

3 states work to share the Colorado's waters

Instead of fighting over water, California, Arizona and Nevada are trying cooperation

Bradley J. Fikes, San Diego Union-Tribune, 11-14-15

California, Arizona and Nevada have quarreled and litigated over Colorado River water for many decades. Now the states are slowly moving to a new model of cooperation.

Once rare water shortages have become seemingly perpetual, posing a common danger. So instead of fighting to secure the most water for themselves, the states are increasingly focused on conserving water.

That water is staying in Lake Mead, the linchpin to reliable supply in the three states. The more water they can store in this key reservoir, the better they are all protected.

For now, the states are cooperating informally. But the federal government says it is possible for them to develop more long-range plans, which the U. S. Bureau of Reclamation can be done under existing provisions of the Law of the River, a complex set of provisions of historic agreements and legal decisions governing use of the Colorado.

Colorado River water is allocated among seven Colorado River basin states and Mexico. These states include Wyoming, Utah, Colorado and New Mexico. But in recent decades it has become clear that on average, less rain and snow falls in the river basin than is used.

That over-allocation, along with a recent drought, have resulted in Lake Mead falling to less than 40 percent capacity, the lowest level since it has been filled. If the reservoir falls much further, it will trigger a declaration of shortage on the Colorado River.

A shortage declaration would start a series of increasingly severe cutbacks in supplies none of the states want to see happen. Hardest hit would be the lower basin states, especially Arizona. Thanks to clever negotiating by California, Arizona will take all of the initial cuts before California loses one drop.

But that event would trigger a political firestorm, causing uncertainty and possibly threatening California's water rights. So water agencies such as Metropolitan Water District of Southern California are talking with their counterparts in Arizona and Nevada to head that off.

Stockpiling unused water in Lake Mead doesn't legally change the amount allocated to each state. But it does raise the reservoir's level above the point where a shortage is declared. That's a surface elevation of 1,075 feet. The reservoir briefly dropped to 1,074.98 feet in late June, but rebounded above that point a few hours later.

Unexpected spring rains in the Colorado River Basin helped keep Lake Mead from falling into shortage. The near-miss underscored the precarious nature of this water supply, and the importance of the states working together to strengthen its reliability.

Overused

One of the most worrisome facts is that unlike California, the Colorado River basin is no longer in drought.

Precipitation in the basin area returned to normal about a decade ago, said Bill Hasencamp, Manager of Colorado River Resources for Metropolitan Water District. The district is Southern California's main water wholesaler, supplying about half the water used in San Diego County.

Over-allocation is the fundamental problem for Colorado River users, Hasencamp said. The seven basin states and Mexico are allotted a total of 16.5 million acre-feet a year. But the allocations were developed based on weather patterns of the early 20th century, which were unusually wet.

Currently, the lower basin shortfall is about 1 million acre-feet annually, Hasencamp said. The amount is predicated on the upper basin states releasing their agreed-upon amounts of water and varies with the rate of evaporation from Lake Mead.

According to a report released by Interior Secretary Ken Salazar in December 2012, the long-term shortfall is about 3.2 million acre-feet annually. An acre-foot is about 326,000 gallons, enough for two single-family households a year.

California gets the most of the lower basin states, 4.4 million acre-feet. Arizona gets 2.8 million acre-feet, and Nevada gets just 300,000 acre-feet. Nevada actually uses more, but the amount it recycles and returns to Lake Mead is subtracted from the total.

Lake Mead can hold a maximum of about 29 million acre-feet, according to the U.S. Bureau of Reclamation. Lake Powell, its companion reservoir upstream, holds up to about 24 million acre-feet. Total storage capacity of the Colorado River system is just under 60 million acre-feet.

While that's a lot of capacity, the drought and overuse has over the years drawn down the reservoirs to worrisome levels. Unlike in California, where much smaller storage capacity means that just three or four dry years can cause drought, the Colorado River basin's problems have been building for more than a decade.

Global warming, predicted to make the shortages worse, will at some point come out of its hiatus, say UC San Diego Scripps Institution of Oceanography scientists in new research. They released their findings this month in a study published in Nature Geoscience.

"With the current hiatus we are on a flat step of the staircase, but the greenhouse gas increase drives the staircase going upward," lead researcher Shang-Ping Xie said in a statement.

Talking it out

Hasencamp said the district has been working on ways to save water in Lake Mead for a decade. It has worked not only with the other basin states, but Mexico.

"We've done things like operating the Yuma desalting plant (to reduce the salt content of Mexico's Colorado River water), funded Brock Reservoir, and funded cloudseeding," Hasencamp said.

"So we're slowing the drop from the million acre-feet because of our actions," he said.

More recently, the basin states have begun taking steps to conserve water under a memorandum of understanding signed last December between the U. S. Department of the Interior and agencies in the three states. This includes funding for conservation projects.

"We're still talking, which is a good thing," said Jayne Harkins, executive director of the Colorado River Commission of Nevada.

Nevada has an especially strong incentive to keep lake elevations up: if it drops too low, the intake pumps that supply the Las Vegas region will come up dry. To prevent this, the Southern Nevada Water Authority, which serves Las Vegas, recently built a "third straw" to augment its two other connections to the reservoir.

The seven basin states have been talking among themselves, and the lower basin states have had their own discussions under the memorandum, Harkins said.

"We're trying to come up with a plan, always looking for voluntary ways to reduce the use and help shore up Lake Mead elevations," Harkins said.

While there is no agreement among all seven states, the memorandum signed by members of the lower basin states allocates up to \$11 million contributed by the parties to increase water conservation efficiency throughout the entire basin. So far, about \$8 million has been committed, Harkins said.

Hasencamp said the scope of the talks is confined to such voluntary actions, on a trial basis. A "complete reset" of the allocations, a revision of the Law of the River, is not part of the discussions.

The scope and pace of the voluntary agreements largely depends on the level of Lake Mead, he said.

"If Lake Mead is lower, we would try to speed up the reductions. If we have a wet year and Lake Mead goes up, we would kind of relax."