

DFO Approval:

Glen Canyon Dam Adaptive Management Program Technical Work Group (TWG) Meeting Summary

Dates: February 5, 2026

Note: Meeting Summary was produced by AI and subject to errors.

Welcome and Administrative

The meeting was convened by Chair Seth Shanahan, who welcomed participants and emphasized the importance of collaboration given the challenging conditions facing the program. Members and alternates introduced themselves, including those attending online. Administrative updates included confirmation that the next Technical Work Group (TWG) meeting will be held on April 9 in Flagstaff, combined with the first Knowledge Workshop scheduled for April 7–8. Updates were provided on ad hoc groups: the Trout Ad Hoc Group (TAHG) continues to work on recommendations but anticipates difficulty reaching consensus, particularly on short-term actions such as trout stocking. The Smallmouth Bass Ad Hoc Group (SBAHG) has not met recently but completed a survey, while the Budget Ad Hoc Group (BAHG) is transitioning leadership and preparing to guide planning for FY27. A significant portion of the discussion focused on drought planning and the need for proactive strategies to address potential low reservoir conditions. Suggestions included scenario planning and leveraging the Steering Committee Ad Hoc Group (SCAHG) for rapid response. Additionally, a new SharePoint site was introduced to improve document sharing and collaboration among members. Monitoring and research trip schedules were reviewed, with attention drawn to potential impacts from budget reductions of 5%, 10%, and 15%, which could result in canceled or scaled-back fieldwork.

Hydrology, Glen Canyon Dam Operations, and Water Quality Conditions in Lake Powell and Below Glen Canyon Dam

As reported by Alex Pivarnik, Bureau of Reclamation (Reclamation), hydrologic conditions are poor, with Lake Powell at approximately 3534 feet (26% full) and Upper Basin storage at 50%. Snowpack is currently at 61% of median, leading to a sharp decline in runoff forecasts. The April–July inflow forecast dropped to 2.4 million acre-feet (MAF), or 38% of average, and the full water year forecast is about 5 MAF (52% of average). Projections indicate that Lake Powell could fall below the critical elevation of 3525 feet by late summer, with a potential low point near 3503 feet next March. These conditions raise concerns about approaching power pool and possible run-of-river operations. Seasonal outlooks suggest continued warm and dry conditions, compounding the risk. Hydropower maintenance outages scheduled for 2026–2027 were also noted, adding operational complexity.

Current dam operations have been adjusted to respond to drought conditions, with monthly release patterns modified to meet system demands while preserving reservoir elevation. Future operations remain uncertain pending the outcome of post-2026 Colorado River guidelines negotiations. If reservoir levels continue to decline, the system may face run-of-river conditions, which would significantly alter flow management and resource impacts downstream.

Bryce Mihalevich (Reclamation) provided an update on water quality and indicated that monitoring in December revealed unusually warm reservoir temperatures, with readings near the dam at approximately 14°C, far above historical norms. Dissolved oxygen levels remain acceptable for now but decrease with depth, posing risks as reservoir elevation declines. Forecasts indicate that release temperatures could exceed 22°C by summer, surpassing previous records and creating severe challenges for cold-water species such as rainbow trout. Downstream projections show that River Mile 61 may exceed 15.5°C by late May, with Lees Ferry crossing that threshold by late June. Specific conductivity is trending higher as reservoir levels drop, which may affect aquatic invertebrates and overall ecosystem health.

Long-Term Experimental and Management Plan (LTEMP) Biological Opinion Conservation Measures

Updates on LTEMP conservation measures were provided by Matt O’Neill (Reclamation) and highlighted mixed progress. Humpback chub populations are currently above Tier 1 thresholds, meaning no immediate conservation actions are required, although future risks remain. Translocations were limited this year due to low larval detections. Non-native fish control efforts continue, including removal operations in Bright Angel Creek and implementation of cool-mix flows to deter smallmouth bass. Razorback sucker surveys detected no individuals, underscoring ongoing concerns for this species. Additional measures include a biofouling study to inform thermal curtain design, exploration of an electric fish barrier to reduce entrainment at penstocks, and a proposed congressional feasibility study for a temperature control device at Glen Canyon Dam.

