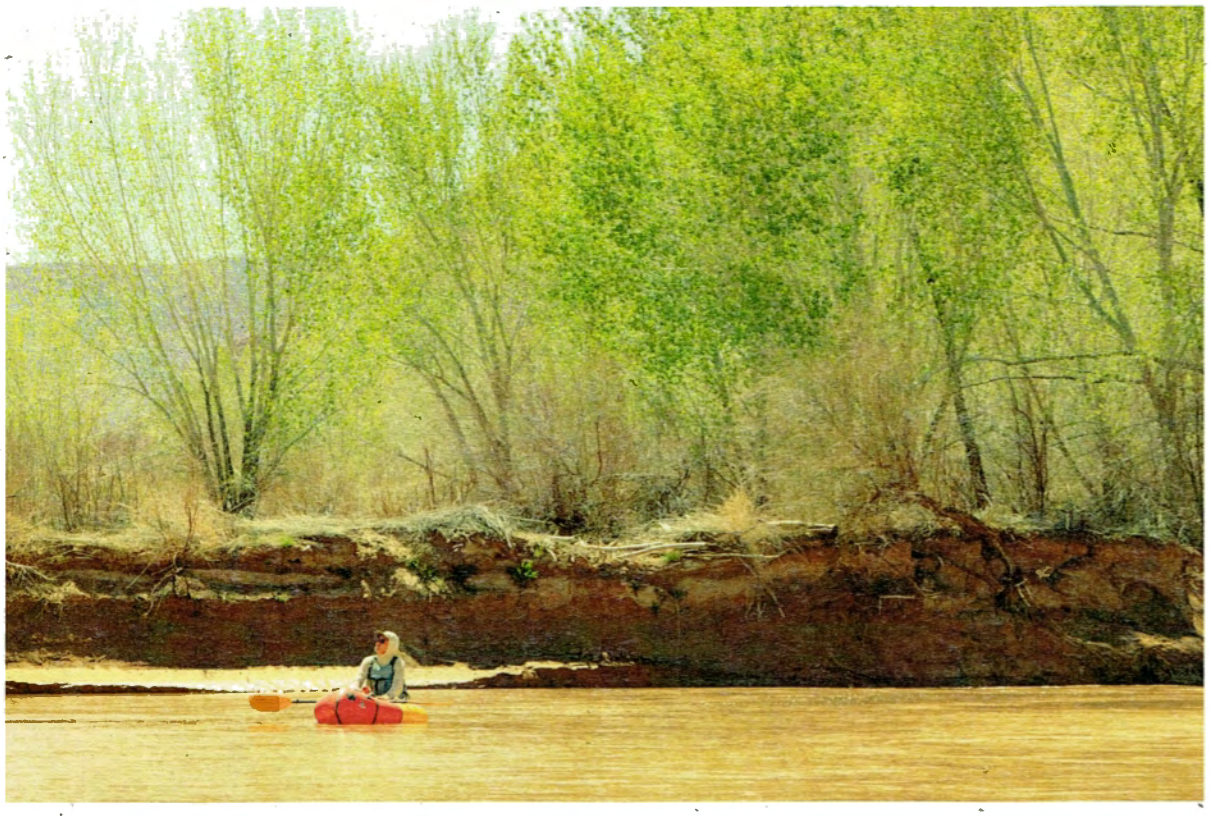
Extrapolating our findings and distinguishing between reservoir visits vs. river and land visits, we would likely see the overall visitation numbers get closer to a 60/40 split, with non-reservoir visitors being in the majority.

As long as there is a reservoir behind Glen Canyon Dam, visitors will recreate on it. But as the reservoir has declined over the past two decades, the park has changed significantly. Areas that used to be a playground for houseboats and jet skis are now lush riparian rivers and streams, with well-established native plant and wildlife communities. The peripheral reaches of the reservoir's high-water era are now free-flowing rivers, with thousands of visitors boating down them every year.

If you compare the total miles of flowing river to miles of impounded river in GCNRA, half of the waterways managed by GCNRA are flowing rivers. In total there are almost 200 miles of navigable, flowing river in GCNRA: approximately 39 miles in Cataract/Narrow Canyon, 59 miles on the San Juan, 55 miles on the Escalante, 21 miles on the Dirty Devil, and 20 miles below the dam, almost 100 of those miles were once under the reservoir.



