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To: LTEMP SEIS Project Manager
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Bureau of Reclamation

Re: Grand Canyon River Guides' Scoping Comments re: the Supplemental Environmental Impact Statement for the Glen Canyon Dam Long-Term Experimental and Management Plan

Date: November 2, 2023

To whom it may concern,

Grand Canyon River Guides, Inc., (GCRG) founded in 1988, is unique in that it provides a unified voice for river guides and river runners in defense of the Colorado River through Grand Canyon. Our non-profit educational and environmental 501(c)(3) organization is comprised of over 1,700 individuals who are passionately dedicated to the continuing preservation of this national icon. Consequently, Grand Canyon River Guides' goals are to:

Protect the Grand Canyon

Provide the best possible river experience

Set the highest standards for the guiding profession

Celebrate the unique spirit of the river community

As the recreational river running stakeholder for the Glen Canyon Dam Adaptive Management Program, and as a longtime Grand Canyon defender, GCRG respectfully submits our scoping comments and suggestions on the Supplemental EIS for the Long Term Experimental and Management Plan (LTEMP) as per the Federal Register notice dated 10/4/23.

Please be advised that Grand Canyon River Guides submitted comments and suggestions regarding the previously planned Glen Canyon Dam Smallmouth Bass Environmental Assessment envisioned by the

Bureau of Reclamation (BOR). It is our understanding that comments received by the BOR on the Draft EA will be considered in this LTEMP SEIS. GCRG's full comments on the SMB EA are posted at this link on the GCRG website and are summarized below. Additional scoping comments regarding potential modification of the High Flow Experiment (HFE) protocol are also included here for your consideration.

Smallmouth Bass Invasive Threat

We understand that the BOR must respond expeditiously to the significant threat of Smallmouth Bass (SMB) establishment below Glen Canyon Dam which could impact the federally listed Humpback Chub and other native fish populations. The BOR's purpose within this SEIS is to identify methods to prevent this from happening by proposing multiple release (flow) options from the dam that cool the river below 16 degrees Celsius and introduce unfavorable flow velocities for SMB spawning.

The four alternatives to be analyzed are:

- Option A: Cool Mix
- Option B: Cool Mix with Flow Spikes
- Option C: Cold Shock
- Option D: Cold Shock with Flow Spikes

Coupled with these alternatives is a revised annual sediment accounting period and HFE implementation window plus a hydropower flow option to not use the bypass tubes to reduce water temperature.

Grand Canyon River Guides believes that the SEIS should analyze the following issues:

- How will the different flow alternatives impact recreation? In particular we would like to understand how the different options would impact river trips when the flows would be implemented and what metrics will be used to assess and compare alternatives in terms of impacts to river recreation.
- How will the flow alternatives affect the sediment balance in the river and the potential to conduct spring and fall HFEs?
- What is more effective in preventing SMB establishment – low water temperature or flow velocity?
- Do the flow alternatives satisfy the BOR's Section 10 responsibilities to species listed under the Endangered Species Act?
- What other flow alternatives were considered that prevent the establishment of SMB and why were they dismissed?

Grand Canyon River Guides is deeply concerned that Flow Options B and D (with potential for multiple spike flows) could be extremely detrimental to sediment, resulting in substantial erosion of the sand that accumulates in the channel from the Paria River and precluding the opportunity to conduct an HFE. The SEIS should consider a flow option with a larger magnitude (single) spike flow timed to disrupt SMB spawning while simultaneously being potentially beneficial for sediment. Please refer to recent HFE optimization modeling conducted by Grand Canyon Monitoring and Research Center (specifically Paul Grams' September 1, 2022 presentation, Scenario C). Moreover, what supporting evidence suggests that multiple spike flows are necessary? A single flow above 40,000 CFS may be more beneficial than multiple flows at 30,000 CFS.

If reduced water temperatures are shown to be more effective than higher velocities, then the SEIS should consider an alternative that focuses on reducing water temperatures below 13 degrees Celsius. The SEIS should consider sustained flows with reduced water temperatures that may be more effective at inhibiting SMB establishment while not adversely affecting sediment resources.

