



# United States Department of the Interior

BUREAU OF RECLAMATION  
125 South State Street, Room 8100  
Salt Lake City, UT 84138-1102



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## Memorandum

To: Chief of Staff  
Office of the Assistant Secretary for Water and Science

From: Wayne Pullan  
Chair, Glen Canyon Leadership Team  
Secretary's Designee to the Adaptive Management Work Group (acting)

**WAYNE  
PULLAN**

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WAYNE PULLAN  
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Subject: Notification of Decision to Not Implement a Fall 2022 High Flow Experiment at Glen Canyon Dam

On September 29, 2022, the Glen Canyon Planning/Implementation Team (PI Team) finalized its recommendation regarding a potential fall High Flow Experiment (HFE) at Glen Canyon Dam in November 2022 (Attachment - Final Recommendation Regarding a Fall 2022 High Flow Experiment at Glen Canyon Dam, November 2022). The PI Team reached consensus in its opposition to recommending to the Glen Canyon Leadership Team (Leadership Team) the implementation of any duration (up to 192-hour) fall HFE in 2022. The recommendation was developed and evaluated within the adaptive management framework and provisions of the 2016 Record of Decision (ROD) for the Glen Canyon Dam Long Term Experimental and Management Plan (LTEMP) Final Environmental Impact Statement (LTEMP ROD) concerning annual planning for flow-based experiments.

In accordance with the LTEMP, the Department may make the decision to conduct flow-based experiments (e.g., HFEs, Macroinvertebrate Production Flows, Trout Management Flows, and Low Summer Flows) at Glen Canyon Dam if it is determined that there are no unacceptable adverse impacts on other resource conditions. LTEMP states that "Prior to implementation of any experiment, the relative effects of the experiment on the following resource areas will be evaluated and considered: (1) water quality and water delivery, (2) humpback chub, (3) sediment, (4) riparian ecosystems, (5) historic properties and traditional cultural properties, (6) Tribal concerns, (7) hydropower production and WAPA's assessment of the status of the Basin Fund, (8) the rainbow trout fishery, (9) recreation, and (10) other resources. Water Year 2022 was the fifth full year of implementing the process for annual experimental planning under the LTEMP ROD. For future experimental planning, the Department welcomes input from each the Leadership Team members as to whether the current process or another process should be used to satisfy the coordination and communication requirements under the LTEMP ROD.

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Traditionally Associated Tribes shall be notified at least 30 days in advance of planned experimental flows. On September 27, 2022, notification of the possible fall HFE and offer for consultation was emailed to the Tribes and Parties to the LTEMP National Historic Preservation Act Section 106 Programmatic Agreement (PA) (LTEMP PA). No requests for consultation regarding the potential fall HFE were received to date.

The LTEMP ROD specifies the representation requirements for planning experiments at Glen Canyon Dam and is based on past successful planning and implementation of flow-based experiments. The PI Team includes technical representatives from the Bureau of Reclamation (Reclamation), the National Park Service (NPS), the U.S. Fish and Wildlife Service (FWS), the Bureau of Indian Affairs (BIA), the U.S. Geological Survey's (USGS) Grand Canyon Monitoring and Research Center (GCMRC), Western Area Power Administration (WAPA), the Arizona Game and Fish Department (AZGFD), the seven Colorado River Basin States (States), and the Upper Colorado River Commission (UCRC). The Leadership Team is made up of decision makers from the same organizations.

The Leadership Team has reviewed and considered the PI Team's recommendation, including the assessment of key resources that may be impacted or affected by any (up to 192-hour) HFE duration. The Leadership Team met via webinar on October 3, 2022, and, consistent with the PI Team's recommendation, members reached consensus to not recommend implementation of any duration (up to 192-hour) fall 2022 HFE.

The 2022 water year was another historically difficult year for the Western states, including tribes, fisheries, wildlife, farmers, ranchers, and communities. Low reservoir elevations exacerbated non-native fish issues as warm water releases from Glen Canyon Dam provided thermal conditions in the Colorado River to be suitable for reproduction of high-risk smallmouth bass. Juvenile smallmouth bass were discovered in Lees Ferry in July 2022 and a rapid response action is currently underway by management agencies. Though the sediment triggers outlined by LTEMP ROD were met during the accounting window to consider a fall 2022 HFE, the PI Team by consensus found the following unacceptable adverse impacts associated with any duration (up to 192-hour) fall 2022 HFE: 1) increased risks to benefitting non-native fish, including the potential to transport juvenile smallmouth bass downstream into the Grand Canyon; 2) challenges and risks associated with reallocating large volumes of water for longer duration HFEs and uncertainties and risks associated with exacerbating low reservoir elevations (e.g. lower annual minimum and risk of falling below minimum power pool); 3) impacts to hydropower production; and 4) increased risk of fish entrainment at lower reservoir elevations.

The PI Team also noted that in LTEMP, fall HFEs were predicted to be conducted frequently (~3 out of every 4 years) and it has been four years since the most recent HFE was triggered and implemented (fall 2018). The PI Team determined that a potential fall 2022 HFE would rebuild some of the beaches that were lost since the last fall HFE. They determined that a low duration 24-hour HFE would likely provide a good learning opportunity and likely have some sediment benefits. It was noted that maintaining camping beaches is important for the LTEMP sediment resource goal. Also noted is the potential for an improved legacy of sandbar increases resulting from a fall HFE (predicted +20% sandbar size in April 2022 relative to October 2021), due to relatively low winter flows consistent with the 7.0 maf annual release pattern planned for Lake Powell in Water Year (WY) 2023.

The GCMRC highlighted the learning value of implementing an HFE in November 2022, anticipating it would contribute to addressing: 1) the long-term question about the cumulative effect of multiple HFEs over the 20-year period of the LTEMP, and 2) questions about the effects of shorter duration and lower magnitude HFEs.

Although the best available science indicates a fall HFE could result in a small increased risk of dispersing smallmouth bass and green sunfish, the consequences to humpback chub (listed as threatened under the Endangered Species Act (ESA) is very high. Thus, expert opinion among fishery biologists was that even a 24-hour fall HFE could substantively increase the risk to ESA listed and other native fishes in Grand Canyon.

Based on the concerns expressed by both the Leadership Team and the PI Team, the determination of unacceptable adverse impacts, and consensus recommendations for the Department to not implement any duration fall 2022 HFE, I concur with the determination of unacceptable adverse impacts and have decided not to conduct a fall HFE in November 2022. Reclamation will continue to work with our partners on future experiments under LTEMP and in the protection of the Grand Canyon and its resources.

I am grateful to both the Leadership and the PI Teams for their dedication and commitment to the process for annual experimental planning and for your continued support of the Glen Canyon Dam Adaptive Management Program. If you are deaf, hard of hearing or have a speech disability, please dial 7-1-1 to access telecommunications relay services.

Attachment

cc: Camille Calimlim Touton  
Commissioner