A map highlighting the rivers within the boundaries of Glen Canyon National Recreation Area at elevation 3,565 feet above sea level. At this elevation, there are nearly 100 miles of flowing river that were once inundated by the reservoir.



A packrafter floats beneath a cottonwood gallery on the San Juan River, an area once 75 feet under the reservoir. Photo by Elliot Ross.

These figures will change from year to year with fluctuations of the reservoir, but suffice to say there are a lot of river miles in GCNRA. Glen Canyon's rivers don't get the same recognition as the reservoir. The restoring river miles, as both recreational and ecological resources, have hardly been acknowledged by government agencies.

In a Draft EIS released last year on near-term Colorado River Operations, it was stated that river rafting in GCNRA above Glen Canyon Dam wasn't a significant enough resource to be considered in its analysis, despite the thousands of river runners in the park. The North Wash boat ramp, the primary takeout for visitors who float Cataract Canyon every year (4,500 in 2022), has been all but abandoned until a new location can be established—hopefully by 2027. Not only has this become hazardous to river runners on private trips, it is also a financial burden to Moab- and Green River-based outfitters who must now motor an additional 50 miles to Bullfrog to take out their boats.

Regardless of personal opinions about the reservoir in Glen Canyon, it is now only 33% full—despite last year's massive runoff—and climate projections suggest the Colorado River's flow will continue to decrease in coming years. With this in mind, we can expect the changes happening in Glen Canyon to continue. Non-reservoir use is likely to grow in the park, and its management should be optimized to accommodate it. It is wrong to assume that all visits to GCNRA are because of the reservoir.

The changes at Glen Canyon have created immense challenges for the Park Service. It would be hard to find another unit of the National Park system that has gone through as much transformation as Glen Canyon. Park Service staffers have done their best to adapt to the changes at the park, and protect and preserve resources in many areas of Glen Canyon. But as long as there is a large reservoir in the park that fluctuates wildly, these challenges will persist.

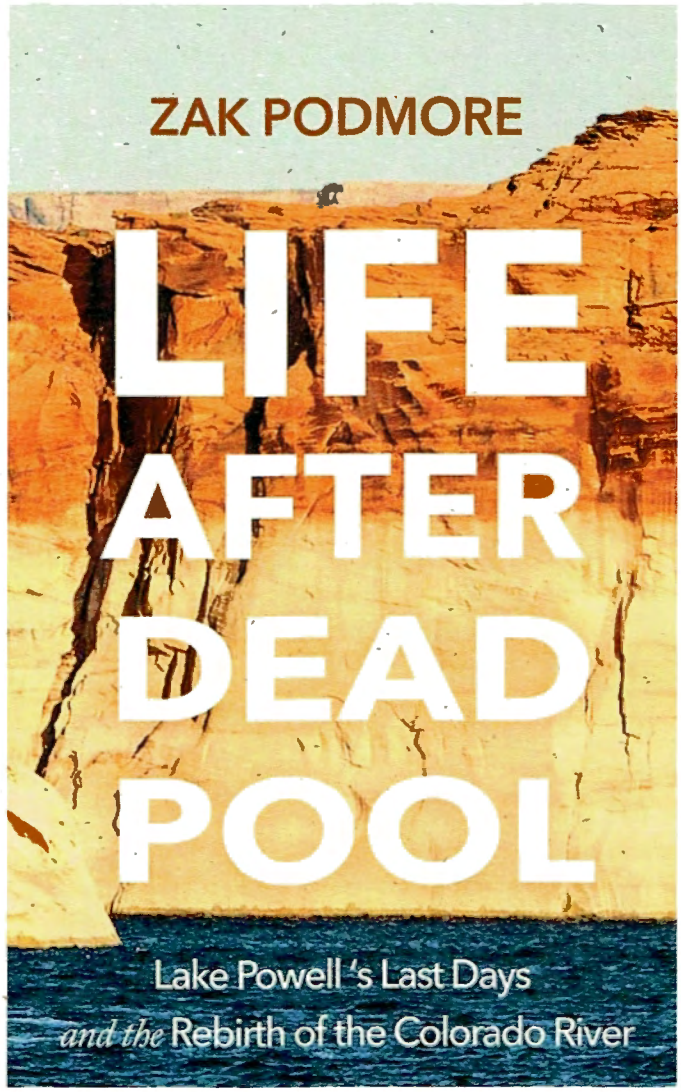
Furthermore, the changes happening in Glen Canyon are opening up new opportunities for recreation and the rebirth of the canyon's unique riparian and upland ecosystems—documented extensively by Glen Canyon Institute, the Returning Rapids Project, and the media.

