2 Ariz. J. Envtl. L. & Pol'y 1

Arizona Journal of Environmental Law & Policy
April, 2011

Comment
Jeff Gilmore

DEFENDING ENVIRONMENTALISTS' PUNCHING BAG: LAKE POWELL

In 1963, Glen Canyon Dam began impounding the Colorado River's water.[1] The rising water would eventually form Lake Powell, named after Civil War hero Major John Wesley Powell who first mapped the region in 1869.[2] Today, Lake Powell is the second largest man-made reservoir in the United States.[3] The lake's finger-like nature gives it nearly two thousand miles of shoreline, more than the entire west coast of the United States.[4] The ample shoreline, combined with stunning red rock formations, fishing, hiking, and plenty of water sports, attracts roughly two million people to Lake Powell every year.[5]

While many consider Lake Powell to be a premier vacation destination, some consider it to be the most humiliating failure of the environmental lobby. Former Sierra Club Executive Director David Brower claimed that his inability to block Glen Canyon Dam's construction was his life's greatest failure and tragedy.[6] In 1975, eco-novelist Edward Abbey published his inflammatory work, *The Monkey Wrench Gang*.[7] The novel's protagonists consider blowing up Glen Canyon Dam to be the ultimate victory for the environmental community.[8] Inspired by the story, the eco-activist group Earth First! invited Abbey to witness the unfurling of a giant, fake crack down the dam's face in 1981.[9] In 2007, Gary Hansen wrote *Wet Desert*, a fictional work in which Glen Canyon Dam is successfully sabotaged and destroyed by a rogue environmentalist.[10]

Today, the Sierra Club remains vocal about their desire to decommission Glen Canyon Dam and to drain Lake Powell.[11] Smaller activist organizations, like the Glen Canyon Institute, have been born with the specific intention to drain Lake Powell and to restore the region's pre-dam state.[12] In general, the activists of this movement are collectively known as "drainers" and their rationale for draining is simple: The dam has drowned the natural beauty of the original Glen Canyon; only draining Lake Powell can reconcile the tragic loss.[13] Draining possesses some logic since it would eliminate the lake's inescapable weakness: Evaporation. Lake Powell's elevation can be as high as 3700 feet.[14] Combined with warm temperatures, extremely low humidity, and its relatively high elevation, Lake Powell is an ideal setup for evaporation. The US Bureau of Reclamation estimates that two to three percent, or as much as one million acre-feet[15] of water, is lost through evaporation annually at Lake Powell.[16]

Lake Powell's high evaporation rate is the draining community's best argument, but it is one that is seldom employed. It often takes a backseat to a more aesthetic appeal that the region was once beautiful, but now is not. It is true, Lake Powell *did* submerge a beautiful place. Yet in the process, the dam created a new and stunning expanse, one that is safer and more accessible than it ever was before. After Major Powell's expedition in 1869, it is estimated that less than one thousand people ever saw the original Glen Canyon.[17] Only the most intrepid and daring, like Powell himself, could witness Glen Canyon before the dam's construction. Today, the lake attracts millions of visitors every year.[18] Moreover, Lake Powell is considered one of the most scenic and photogenic lakes in the world. The dramatic contrast between the lake's blue water and the area's unmistakable red, layered geology is spectacular.

Regardless of who wins the aesthetic debate, the draining community faces considerable legal obstacles in their quest to decommission Glen Canyon Dam. In 1922, a seven-state agreement known as the Colorado River Compact (hereinafter ""the Compact") was created.[19] The Compact mandated how the river would be regulated and apportioned amongst states. It continues to be the driving legal force behind any manipulation of the river today.[20] The Compact divides the seven states at Lees Ferry, Arizona, just south of the Arizona-Utah border.[21] Everything upstream of Lee's Ferry is part of the "Upper Basin" and everything downstream makes up the "Lower Basin."[22] The Upper Basin states consist of Wyoming, Colorado, Utah, and New Mexico, while Arizona, Nevada, and California make up the Lower Basin.[23]

