STATE OF COLORADO

Colorado Water Conservation Board
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M E M O R A N D U M

February 4, 2014

To: State of Colorado's Colorado River Water Users

From: John McClow
Governor's Representative on Colorado River Matters

James Eklund
Director, Colorado Water Conservation Board

Re: Contingency Planning in the Colorado River Basin

This memorandum is intended to inform Colorado stakeholders about the State of Colorado's contingency planning efforts given the possibility of critically low Colorado River reservoir levels in the next several years.

The Colorado River supplies water to most of Colorado's 5 million people. Basin wide, it supplies 40 million people and irrigates over 6 million acres of agriculture in the Upper Basin (Colorado, New Mexico, Utah, Wyoming), the Lower Basin (Arizona, California, Nevada), and Mexico. According to the United States Conference of Mayors, the combined metropolitan areas served by the Colorado River represent the world's 12th largest economy, generating more than $1.7 trillion in Gross Metropolitan Product per year.

The Colorado River system relies on two large regulating reservoirs: Lake Powell in the Upper Basin and Lake Mead in the Lower Basin. Lake Powell is the main storage unit of the Colorado River Storage Project (CRSP), the "bank account" that allows Colorado and the Upper Basin to meet our Colorado River Compact obligations. Electric power generation from Glen Canyon Dam at Lake Powell helps supply the electrical needs of 5.8 million people, including a significant number of people in Colorado. Revenue from hydropower generation is applied to several beneficial purposes, including salinity control projects and important environmental programs (such as the Upper Colorado River and San Juan Endangered Fish Recovery Programs and the Glen Canyon Dam Adaptive Management Program), repayment of the cost of constructing the CRSP facilities, and paying project operating costs.

Severe drought since 2000 and a supply-demand imbalance in the Lower Basin (i.e. more uses than inflow), have caused both reservoirs to approach critically low levels. The attached graph illustrates the impact on Lake Powell storage elevation if we experience continued drought conditions during the next few years that are similar to the hydrology witnessed during the 2000-2012 period. Unless something is done in response to these conditions, Lake Powell elevation could drop below the level at which the reservoir can generate hydroelectric power (minimum power pool).

Allowing Lake Powell to fall below minimum power pool would lead to the following consequences:

- Dramatically higher electric costs (potentially, current rates could increase two to four times) for customers in cities and towns, farms and ranches throughout much of Colorado and the elimination of funding for the important programs noted above that protect current and future water use in Colorado.
- Reduced capacity to make releases from Glen Canyon Dam, resulting in releases that are insufficient to keep the Upper Basin on course to comply with the Colorado River Compact obligations that increases the risk of a Compact violation. A Compact violation could result in protracted litigation with the threat of curtailment of water uses throughout Colorado and the Upper Basin.
- Risk imposition of federal management of Upper Basin reservoirs with diminished Colorado primacy on the management of the River and water rights.

Should extreme drought conditions persist, proactive steps are necessary to protect the Upper Basin. In addition, Lower Basin actions to address shortages at Lake Mead should be accompanied by Upper Basin actions. This basin-wide approach is in the best interest of Colorado for several reasons:

1) Colorado needs to protect its use of Colorado River water;
2) Colorado must vigorously guard state primacy over Upper Basin water management;
3) Colorado stands to benefit from synergistic benefits arising from Lower Basin efforts; and,
4) Colorado must strategically position itself for future negotiations with the Lower Basin—we are better positioned to do this if we can actively manage proper water elevations in Lake Powell.

In light of these real and immediate threats, the Governor's Colorado River representative directed a group of Colorado water advisors to engage with the other six Colorado River Basin States in confidential brainstorming and system modeling for the purpose of developing an emergency response plan. The Upper Basin group members evaluated options that could be deployed in the near term to address Lake Powell elevations, and concluded that the Upper Basin can respond to this emergency by taking two actions: 1) releasing increased amounts of water to Lake Powell from other CRSP reservoirs in the Upper Basin; and, 2) implementing demand-management programs to bolster Lake Powell (e.g. voluntary lease-fallowing or deficit irrigation). Continuation of existing efforts, such as weather modification and phreatophyte

removal can also contribute, but these actions are less reliable. The additional water delivered to Lake Powell would be "system water" and would be carefully managed so that critical storage levels are maintained without triggering greater releases to the Lower Basin.

