

**Glen Canyon Dam Adaptive Management Program  
Technical Work Group Meeting  
Aug 9, 2023**

## Webinar

**Start Time:** 2:07 PM Pacific Daylight Time (PDT)

**Conducting:** Seth Shanahan, Southern Nevada Water Authority (SNWA) and TWG Chair

**Meeting Recorder:** Beccie Mendenhall, SeaJay Environmental LLC

## Welcome and Administrative

- **Introductions and Determination of Quorum:** A quorum was reached.

## Status Report for Developing a Plan to Amend the High-Flow Experiment Protocol

### Presentation [Sinjin Eberle, American Rivers and FLAHG Chair]

This is the most recent version of the document coming into the meeting today. It represents all of the feedback and work done to date. In an effort to streamline closure, we have pulled out the areas of the document that still have open points to resolve. As he sees it there are just 4 things we need to deal with today, all of them are quite small.

Page 7            Change the word infrastructure  
Page 10          Review / change 2 sentences  
Page 11          Several points to revisit on this page  
Page 15          Address NEPA Compliance pathways

### Q&A, discussion

Page 7 Change the word infrastructure  
→ “infrastructure” was changed to “critical Infrastructure”

Page 10          Change one sentence  
[Sinjin Eberle, American Rivers] The sentence reads “This proposed revision does not mean that more than one Fall HFE should be implemented in the fall implementation window, more than one spring HFE in the spring implementation window, or more than one HFE should be implemented within a year.” We have all discussed the possibility of 2 HFE in a specific calendar year, but not within the same implementation window. We all understand that so can we just strike this part of the sentence? [Craig Ellsworth, WAPA] Yes, I think you can strike that part of the sentence.  
→ Language was removed

Page 10          Question about “Doing So”  
[Sinjin Eberle, American Rivers]  
A question was raised about the meaning of “Doing So” in this sentence. It means allowing roll over of sediment from one implementation window to the next. The roll over is covered elsewhere. This sentence is not necessary, we could just remove it. <Multiple entries in chat “OK to Remove”>

[**Sinjin Eberle, American Rivers**] Paul Grams, you are involved in the sediment accounting, are you OK to remove? [**Paul Grams, GCMRC**] Yes [**Sinjin Eberle, American Rivers**] Bill Stewart representing Reclamation, are you OK if we remove this sentence? [**Bill Stewart, Reclamation**] You can remove it.

→ Sentence removed

Page 11 Point 1

[**Sinjin Eberle, American Rivers**]

Now we are talking about the confluence of defining which HFE cannot be conducted within the same implementation window. I just want to make sure everyone is on board with this language “Spring HFE will not be tested in years where there has been an extended fall HFE earlier in the water year”. [**Seth Shanahan, SNWA**] That sentence is the existing sentence in the LTEMP ROD HFE protocol. Let’s hope people do not have issues with it. [**David Rogowski, AZGFD**] Is “tested” the correct word or should it be conducted? [**Seth Shanahan, SNWA**] You may be right, but that is the word in the LTEMP ROD. Let’s focus on the intent.

→ Agreed to leave as is, no changes

Page 11 Point 2

[**Sinjin Eberle, American Rivers**]

The proposal here is to replace the entire strike through paragraph with the new one below. [**David Rogowski, AZGFD**] Do we really want to restrict this to Small Mouth Bass? May be other species we want to include in the future. [**Sinjin Eberle, American Rivers**] It is written this way because we assume Reclamation will take this work and morph this into the new LTEMP EIS which incorporates both SMB control options and HFE recommendations. [**Seth Shanahan, SNWA**] First, I made a quick formatting change to non-italicized text here. Italicized text is reserved for actual revisions to the protocol. Non-italicized text is for context setting and explanations. The language says, “Should there be a spring HFE and a spike in SMB”, so the sentence is only meant to address that one specific situation, HFE and SMB spike. It also provides the context and brings awareness to the tradeoffs as you move into an EIS. Are you OK with that? [**David Rogowski, AZGFD**] I understand the reasoning, would like it to be broader but realize this is just a recommendation. [**Colleen Cunningham, NMISC**] Following the same line as David, I do not understand why we wouldn’t change this to “Non-Native Species Flow” action. Also why are we limiting it to Spring? [**Bill Persons, FFI/TU**] We are looking for more flexibility, rather than limiting to just SMB action, maybe more flexible language “an alternative flow action such as SMB” [**Craig Ellsworth, WAPA**] Suggest striking Spring HFE [**Ryan Mann, AZGFD**] You can simplify further by removing the “Such As” [**Emily Higuera, ADWR**] Add SMB triggers, remove the word implementation [**Kelly Burke, GCWC**] Can we replace Reclamation analysis in the last sentence with NEPA process? [**Leslie James, CREDA**] I do not agree with this suggestion. We do not want to limit this analysis to a NEPA process. [**Seth Shanahan, SNWA**] What if the sentence just ends after tradeoffs? Does that work? [**Kelly Burke, GCWC**] That works for me, even more flexible and broad. *<multiple agreements in chat>*