Before it was regulated, the Colorado River's flow could be anywhere from a trickle to a destructive torrent.[24] In fact, California's giant lake, the Salton Sea, is a product of such an unusually high-flow year.[25] In light of the possible destruction that the untamed Colorado was capable of, Congress passed the Boulder Canyon Project Act in 1928.[26] The project approved Hoover Dam, a massive concrete slab that would eventually create Lake Mead.[27] Hoover Dam was designed to prevent floods, to produce hydroelectric power, to supply a safe and steady flow of water to downstream customers, and to store water for drought years.[28] Hoover Dam proved to be such a success that Congress also approved the construction of Parker Dam (creating Lake Havasu), and then Davis Dam (creating Lake Mohave).[29] Additionally, smaller dams were constructed to facilitate irrigation to the fertile Imperial and Palo Verde valleys adjacent to the river.[30] Each dam allowed US Bureau of Reclamation engineers to regulate the Colorado's fluctuating flow to the benefit of the growing American Southwest. The common denominator for each dam was that it adhered to the agreed upon allocations set forth in the Compact.[31]

An important tenet of the Compact is that both basins are given an exactly equal share of 7.5 million acre-feet of water in a given year.[32] Yet before 1956, no dam was located in the Upper Basin.[33] This meant that the river ran unleashed for hundreds of miles before it began to pool behind Hoover Dam, almost three-hundred miles south of the basin dividing line at Lee's Ferry. The only way the Upper Basin could store and regulate water that it was entitled to was to get approval of dams *upstream* of Lee's Ferry. In 1956, Congress did exactly that by enacting the Colorado River Storage Project (hereinafter "CRSP").[34] The CRSP authorized the construction of several dams in the Upper Basin.[35] Glen Canyon Dam was easily the largest of the project, nearing the size of its behemoth cousin, Hoover Dam.[36] Each dam of the project had two primary goals: To allow the Upper Basin to harness the power of the Colorado River (and its tributaries) as the Lower Basin had been doing with its dams for decades, and to serve as insurance to the Lower Basin during droughts.[37] During wet years, Upper Basin dams could store surplus water to ensure that the Lower Basin allotment could still be met, even when Mother Nature had drier plans.[38]

After over half a century of work, Glen Canyon Dam has done exactly what it was designed to do. In the wet decades of the 1970s and 1980s, Lake Powell built up tens of millions of surplus acre-feet of water.[39] Fortunately for California, Arizona, and Nevada, Lake Powell's extra water helped alleviate the strain of the extended drought of the 2000s. Even in 2002, when the Colorado's snowpack reached less than a third of its average, the Lower Basin customers received their legal allotment as guaranteed by the Compact.[40]

Like Hoover Dam, Glen Canyon Dam's purposes are not limited to water storage. The dam has created a beautiful lake that provides recreation for millions every year. The once dangerous canyons that tested the likes of Major Powell can now be safely enjoyed from the comfort of a ski boat, tent, or houseboat. The dam also supplies clean and plentiful hydroelectric power to nearly six million customers in seven different states.[41]

The benefits of all the dams in the Upper and Lower Basin, including Glen Canyon Dam, are possible only through massive pieces of complex federal legislation.[42] Billions of dollars were spent and an incalculable amount of man hours were required to construct the dams.[43] In the last fifty-five years, just one major piece of congressional legislation has passed that manipulates the Colorado River,[44] and only after a grueling, multi-year battle at the US Supreme Court.[45] Procuring congressional authorization to construct a giant dam is a task almost as daunting as actually building one. Harder still would be to secure new legislation that would dismantle such a dam, stripping the benefits it has been providing to millions of people for decades.

