Despite strong 2023 snowpack, expert says permanent Colorado River reductions still needed

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Water at Lake Mead remains much lower than average for winter levels in January.

Parker Seibold, The Gazette

The snowfall and spring rains of 2023 have provided a temporary sigh of relief for the situation on the Colorado River.

It allowed the three lower basin states on the Colorado River to submit a plan to the Bureau of Reclamation for water reductions of three million acre-feet over three years, instead of the four million acre-feet per year called for a year ago by bureau Commissioner Camille Touton. That means Lake Powell, currently at 3,568 feet, will likely increase by 70 feet this summer.

That's the good news.

But don't get used to it, according to Brad Udall, senior water and climate research scientist at Colorado State University's Colorado Water Center.

Udall set the scene for the 43rd annual Colorado Law Conference on Natural Resources at CU-Boulder. This year's conference, focusing on Colorado River "short-term

Udall blames some of the enthusiasm over this year's snowpack to amnesia.

"We've had good years since 2000, but we just don't have them in the frequency we need," he said.

People remember what they're experienced, he said, but memories of the bad years in the historic drought along the Colorado should be a better guide to the future.

Udall said in order to refill Lake Powell and Lake Mead, both of which are around 25% capacity and nearing a crisis point where the dams will struggle to produce hydropower, it would take about six consecutive years just 2023.

Since climate change means that's highly unlikely, Udall said the solution needs to include permanent reductions.

And as good as 2023 snowpack has been — levels in the lower basin states are at 250% of average, and 170% of average in the upper basin states — he said hydrology from the last 23 years indicates one bad year will return the nation's two largest reservoirs to 25% capacity.
Climate change will continue to contribute to the problems, Udall explained. That's resulted in a 1.1-degree Celsius increase and headed to 2.7 degrees warmer by 2100.

Part of the solution is to get emissions down as fast possible, he said.

On the precipitation side, the period from 2000-2022 is the worst 23-year running average since record-keeping started in 1893. Udall said he believes that decline is also human-caused, and more worrisome than the impact on temperature.

Udall called for Powell and Mead to be managed as one reservoir instead of two, and permanently remove at least 1.5 million acre-feet of demand from the system, every year.

Such a proposal would require efforts to maintain the Grand Canyon between them in a healthy way, as well as taking into account lower basin needs versus the total content of both.

Udall said it means saying: "Here's what we've got and how do we spend it, rather than the upper basin safeguarding its supply and hold back its water and the lower basin states using as much of their water as they possibly can."

That's a solution already agreed to by the six states in January and by California in a separate decision.
To stabilize the basin, it needs consistent upper basin demands, and 3 million acre-feet lower basin reductions when reservoirs drop below 15 million acre-feet, he said.

That 15 million represents the volume of water in the two reservoirs, Udall explained.

"2023 buys us time but expect large future warming to cause additional and substantial future flow declines," he added.

"Don't be lulled by this delightful year we’re having in the West. It's not likely in the future...We have to remember what we’re up against."