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environment

Water-use saga: The return of Glen Canyon

After a beautiful landscape reemerged, a new plan for Lake Powell water usage has taken shape.

By **Kurt Lancaster** | Correspondent of The Christian Science Monitor/ August 26, 2009 edition

FLAGSTAFF, ARIZ.

"I don't know that there's very many people in the world who want to kiss, love, hug, lick, touch, and talk to sandstone," says 89-year-old Katie Lee, as she sums up the loss she felt when the 170-mile Glen Canyon in Arizona was dammed in 1965. The Colorado River backed up, creating one of the largest reservoirs in the United States, Lake Powell, etching about 2,000 miles of shoreline as it flooded the main canyon and nearly 200 side canyons.

The purpose of the dam was to help meet the water supply of growing Western cities from Las Vegas to Los Angeles. But Ms. Lee, a former Hollywood actress who moved to Arizona and later became the winner of the Glen Canyon Institute's David Brower Award for outstanding environmental activism, would emotionally refer to the event as a "drowning."

The construction of Glen Canyon Dam near Page, Ariz., was a controversial project from its inception in 1956. Environmentalists pointed out that numerous natural wonders would be submerged. They also raised issues of land use and the cost to the environment.

For Lee, her love affair with Glen Canyon began more than 50 years ago when she first floated down the Colorado River into a rare wilderness area that Annette McGivney, author of a new book about Glen Canyon, says is "possibly more beautiful than [the] Grand Canyon."

Landscape photographer James Kay was only a child when the dam flooded the canyon, but he later heard stories that described the landscape lying below the surface of Lake Powell as an "inspiring, magical place."

In 1995, he visited the site of Cathedral of the Desert, one of those submerged natural formations. Reflecting back on the moment, he remembers thinking, "I probably will never get to see it, and it's really a shame."

Lee and Mr. Kay may have felt something of an affinity with the characters in Edward Abbey's 1975 novel, "The Monkey Wrench Gang," who planned the destruction of Glen Canyon Dam. But now the Colorado River and Glen Canyon aren't what they once were – and it has nothing to do with fictional ecoterrorists.

A drought beginning in 1999 caused a 145-foot drop in Lake Powell's water level by 2005, exposing the once-submerged canyons to sunlight, air, and public view.

When Kay discovered the lake's plummeting levels, he put on his backpack, grabbed his camera, and, along with Ms. McGivney, documented a "resurrection" of Glen Canyon over a period of five years, hiking areas untouched by humans for decades.

McGivney notes how she felt: "I'm like an explorer going into a place that has never been charted before."

At one point, Kay trekked to Cathedral of the Desert, which was no longer submerged, and "spent six hours in there photographing it as the light changed and the sun moved through the canyon. It was one of the most profound days of my life."

McGivney remembers "walking 100 feet below the high-water mark" in a canyon "so narrow you could touch [the walls with] both hands." Looking up, she noticed pink and purple colors high up on the wall, "and I realized it was the paint of jet skis [that] had gotten stuck in this narrow" before the drought.

Kay and McGivney documented their expeditions in "Resurrection: Glen Canyon and a New Vision for the American West."

"It's not just about Glen Canyon," McGivney says in an interview at a recent book signing. "It's about everybody in the West and how we live."

The book champions the idea that environmentalists and Western water managers can make better decisions:

"Lake Powell is half full, and Lake Mead is half full," McGivney says. "You've got two giant reservoirs evaporating massive amounts of water" into the desert air. "If you send all the water from Lake Powell – or most of it – into Lake Mead and fill Lake Mead, then you would cut that evaporation loss in half," an amount, she believes, that's enough to meet the water needs of Las Vegas.

Balaji Rajagopalan, lead researcher of a study to be published by Water Resources Research, a journal of the American Geophysical Union, agrees with McGivney up to a point. He calls her idea "low-hanging fruit" that could "mitigate water supply risk." But stressing water preservation over the preservation of nature, Dr. Rajagopalan suggests that it would be more logical to "store more water in Lake Powell, as it is at a higher elevation/latitude relative to Lake Mead and thus will have less evaporation."

Other scientists bring up the possibility that global warming could increase the drought in the Colorado River Basin area, greatly lessening the river's flow and affecting the reservoir system if water management practices aren't changed.

In "Resurrection," McGivney argues that Lake Powell is really a "holding tank" for large agribusinesses: "80 percent of that is sucked up by agriculture [growing] water-intensive crops like alfalfa, hay, and cotton that are grown not to satisfy market demand but to take advantage of a tangled web of subsidies and tax breaks," she writes.

That makes the issue a political one.

Barry Wirth, regional public-affairs officer of the US Bureau of Reclamation, Upper Colorado Region, insists that Glen Canyon's water management isn't political, but governed by law.

He hasn't read McGivney's book and therefore doesn't want to take issue with its author, but notes that the 1922 Colorado River Compact governs how much water states can receive from the river, with the upper basin states – Colorado, New Mexico, Utah, and Wyoming obliged to meet a certain amount of the needs of the lower basin states – Arizona, California, and Nevada. (Currently, the upper basin states consume slightly more than half their allotment, while the lower basin states consume 110 percent of theirs.)

However, in light of the effects of the drought, a new agreement – the Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead – has been finalized after an 18-month study. It covers water planning through 2026 – from agricultural use to recreation.

The research done by Rajagopalan's team considered "a couple of different demand management and reservoir operation alternatives that can help mitigate increased risk for water supply due to demand growth and flow reduction due to climate change," he says.

These will be given to the Bureau of Reclamation for consideration. But however it finally deals with the drought, McGivney argues in an interview that people who live in the desert should "embrace the fact that [they] live in a desert." They should stop living like "the way people in Kentucky live," as though rainfall is abundant.

These changes in attitude could "lead to a different set of values that guide people" in how they utilize scarce water resources, she says.

The Sierra Club and other organizations have called for the draining of Glen Canyon.

Both McGivney and Kay argue for a regulated water flow from Glen Canyon Dam, keeping Lake Powell around one-third to one-half full. This would allow city water needs to be met and the side canyons to recover, but still permit continued recreational use.

As Kay puts it, "You can go out there and jet-ski, and motorboat, or water-ski, and do whatever you want ... and you can also hike in the side canyons," because even at half capacity, there's "119 square miles [of water] still there."

That vision isn't likely to become reality quickly, however.

As Mr. Wirth notes, only Congress can change the way the Bureau of Reclamation regulates Glen Canyon Dam. And the lower basin states have more than three times the politicians in Congress than the upper basin states.

Also, should the drought recede and the policy not be changed, the canyons will flood again.

But those who have witnessed the "return" of much of Glen Canyon are holding out hope that it may be permanent. Indeed, since the early 2005 low, Lake Powell has risen to about 50 to 60 percent of capacity, submerging many of the side canyons once again. But since the lake is not full — and may not be full for some time — some of the canyons are still accessible for exploration.

Perhaps Lee says it best, talking about why she fell in love with the area in the 1950s: “You begin to talk to a place like that and it talks back to you.”

Now, the cottonwoods are returning, petroglyphs are exposed, and orange sedimentary canyons glow in the sunset. Glen Canyon is talking back.

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