Fostering these new recreational and ecological resources in Glen Canyon would align with the National Park Service's Green Parks Plan, which has the mission "To provide a framework for the NPS to reduce its environmental impact at all levels of the organization." Houseboating requires purchasing thousands of dollars worth of fuel. When it was in operation, Dangling Rope Marina alone sold 1.5 million gallons of gas per year. What better way to reduce environmental impact at GCNRA than to optimize the park for users who aren't cruising around a reservoir in gas guzzling boats?

To quote former GCNRA superintendent Billy Schott who spoke about the prospect of Glen Canyon without a reservoir in 2021, "We'll have more people coming here to raft than they have in the Grand Canyon. It'll be a different place, but people will still enjoy it. It's just change. We just have to adapt to it. There's just no end to how much we can do."

Book Review: *Life After Dead Pool: Lake Powell's Last Days and the Rebirth of the Colorado River*

by Jack Stauss



In late 2021, I joined a science expedition in Cataract Canyon. For a week, we floated through the twisting canyon country, exploring the changing landscape below high water. We were joined on that trip by Zak Podmore, a young reporter and author. He wrote a piece for the *Salt Lake Tribune* about the adventure, meticulously detailing the work being done and the rapid transformation taking place along the river. From that article, and the people he met on the river trip, an idea blossomed: it was time for Glen Canyon's story to be told in the new era of water scarcity and climate change, a book telling the story of the place in the 21st Century.

Over the course of two years, Zak joined Glen Canyon Institute and a variety of other experts on dozens of trips to work on his new book released this fall: *Life After Dead Pool.* He traversed the entirety of the canyon—exploring the main channel, the side canyons, slots, glens, alcoves, and bays. He hiked through quicksand, clear creeks, tumbleweed and new-growth willow. He interviewed tribal members, economists, policy buffs, scientists, desert rats, and river runners alike. The time he spent in the canyon informed a progressive thesis for the canyon: it is time to drill bypass tunnels around Glen Canyon Dam at river level and let the Colorado River run free once again.

I particularly enjoyed Zak's blend of storytelling with interviews and hard data that he collected on his many trips. In the chapter "Where The Willow Grows," Zak joined one of our ecology surveys and he pairs the story of the hot and arduous work of measuring plant transects with the myriad of other scientific work in the region. He explains how the damming of the Colorado has altered its complex ecosystem: what it has meant for native fish, plants, and biocrusts. Zak, like many of us, points out that this is an amazing laboratory for change, but it is woefully lacking resources and funding. His calls throughout the book echo our work: we need a better understanding of what is happening in Glen Canyon, and in turn, better management.

The book is also a must-read for Glen Canyon history buffs. From Ancestral Puebloans, to John Wesley Powell, to Ed Abbey and Katie Lee, to the debate between Floyd Dominy and David Brower (indeed, the history of our organization), and the current Glen Canyon champions, Zak draws a throughline between various stories and value sets that have gotten us to where are today. In each chapter, he braids these players into a narrative that gives the whole book a rich depth that fully contextualizes the canyon as a keystone environmental issue.

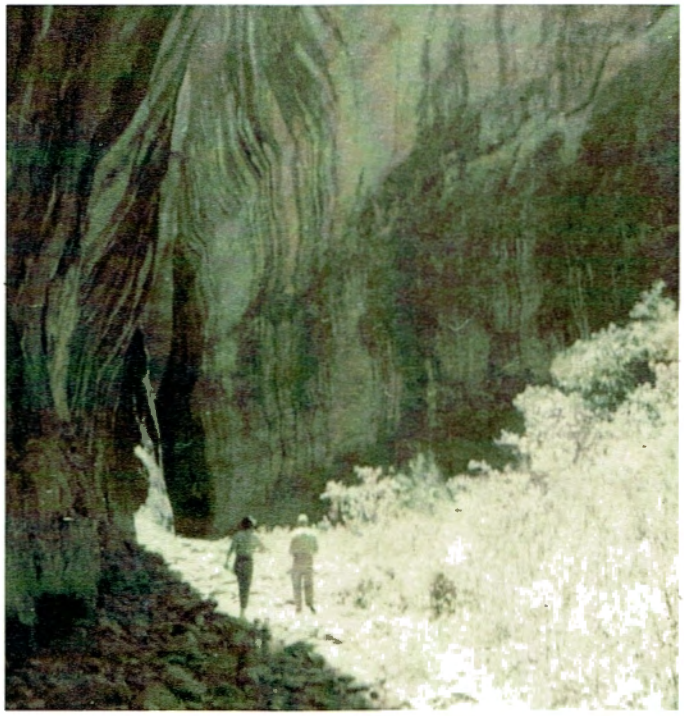
But *Life After Dead Pool* isn't just science and history. It's Zak's longtime relationship with the river and landscape. His stories tracing Glen Canyon run as far back as 2010, and having lived among the red rock for much of his life, the canyon country is etched into his DNA. This shines through in the book, with thoughtful prose and eloquent descriptions of the place. The book shows that there is value in the Glen far beyond our own human needs or meddling. The canyon and all its mystery is itself a character in *Life After Dead Pool.*

