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Glen Canyon Dam Adaptive Management Program – Hydropower Workshop Review

Bureau of Reclamation

History

- Project N – Developed in the FY2018-2020 Triennial Work Plan
- FY25-27 Triennial Work Plan Project 4.G
 - Hydropower Monitoring and Research
 - Reclamation will coordinate a hydropower workshop
 - Work closely with WAPA and GCMRC
 - Input and feedback provided by TWG/AMWG
 - Hydropower status, trends, and current issues
 - Identify opportunities to improve GCD flow experiments and new flow experiments associated with hydropower
- LTEMP 10-Year Review



Hydropower and Energy Goal – 2016 LTEMP

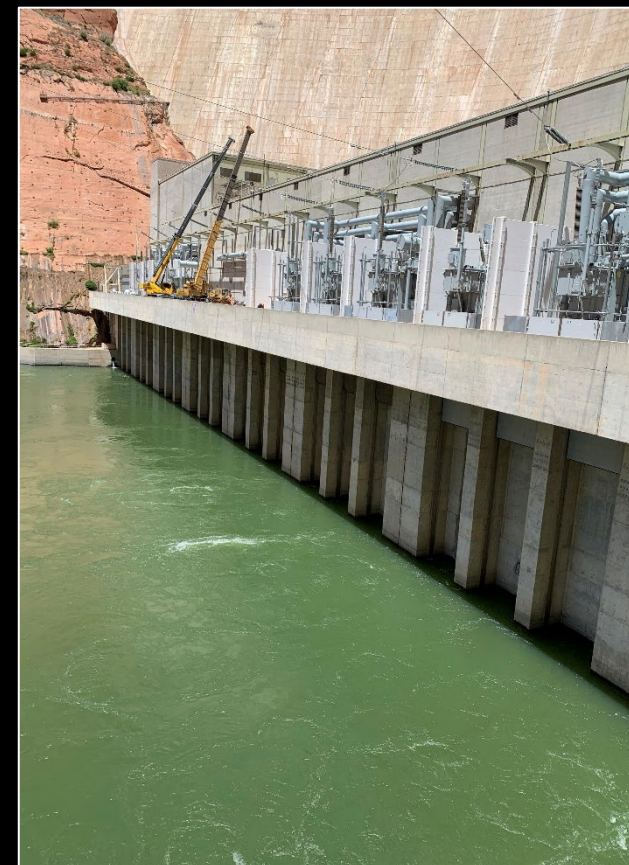
- Maintain or increase Glen Canyon Dam electric energy generation, load following capability, and ramp rate capability, and minimize emissions and costs to the greatest extent practicable, consistent with improvement and long-term sustainability of downstream resources.





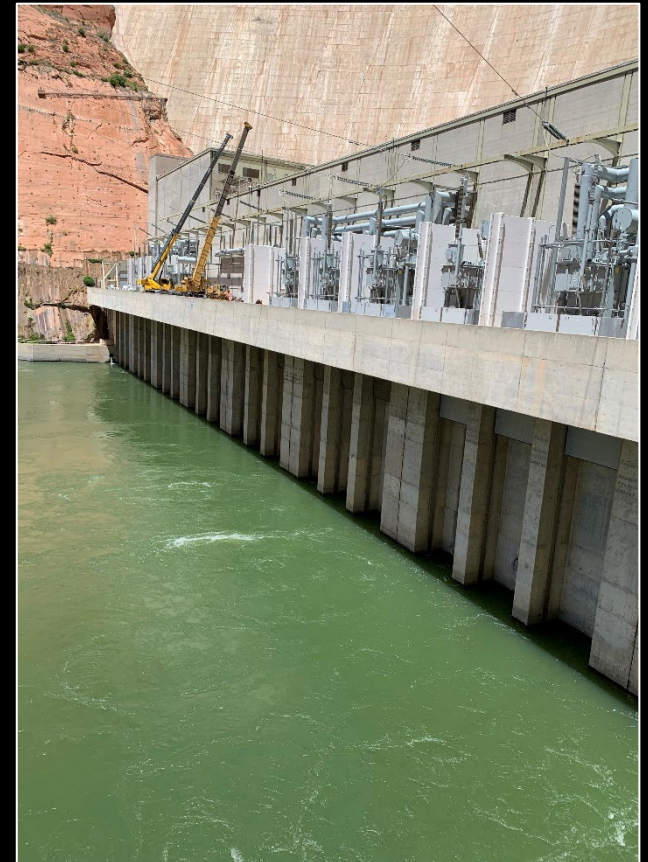
Hydropower Workshop Desired Outcomes - Simplified

- Provide baseline Hydropower information
- Visit the hydropower assumptions
- Identify opportunities to improve upon Glen Canyon Dam (GCD) flow
- Identify potential experimental hydrographs at GCD that improve hydropower
- Identify, coordinate, and collaborate on monitoring and research
- Identify opportunities to improve upon Glen Canyon Dam (GCD) flow experiments
- Discuss proposed performance metric for monitoring metrics document.



Hydropower Workshop – What's Next

- Revisit Hydropower Assumptions and Goals
 - Last visited in 2016 LTEMP
 - Apply what we learned
 - New conditions and new forecast
- Experiments
 - Develop potential future hydropower experiments
- Further discussion on the interaction among Hydropower and the other resources within LTEMP





Seth Cohen
Senior Program Manager; Facilitator

Morris K. Udall and Stewart L.
Udall Foundation's
John S. McCain III
National Center for
Environmental Conflict
Resolution

Developing the workshop

- Udall facilitation team worked with Reclamation team and WAPA to identify desired outcomes and questions for TWG
- Assessment interviews with TWG members, to identify:
 - Member interests or priorities.
 - Specific challenges to be addressed in the workshop
 - Ideas/concerns for workshop design and participation.
 - What might make it more successful?
- Ongoing facilitated meetings to build the agenda with a core planning team of Reclamation, WAPA, and GCMRC

Models and Screening Tools –

- *Much appreciation for talking through the models with visual examples*
- *Would like to see the models consistently discussed and used for experimental design and P&I recommendations.*
- *Consider additional discussion amongst technical experts for TWG/AMWG. Very complex topic.*



“Hydropower Experiment”

- *This topic could have almost been its own workshop. More time on this subject would be good.*
- *Suggest WAPA and BOR continue working on this project and determine when/if additional discussions are appropriate.*
- *Provide some materials of experimental ideas or literature as “homework” to assist in any discussion.*



Basin Fund; Marketing Plan & EMMO

- *Follow up on WAPA's efforts to address Basin Fund financial concerns*
- *More information about the limitations of ability of intermittent energy sources in meeting customer load demands.*
- *Further discussion on using battery storage to capture the use of intermittent resources to firm up the times when GCD releases were not sufficient to meet customer contracts.*



Tribal Benefits Presentation

- *It would be nice to hear directly from the Tribes*
- *Specific information from Tribes about how they have used the funding they have received through the benefit credit concept*



10-Year Review feedback

- *More discussion on basin fund financial fixes;*
- *Discussion on alternate funding sources for LTEMP experiments.*
- *More deliberation on potential experiments, or how to maximize potential hydropower benefits.*
- *Please share with the AMWG if the non-federal participants may be able to support these efforts.*

Other Feedback:

- Third-party facilitation was appreciated
 - *helped eliminate any perceived bias or potential personality issues.*
 - *ensuring structure/unbiased discussions.*
- AMWG Discussion - Other feedback/ suggestions?
 - Input for future Hydropower discussions
 - Input that can inform upcoming resource workshops

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Thank you