FY25–27 Triennial Work Plan Year 3 Planning

Budget uncertainty dominated discussions about planning for FY27. As described in the President’s budget released in spring of 2025, the FY26 appropriation for Colorado River activities is approximately \$20.67 million for Adaptive Management Program and recovery programs combined, significantly lower than previous years. This shortfall translates into a 10–15% reduction from triennial work plan projections. Members were advised to plan for

potential reductions for the future. The BAHG will begin developing FY27 recommendations soon, with preliminary guidance expected by April and final recommendations by summer.

Knowledge Workshop Planning

Jeremy Hammen (Reclamation) indicated that four workshops are planned: Fish (April), Sediment, Cultural Resources, and Vegetation (June), Natural Processes and Rainbow Trout Fishery (fall), and Program Processes and Tribal Perspectives (early 2027). These workshops aim to build stakeholder understanding, identify knowledge gaps, and prepare for the 10-year LTEMP review. Active participation is critical, and members were encouraged to provide feedback on topics and format. Summaries and technical products will be developed to inform future planning.

Breakout Group Discussion

Breakout sessions revealed consensus between TWG members on several points. Overall, humpback chub populations are improving, while sediment resources, cultural sites, and vegetation are in decline. The rainbow trout fishery is in poor condition and faces severe risk from rising temperatures. Emerging threats include warm-water fish invasion, hydropower decline, and vegetation encroachment on campsites. Recommendations emphasized maintaining core monitoring, focusing on high-risk resources, revisiting desired conditions, improving communication, and preparing for trade-off discussions among competing resource goals.

Discussion of Possible Experimental and Management Actions that May be Implemented Over the Next Year

Bill Stewart (Reclamation) reported that two major experimental actions are being considered in the coming year. A spring high-flow experiment (HFE) potentially in May or June, as sediment triggers have been met. Modeling is underway to determine feasibility and timing. Additionally, a smallmouth bass flow experiment will be evaluated using a screening tool, with decisions expected by late April and possible implementation in early June. Coordination between these experiments is under consideration to optimize benefits and minimize conflicts.

Emerging Issues

Members expressed concern about the combined effects of budget cuts, a federal hiring freeze, and restrictions on volunteer participation, all of which threaten program capacity. The group stressed the need for proactive planning for low reservoir scenarios, including potential run-of-

river operations. Suggestions included engaging external expertise from regions such as Australia and South Africa, which have experience managing severe drought conditions.

Updates Before Next TWG Meeting

Ongoing activities include monitoring crayfish and other invasive species, addressing challenges to tribal restoration projects caused by drought, and continuing research on springs and tributary ecosystems affected by wildfire.

Agenda Items for Next Meeting

The April meeting will focus on budget planning and recommendations from the BAHG, updates on HFE and smallmouth bass experiments, outcomes from the first Knowledge Workshop, and continued discussion on program evaluation and reporting frameworks.

Public Comment

Public comments underscored the importance of recreation and fisheries. The Grand Canyon River Guides representative called for greater attention to recreation in workshops and research, citing outdated data and the need to prioritize visitor experience. A representative for the trout fishery criticized the lack of progress on trout recovery and urged the Trout Ad Hoc Group to deliver meaningful, science-based recommendations. Tribal perspectives emphasized collaboration and optimism, encouraging the group to couple science with cultural values to guide future decisions.

Lynn Hamilton, Executive Director of Grand Canyon River Guides, addressed the group to emphasize the critical importance of recreation within the Glen Canyon Adaptive Management Program (AMP). She expressed appreciation that Rob Billerbeck raised the topic of recreation in relation to the upcoming Knowledge Workshops, but strongly objected to the response that suggested recreation would simply be “figured out” and combined with other topics. Lynn stated that this approach is unacceptable because, in her view, recreation is a foundational reason for the existence of AMP and the TWG.