It is undisputed that Glen Canyon Dam erased a beautiful and mysterious labyrinth of canyons that was loved so much, by so few. The Sierra Club, the Glen Canyon Institute, Earth First!, and various other environmental organizations will likely never take their figurative crosshairs off of Glen Canyon Dam. Activists will continue to zealously lament the loss of the original Glen Canyon, and curse the lake that drowned it. So long as the region is dammed, it may as well be damned in their eyes. Yet, the winner of the never-ending aesthetics debate between Lake Powell lovers and Lake Powell drainers is largely

irrelevant. Barring a highly improbable act from Congress that undoes the CRSP, Glen Canyon Dam will continue to be operational, and continue to serve the Southwest's needs of water regulation, hydroelectricity, flood prevention, and recreation.

Footnotes

[1] MICHAEL KELSEY, BOATER'S GUIDE TO LAKE POWELL 17 (Michael Kelsey ed., Kelsey Publishing 2008) (1989).

[2] *Id.* at 10.

[3] Lake Powell Magazine, The Official Guide for Lake Powell, *available at* www.powellguide.com (last visited April, 2, 2011).

[4] *Id.*

[5] KELSEY, *supra* note 1.

[6] Glen Canyon Institute, Co-found David Brower's bio, *available at* www.glencanyon.org/brower/browerhome.php (last visited April, 2, 2011).

[7] Wikipedia, The Monkey Wrench Gang, *available at* en.wikipedia.org/wiki/The_Monkey_Wrench_Gang (last visited April, 2, 2011).

[8] *Id.*

[9] Wikipedia, Glen Canyon Dam, *available at* en.wikipedia.org/wiki/Glen_ Canyon_Dam (last visited April 2, 2011).

[10] *See* Official website of author Gary Hanson, http:// www.wetdesert.net (last visited April 2, 2011).

[11] *See generally* Sierra Club, David Brower bio, http:// www.sierraclub.org/sierra/199703/brower.asp (last visited April 2, 2011).

[12] Glen Canyon Institute, About Us, www.glencanyon.org/aboutgci/aboutgci.php (last visited April 2, 2011).

[13] *Id.*

[14] KELSEY, *supra* note 1.

[15] An acre-foot of water is one acre filled with one foot of water, or 325,850 gallons. The typical American family uses roughly 1/4th of an acre-foot of water per year. *See generally* Wikipedia, Acre foot, http:// en.wikipedia.org/wiki/Acre_Foot (last visited April 2, 2011).

[16] *See* United States Bureau of Reclamation, Colorado River Storage Project (FAQs) http://www.usbr.gov/crsp/gc/faq.html (last visited April 2, 2011).

[17] KELSEY, *supra* note 1, at 10.

[18] *Id.*

[19] *See generally* United States Bureau of Reclamation, The Law of the River, http://www.usbr.gov/lc/region/g1000/lawofrvr.html (last visited April 2, 2011).

[20] *Id.*

[21] United States Bureau of Reclamation, The Colorado River Compact, http://www.usbr.gov/lc/region1000/pdfiles/crcompact.pdf (last visited April 2, 2011).

[22] *Id.*

[23] *Id.*

[24] *See generally* Wikipedia, The Salton Sea, http:// en.wikipedia.org/wiki/Salton_Sea (last visited April 2, 2011).

[25] *Id.*

[26] United States Bureau of Reclamation, *supra* note 19.

[27] *Id.*

[28] *See generally* Wikipedia, Hoover Dam, http:// en.wikipedia.org/wiki/Hoover_Dam (last visited April 2, 2011).

[29] United States Bureau of Reclamation, *supra* note 19.

[30] *Id.*

[31] *Id.*

[32] United States Bureau of Reclamation, *supra* note 21.

[33] United States Bureau of Reclamation, *supra* note 19.

[34] *Id.*

[35] United States Bureau of Reclamation, *supra* note 19.

[36] *Id.*

[37] *Id.*

[38] *Id.*

[39] United States Bureau of Reclamation, Glen Canyon Dam, http:// www.usbr.gov/uc/rm/crsp/gc/index.html (last visited April 2, 2011).

[40] Water Data, Lake Powell Annual Inflows, http://graphs.water-data.com/lakepowell/index.php (last visited April 2, 2011).