While the future of Glen Canyon is still unwritten, in Zak's work we have a vision of what it might look like, should we give it the opportunity. We know there is a fighting chance for the canyon to come back to life, and for what was once considered lost to instead be a shining example of the resilience of the natural world.

Order a copy of Zak's book, available now, on our bookstore at www.glencanyon.org.

An Adventure in Glen Canyon with My Dad in 1962

by Juanita Crampton



Left: hikers in a tributary side canyon. Right: Gregory Crampton on the river in Glen Canyon. Photos by Juanita Crampton.

It was August 1962, almost 62 years ago, and I had just completed my junior year in high school. I was about to be one of the last people for many, many years to experience the beauty and majesty of Glen Canyon. I knew about the dam, and based on my father's knowledge, knew the inundation of the canyon by Lake Powell was going to be a disaster in many ways.

My father, C. Gregory Crampton, was a regular in the canyons of the Colorado River. As mentioned in his book, *Ghosts of Glen Canyon*, he conducted historical salvage studies for the National Park Service in Glen Canyon from 1957 to 1963, where he and his research team made an impressive thirteen trips through Glen Canyon "identifying, documenting and photographing the evidence of man's experience there."

What I knew best and loved about my father was his relationship with nature. Being in nature, contemplating nature, and fathoming our relationship with nature captured his life long attention. He had broad and sweeping views of nature and was compelled to share his experiences.

Now that 62 years have passed and I have had my own rich, diverse, and meaningful life experience, I have forgotten many of the details of that trip through Glen Canyon back in 1962. While I don't remember all of the names of the side canyons and crossings, what I do remember is the company: my father, the boatman Frank Wright, his sidekick—Cal, I believe his name was—and the 4 members of the Garms family. Eight of us set off in two boats for the experience of a lifetime.

We often drifted along feeling one with the river, bound only by our limited minds. We camped on her banks, swam into her canyons, climbed and descended Moqui steps, inched along canyon ledges, and sang in Music Temple. Once in a while the boat towed us behind and we became acquainted with the river and the canyon from a different perspective. One afternoon Dad caught a small fish and we laughed at the prospect of a skimpy dinner.

I felt like a dwarf in Glen Canyon, a tiny mortal journeying between imposing, magnificent, vast canyon walls that had been carved over millennia by the power of nature. That my father, an inveterate modern explorer, chose to investigate and record the history of this place, gives me great pleasure. That he found his own connection with spirit in the land, water and all the elements, gives me great joy.

Dad never talked about his spiritual journey, but he didn't have to. He showed me on that trip down the Glen Canyon of the Colorado in 1962. Words were not the mode of communication with Dad, nature was. He gave me the same gift that he had been given. Him inviting me along to share his love of nature, communicated more to me than words ever could. And Glen Canyon was the piece de resistance. How could rock and river and the rhyme in the wind not show me what informs a meaningful life?

Thank you, Glen Canyon of the Colorado River. Thank you, Dad.

Notes from the Field: Cataract Canyon

by Eric Balken

Of all the restoring terrain within Glen Canyon's reservoir-affected canyons, nowhere are the changes more dramatic than in Cataract Canyon. The river corridor is where GCI was first conceived—on the banks of Ten Cent beach in 1995—at a time when the reservoir's tentacles inundated the river all the way up to the bottom of Big Drop Three. Today, nearly 40 miles of Cataract are flowing once again, with incomprehensible amounts of reservoir sediment slumping, calving, and migrating throughout the river, changing its character week to week. GCI spent ample time in Cataract this year with our members, policy makers, and our partners at the Returning Rapids Project to continue tracking the restoration of the wild, muddy, and dynamic Colorado River.