She reminded the group that it was river guides in the Grand Canyon who first recognized the severe impacts of Glen Canyon Dam on beaches and river conditions, which ultimately led to the passage of the Grand Canyon Protection Act (GCPA). This legislation explicitly places natural resources, cultural resources, and visitor use on equal footing, as outlined in Section 1802 of the Act. Lynn argued that recreation deserves the same level of attention as other resource goals and should not be treated as secondary.

To illustrate the lack of focus on recreation, Lynn pointed to the Post-2026 Operations Environmental Impact Statement (EIS), noting that the Recreation Appendix relies on outdated citations—some dating back to 1987 and 2000—with little to no recent research on the recreational experience or resource conditions. She described this as a “terrible death” of knowledge and called it “for shame,” stressing that the program must do better.

Lynn urged the group to prioritize recreation in the upcoming workshops by dedicating a standalone Knowledge Workshop specifically to recreation, even if the primary outcome is acknowledging significant knowledge gaps. She emphasized that the program is at an inflection point, with major changes looming for all resources, and recreation must receive the focus and attention it deserves to ensure informed decision-making in the future

Dave Foster spoke passionately on behalf of the Lees Ferry trout fishery, offering to personally take any Adaptive Management Work Group (AMWG) or TWG members upriver to experience the conditions firsthand. He began by referencing a recent presentation from the Grand Canyon guiding community, which emphasized the importance of sand for recreational beaches—so much so that one individual reportedly returned sand trapped in their gear back to Lees Ferry for reuse. Foster contrasted this level of care for sand with what he perceives as neglect toward the trout fishery, arguing that if the Glen Canyon Adaptive Management Program (GCDAMP) had shown similar commitment to trout, the fishery might still be thriving today.

Foster highlighted the historical significance of Glen Canyon Dam, noting that it created modern river-running conditions—longer seasons, safer flows, clearer and colder water—and also established what was once a world-class trout fishery. He stressed that maintaining this fishery is an explicit goal of GCDAMP and Glen Canyon Dam Long-Term Experimental and Management Plan (LTEMP), yet in his view, the program has failed to protect or manage it effectively. He expressed frustration that despite looming 15% budget cuts, programs targeting smallmouth bass between Lees Ferry and Lake Mead seem to take priority over trout restoration efforts.

Reflecting on the creation of the TAHG 16 months ago, Foster said he initially felt optimistic, believing it would provide a direct line to AMWG and TWG and lead to science-based recommendations for trout recovery. He envisioned collaboration between Grand Canyon Monitoring and Research (GCMRC) scientists and group members to define issues and craft actionable solutions. However, he now sees the group as fragmented along ideological lines, which undermines its ability to produce meaningful recommendations. Foster criticized the tendency for discussions to stall whenever compliance concerns are raised, arguing that the group’s charge is not to debate implementation hurdles but to determine how to restore the trout fishery.

He outlined several key realities: the Lees Ferry reach is nutrient-poor, trout recruitment has been poor for years, and cool-mix flows—while beneficial to trout—are likely to remain in place. He also noted that humpback chub recovery has been highly successful and that trout no longer pose a threat to chub populations, yet some group members behave as if chub survival is still at risk.

Foster urged the group to confront these issues head-on with scientific support, warning that restoring the fishery will “ruffle feathers” but is necessary.

To illustrate that bold actions are possible, Foster cited past GCDAMP decisions that once seemed impossible, such as implementing costly bypass flows and channelizing backwaters for chub recovery. He argued that similar ambition should be applied to trout restoration, suggesting options like stocking programs, invertebrate reintroduction, nutrient augmentation, and early spring HFEs to benefit trout. He concluded by calling on the TAHG to “slow down, refocus, and ruffle some feathers,” engage scientists, and deliver a meaningful document to TWG. Finally, he urged any members not fully committed to trout recovery to step aside, emphasizing that the group must fulfill its original purpose.

