

## Wet winter may help Colorado River push off problems, but it will not end the drought

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California is not the only place in the West confronting startling amounts of rain and snow.

Drought conditions have declined substantially across the region in recent weeks, with heavy storms replenishing reservoirs and piling fresh powder on ski resorts.

Yet there is one place where the precipitation has been particularly welcome and could be transformative: the Colorado River basin, which provides <u>water</u> to nearly 40 million people across seven states.

"We're in a really good spot as far as snow accumulations," said Malcolm Wilson, who leads the Bureau of Reclamation's water resources group in the upper Colorado River basin.

In fact, if the Rocky Mountains continue to see substantial snowfall this winter, there is a chance that later this year, water managers for the Colorado could do something that seemed inconceivable just a few weeks ago: They could start giving water away.

Under federal guidelines that kick in when water flows reach certain volumes, the Bureau of Reclamation, which oversees the river basin's largest reservoirs, Lake Powell and Lake Mead, could release enough water from the former to raise the elevation of the latter by 20 feet or more - providing a remarkable shot in the arm for a lake that has been declining steadily during a devastating drought that started in 2000.



The process - lowering one reservoir to lift another - is called equalization, and a few weeks ago, it was not even viewed as a viable option. Now, Wilson said, "It's in the realm of possibility."

Even if that optimistic scenario does not play out - the region would need several more weeks of strong precipitation without a substantial warmup - there is still reason to savor a moment of relief on the Colorado.

As of last month, the bureau was forecasting about a 50 percent chance that, for the first time, the river and its reservoirs would not be able to fulfill the water demands of states that rely on it, beginning in 2018.

But this week, the bureau quietly updated that forecast, saying the chance was only about 34 percent. By the end of this year, it expects Lake Mead to be at least 3 feet above the threshold at which an official "shortage" would be declared.

Not only that, the bureau said the likelihood of a shortage through 2021 is no greater than 33 percent. Just a few weeks ago, the chances of shortages in that time frame were about 60 percent.

Still, no one is declaring this the end of a drought that has fallowed farm fields, depleted groundwater and even inspired a dystopian novel, "The Water Knife," from 2015, which imagines the Southwest descending into crime and chaos as people fight over the shrinking Colorado.

While California has been climbing out of its drought - albeit the hard way, with brutal storms, mudslides and a mass evacuation ordered earlier below the damaged Oroville Dam spillway - the drought on the Colorado may never truly end.

That is because no matter how deep the snowpack may get one year -



some drainages are seeing close to 200 percent of normal this year - the river itself functions at what its managers call a "structural deficit." The amount of water to which cities, tribes, farmers and others have legal rights is larger than the amount that, on average, flows into the system. In addition, climate change models for the future show declining snowpack and rising temperatures, potentially leading to more evaporation.

That all means that delicate negotiations that have been underway to get the seven states which use the water - Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming - to increase the amount of water they conserve are still crucial.

The effort, called the drought contingency plan, has been going on for several years, though negotiations intensified in 2016. The idea is to add a layer of voluntary conservation measures to prevent Lake Mead from falling below 1,075 feet, the level that triggers more painful, involuntary conservation measures.

Water managers had hoped to reach an agreement by the end of the Obama administration but ran into challenges resolving concerns among agricultural and other interests within individual states, particularly in Arizona and California.

Now, some water managers worry they may face a new challenge: that the wet winter may reduce the sense of urgency to complete the drought contingency plan.

"It potentially makes it harder, to tell you the truth," said Tom Buschatzke, the head of the Arizona Department of Water Resources, who is trying to build support for the plan among the state's competing interests, "because sometimes crisis mode drives outcomes."



Buschatzke noted that 2011 was also a very wet year, with strong snowpack, but less than four years later, <u>water managers</u> were again preparing for the possibility of a shortage. The Colorado provides 41 percent of Arizona's water.

"We need to make sure the wet winter doesn't stop the momentum we've built," he said. "Mother Nature does not bail us out."

The drought and the recent deluges demonstrate how the region's water issues are connected. The Metropolitan Water District of Southern California relies on the Colorado for about 45 percent of its water on average, but during the drought, the Colorado has provided as much as 90 percent of the utility's water.

The recent heavy rain in California has changed the balance again, allowing the utility to leave more water in Lake Mead, which helps the rest of the basin guard against a shortage.

"For the last four years, it was all about where can we get extra water," said Bill Hasencamp, who manages Colorado River resources for the Metropolitan Water District. "Now, all of a sudden in the last six weeks, it's a completely different mindset. We're storing as much water as we can in Lake Mead, storing it in our desert groundwater account, storing it in every reservoir account we have."

Hasencamp said the improvement in short-term forecasts for the Colorado could make it easier for California to approve the drought contingency plan, in part because the state's water rights already make it least likely to suffer major cuts.

Besides, he noted, the plan is merely a temporary fix, one that may not have to be implemented if Lake Mead improves for a few years. The truly complex negotiations will begin in 2020 for what is supposed to be



a long-term solution.

"Lake Mead is like going to Vegas," Hasencamp said. "You might win a couple of times. You might even hit a jackpot. But in the end, the odds are stacked against you."

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