

Negotiations moving forward on plan to avert Colorado River 'crash'

[Ian James](#)

The largest reservoir in the country now stands at just 37 percent full.

Lake Mead reached its lowest point on record this year, and federal water officials estimate the odds of the reservoir slipping into shortage conditions in 2018 at nearly 50-50.

The reservoir's decline reflects a fundamental deficit in how the Colorado River has been divided up for decades. The old system of allotments that sustains farms and cities is doling out much more water than the river can provide, and the strains on the river are being compounded by 16 years of drought and rising temperatures.

If the level of Lake Mead crosses a critical threshold by next summer and a shortage is declared, Arizona and Nevada would automatically face cutbacks in water deliveries in 2018. And if the reservoir near Las Vegas keeps dropping, eventually California would also receive less water.

Representatives of the three states, the federal government and water districts have been in negotiations on a "drought contingency plan" in an effort to head off Lake Mead's downward spiral and make the math of the river more manageable. Participants in the talks say working through the details is complicated and could take time, but they're hopeful a deal may take shape within the next few months.

"We're trying to keep forward momentum," said Tanya Trujillo, executive director of the Colorado River Board of California. "There are a lot of moving pieces."

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An eventual deal for all of the states to temporarily leave more water in Lake Mead would require buy-in by California water districts that hold the most privileged rights to Colorado River water, as well as approval by the Arizona Legislature.

Trujillo said talks between California water districts are continuing alongside regular discussions among representatives of the three states. She said she thinks it's still possible to finalize an agreement by the end of this year.

"The stars can all line up and it can happen," Trujillo said. "There are a number of things that could push us into the next calendar year, but we just have to see how things go."

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She said the parties are working on an "adaptive" approach that would lay out steps if dry conditions continue and encourage water districts to temporarily store more water in Lake Mead.

The reservoir reached a new record low on July 1 when the water level dipped to elevation of 1,071.6 feet before starting to rise again with releases of water from Lake Powell. A shortage declaration was narrowly averted, and water managers credited several conservation efforts with helping to prop up Lake Mead's levels by about 10 feet.

One of those efforts is an initiative called the Pilot System Conservation Program. Since 2014, the federal government and water districts have contributed \$16.5 million to the program, which is providing grants for water-saving projects such as building wells to inject treated water into the Colorado River aquifer in Arizona and removing grass from a golf course in Mojave Desert town of Needles.



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The Coachella Valley Water District is using a \$1 million grant from a regional conservation program to offer rebates to farmers who switch from flood irrigation to drip irrigation for crops such as dates. *(Photo: J. Omar Ornelas/ The Desert Sun)*

The Coachella Valley Water District has begun using a \$1 million grant to offer rebates to farmers who convert crops such as date trees from flood irrigation to drip systems.

Bigger steps will be needed to address what water experts describe as the river's "structural deficit" – the enormous gap between the amounts being drawn out and what the river can supply.

"This is a slow-moving train wreck that I think everyone can see coming at them," said Brad Udall, a water and climate scientist at Colorado State University. He called the negotiations a momentous effort, pointing out that many people will need to sign off.

“I’d be shocked if a deal got done this year,” Udall said. “Deals like this take a lot of time and a lot of thought.”

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He said if past water agreements are any guide, often temporary arrangements end up being permanent, yet the parties keep their water rights intact on paper. “I think part of this is sort of walking down the garden path here and saying it’s temporary but maybe deep down knowing it’s going to be permanent.”

The federal Bureau of Reclamation could declare a shortage next summer if officials project Lake Mead's level would be below an elevation of 1,075 feet at the beginning of 2018. Larger reductions in water deliveries to Arizona and Nevada would take effect at an elevation of 1,050 feet, and the Secretary of the Interior could step in with additional measures if the water level falls below 1,025 feet.

The decline of Lake Mead threatens not only the water supplies of farms and cities but also the electricity generated by Hoover Dam. The dam’s power-generating capacity has already declined substantially. And if the water level eventually falls below an elevation of 950 feet, some water would still flow through the dam but its generators would near a point at which they could no longer churn out power.



