

**Testimony of Brenda Burman  
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U.S. Department of the Interior  
Before the Committee on Energy and Natural Resources  
Subcommittee on Water and Power  
U.S. Senate**

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Good morning, Chairman McSally, Ranking Member Cortez Masto and Members of the Subcommittee, I am Brenda Burman, Commissioner of the Bureau of Reclamation (Reclamation).

Thank you for the opportunity to testify today on the efforts in the Colorado River Basin (Basin) on the drought contingency plans (DCPs). We appreciate that the Subcommittee called this oversight hearing as promptly as possible given the recent drought agreements forged by the Colorado River Basin States, who also are testifying today.

We are here for a very serious and important purpose: to discuss critically needed efforts to ensure that, *by working together across the Colorado River Basin*, we can protect all who rely on the Colorado River.

The Basin States have now completed their drought plans and have determined that federal legislation will be necessary to promptly implement their plans. As you will hear from the states, the goal of the DCP is straightforward. The goal is to reduce the risk that Colorado River reservoirs, primarily the massive reservoirs of Lake Powell and Mead, decline to critically low elevations. For example, and for context, if Lake Mead were to decline to elevations below 1,020 feet mean sea level, at that point the remaining live storage in Lake Mead would be less than 6 million acre-feet. In a normal year, the Lower Basin States use 7.5 million acre-feet and deliveries to Mexico total 1.5 million acre-feet.

**Background**

The Colorado River irrigates nearly 5.5 million acres of farmland and serves approximately 40 million people in major metropolitan areas across nine states in the United States and Mexico including Denver, Salt Lake City, Las Vegas, Phoenix, Tucson, Los Angeles, San Diego, Mexicali and Tijuana, and a number of tribal reservations.

The Colorado River Basin (Basin) is currently experiencing its worst drought in recorded history. The period from 2000 through 2018 is the driest 19-year period in over 100 years and one of the driest periods in the 1,200-year paleo-record.

Over a decade ago, responding to five years of intense drought, the Department of the Interior (Interior) worked with the Basin States, tribes and other stakeholders in the Basin to adopt operating rules for Glen Canyon and Hoover Dams. These operating rules are known as the 2007 Interim Guidelines and were adopted to better coordinate the operations of Lakes Powell and Lake Mead, encourage water conservation, and to provide objective rules for shortages and reductions of water use in the Lower Basin by Arizona and Nevada.

Since 2007, the drought has persisted and more action, such as combining provisions requiring reduced use of water with new incentives to conserve water, is needed to protect these reservoirs that are essential to our environment and economy.

Following the extremely dry years of 2012 and 2013, when the Colorado River experienced the lowest 2-year runoff period in modern recordkeeping, the seven Colorado River Basin States began pursuing drought contingency plans. In 2014, Reclamation and the Basin States initiated a series of pilot projects to encourage additional, compensated, water conservation. Most recently, the adoption in September 2017 of a new, long-term cooperative agreement with Mexico known as Minute 323 included additional important water conservation and savings actions by Mexico. Some of these water savings actions would only be triggered if the DCPs are completed in the US, which intensified efforts to complete the DCPs in the Upper and Lower Basins.

In December 2017, during my first public remarks as Commissioner of Reclamation, based on the ongoing historic drought, I called on all seven Basin States and key water districts in the Lower Basin to complete their work on finalizing the drought contingency plans by the end of 2018. During development of the DCPs, the states requested, and received, technical assistance from Interior on such matters as the projected risk facing the basin as a result of long-term drought. Interior is proud to have worked collaboratively with the States, tribes, non-governmental organizations and other Basin stakeholders on the DCPs. We look forward to continuing our work with the States, tribes, NGOs, key water districts, and Mexico on implementation of the DCPs once they become effective.

### **Colorado River Basin Hydrology**

2018, the fifth driest year on record, caused the combined storage of Lake Powell and Lake Mead to drop to approximately 40 percent of capacity, the lowest level since the mid-1960s when Lake Powell was initially filling. Conservation and storage programs developed in the last few years have added approximately 25 feet in elevation to Lake Mead, helping to avert a

shortage condition for at least the past four years (2016 through 2019). However, Reclamation analysis conducted in January 2019 indicates the risk of water levels declining to critical elevations at Lakes Powell and Mead, has increased nearly four-fold over the past decade. Critical elevations could be reached as early as 2021.