The crew of GCI's member trip on our final morning on the river. Photo by Morgan Sjogren.

GCI 2024 Member Trip

GCI's 2024 member trip was one to remember. Our cohort included members from around the country, GCI board and staff, the standout river guides at Holiday River Expeditions, and some of the foremost experts on Cataract Canyon: the Returning Rapids Project (RRP). Since 2020, GCI has worked closely with RRP as a fiscal sponsor, funder, and collaborator in an effort to document emerging resources in the canyon and advocate for improved management. Our collaboration with RRP has enhanced GCI's work and theirs, and it was a special treat for some of GCI's members to experience a Returning Rapids trip.

Mike DeHoff, RRP's principal investigator, regaled the group with stories of how Cataract started to change twenty years ago during the reservoir's first major recession. Dramatic differences in the river left river guides wondering what their next trip would entail, not knowing where or how big newly-emerging rapids would be. Mike began making notes of where new rapids were emerging and how to run them—the genesis for what would eventually become the Returning Rapids Project.

Meg Flynn, DeHoff's wife and RRP co-founder, led our group through archival histories of pre-dam river runs through Cataract Canyon. Flynn is a library scientist who has spent years combing through archival photography that tells the story of Cataract Canyon before the dam, and a hint at what the future may hold. Every morning over coffee, the group scanned scroll maps of the river corridor and thumbed through archival photos of the rapids and beaches we would encounter that day.

We were also lucky enough to be joined by Brenda Bowen, professor of Geology and Geophysics and director of the Global Change and Sustainability Center at the University of Utah. Bowen has been a key member of RRP's research cohort, studying the sediment changes in the emerging river corridor for years. The banks of the river became our classroom as Brenda explained the strata of fifty foot sediment walls next to Waterhole Canyon. The layers of pink, brown, and cobbled sand layers tell the story of a landscape that experienced decades of submersion and emergence, leaving behind a baklava-style layering of river and reservoir deposition. Brenda also brought a high powered laser range finder—a nifty tool that the group passed around to take real time elevation readings of the rapids.

Not only was this a rare opportunity for GCI's members to experience a Returning Rapids trip, replete with photo matching and scientific instruments, it was a unique gathering of folks who have decades of experience running, studying, and fighting for rivers. Many of GCI's members are longtime river advocates, involved in the protection of rivers in California, Utah, New Mexico, and Idaho, their stories around the campfire built comradery and hope for the future of the Glen.

The Holiday Expeditions guides are some of the most knowledgeable in the business, each offering a unique wealth of knowledge in ecology, geography, geology, and politics of the river they know so well. While staying true to their environmental ethos with a non-motorized trip, they also provided a comfortable experience for the group, providing the perfect setting for us to enjoy the splendor of a restoring Colorado River.

Stakeholder Trip with Returning Rapids

As summer turned to fall, I had the opportunity to participate in a policy-focused stakeholder trip down Cataract Canyon organized by the Returning Rapids team, Mike Fiebig of American Rivers, and Jack Schmidt, former director of the Center for Colorado River Studies at Utah State University. I was able to join on behalf of GCI and bring Glen Canyon to this important table of decision makers.

The robust roster of stakeholders included tribal members, government representatives, scientists, academics, journalists, and representatives from river advocacy groups from across the Basin. The goal of the trip was to experience the restoring river corridor, highlight the need to think about managing sediment in the canyon, discuss the complex policies that will shape its future, and build relationships with one another.

The trip was chock full of presentations by experts from every aspect of river management, including the role of tribes, recreation and ecotourism, managing endangered fish, the Wild and Scenic Rivers Act, sediment changes throughout the river system, the role of the National Park Service, Colorado River hydrology and climate change, and of course how policy can adapt the the new realities of the river. In Clearwater Canyon, I gave a talk on ecological succession in tributary canyons, highlighting the findings of our vegetation survey—and the opportunities of large-scale ecological restoration in Glen Canyon.

