



Date: May 5, 2022

MEMORANDUM

To: Honorable Mayor and Council Members
From: John Kmiec, Interim Director
Subject: Colorado River Shortage and Drought Update

Honorable Mayor Romero and Council Members,

On Friday May 6, the Arizona Department of Water Resources (ADWR) and Central Arizona Project (CAP) are holding the next regular Joint Colorado River Shortage Briefing (see <https://www.cap-az.com/>).

At the briefing, we expect the announcement of a reduction in water releases from Lake Powell to Lake Mead this year. As you recall, we forwarded to you a letter from the Bureau of Reclamation Assistant Secretary of for Water and Science Tanya Trujillo dated April 8 that indicated these mid-year cuts were likely. **These reductions will not affect the delivery of Colorado River water to Tucson for this calendar year.** We expect that Tucson will still bank approximately one third of its Colorado River water allocation (about a half year of customer demand) in local aquifers this year.

Lake Mead serves the lower basin states, including Arizona, and serves as the barometer for shortage conditions. We have also attached a recent communication from Assistant Secretary Trujillo on how these reductions between the lakes will take place.

Through decades of planning, investment, and concerted conservation effort by our community, the City of Tucson remains one of the best prepared communities in the Southwest to manage changing conditions on the river.

However, the speed at which drought is deepening necessitates a tangible and meaningful response. This is needed not only to reassure the public, but to provide more ways that citizens can participate in a new chapter for water stewardship in our community. We also expect the projection for a Tier 2 drought stage on the Colorado river will be announced in the Bureau of Reclamation's August report for the 2023 calendar year. In response, we

are implementing the following additional drought responses over the coming months. These measures will help us to proactively prepare for deeper stages of drought in both the short- and long-term.

- Outreach/Education:
 - Launching a new, comprehensive, conservation-centered marketing and outreach campaign including:
 - Marketing to include television, radio, print, outdoor, and social media advertising
 - New videos and visuals to increase public engagement
 - A new branded website (or special section of the City's website) providing a one-stop shop where residents and businesses can:
 - learn about the status of Tucson's Water supply and drought/shortage conditions, including the [drought dashboard](#)
 - take action through a streamlined portal to Tucson Water's incentives, conservation, and education programs
 - learn about and engage in Tucson Water's One Water 2100 Master Plan
 - Public messaging ramp up through June-July, full roll-out in August 2022
- City of Tucson facilities:
 - Working with City departments to implement recommendations from water efficiency audits of 91 City facilities that have been completed
 - Continuing to implement the City's \$1 million investment in water-saving irrigation and drinking fountain upgrades at City parks
- Residential customers:
 - Providing residential customers with information about how their water usage compares to the average customer every month on the utility services statement and drought dashboard
 - Launching a new online "Home Water Works Calculator" where customers can enter their water use factors, compare to local customer averages, and receive efficiency recommendations. Customers may receive an incentive for using the calculator
 - Performing targeted outreach to high water-use residential customers, offering free audits, rebates, and other conservation guidance
 - Providing a new, higher rebate for premium high efficiency toilets using only 1.1 gallons per flush or less (the existing High Efficiency Toilet Rebate is the number one water savings measure among all Tucson Water rebates)

- Increase of passive rainwater harvesting rebate (i.e. installing landscapes that capture rainwater in basins to support trees and other plants)
- Per Council direction, conducting direct outreach to ~6,000 homes constructed in the past 10 years, which have had dedicated graywater plumbing installed per City ordinance – provide info and resources regarding how to use gray water and Tucson Water’s gray water rebate
- Commercial customers:
 - Conducting direct outreach to large (commercial, industrial, multifamily) customers whose water use exceeds the guidelines unique to their property – offering free on-site water audits and recommendations for improvement and customized rebate packages
 - Per Council direction, hiring staff and improving the implementation and enforcement of the Commercial Rainwater Harvesting Ordinance

In terms of policy responses, staff respectfully requests direction to evaluate the feasibility, costs, and benefits of implementing the following:

- Modifying the Unified Development Code to require use of EPA Water Sense certified fixtures in new construction.
- Implementing a Low Impact Development Ordinance, like many across the country, mandating the implementation of green stormwater infrastructure in new residential construction. Much supporting work has already been completed in the non-regulatory [Pima County/City of Tucson Low Impact Development and Green Infrastructure Guidance Manual](#).
- Requiring irrigation meters for commercial and multifamily properties over specified size/use thresholds. This could greatly increase the efficacy of the Commercial Rainwater Harvesting Ordinance while reducing long-term costs (especially sewer charges) for businesses.
- Requiring submetering for townhome and condo developments. This is a proven measure to significantly reduce water use in multifamily settings and provides residents with greater control over their water consumption and related expense.

Thank you for your continued stewardship of Tucson’s water resources. We plan to give you a further update at our annual Colorado River update Study Session item in September, and where we can receive further policy direction on the items presented in this Memorandum.



