

**Minority Opinion Report on the Budget Resolution August 31, 2017**  
**Glen Canyon Dam Adaptive Management Program**  
**Technical Work Group Meeting**

Prepared by Kevin Dahl, Chair and sole member of the Minority Ad Hoc Committee  
Submitted on September 6, 2017

Here is a short minority report as I voted against recommending the budget for the reasons given below. The TWG meeting had lots of votes, which was unusual for a group that generally operates by consensus, and the result is not the best it could be. Michael Yeatts wrote up his concerns about the process, and because I agree with them I have included them in their entirety below.

As called for in our operating procedures, I've prepared an alternative resolution, located at the end of this report.

GCMRC Project D. Geomorphic Effects of Vegetation Management and Dam Operation

The concerns expressed about this item, which would monitor an experimental action that has been approved in the LTEMP and ROD, seemed more policy oriented than technical. The action – removal of nearby vegetation to (we hope) generate beneficial impacts to cultural sites – is one that is going to take place; so it just makes sense to me that we want the scientists involved to help plan and especially to monitor the effort. The Zuni representative to TWG told us that they don't want the project at all because it would be cheaper to just move sand onto archaeological sites rather than trying to restore natural processes. That is an intriguing thought. I wouldn't mind seeing that tested. But this project as it stands should be kept in as a reasonable experiment. It has arisen from our studies of what is happening with beaches and cultural sites in the Colorado River ecosystem that is different now than it was before the Glen Canyon Dam. This would both test a hypothesis and possibly provide some cultural sites better protection.

GCMRC Project N. Hydropower

This was a whole new section of the work plan and budget, proposed toward the end of our TWG meeting. I know it has been talked about before, but as a proposal from one stakeholder it doesn't seem quite whole and fully worked out. I have serious content concerns, as to me it is not clear what the experiments hope to determine. Certainly, what will actually be done isn't spelled out clearly in the budget/work plan amendment.

There is no funding amount associated with this new project, but is noted that it will be budget neutral. If that means it has no cost, then it doesn't belong in the budget. If that means this is in trade for some other reduction (such as Project D), then any item can be budget neutral if it simply replaces a reduction elsewhere.

My main objection is that we are operating under the Grand Canyon Protection Act, as informed by the LTEMP, and that experiments about improving dam operations (which I think are fine as long as they don't take funds away from protecting the resources of the two park units) are not my idea of what we should be doing here. Yes, the LTEMP has language about maintaining and increasing hydropower, but that bullet point clearly states this it must be "consistent with improvement and

long-term sustainability of downstream resources.” Are the proposed experiments under this section consistent with such? I don’t think we know, and so I believe it is too early to include this project.

### Process for Evaluating, Paring Down, and Staying Within Budget

I think there was some confusion about our role during TWG discussion of the budget. I believe the TWG’s highest purpose is to help get the scientists’ proposals packaged into something that meets the needs of the program, is good science, is within budget, and generally results in information that will inform management decisions of the agencies involved. At our meeting it appeared that an effort was underway to eliminate a few projects so as to meet budget. I voiced a suggestion that didn’t go anywhere, and I’m not sure why not. My suggestion was that, if we have pared down the science projects to just a small percentage over what funding is available, then we should just cut all the projects across the board that small percentage. My experience with large budgets is that as the program goes forward there are usually some changes – something costs more, something costs less or isn’t done – and that a good manager can make sure to be under budget at the end of the period. When we instead tried to meet budget by trying to limit or eliminate some studies, mostly for policy reasons, by a few stakeholders, then we don’t do good work. We had the fiscal numbers, but we didn’t have a good understanding of the interconnections between projects. We also didn’t have before us a rationale for how each project helps (or doesn’t) accomplish what is set forth in the final LTEMP and ROD; that would have improved our deliberations as well.

