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## **McPhee vulnerable to crisis at Powell**

Area reservoirs could be called upon to sustain Arizona power plant



Photo by: Courtesy of U.S. Bureau of Reclamation

This graphic depicts what would happen to reservoir levels at Lake Powell if the next seven years were the same precipitation levels of the 2001-2007 period. If current drought trends continue, Powell could drop too low for hydroelectric power to be generated.

## By Jim Mimiaga Journal staff writer

Water shortages from a persistent drought in the Southwest have left Lake Powell dangerously low, threatening operation of the Glen Canyon Dam hydroelectric power plant relied on by 5.8 million customers.

The problem is a looming concern for reservoirs in the Colorado River basin upstream from the Lake Powell. Those reservoir managers face the possibility of having to deliver water downstream to boost levels and avert a shutdown of the plant.

Reservoirs, including Flaming Gorge, McPhee, Animas-La Plata, Navajo, and Blue Mesa could potentially be tapped for additional water under the "call" system if conditions don't improve in the next one to two years, water officials report.

Now is the time to have the discussion of how to deal with the situation unfolding at Lake Powell, said Mike Preston, general manager for the Dolores Water Conservancy District, which operates McPhee Reservoir at Dolores.

"If Powell becomes too low to operate it would trigger a crisis, so we need to decide early on how we would deal with that," Preston said during a meeting on reservoir operations in Dolores last week.

According to a February memorandum from the Colorado Water Conservation Board, both Lake Powell (of the Upper Colorado Basin) and Lake Mead (of the Lower Colorado Basin) could soon become too low to operate their hydropower plants if conditions don't improve. As of May 12, Lake Powell was at 42 percent of full, and has only been totally filled three times in the last 14 years.

A water-level graph for Lake Powell, created by the Bureau of Reclamation, shows what would happen if 2014-2020 is a repeat of drought-impaired hydrology from 2001-2007.

According to the simulation, as early as 2015 Lake Powell could drop to, or below, the minimum power-pool level required to operate the hydroelectric generators. If the pattern materializes, the level would stay below the power pool for years and by 2020 still not have recovered to power-producing levels.

Allowing Lake Powell to fall below the minimum power pool has numerous dire consequences, according to the CWCB memo:

It would result in dramatically higher electric costs for cities, towns and farms throughout much of Colorado, increasing rates two to four times. The Dolores Project relies on power generated from Glen Canyon sold at a discounted rate.

Funding for irrigation projects derived from power plant revenues would dry up.

Reduced capacity to make releases from Glen Canyon Dam threatens compliance with Colorado River Compact obligations. The result could be litigation and curtailment of water use within the Upper Basin states, which include Colorado.

"In light of these real and immediate threats, the governor's Colorado River representative directed a group of Colorado water advisers to engage six Colorado River Basin states in confidential brainstorming and system modeling for the purpose of developing an emergency response plan," the memo states.

Solutions to prevent a shutdown of power plants at Lake Mead and Lake Powell may involve delivering more water downstream, the memo states. That could impact storage yields from upstream reservoirs on the Green, Gunnison, San Juan, Animas and Dolores Rivers, among others.

In a presentation to water stakeholders Wednesday in Cortez, John McClow, the governor's representative on Colorado River matters, said the guidelines for potential shortages are being negotiated among upper basin states.

"States need to negotiate, not litigate," he said, adding the loss of power at Glen Canyon would be "catastrophic event for Colorado electric rates."

The lack of water in Powell could also limit use of bypass tubes that deliver water downstream to Lake Mead, threatening water compact obligations.

"It is a what-if scenario but there is a 20 percent chance this could occur. We need a plan to deal with this potential crisis," McClow said. "The Secretary of Interior is closely monitoring the situation and is so far satisfied affected states are dealing with it."

Implementing demand-management programs to bolster Lake Powell could also involve voluntary lease-fallowing or deficit irrigation.

"The water-management world cannot be in denial about drought, and we have to be mindful and adaptable," Preston said. "There is already talk about making contributions to bring Powell up. It could be sooner rather than later where we are forced to confront demands larger than our basin."

DWCD is planning to conduct an optimization study of local water supplies as a result of the problem at Lake Powell.

"We want to have a contingency plan on the shelf," McClow told a room of farmers and water managers."The good news is that the Green River was at 170 percent of average this winter and the Gunnison was at 130 percent."

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