Coming from all walks of life and different perspectives in the Basin, the expedition was an important experience for a group of people who are influencing the future of the river. After working for GCI for almost 20 years, I reflected on how far the Glen Canyon restoration movement has come, and how far it still has to go. The value of Glen Canyon's emerging rivers, canyons, habitat, and recreational experiences has historically been ignored in river negotiations. Only in recent years has the emergence of Glen Canyon been mentioned at conferences and in policy papers.

Field trips like this are a crucial part of instilling the value of a free-flowing Colorado River to decision makers, and to drive home the point that storing water in Glen Canyon comes at a great cost. The discussions from this trip revealed a wide array of perspectives of how the Colorado River could be managed, but more importantly, places where we share similar visions for a healthy river.

The return of Gypsum Canyon Rapid

While the politics of the Colorado River continue to be tumultuous, drastic changes are happening on the ground (and the water) in Cataract Canyon too. One change worthy of celebration is the full return of Gypsum Canyon Rapid. At an approximate elevation of 3,615 feet above sea level, this rapid was drowned by the reservoir in the 1970s. In the past decade, with reservoir levels fluctuating downward, this section of river became free-flowing, but years of sediment deposition had covered the boulders that created its whitewater. In 2018, a riffle began to form, and with each subsequent year of runoff, grew into more formidable whitewater. By the end of this year's runoff, it appeared that most of the reservoir sediment here has been scoured away and the rapid has been fully restored. It is complex enough that river runners are encouraged to scout it, making sure to pull away from a massive hole at the bottom. One of the more exciting resouces to emerge with the retreat of the reservoir, Gypsyum Canyon Rapid graces the cover of this year's issue.

Cataract Canyon river runners utilize extreme techniques to take of the river at the North Wash "boat ramp" in Glen Canyon National Recreation Area. Photo by Kim Raff.

The North Wash Boat Ramp

One change in the canyon that has drawn the ire of river runners for years is the continued deterioration of the North Wash Boat Ramp just north of the abandoned Hite marina. The ramp, if you can call it that, has been the primary takeout for Cataract trips for over 20 years. Beginning in 2003, the Park Service created the "temporary low water access point" for river runners to take out, and in the past several years, it has been scoured away to form cliffs, calving mud banks, and a daunting incline that has required private and commercial trips to use elaborate pulley and log rolling methods to pull watercraft up the steep hundred-foot bank.

The take out is likely one of the most degraded access points in the National Park System, creating a headache for thousands of river runners, resulting in injuries to visitors, and a drastic increase in costs to commercial outfitters who now travel an additional 50 miles downstream to Bullfrog marina.

In recent years, a coalition led by the Returning Rapids Project and joined by GCI, American Whitewater, American Rivers, as well as multiple rafting outfitters, lobbied the Park Service and Utah's congressional delegation to do something to remedy the situation. Last year, the Park Service said that they would no longer perform maintenance on the ramp, choosing a more long term solution that wouldn't be implemented until 2027. While a tentative plan for a ramp at a new site was in the works, it appears those plans have been scrapped for now.

Massive sediment slump creates a new "mud rapid" in Cataract Canyon. Photo by Davide Ippolito.

Megaslumps Rock the River

Last year, near the end of a Cataract Canyon trip, we were shocked to encounter a fortification of "mudbergs" strewn across the river channel in Narrow Canyon. The obstacles were a result of a massive slump of an embankment on river left, which deposited one million cubic meters of sediment, reaching across the entire channel.

This year, another massive slump occurred just upstream, near the "fish mouth" cave, sending sediment across the river and leaving an array of obstacles, constricting the river significantly, and creating a new "mud rapid". These massive, real-time geological changes are a reminder of how quickly things can change in the restoration zone, and that river runners must be ready for sudden changes in this section of river.

A New Management Plan

Canyonlands National Park has begun developing new management guidelines for the Green and Colorado Rivers, with the potential for a Wild and Scenic recommendation. Through the new guidelines, the Park Service aims to create equal and equitable access, ensuring public and private parties alike are able to enjoy these beautiful rivers. They also seek to protect the natural and cultural resources in the area as changes in recreation and climate continue to pose new challenges.

The multi-year process is in its early stages, starting with a public comment period to gain insights into the priorities and preferences of the area's users.

