# **Colorado River Policy Recommendation:** Improving Reservoir Operations

The Colorado River is the lifeblood of the West, but climate change and burgeoning water demands have pushed the river to a breaking point. We have an important opportunity to update the guidelines for governing the

Colorado River after 2026. The future of the West hinges on our ability to work together to protect the river that sustains us all.



River operations must account for recent hydrology, consider storage across the basin, and respond faster to changing conditions.

### Why it's needed

We must reduce water demands across the basin by at least 25% to keep the river in balance, but measures to address water shortages on the Colorado River are often too small and too late. Under the 2007 Interim Guidelines and subsequent Drought Contingency Plan, shortages in the Lower Basin are determined using a tiered system that is based on the elevation of Lake Mead. For example, when the elevation of Lake Mead is above 1,090 feet, no shortages are required. If the elevation falls between 1,090 and 1,075 feet, the Lower Basin must reduce its water use by 200,000 acre-feet in the upcoming year. Additional cuts are triggered each time the reservoir drops to certain elevation thresholds.

This tiered approach does not allow the basin to proactively respond to conditions on the river. Just one foot of elevation change in Lake Mead, from 1,090.5 feet to 1,089.5 feet, can be the difference between whether the Lower Basin is required to reduce its water use or not. Not only does this lead to incentives to "game the system" to stay in a tier or move to a new tier, but it also disincentivizes efforts to conserve water that do not change what tier the system is operating in. Even if conditions are gradually worsening, additional shortages are not required until Lake Mead elevations cross a threshold that triggers a new shortage tier.

Lake Mead elevation levels are just one part of the Colorado River system and are not indicative of what the rest of the basin is experiencing. Reservoir levels are inherently slow to respond to changing river flows. The entire river is changing as the West becomes hotter and drier. Reservoir operations need to follow a "dual indicator" approach that is based on recent hydrology and storage across the basin.

We must be prepared to respond to changing conditions in real time.

## How it works

New policies are needed to improve reservoir operations, including:

#### Accounting for actual hydrology

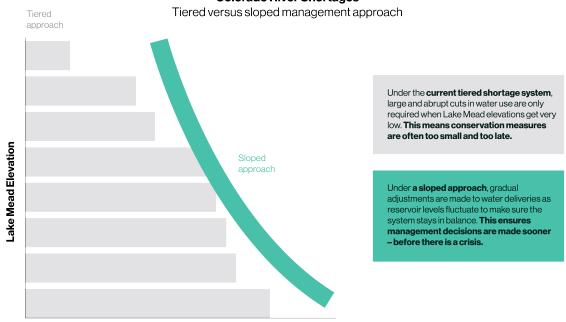
Management decisions must account for actual hydrology, especially as climate change and aridification impact the basin. For example, recent declines in river flows must be factored into decision making around river operations.

#### **Considering combined system storage**

Reservoir operations must be based in part on how much water is stored in the entire system, not just Lake Mead. The basin is a connected system. Many upstream reservoirs also impact the available water supply. The water levels in Lake Mead alone do not tell the full story.

#### **Responding faster to changing conditions**

Instead of a stepwise tiered approach, the new guidelines must follow a sloped and continuous approach. Currently, large and abrupt adjustments are made to water deliveries whenever the system changes tiers. Under a sloped approach, the Bureau of Reclamation would make small and gradual adjustments to water deliveries as reservoir levels fluctuate to make sure the system stays in balance. Both the Upper and Lower Basin will need to be part of the solution and take proactive measures to use less water before there is a crisis.



### **Colorado River Shortages**

Water Shortages

#### FOR MORE INFORMATION

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