TWG Members, Alternates, and Leadership

Ben Reeder (Grand Canyon River Guides)	Jakob Maase (Hopi Tribe)
Betsy Morgan (State of Utah)	Jeremy Hammen (Reclamation)
Bill Persons (Trout Unlimited)	Jerry Wilhite (WAPA)
Brent Powers (Navajo Nation)	Joe Duncan (State of Wyoming)
Matt O'Neill (Reclamation)	Kelly Burke (Southwest Wildlands)
Buddy Fazio (NPS-GLCA)	Ted Rampton (UMPA)
Carrie Cannon (Hualapai Tribe)	Larry Stevens (Southwest Wildlands)
Christina Noftsker (State of New Mexico)	Leslie James (CREDA)
Colleen Cunningham (State of New Mexico)	Marc Wicke (Salt River Project)
Daniel Bulletts (Southern Paiute Cons.)	Mel Fegler (State of Wyoming)
Danielle Collins (State of Nevada)	Michelle Garrison (State of Colorado)
David Rogowski (AZGFD)	Rob Billerbeck (NPS-GRCA)
David Ward (USFWS)	Nicki Gibney (NPS-GLCA)
Deb Williams (USFWS)	Ryan Mann (AZGFD)
Emily Omana (NPS-GRCA)	Seth Shanahan (State of Nevada; Chair)
Emily Young (State of Arizona)	Shana Rapoport (State of California)
Hannah Chambless (NPS-GRCA)	Sinjin Eberle (American Rivers)
Stewart Koyiyumptewa (Hopi)	Erik Stanfield (Navajo Nation)
Craig Ellsworth (WAPA)	Kathy Callister (Alternate DFO-Reclamation)

Other GCDAMP Members and Interested Persons

Abigail Winrich (NPS-GRCA)
Alex Pivarnik (Reclamation)
Alyx Richards
Andrew Peters
Bill Stewart (Reclamation)
Brian Healy (GCMRC)
Brian Hines (Reclamation)
Jackie Brown
Bryce Mihalevich (Reclamation)
Erica Byerley
Katherine Chapman
Charles Yackulic (GCMRC)
Conor Clancy
Craig McGinnis
Dave Foster (Trout Unlimited)
David Dean (GCMRC)
David Topping (GCMRC)
David Wegner
Craig Dengel
Maria Dzul (GCMRC)
Emily Brandt
Emily Palmquist (GCMRC)
Erik Skeie
Ernest Rheaume (Reclamation)
Graham Rex
Katrina Grantz (Reclamation)
Helen Fairley (GCMRC)
Jan Balsom (NPS-GRCA)
Jeff Arnold (NPS-GLCA)
Jen Pelz
Jeremiah Maybee (NPS-GRCA)
Joel Sankey (GCMRC)
Josh Korman
Kerri Pedersen (Reclamation)
Kim Dibble (GCMRC)
Lisa Belenky
Lucas Bair (GCMRC)
Mark Anderson (GCMRC)
Mary Ekstrom
Matt Kaplinski (GCMRC)
Matthew Boggie (USFWS)
Megan Kramer
Lisa Meyer
Michael Pillow (USFWS)
Page Buono
Paul Grams (GCMRC)
Pilar Rinker (USFWS)
Richard Begay (Navajo Nation)
Ron Kegerries
Stephanie Graham
Taylor McKinnon
Warren Turkett (State of Nevada)
Heather Whitlaw (USFWS)
Sheri Farag (Salt River Project)
Tara Ashby (Reclamation)
Ted Kennedy (GCMRC)
Jess Newton (USFWS)
Thomas Gushue (GCMRC)
Lynn Hamilton (GCRG)
Ka-Voka Jackson (Hualapai Tribe)