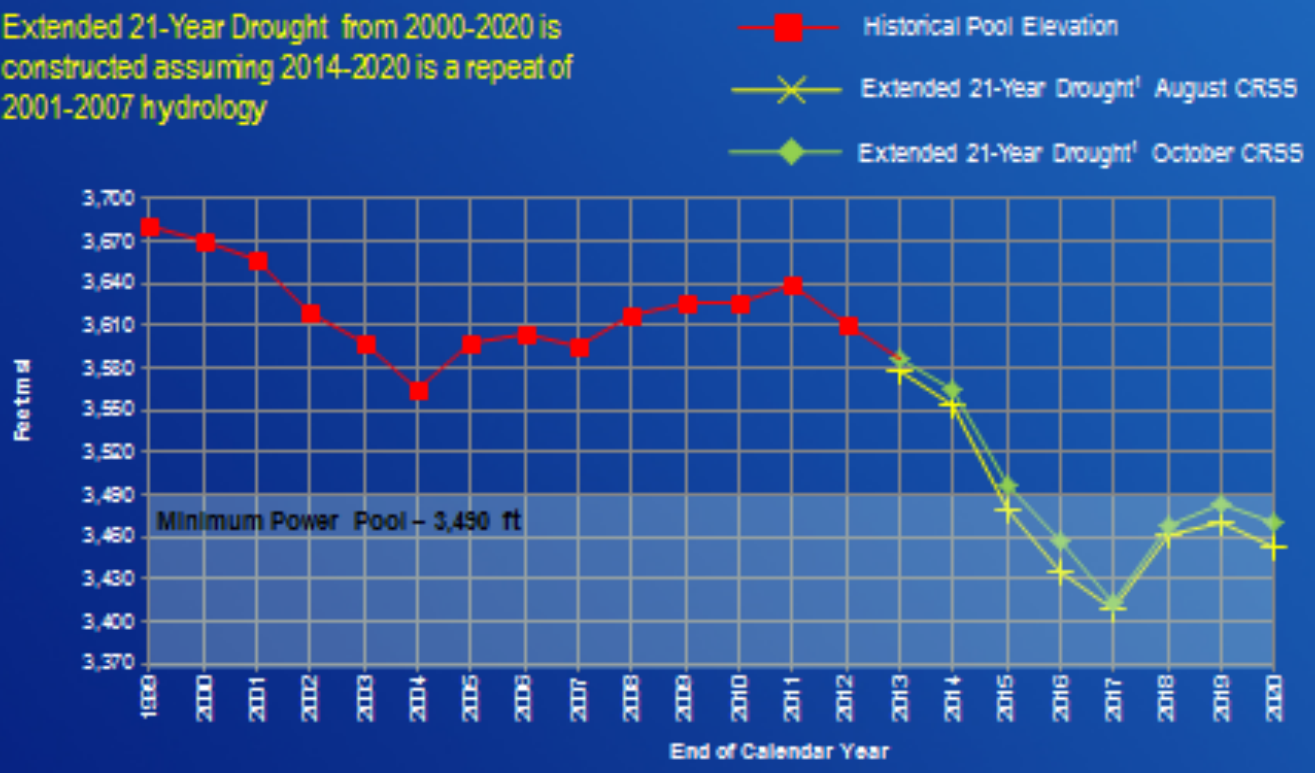
The Upper Basin Commissioners have created two work groups to analyze the technical and legal challenges to accomplishing extended operation of CRSP reservoirs in the near future should the need arise, and to suggest ways to overcome these challenges within the Law of the River. The legal and technical work groups will also begin exploring the potential for implementing demand management programs in the Upper Basin. The Commissioners will review the work groups' progress in early March and direct their continued efforts toward implementation of a response to critical decline in Lake Powell storage. Then, once a framework for these analyses is approved by the Commissioners, interested stakeholders will be invited to participate.

We will be closely monitoring this winter's hydrology to determine whether any of these options must be exercised to keep Lake Powell from reaching a critically low storage level.

Moving forward, we will continue to update Colorado River stakeholders within Colorado as circumstances warrant.

Current Situation – Lake Powell
End of Calendar Year Pool Elevation

Extended 21-Year Drought from 2000-2020 is constructed assuming 2014-2020 is a repeat of 2001-2007 hydrology



[1] CRSS trace 96: 2014-2020 uses 2001-2007 hydrology

RECLAMATION

Colorado River Storage Project Electricity Customers