We would like to emphasize that time is of the essence to prevent establishment of this invasive species below Glen Canyon Dam before it is simply too late. The fate of our native fish assemblage is at grave risk. Accordingly, all prevention methods must be pursued, including answering these important questions that have been raised by program stakeholders:

- Will structural methods of preventing non-native invasive fish passage through the dam be addressed, such as installing curtains in the forebay?
- How will habitat conditions in the slough be considered? While green sunfish and smallmouth bass continue to reproduce in the slough, will habitat modifications be considered and implemented at the earliest opportunity?

High Flow Experiment (HFE) Protocol

GCRG is in full support of updating/amending the existing HFE Protocol to revise the sediment accounting periods and implementation windows per recommendations from the Flow Ad Hoc Group (FLAHG) based on scientific information from Grand Canyon Monitoring and Research Center. Those recommendations have been accepted by both the Technical Work Group and most recently by the Adaptive Management Work Group at their August 2023 meeting.

In order to provide additional input for consideration by the Bureau of Reclamation, GCRG solicited input from river users after the Spring 2023 HFE. Approximately 98% of respondents feel HFEs benefit the Grand Canyon ecosystem and more than 95% feel HFEs benefit the recreational resource in the Grand Canyon. Echoing GCRG's own views, a clear majority of respondents also prefer naturally timed spring HFE's due to biological considerations, aeolian transport for protecting cultural resources, and beach building that greatly enhances the recreational experience during the commercial boating season. A particularly insightful comment worthy of consideration in the SEIS explained that HFEs are critical to sustaining a viable recreation resource adding 'while the loss of campable area has been diminishing, it should provide a carrying capacity consistent with wild river/wilderness management concepts.'

Numerous firsthand accounts appreciated the successful beach building results that were sorely needed after several missed HFE opportunities in previous years. Several users also lamented releases before and after the HFE, specifically the high flows prior to and after the HFE as well as sudden down ramp rates that left steep cutbanks. With these experiences in mind, the HFE implementation protocol should be designed to optimize benefits as well as the longevity of deposits by carefully considering HFEs within the context of flow regimes before and after the HFEs including keeping post-HFE flows below the level of sediment transport/export, experimenting with different ramping rates, and other techniques to preserve the HFE sediments. This is especially important if aridification continues to influence the frequency, duration, and magnitude of HFEs.

Finally, GCRG respectfully requests that this SEIS should also revisit the HFE decision-making process as part of its evaluation of the HFE protocol. Greater inclusivity is fundamental to more fully realize the goals of the Grand Canyon Protection Act (GCPA), by expanding membership of the

implementation/planning group [PI Team] described on page C-6 of the LTEMP ROD. The PI Team should include ALL stakeholders as GCRG and others requested in our Oct 2021 letter to Secretary's Designee, Wayne Pullan. Otherwise, key stakeholders (recreation, environmental, and Tribes) are disenfranchised from the decision-making process for this key tool to manage downstream resources specifically cited as justification for their membership on the AMWG.

In our 2021 letter we stated, *"If the inclusion of our voices can only be achieved through a National Environmental Policy Act process, we request that the Secretary consider including our voices on the PI Team during the AMP's next NEPA-related effort."* The LTEMP SEIS should address how marginalizing some stakeholders from the process meets the stated goals of the GCPA and the underlying intent behind formation of the AMWG. GCRG believes that the current PI Team configuration does *not* in fact meet those mandates and must therefore be modified so that all voices and perspectives can be heard and incorporated into the decision-making process for High Flow Experiments. Supporting greater transparency, equity, and inclusion should be an important component of this LTEMP SEIS so that we can make the best recommendations to the Secretary of the Interior as we face the challenges ahead.

And indeed, the challenges facing the Colorado River through Grand Canyon are profound. We deeply appreciate the Bureau of Reclamation's hard work to develop this Supplemental EIS to the Long Term Experimental and Management Plan so that we can provide the essential tools, nimbleness, and flexibility necessary for adaptively managing Glen Canyon Dam ""in such a manner as to protect, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established."

Thank you very much for this opportunity to provide scoping comments. If you should have any questions or if we can be of further assistance, please let us know.

Respectfully,

Lynn Hamilton, Executive Director, Grand Canyon River Guides, Inc.

David Brown, Adaptive Management Work Group Representative

Ben Reeder, Technical Work Group Representative