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To: Sarah Bucklin
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Bureau of Reclamation

Re: Grand Canyon River Guides' Stakeholder Comments re: Small Mouth Bass EA

Date: December 14, 2022

Dear Ms. Bucklin,

Grand Canyon River Guides would like to submit the following comments and suggestions regarding the upcoming Glen Canyon Dam Smallmouth Bass Environmental Assessment being prepared by the Bureau of Reclamation (BOR). We understand that the BOR needs to respond to the threat of Smallmouth Bass (SMB) establishment below Glen Canyon Dam. The BOR's purpose 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.

Additionally the purpose of this EA is to respond to a directive from the Secretary's designee that requests the BOR identify operational alternatives, some of which may not be within the scope of the LTEMP Record of Decision, that inhibit SMB establishment while minimizing potential adverse effects to other resources. The BOR hopes to make a decision in time for implementation in late spring/early summer 2023. The directive continues to request that *'this NEPA analysis must not become a vehicle for addressing the range of concerns about the LTEMP FEIS and ROD but should rather give us possible tools that we can implement in a timely manner to address the non-native fish challenges we are currently facing.'*

The four alternatives being analyzed are:

- Option A: Cool Mix
- Option B: Cool Mix with Flow Spikes

- Option C: Cold Shock
- Option D: Cold Shock with Flow Spikes

Grand Canyon River Guides believes that the EA 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. Relevant data that should be considered are the scheduled commercial and private river trip launch dates for 2023.
- How will the flow alternatives affect the sediment balance in the river and the potential to conduct spring and fall HFEs? How are they considering the LTEMP's sediment accounting periods?
- 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?
- Given that an EA cannot result in any significant impacts, what thresholds will be used to assess the severity of impacts to sediment and recreation?

Grand Canyon River Guides is deeply concerned that Flow Options B and D (the 2 spike flow alternatives) could be extremely detrimental to sediment, resulting in substantial erosion of the sand that has accumulated in the channel from the Paria River over the last two seasons, and precluding the opportunity to conduct an HFE in 2023. The EA 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. Additionally, as you consider how to lessen impacts to hydropower, please consider that less water would be going through the bypass tubes with a single 40,000 cfs spike than with multiple 30,000 cfs spikes.

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

Respectfully,

Lynn Hamilton, Executive Director, David Brown, AMWG Member, and Ben Reeder, TWG Member