Hydrology in the upper Colorado River basin, where 92 percent of the total inflow in the Basin originates, appears to be experiencing a modest reprieve in water year 2019. As of March 19, 2019, snowpack in the upper basin is 138 percent of median, one of the highest snowpack totals for this time of year since the drought started, and the forecasted seasonal runoff into Lake Powell is 133 percent of average. We are reminded that while hydrologic conditions in the Basin have improved this year, one year of above average inflow will not end the ongoing, extended drought and does not substantially reduce the risks facing the Basin. In fact, after a robust water year in 2011, the Basin experienced exceptionally low snowpack and flows in 2012 and 2013. Due to hydrologic uncertainty, there is still a possibility that Lakes Powell and Mead decline to critical levels over the next few years.

## **Drought Contingency Plans**

### **Upper Colorado River Basin Drought Contingency Plan**

The Upper Basin DCP is designed to reduce the risk of reaching critical elevations at Lake Powell and help assure continued compliance with the 1922 Colorado River Compact and authorize storage of conserved water in the Upper Basin that could help establish the foundation for a Demand Management Program that may be developed in the future.

#### *Drought Response Operations Agreement*

The Drought Response Operations Agreement (DROA) in the Upper Colorado River Basin creates a process to temporarily move water stored in the Colorado River Storage Project (CRSP) Initial Units above Lake Powell — Aspinall, Flaming Gorge, and Navajo—to Lake Powell if it is projected to approach critical elevations. The purpose of temporarily moving water to Lake Powell is to avoid critical elevations (below elevation 3525') that threaten compliance with the Colorado River Compact, and hydropower production. DROA creates a process to respond to critical elevations at Lake Powell: if advance forecasting shows that Lake Powell's elevation is approaching a critical elevation, the Secretary will convene representatives of the Upper Basin States to monitor the forecasts, assess the water needs to avoid reaching critical elevations, and assess the water that may be available from the upstream Initial Units. If forecasted hydrology continues to show levels below a critical elevation, this group will recommend a plan to the Secretary regarding what water releases can be made from the Initial Units to avoid critical elevations, and the Secretary will approve or reject that plan.

### *Demand Management Storage Agreement*

The Demand Management Storage Agreement creates support for each of the four Upper Basin States, working through the Upper Colorado River Commission, to have access to storage capacity in the CRSP Initial Units where they can store conserved water, should the states decide to create Demand Management Storage programs in the Upper Basin. Water conserved under such programs, if developed, would be set aside for meeting the Upper Basin's obligations contained in the Colorado River Compact of 1922 and the Upper Colorado River Compact of 1948.

The Demand Management Storage Agreement contains important safeguards. Before water can be set aside for demand management storage, each respective Upper Basin state must work with its water users to assess conservation opportunities available at facilities within the state and approve its own intrastate voluntary demand management program to conserve water. The Demand Management Storage Agreement does not affect what particular water conservation opportunities may be available in a particular state. Each state must then secure interstate approval for its program throughout the Upper Basin. The States have indicated to Reclamation that available storage for conserved water in the CRSP Initial Units is critical to pursuing discussions to develop these conservation programs because there is no incentive to begin complex discussions on water conservation if there is no place to store conserved water. We understand that these discussions are conceptual at this time and specific plans have yet to be negotiated or approved and are likely to take some time to develop.

The States have not identified operational details for a potential Demand Management program and therefore have not defined how water savings will be determined, how water will be conveyed to CRSP Initial Units, or how much water the States may be able to save. Of the 30,000,000 acre-feet of storage capacity in the Initial Units, the Demand Management Storage Agreement authorizes storage in the Upper Basin up to a maximum of 500,000 acre-feet. Once these details become available, Interior will work with the Upper Basin States, in consultation with the Lower Basin States, to review the technical elements of the anticipated Demand Management Storage Program.

