

Background

The seven Colorado River basin states and the US Bureau of Reclamation are working on a “contingency plan” to avoid the unacceptable consequences of the continuing drought. The Colorado River District, Southwestern Water Conservation District, Colorado Water Conservation Board, The Nature Conservancy and Front Range Water Council are jointly investigating the feasibility of a water bank. The water bank is a tool that might be used with either the contingency or insurance concepts.

There are many overlapping issues so it's easy to get confused.

This FAQ answers many of the most frequent questions.

1. What is the contingency plan, and why is one needed?

Since 2000, the Colorado River Basin has experienced a prolonged drought. There have been a few wet years – 2008, 2010, and 2014, but the remaining years have been dry. 2002 was one of the driest years on record and 2012-2013 were the driest consecutive two years on record.

Consequently, to meet demands, the basin’s reservoirs have been drawn down by about 30 million acre feet. If the drought conditions continue, Lake Powell could drop below the elevation necessary to produce power (3,490’ – or at about 4 million acre feet of storage).

The goal of the contingency plan is to avoid water levels in Lake Powell from falling below the minimum level and still produce power.

If Lake Powell no longer produced electricity, up to \$120 million per year in power revenues would be lost. These revenues cover the operation of power generation and the transmission grid; repay the federal treasury for the construction of these reservoirs; and, cover the costs of critical environmental recovery programs such as the San Juan and Upper Colorado River Basin endangered fishes recovery programs and the Salinity Control Program. Additionally, federal power customers could see their power costs skyrocket.

2. What will be included in the contingency plan?

Three basic elements:

- a. Extended operations.** Federal reservoirs upstream of Lake Powell – Flaming Gorge, Aspinall and Navajo Reservoirs – would release additional water for storage and use in Lake Powell.
- b. System augmentation.** Enhanced cloud seeding and accelerated removal of non-native vegetation such as tamarisk.
- c. Demand management.** Additional conservation by municipal and irrigation users and deficit irrigation or fallowing by agricultural users.

The extended operations and augmentation elements will be the first lines of defense. The demand management element is only a concept at this point. None of the four Upper Division (WY, UT, CO and NV) states has agreed to implement demand management. There are currently no management mechanisms in place to actually implement demand management.

In the Lower Basin (NM, AZ, CA), possible actions include: better managing over-deliveries, improving system conveyance, reducing or eliminating groundwater banking, and assigning reservoir evaporation to lower basin states.

3. How will extended operations of the upstream Colorado River Storage Project (CRSP) units work?

Under the proposed contingency plan, Reclamation and the Upper Division states would evaluate the risk of Lake Powell dropping below minimum power. If action is deemed necessary, the parties would consider if adequate water is available in upstream reservoirs for release to Lake Powell. Because of its size and inflow, it appears that Flaming Gorge Reservoir has the most flexibility.

As we envision the contingency plan today, the demand management option would only be used once all of our flexibility with extended operations has been exhausted and the forecast is for continued drought.

4. How will the 2007 Interim Guidelines affect the contingency plan?

Because releases from Glen Canyon Dam (Lake Powell) are controlled by the **2007 Interim Guidelines**, the contingency plan will be specifically tailored to work in tandem with them. They are “interim” because they are only in effect through Water Year 2026. Thus, the contingency plan is “interim” as well.

Under the Interim Guidelines, Powell's and Mead's operations are coordinated. Releases are based on forecasted, year-end reservoir levels in Powell and Mead. Lake Powell is divided into four tiers; Lake Mead is divided into a number of different tiers. The critical levels at Lake Mead are 1,075`, the level at which shortages are imposed on lower basin water users and 1,025`. 1,025` is considered uncomfortably close to the 1,000` level that cuts off Las Vegas' access to Lake Mead water.

One of the challenges for the contingency plan will be to keep enough water in Lake Powell to maintain hydropower production, while at the same time not releasing so much upstream water into Powell that it would "bump up" releases from Lake Powell to Lake Mead under the Guidelines.

5. What are the chances that we will need to implement the contingency plan by 2026?

For the Upper Basin, it all depends on future hydrologic conditions. If dry conditions continue, it is almost certain that we will need to implement the contingency plan. However, if hydrologic conditions return to the longer term average, then the chances are still real, but much lower.

Whether or not the drought continues is a difficult prediction. Based on the 1906 to present observed record, we are in the longest drought of record. However, looking at the longer term, reconstructed natural flow record (using tree rings), droughts such as the current one are rare but not unprecedented.

The bottom line is that under most hydrologic futures a contingency plan is necessary. If we prepare one, but don't have to use it, we will consider ourselves fortunate.

6. Why should the Upper Basin be concerned about what's happening in the Lower Basin?

The 2007 Interim Guidelines interconnect the operation of Lake Powell and Lake Mead,. If the Lower Basin reduces its use of Colorado River water, less water needs to be released from Lake Mead, and under the Interim Guidelines, Lake Powell releases will average less. This interconnection between Lake Mead and Lake Powell is why the seven basin states and the Department of the Interior view the contingency plan as a basin-wide effort.

7. What is meant by the Lower Basin's "structural deficit"?

In the Upper Basin we're primarily at risk from continued drought. The Lower Basin is threatened by both dry hydrology and the "structural deficit" caused by over use. In a normal year, which is defined as releasing 8.23 million acre feet (maf) from Lake Powell, about 9.0 maf flows into Lake Mead (8.23 maf from Powell, the rest from tributary inflow between Powell and Mead). However, demands in the lower basin range from 10.0 to 10.5 million acre feet. Thus, in the Upper Basin, we could experience a string of average years (like 2014) and Lake Powell would continue to slowly recover, but in the Lower Basin, the demand continues to exceed supply and Lake Mead levels keep falling.

Water users in the Lower Basin fully understand this "structural deficit" problem and are actively engaged in difficult discussions to solve it.

8. Is the Lower Basin's structural deficit a threat to the Upper Basin?

The practical implications for the entire basin of continued overuse in the Lower Basin are real and significant. If Lake Mead drops below 1,025', the 2007 Interim Guidelines require re-consultation.

From a compact perspective, there is virtually no chance that the Lower Division states or the Interior Secretary could use the 1922 Compact to require a cutback or curtailment of uses in the Upper Basin because of overuse in the Lower Basin. The more likely scenario is that to prevent Lake Mead from dropping below 1,000', current water users in the Lower Basin would have to conserve or save additional water beyond the 500,000 acre foot cutback required by the Interim Guidelines.

It is possible that the Upper Division states would be asked to provide additional stored water that would be considered "surplus," but even this option should only be considered as a "last resort."

Additionally, if (perhaps when) Lake Mead approaches 1,000', there will be great political pressure for expanded water marketing. Traditionally, the Basin States and water agencies have adamantly opposed efforts to market water between the upper and lower basins.

The best certainty for all users on the Colorado River system is full reservoirs. One method the Basin's municipalities could use to maintain storage in system reservoirs would be to acquire large amounts of agricultural lands and retiring or changing crops on these lands to reduce water use. But such transfers of water use, even temporarily, would have dramatic impacts on the economy, land use and lifestyles of the basin.

“Flexible water sharing reduces risk in dry times” by Jon Stavney