### Minority Report Contribution – Michael Yeatts, Hopi TWG Representative

*I would like to express some concern regarding the 2018-2020 Triennial Budget and Work Plan (TBWP) being forwarded from the TWG to the AMWG for potential recommendation to the Secretary of the Interior. Specifically, the approach used for TWG “approval” of the TBWP relied heavily on a voting process that I feel goes against the consensus philosophy that has guided the Adaptive Management Program (AMP) in recent years. The consequences of going back to a straight voting procedure for decision making within the AMP has a number of adverse outcomes that I believe will not further the goals of the program, either as a whole, or at the level of this TBWP.*

*First, immediately going to a voting process when consensus is not initially achieved undermines the aim of trying to reach a compromise; rather than attempting to seek resolution on underlying issues, the focus becomes lining up enough votes to make sure your “side” prevails. We have experienced this in the past and the potential for stakeholder (in particular tribal) disenfranchisement is very real. Further, it has the potential to undermine the scientific planning and credibility that I feel underpins successful implementation of an adaptive management program, as discussed next.*

*The process followed for this TBWP involved first identifying concerns about Program Areas that would prevent consensus recommendation of them moving forward to the AMWG. In the cases where there was disagreement, suggested changes were made by those objecting to project(s) as written and then a vote was held as to whether the changes would be accepted. Next a vote was held on whether the overall Program Area, incorporating whichever changes had been made to individual projects by the previous vote, occurred. It is with this second phase of voting that I have the most concern. By lumping all projects within a given program area together for an up-or-down vote, there is great potential to undermine planning and integration within the science program and in effect, throw the baby out with the bath water. No process was available to seek an outcome which wasn’t all or nothing.*

*In the current TBWP, I feel this may have happened to Program Area D. A number of the proposed projects have linkages to other Program Areas. What the implications for wholesale removal of most Program Area D projects will be with regard to other Program Areas could not be adequately discussed in the abbreviated voting process that was*

*followed. This does not seem to be the best approach for fostering a science and monitoring program that considers the Grand Canyon as an ecosystem, an approach the Hopi Tribe has long advocated for.*

### Minority Opinion Report Alternative Proposed Budget Resolution

For clarity and ease of comparison, this alternative resolution is presented as a redline version of the TWG's resolution:

The TWG recommends that the AMWG recommend for approval the Glen Canyon Adaptive Management Program triennial budget and work plan – Fiscal Years 2018-2020 (Draft August 17, 2017) to the Secretary of Interior with the following changes:

1. Approving GCMRC's Project C as written contingent upon adding language to BOR's C7. Experimental veg treatment for funded tribal engagement as partners in planning and executing the experiment.
2. Approving GCMRC Project D ~~with no funding for D1, 2 or 3, but with funding for D4.~~
3. GCMRC Project G 5– Add one annual seining trip funded by the Native fish conservation contingency fund
4. Approve Project I with additional Spring system-wide monitoring to I.1 and a Fall Diamond Down trip
5. GCMRC Project E. with reinsertion of Project E7.1 Aquatic vegetation surveys and Project E7.2 Artificial Streams
6. ~~Without a net increase to the budget, add a new Project N. Hydropower, to the GCMRC work plan with work efforts that include: (also add to BOR Project C with complementary language)~~
  - a. ~~Develop GCD operational experiments to meet the hydropower objective.~~
  - b. ~~Consider and estimate impacts of experiments on hydropower as part of experimental design~~
  - c. ~~Incorporate total hydropower value into DSS being developed in J.2~~
  - d. ~~Utilize WAPA and Reclamation hydropower data, as available, and include WAPA technical staff in the development of models, design of experiments and monitoring metrics.~~
7. Project J. Socioeconomics as written with additional language:  
Clarifying language will be added to Project J.2 that indicates integrating hydropower analysis into the modeling of trout management flows will be a primary focus. Incorporating hydropower analysis follows the development and integration of rainbow trout and humpback chub population models and cost-effectiveness analysis, used to identify efficient management actions to meet adult humpback chub abundance goals. Hydropower analysis in J.2 is an incremental step in the development of applied decision and scenario analysis research at GCMRC. Adding hydropower analysis into the applied decision and scenario analysis research is timely provided the proposed LTEMP EIS experiments, including trout management flows.

A workshop will occur with GCMRC staff and GCDAMP stakeholders in fiscal year 2018 to review and discuss the trade-offs between trout management flows, expected downstream rainbow trout and humpback chub outcomes and associated costs of management actions, including hydropower. This workshop will provide an opportunity to explore opportunities to improve

hydropower resources while meeting downstream rainbow trout and humpback chub resources goals as defined in the LTEMP EIS.

8. Approve Reclamation Project D. with addition of Identify how Reclamation Project D elements and GCMRC project elements address stipulations in the PA and track their progress and
9. Increase funding for D.10 to a target balance of about 200,000 by the end of FY 2018
10. Approve Reclamation Project C. with changes to Allow Allocation of some funds from Reclamation Project C5 into Reclamation Project D.10