### **Lower Colorado River Basin Drought Contingency Plan**

The Lower Basin DCP is designed to reduce the risks of Lake Mead declining to critical elevations by requiring Arizona, California, and Nevada to contribute additional water to Lake Mead storage at predetermined elevations and creating additional flexibility to incentivize additional voluntary conservation of water to be stored in the lake. These new contributions of water by each Lower Basin State are an overlay and are in addition to the shortage volumes

outlined in the 2007 Interim Guidelines. Like the shortage elements of the 2007 Guidelines, new contributions would increase as Lake Mead's elevation declines, providing protection against Lake Mead declining to critically low elevations. The DCP also provides for the potential recovery of contributions later, should Lake Mead conditions improve significantly.

The Lower Basin DCP creates important incentives to encourage water conservation and storage in Lake Mead. New rules allowing flexibility to withdraw previously conserved water from Lake Mead below elevation 1,075 feet will remove disincentives to conserve water when Lake Mead is near those elevations. The Lower Basin DCP also removes incentives to withdraw previously stored water as Lake Mead approaches elevation 1075'.

The DCP increases the maximum allowable storage of Intentionally Created Surplus (ICS) for each Lower Basin State to help incentivize creation and long-term storage of ICS. This incentive aims to further bolster Lake Mead's elevation.

In the Lower Basin, the DCP agreements will be accompanied by intra-state agreements in Arizona and California for each Lower Basin State, and related inter-state agreements among Arizona, California and Nevada, required to implement the DCP.

Implementation of a Lower Basin DCP will automatically trigger Mexico's Water Scarcity Contingency Plan as outlined in Section IV of Minute 323 to the 1944 U.S.-Mexico Water Treaty. This agreement, finalized in 2017, provides that Mexico will share proportionally in making additional contributions to Lake Mead at predetermined elevations. Following execution of the Lower Basin DCP in the U.S., the principal engineers from the U.S. and Mexican Sections of the International Boundary and Water Commission will prepare an engineer's report implementing Mexico's Water Scarcity Contingency Plan.

Collectively, these elements of drought response actions in the Upper Basin, Lower Basin and Mexico would cut the risk of Colorado River reservoirs reaching critically low elevations by approximately 50 percent. These are critically important actions and Interior believes these efforts need to be implemented this year to provide the maximum benefits in terms of water conservation opportunities and associated risk reduction.

## **Environmental Considerations**

Reclamation has worked closely with the Basin States as the DCPs were developed, and, as noted above, provided technical assistance to the States throughout their discussions. Through this engagement, Reclamation has been able to inform the States of relevant existing environmental programs and environmental compliance in the Upper and Lower Basins so that

the elements of the DCPs could be carefully developed with these important considerations in mind.

Now that the DCPs have been finalized and transmitted for congressional consideration and approval on March 19, 2019, Reclamation has been carefully reviewing the final provisions in the context of existing environmental analyses that guide operation of Colorado River reservoirs.

### **Avoidance of Crisis**

The DCP is a program that implements simultaneous and coordinated actions among the seven Colorado River Basin States and Mexico through the activation of their Binational Water Scarcity Plan in a critically needed effort to reduce water use, or conserve water, to protect the Colorado River system from crisis.

Implementation of the DCPs would occur while Basin State representatives, along with Tribes, NGOs, and the public, begin efforts to develop agreements on longer-term operations that would be adopted beyond 2026.

Committing to this level of conservation, more than double what is currently required, results in a more reliable future for all resources that depend on the Colorado River – municipal, agricultural, hydropower production, recreation, and the environment.

### **Conclusion**

In summary, the Upper and Lower Basin DCPs, coupled with Mexico's Water Scarcity Contingency Plan under Minute 323, are designed to reduce the risk of Lakes Powell and Mead declining to critical levels.

With these plans in place, analysis indicates that the risk of declining to critical levels decreases to what they were when the 2007 Interim Guidelines were implemented. This would help bridge the gap as Interior and Reclamation work with stakeholders to develop a new set of operating guidelines prior to the expiration of the 2007 Interim Guidelines in 2026.

In closing, the Colorado River Basin is a critical resource to the seven Basin States. Recognizing that, they have worked and will continue to work hard on this effort. Thank you for the opportunity to appear before the Subcommittee today and I would be happy to answer any questions you may have.