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Hoover dam rises above Lake Mead, which has recently declined to the lowest levels since the reservoir was filled in the 1930s. (Photo: Richard Lui/The Desert Sun)

Representatives of the three states have discussed a “framework” of measures to jointly leave more water in Lake Mead. Arizona and Nevada would forgo larger amounts than they have previously agreed to under a first-level shortage, and water users in California would also pitch in before they would otherwise be legally required to.

That plan includes a “backstop concept” of making sure Lake Mead’s level doesn’t fall below the mark of 1,020 feet elevation, said Tom Buschatzke, director of the Arizona Department of Water Resources.

“None of us can live with that ultimate crash,” Buschatzke said in a telephone interview. “That’s the backstop goal, is to stop that from happening.”



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Water from the Colorado River flows to the Coachella Valley through the Coachella branch of the All-American Canal. (Photo: Richard Lui/The Desert Sun)

Arizona officials have held public meetings to present proposals and workshops with representatives of cities, agricultural water users and Native American tribes.

Federal legislation would be needed to allow for greater flexibility so that water could be stored and taken out of Lake Mead during a shortage, Buschatzke said. And the Arizona Legislature will only be able to approve any deal once lawmakers reconvene for the next session in January.

In the meantime, Buschatzke said he's hopeful a deal can be reached by the end of the year. The sooner an agreement is finalized, he said, "the more you benefit the lake and reduce the probability of the lake going down to that 1,020 elevation that we want to absolutely protect."



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The level of Lake Mead has been declining for years, leaving behind a lighter "bathtub ring" around the reservoir. (Photo: Jay Calderon/The Desert Sun)

The negotiations would lose some momentum if they aren't completed by the time President Obama leaves office and a new administration takes over.

"We have a lot of support at very high levels in the administration to make this happen," Buschatzke said. "We're better off if we can close the loop with the people who know all the devil-in-the-details that we've been working on."

As proposed, the plan would trigger reductions in water deliveries to Arizona and Nevada below a reservoir level of 1,090 feet, and cuts in water deliveries to California below 1,045 feet.

The board of the Metropolitan Water District of Southern California will

discuss the proposals at a meeting in November. A decision by the board could come in December.

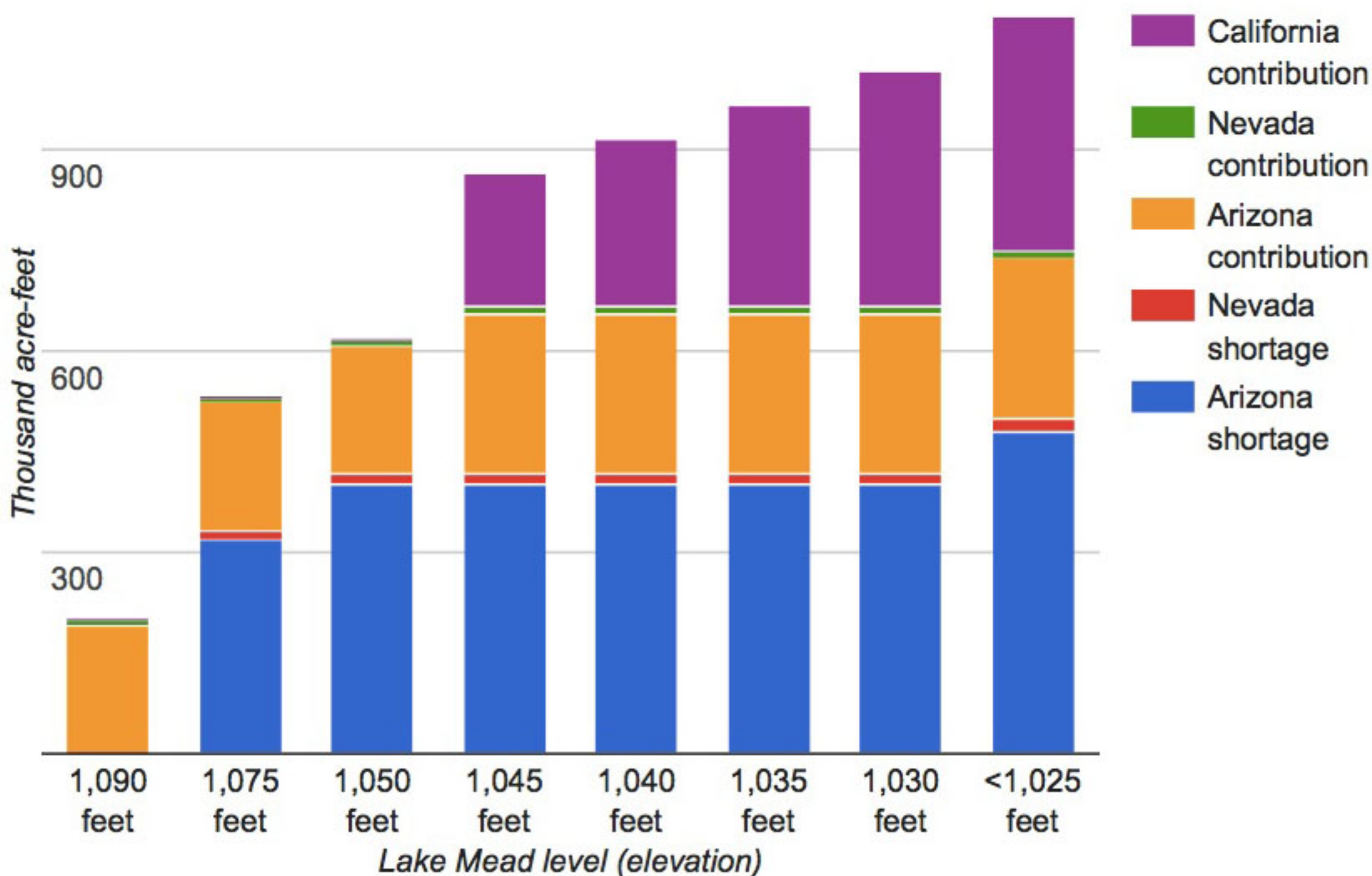
A presentation shown during an Oct. 10 meeting of the district's Water Planning and Stewardship Committee said California's aims in the discussions are to "protect California's senior priority, avoid future conflict from critically low storage levels in Lake Mead, increase flexibility to meet water needs," and protect Hoover Dam's ability to generate power.