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

MAY 03 2022

Mr. Thomas Buschatzke
Governor's Representative
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P.O. Box 36020
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Dear Mr. Buschatzke:

The Colorado River Basin is experiencing unprecedented conditions of drought and low runoff. The best available science indicates that the effects of climate change will continue to adversely impact the basin. Combined water storage at our primary Colorado River reservoirs – Lake Powell and Lake Mead – is at the lowest level since Hoover Dam and Glen Canyon Dam were constructed. Colorado River inflow into Lake Powell last year was the second-lowest since Lake Powell began filling nearly sixty years ago. Current National Oceanic & Atmospheric Administration projections indicate that basin runoff will again be well below average this year.

In recent weeks, Department of the Interior staff have shared the best available information regarding hydrologic conditions and the potential for adverse effects on Glen Canyon Dam facilities and operations with representatives of the seven Colorado River Basin States, Basin Tribal leaders, Congressional staff, officials from the Republic of Mexico, water users, water districts, federal and state agencies, and non-governmental organizations (NGOs). We have identified a number of concerns, including concerns for public health and safety, that could occur within this calendar year if Lake Powell were to decline below critical elevations. These include water supply interruptions to water users that rely on Lake Powell for drinking water supplies, hydropower interruptions to users that rely on Glen Canyon Dam for power supplies, and increased uncertainty regarding downstream releases should Lake Powell elevations continue to decline. Reclamation staff have initiated efforts to assess operational and infrastructure risks and accelerate maintenance and response actions for water delivery and hydropower generation infrastructure at the facility.

The Department has reviewed these concerns, along with input from the Basin States, Tribal leaders and others and has concluded that prudent operation of Glen Canyon Dam for 2022 requires a downward adjustment to the water release volume originally planned for this water year to delay or avoid Lake Powell declining further to critical elevations. Given all of the relevant considerations, and consistent with Sections 6 and 7.D. of the 2007 Interim Guidelines, the revised operations will be implemented to include the following determinations:

Glen Canyon Dam Operations in 2022 Water Year

- The schedule for Glen Canyon Dam annual releases for water year 2022 will be temporarily changed from 7.48 million acre-feet (maf) to 7.0 maf, a reduction of 480,000 acre-feet (480,000 af reduced release amount).

Implementation of Tier Determinations

- To ensure operational neutrality with respect to the 480,000 af reduced release amount:
 - For projections of Lake Powell elevations, the August 24-Month Study determinations will be made as if the 480,000 af reduced release amount is not present in Lake Powell;
 - For projections of Lake Mead elevations, the August 24-Month Study determinations will be made as if the 480,000 af reduced release amount is present in Lake Mead;
 - The foregoing approach to operational neutrality and tier determinations will be made in the August 2022 24-Month Study projections for water year /calendar year 2023 and all subsequent tier determinations under the 2007 Interim Guidelines and the 2019 Drought Contingency Plan or until such time as the 480,000 af reduced release amount is fully released from Glen Canyon Dam.
- Consistent with the provisions of the 2007 Interim Guidelines and to preserve the benefits to Glen Canyon Dam facilities and operations in 2023, Reclamation will consult with the Basin States on monthly and annual operations.

Accounting for the Reduced Release amount for Water Year 2022

- Reclamation will take appropriate actions to account for and track the 480,000 af reduced release amount in subsequent years.
- Reclamation will evaluate continuing risks of Lake Powell and Lake Mead declining below critical elevations and develop strategies to mitigate and reduce such risks.
- Reclamation will address future releases of the 480,000 af reduced release amount from Lake Powell in an appropriate manner, and at an appropriate time, and will seek support from the Basin States for any such future releases given all relevant operational considerations for Glen Canyon Dam and Hoover Dam.

We deeply appreciate the consensus implementation actions contained in the 2022 Drought Response Operations Plan submitted to the Department on April 21, 2022 and we will ensure that the enhanced releases from Flaming Gorge are implemented in addition to implementing the reduced release amount from Glen Canyon Dam. These combined actions have received consensus support from the Basin States.¹ We have also received written support from the Colorado River Indian Tribes and the Gila River Indian Community, while other partners have also expressed general agreement with these actions. We believe these consensus approaches are superior to the exercise of unilateral action by the Department to address emergency conditions under either the Drought Response Operations Agreement or the 2007 Interim Guidelines.² The

¹ See Letter from Governor's representatives, Colorado River Basin States (April 22, 2022).

² See e.g., Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, Sec. XI, G., at Sec. 7.D. (73 Fed. Reg. at 19892 (April 11, 2008)); Record of Decision - Operation of Flaming Gorge Dam, Action Alternative at p. 4, Sec. III (Feb. 16, 2006).

Department of the Interior and Reclamation will ensure appropriate consultation with the Basin States, Tribes, the Republic of Mexico, municipal and agricultural water users, water districts, federal and state agencies, and NGOs to address the present risks facing the Basin, continue to consult and coordinate with the Basin States pursuant to the 2007 Interim Guidelines and work cooperatively with all interested parties on efforts to address long-term supply and demand imbalances, including development of post-2026 operating guidelines.

We appreciate your support and cooperation as we continue to address the current issues and risks facing the Colorado River Basin.

Sincerely,



Tanya Trujillo
Assistant Secretary
for Water and Science

cc: Camille Calimlim Touton, Commissioner, Bureau of Reclamation
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