[**Sinjin Eberle, American Rivers**] Emily, you worked on this paragraph originally, are you OK with the revisions? [**Emily Higuera, ADWR**] Yes, fine [**Craig Ellsworth, WAPA**] I have a few words to fix in the final language (edits made). [**Seth Shanahan, SNWA**] Ryan, you proposed the plural version, are you OK with removing it? [**Ryan Mann, AZGFD**] No, we want to make sure the multiple flows are maintained (edits made).

[**Sinjin Eberle, American Rivers**] I just want to confirm, everyone is OK to remove the original paragraph and replace it with the new paragraph we just finished editing together? [**Seth Shanahan, SNWA**] Yes, we are all aligned on text below as replacement.

→ New Paragraph edits completed, old Paragraph removed

**[Sinjin Eberle, American Rivers]**

We were waiting for a memo from Wayne which has not yet been received. Seth suggested to just remove this section because Reclamation will be dealing with it later. Any thoughts? **[Bill Stewart, Reclamation]** Yes, removing it is fine. The message has been relayed that we are moving this into an LTEMP EIS.

**[Kelly Burke, GCWC]** I agree, it seems inappropriate for TWG to make statements on policies under the responsibility of AMWG **[Rob Billerbeck, NPS-GLCA]** NFS agrees with Bill. **[Emily Higuera, ADWR]** Arizona agrees.

→ Section removed

**[Kelly Burke, GCWC]** I would like clarification on the roll over section. I presume what we are recommending here will be what is analyzed in the NEPA that follows. Will this language preclude the ability to look at rollover sediment for a single year? And does this need to be part of the NEPA process?

**[Seth Shanahan, SNWA]** I want to make sure we understand what will happen at reclamation with this language. As written, there is no limitation in the number of roll over years, thus we are not narrowing down their analysis. Post analysis they might define a specific number of years, and that is what will go into the NEPA document. **[Kelly Burke, GCWC]** If we could just add the words to reference the NEPA document or NEPA process that this is feeding. **[Seth Shanahan, SNWA]** It does in the language “A future contemplative action” which would be the NEPA process. **[Kelly Burke, GCWC]** Can we just add a clarification?

→ NEPA reference added

**[Helen Fairley, GCMRC]** I thought there was already an agreement to include roll over for one year with recommendation to extend beyond a single year. So why did we take out the specific one-year language?

**[Seth Shanahan, SNWA]** Again, the hope was not to limit it to one year, we want to be more expansive. But one year is included by default. **[Kelly Burke, GCWC]** FLAHG did not identify whether to roll over sediment because more analysis was needed. But we should add language that we all agreed this was important to consider. **[Paul Grams, GCMRC]** It is confusing because what would trigger the roll over is dependent on the preceding process and analysis. Hence the reason we had to keep the language flexible.

**[Sinjin Eberle, American Rivers]** The point of this rollover section is to do our best to always maintain a positive sediment mass balance. **[Paul Grams, GCMRC]** Yes, to enable ability to do an HFE in one year if it was not done in the prior year. **[Christina Noftsker, NMISC]** I just worry that we are not giving BOR enough specifics to propose the NEPA. *<discussion continued with multiple edit proposals and scenarios for sediment>*

**[Paul Grams, GCMRC]** I suggest we leave it the way it is written. **[Seth Shanahan, SNWA]** I think this is why it’s not there, because there is no agreement yet on using extra sand if there was an HFE. Are you OK with this Christina? **[Christina Noftsker, NMISC]** Yes, fine. **[Jessica Neuwerth, CRBC]** We should not assume everyone is on board with one year of roll over. It is OK that for flexibility we removed the language about weather, but I want to make sure that Reclamation still includes weather in their analysis. **[Seth Shanahan, SNWA]** Good point, and thanks for confirming the current language allows for that scenario.