The district's staff said in the presentation that California agencies would "contribute proportionally" based on their diversions of water. Metropolitan has been discussing details with other Southern California water suppliers including the Coachella Valley Water District, the Palo Verde Irrigation District and the Imperial Irrigation District.

Imperial holds the single largest entitlement to water from the river and supplies farms that produce alfalfa, wheat and vegetables from carrots to broccoli. Tina Shields, Imperial's water department manager, said she isn't directly involved in the discussions but the talks appear to be moving in a productive direction. She said the water districts are working toward a "California consensus."

Proposed reductions in water deliveries

This chart lays out proposed reductions in water deliveries to Arizona, Nevada and California under the “drought contingency plan” for the Colorado River. The proposed plan is aimed at boosting the water level of Lake Mead. Arizona and Nevada would accept additional reductions in water deliveries on top of cuts that would be triggered by an eventual shortage declaration at Lake Mead. California would also contribute by accepting reductions in water deliveries before the state would be legally required to do so.



Source: Metropolitan Water District of Southern California
Chart: Robert Hopwood, The Desert Sun

Meanwhile, the Upper Colorado River Basin states – which include Colorado, Utah, Wyoming, New Mexico and Arizona – also have been considering measures aimed at ensuring the levels of Lake Powell don't reach critical lows. That reservoir is now at 53 percent of its full capacity.

U.S. government officials have also recently held talks with Mexican officials, negotiating an agreement to replace a five-year Colorado River accord that expires in 2017. The current U.S.-Mexico agreement enables Mexico to keep some water in Lake Mead for future use, and that has helped boost the reservoir's levels.

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The Colorado River and its tributaries provide water for nearly 40 million people and more than 5 million acres of farmland. While its reservoirs have receded, heavy pumping of groundwater has also led to declining aquifers in parts of the river basin.

Scientists have projected that global warming will make future droughts more severe and multiply the stresses on the river.

In a [study](#) published this month, a team of scientists estimated the chances of a decades-long megadrought in the Southwest by the end of the century at between 70 percent and 99 percent if emissions of greenhouse gases continue unchecked. The researchers also found the risks of a megadrought could be reduced dramatically if steps are taken to aggressively reduce emissions.

"This warming's not going away, and it will get worse," Udall said. "As this century unfolds, we're going to see less flow in the river."

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