GCI rallied its members to submit comments calling for:

- A safe and reliable boat ramp for groups taking out of Cataract Canyon. While the Park Service works to build a permanent takeout, the current takeout near North Wash must be improved so it can be used by the thousands of people who float Cataract Canyon every year.
- An updated management plan that directly coordinates with Glen Canyon National Recreation Area (GCNRA). It would be a mistake to develop a management plan for Canyonlands if GCNRA creates a separate management plan that overlaps the river corridor.
- A cohesive plan where Cataract Canyon is managed as a whole. Whichever NPS unit manages it should have direct control over permitting, infrastructure, etc. This could mean a memorandum of understanding should be established between Canyonlands and Glen Canyon National Recreation Area, or that the park boundary should be changed.
- A strategy to proactively manage sediment and its impacts on environmental resources, access, cultural/historic resources, and visitor safety.
- Considerations for on-going scientific research in Cataract Canyon. It is essential to understanding the rapidly evolving nature of this section of river both for the safety of its users and to anticipate future challenges.

Coming Spring 2025: Glen Canyon Exposed—Now and Then

by Dawn Kish and Jack Stauss

Limited edition Glen Canyon Exposed exhibit poster by Dawn Kish

In 2021, photographer and filmmaker Dawn Kish was presented with a very unique opportunity: Flagstaff-based printmaker Richard Jackson bestowed her the original 4x5 large format film camera of Tad Nichols, Glen Canyon legend and iconic canyon photographer. Nichols was one of the preeminent photographers of Glen Canyon before the dam was built. Along with Katie Lee and Frank Wright, he did trip after trip to document as much of the place as possible before it was gone. From those trips, Tad created his book, *Glen Canyon: Images of a Lost World*, to help show the world what they were losing. Inspired by his book, Dawn considers Tad "the Ansel Adams of Glen Canyon."

Since 1994, Kish has spent years of her life on the river, working as a boatman for the USGS, exploring its canyons, running rapids, and telling stories. Now, decades later and armed with Nichols' camera, she knew she had something special. "I never thought I would see Glen Canyon return in my lifetime", says Kish. In 2020, the reservoir started dropping, and Kish saw her moment to tell a new story and educate people about Glen Canyon.

She spent the following seasons taking photographs as she explored Glen Canyon. Not only did she use Tad's camera as her medium, but his book also served as her treasure map. She moved through many canyons people thought gone forever, now returned. And as she traveled across the land and along the river, she created a film to showcase the amazing changes taking place in the canyon. Her documentary, *Tad's Emerging World: Glen Canyon Exposed*, had its world premier at the Banff Mountain Film Festival in late 2022, and has since been screened across the West and internationally.

Now, it is time for Dawn to present her own work on Glen Canyon, alongside Nichols. Enthusiastic to bridge generations of Glen Canyon photography, Kish says "I am such a big fan of Tad's work that it is an honor to have our work together and create awareness for this epic landscape." The exhibit will display photographs and screen films created by both artists during their time period. This special historic exhibit will showcase the creation of art and advocacy for Glen Canyon.

Help Us Bring This Exhibit to Life!

GCI and The John Wesley Powell River History Museum need your help to make this exhibit happen and to keep the history of Glen Canyon alive. The photographic and written history of the Glen's loss and rebirth is a critical part of engaging the public in the fight to restore the canyon. Running from spring 2025 to spring 2026, this exhibit will directly reach thousands of visitors.

The artist is donating her time to organize and curate the exhibit, and Flagstaff-based printmaker Richard Jackson is donating the time and supplies to print the artwork. The museum is providing the space and coordination of the exhibit. Now we need help from fellow Glen Canyon supporters to get it over the finish line.

- **When you donate $50**, you will receive an invite to a special "pre-opening" event at the museum before it's opening to the public.
- **When you donate $191** (the number of vertical feet exposed at the reservoir's low point), you will receive a "pre-opening" event invite and a limited edition print of the Glen Canyon Exposed exhibit poster.
- **When you donate $500** or more, you will receive a "pre-opening" event invite, a Glen Canyon Exposed Poster, and a framed print signed by Dawn Kish.

Scan the QR code to support the exhibit.

glen canyon institute

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"If we install a drain, Lake Powell will begin to disappear downstream. Glen Canyon will bloom again. On that day, there will be a light at the end of the tunnel, yes, and also: a river."

—Zak Podmore, author of *Life After Dead Pool*

Andy Hutchinson and Dawn Kish launch their wooden boats from North Wash Canyon with the white bathtub ring 100+ feet above, along the Colorado River returning through Glen Canyon, October 2021. Shot on the Tad Camera (4x5 Crown Graphic) by Dawn Kish.