→ Updated language for rollover section per agreed edits

**[Leslie James, CREDA]** In the section where we are talking about more than 1 HFE in an implementation period. Is it possible to have 2 HFE and additional flow action? **[Seth Shanahan, SNWA]** yes, I think it can happen. The language is in a different section. **[Leslie James, CREDA]** This causes concern. Every HFE or flow action includes a bypass. So here we might be at 3 bypass actions in a single implementation

year. [Seth Shanahan, SNWA] Take another read of this language. It may support your position by NOT stating it. It directs Reclamation to do the analysis and then make a proposal that all members have opportunity to object. [Leslie James, CREDA] I disagree, this is outside the intent of LTEMP [Ryan Mann, AZGFD] How does changing the accounting window change the LTEMP? [Seth Shanahan, SNWA] Correct, it is a stand-alone issue that comes into play as Reclamation considers a bypass action.

[David Rogowski, AZGFD] The bypass concern should not be addressed in this document. [Seth Shanahan, SNWA] Let's add a sentence that calls out that some FHLAG members have concerns about this. [Leslie James, CREDA] I am Ok with that proposal. Craig, Shane, what do you think? [Craig Ellsworth, WAPA] Encouraging Reclamation to have this in their queue is important, I support the added language. [Laura Dye, CRCN] I do not agree or disagree about adding this new language, but there are points elsewhere in the text that cover this concern. Will these suffice or does it really need to be in both places? [Sinjin Eberle, American Rivers] What if we just add a point in the bullets "considerations for the NEPA LTEMP analysis" specific to bypass concerns? [Leslie James, CREDA] I agree with this placement in the bullets section. [Seth Shanahan, SNWA] Do we now delete the other general concern sentence? [Leslie James, CREDA] No, I still want to keep that sentence, make it clear this is not YES from everybody.

➔ Concerns about bypass were added in both sections

## Action

*Proposed motion language:*

*The Technical Work Group accepts the proposal developed through the Flow Ad Hoc Group to amend the High-Flow Experiment Protocol and agrees to forward it to the Adaptive Management Work Group (AMWG) to meet the directive given at the Feb 15, 2023, AMWG meeting.*

[Seth Shanahan, SNWA] Let's test the waters, are we ready for a motion? [Shana Rapoport, CRBC] Can we say "the plan developed through the Flow Ad Hoc Group AND proposals from the meeting today"? [Seth Shanahan, SNWA] The proposal is the proposal, don't think adding that is required. *<more editing suggestions follow but no specific changes made>*

[Mel Fegler, State of Wyoming] I motion to accept the proposal.

[Kurt Dongoske, Pueblo of Zuni] Can we replace "Agrees" with "Moves" [Colleen Cunningham, NMISC] I am wondering about the choice of the word Proposal. What we have is a recommendation for analysis. [Seth Shanahan, SNWA] The flag was tasked with developing a proposal, so that is the right term to use. What we have in the document are some proposed amendments. The biggest one is changing the sediment accounting window. But there is context about other things that are not determined yet, that require analysis. [Ryan Mann, AZGFD] "Proposal to amend" is in the name of the document. [Seth Shanahan, SNWA] Colleen, would you be OK with the language as is? [Colleen Cunningham, NMISC] Not really, we do not have agreement on all of the suggested "other things". [Sinjin Eberle, American Rivers] There is a subtitle in the document that can be modified if that helps?

➔ Changed the subtitle of the document by adding "And Other Considerations":

*Final motion language:*

*The Technical Work Group accepts the proposal to amend the High-Flow Experiment Protocol and moves to forward it to the Adaptive Management Work Group (AMWG) to meet the directive given at the Feb 15, 2023, AMWG meeting.*

[**Seth Shanahan, SNWA**] Mel, are these revisions OK? Do you still support the motion?

[**Mel Fegler, State of Wyoming**] Yes.

[**Ryan Mann, AZGFD**] I second the motion.

[**Seth Shanahan, SNWA**] Any objections to pass by consensus?

[**Larry Stevens, GCWC**] This proposal will couple the SMB EIS with Amendment of the HFE Protocol. I strongly recommend that we separate the two so the HFE Amendment can move forward quickly. [**Bill Stewart, Reclamation**] Even if we separate them, we will have to go through the NEPA process for the HFE Amendment. It will not be able to move forward any more quickly on its own. And by coupling them we only have a single NEPA action to manage.

[**Seth Shanahan, SNWA**] Any objections? <*No Objections raised*>

➔ Motion Passes by Consensus

[**Seth Shanahan, SNWA**] Next step in the process – this will be brought forth to the AMWG next week. Members with concerns, such as Larry just presented, please voice them again at the AMWG meeting next week.

➔ ACTION: [**Jeremy Hammen, Reclamation**] Send the preliminary document with edits from this meeting to TWG members by noon 8/10

➔ ACTION: [**Sinjin Eberle, American Rivers**] Distribute the final cleaned up document to AMWG members prior to the meeting 8/16

**Public Comment:** None Received

**Meeting adjourned at 4:12 PM PDT**

## Participants

### **TWG Members, Alternates, and Leadership**

Betsy Morgan (Utah DWR)	Jessica Neuwerth (CRBC)
Bill Persons (FFI/TU)	Kelly Burke (GCWC)
Carrie Cannon (Hualapai Tribe)	Kurt Dongoske (Pueblo of Zuni)
Charlie Ferrantelli (State of Wyoming)	Laura Dye (CRCN)
Christina Noftsker (State of New Mexico)	Leslie James (CREDA)
Cliff Barrett (UMPA)	Martina Dawley (Hualapai Tribe)
Colleen Cunningham (NMISC)	Mel Fegler (State of Wyoming)
Craig Ellsworth (WAPA)	Michelle Garrison (CWCB)
Dan Leavitt (USFWS)	Rob Billerbeck (NPS-GLCA)
Daniel Bulletts (Southern Paiute Consortium)	Rudy Keedah (BIA)
David Brown (GCRG)	Ryan Mann (AZGFD)
David Rogowski (AZGFD)	Scott McGettigan (State of Utah)
Emily Higuera (ADWR)	Seth Shanahan (SNWA)
Emily Omana Smith (NPS-GRCA)	Shana Rapoport (CRBC)
Erik Skeie (CWCB)	Shane Capron (WAPA)
Erik Stanfield (Navajo Nation)	Sinjin Eberle (American Rivers)
Jakob Maase (Hopi Tribe)	Ted Rampton (CREDA)

### **USGS**

Helen Fairley	Scott VanderKooi
Joel Sankey	Ted Kennedy
Lucas Bair	Thomas Gushue
Paul Grams	

### **Reclamation**

Alex Walker	Jeremy Hammen
Bill Stewart	Kathy Callister
Daniel Picard	Ryan Randol
Heather Patno	Teo Melis

### **Other GCDAMP Members and Interested Persons**

Beccie Mendenhall (SeaJay Environmental)	Hannah Chambless (NPS)
Christina Kalavritinos (DOI)	Melissa Trammell (NPS)
Gregory Mehojah (BIA)	Nicki Gibney (NPS)

## Acronyms

°C – degrees Celsius

MOA – Memorandum of Understanding

AMWG – Adaptive Management Work Group  
 ADWR – Arizona Department of Water Resources  
 AHAHG – Administrative History Ad Hoc Group  
 AZGFD – Arizona Game and Fish Department  
 BAHG – Budget Ad Hoc Group  
 BIA – Bureau of Indian Affairs  
 CRBC – Colorado River Board of California  
 CRCN – Colorado River Commission of Nevada  
 CREDA – Colorado River Energy Distributors Association  
 CRSP – Colorado River Storage Project  
 CWCB – Colorado Water Conservation Board  
  
 D.O. – dissolved oxygen  
  
 DOI – Department of the Interior  
 DWR – Department of Water Resources  
 EA – environmental assessment  
 EIS – environmental impact statement  
 FLAHG – Flow Ad Hoc Group  
 FFI – Fly Fishers International  
 FY – Fiscal Year  
 GCDAMP – Glen Canyon Dam Adaptive Management Program  
 GCMRC – Grand Canyon Monitoring & Research Center  
 GCPA – Grand Canyon Protection Act  
 GCRG – Grand Canyon River Guides  
 GCWC—Grand Canyon Wildlands Council  
 HFE – High Flow Experiment  
 LTEMP – Long-Term Experimental and Management Plan  
  
 mm – millimeter  
 NEPA – National Environmental Policy Act  
 NMISC – NM Interstate Stream Commission  
 NPS – National Park Service  
 NPS-GLCA – Glen Canyon National Recreation Area  
 NPS-GRCA – Grand Canyon National Park  
 PDT – Pacific Daylight Time  
 P&I Team – Planning and Implementation Team  
  
 Reclamation – Bureau of Reclamation  
 ROD - Record of Decision  
 SEIS – supplemental environmental impact statement  
 SMB – smallmouth bass  
 SNWA – Southern Nevada Water Authority  
 TRGD – Trout Recruitment and Growth Dynamics  
 TU – Trout Unlimited  
 TWG – GCDAMP Technical Work Group  
 UMPA – Utah Municipal Power Agency  
 USFWS – United States Fish & Wildlife  
 USGS – United States Geological Survey  
 USU – Utah State University  
 YoY – Young-of-Year  
 WAPA – Western Area Power Administration