

To: Shane Capron, Chair Technical Work Group
From: L. D. Garrett, Executive Coordinator Science Advisors
Subject: Review Comments on GCMRC 2013-2014 Draft Budget Proposal
Date: April 11, 2012

As we have discussed, this document is a rapid assessment of the preliminary GCMRC budget information provided from your office on 4/7/2012. The following understanding of recent TWG and AMWG direction on management and science programs as well as SA reviews represent some of the basis for review comments.

The TWG memo you attached provides input to DOI on its efforts to differentiate policy and technical issues in review of budgets. TWG agreed to resolve technical issues as possible at the TWG level and only elevate what it considered policy type issues on the budget to the Secretary. As noted four such policy concerns were elevated to the Secretary on the 2012 budget, and are paraphrased as **sediment monitoring**- focus these activities on DFCs developed by AMWG and reduce sediment budget items in favor of enhanced biological science needs; **terrestrial monitoring**- better integrate native culture programs in GCMRC programs; **non-native fish control conflicts with tribal interests**- improve program clarification of this accomplishment; **archeological site monitoring and compliance**- clarification is needed on how various required compliance will be accomplished and how best AMP monitoring programs can move forward.

The TWG also provided input to the AMWG on technical issues. This included a proposal to delay the temporary economist position until a SE program was developed and a proposal to enhance independent reviews and SA service support to the AMP in several areas including the LTEMP process, support to TWG in CMP development, and support to the SE program and SEAHG. In its meeting following the TWG recommendations, the AMWG supported maintaining independent reviews and SA service roles and budget and approved supporting the SE program with a term economist position.

Also some of the basis for comments provided below relate to the SA 2011-12 program reviews. Several comments addressed in that review are relevant to this requested review of this 2013-2014 preliminary budget.

Following are comments based upon a very quick look at the budget information released by Dr. Schmidt on 4/6 /12.

- The budget information is in a different format, order etc. than in the 2012 budget tables but major science thrusts are similar. The budget process has always tracked in order through the 12 AMP goals. Dr. Schmidt provided clarity for general direction on several major elements in his memo and Appendix 2. This helped to decipher direction in the budget table as compared to the 2011-12 budget table. It is recommended in the future when first preliminary 2-year budgets are proposed to keep formats the same as the previous budget period and list the previous year budget with the proposed new two year budgets. This permits quick assessment of changes in emphasis across the three year period and science contribution to goals and DFCs.

- As proposed this budget does not incorporate any funds for a Cultural Resources Program which was funded at \$359,000 in 2012. It is assumed as proposed by the Chief in the cover letter that GCMRC and the NPS will craft a cooperative effort for the Cultural Resource program and that will be available soon. Hopefully this will have tribal input through the CRAHG. Although the BOR was not mentioned it is assumed they will also be cooperators on this effort, as they have significant compliance responsibility as well as joint responsibilities in the AMP efforts. Over the past several years GCMRCs Cultural Resources Program seems to have had significant problems in establishing and gaining support for a clear science direction in response to tribal needs. Also often there seems to be dissatisfaction of the tribes with cooperation and implementation of compliance, science and management programs in this area. A strong cooperative effort of the above groups and the tribes toward a clear set of integrated compliance, management and science goals would be applauded and should improve the science direction.
- The budget does not include the term economist position proposed by AMWG for 2013. Statements are made that at least imply that other presented program needs cause the budget to be in deficit approximately \$500,000 and the position therefore cannot be funded. GCMRC does propose to continue to review opportunities to fund the position. On the surface not funding the position seems to breach the AMP budget process used in 2012 to identify and implement specific programmatic needs. That is, the SAs understood AMWG and the Asst. Sec. supported this position as needed to assist the LTEMP process and better clarify resource values of the CRE. It is understood that although a TWG majority did not propose the position, they did support strong continued activity of the SEAHG on the SE program. In short it is difficult to determine why this program expenditure or some socioeconomic activity was not selected to stay in the 2013 budget if continued socioeconomic effort was proposed by TWG and AMWG and the Asst. Sec. proposed the position to support this continued effort. Even in a preliminary budget, clarification needs to be provided when the proposed budget element does not support a program direction so clearly specified by the AMWG. The SAs in their review of the 2011-2012 science programs encouraged completion of socioeconomic assessments in 2013-14 to better clarify CRE resource values. Although the recommendation was to use external contract scientists to create rapid assessments, the SAs supported the need for socioeconomic assessments for the EIS and LTEMP process to begin immediately.
- As noted above this budget table is prepared differently than past tables. It is not organized by goals. It is unclear if this presentation is the new agreed to format. However, the AMP is a management program with specific goals. The application of management actions and science is to attempt to achieve these specified AMP goals and associated desired future conditions. In this environment the format used for budget presentations in 2012 seems to provide better clarity and transparency than this proposed preliminary budget format.
- The budget is proposed in a deficit form of approximately \$500,000 and as noted does not include two elements proposed by stakeholders, Cultural Resources and Socioeconomics. The real deficit could then be approaching \$1,000,000 to include these two activities. Normally the budget is prepared under the constraint of available funds with prioritized requests for support of projects or programs that exceed available funds.
- When one evaluates proposed 2013 physical resource budgets in program areas A, B and C against 2012 it appears A is increased \$911,817, B increased \$112,667 and C increased \$48,000 for a total increase of \$1,073,484. The text provided for the sediment area does not clarify where the increases in the sediment budget are allocated. In the water quality summary proposal a sentence does state that the increases are necessary to make the collected data more available, useable and relevant to decision makers. In the

Lake Powell program it is clarified that one or two new station data sets be reestablished to monitor inflow temperature and salinity, establish one or more new weather stations and develop assessments of existing paper sonar data (2001-2012) on sediment deltas from three tributaries. Recommendations by the TWG in 2012 proposed that reductions occur in the future in areas of physical sciences and these resources be transferred to areas of biological sciences where much greater uncertainty and risks exist regarding attaining AMP goals and desired future resource conditions. In the review of the 2011-2012 Biannual Work Plan the SAs encouraged focus on biological program uncertainties over the next several years, especially as regards native fish predation, food base and habitat issues. They also proposed greater synthesis of the extensive physical resource knowledge, especially in areas to reduce uncertainty related to proposed management actions and in areas of demonstrated interaction with biological and cultural resources.

- Presentations in knowledge assessment workshops in 2011-12 clarified that significant knowledge has been gained by GCMRC since 1996 regarding dam operation impacts on physical resources above and below GCD. Although uncertainties still exist, considerable refinement of knowledge gained could now be addressed through data assessments, synthesis and modeling. And these efforts can be used to both adjust already developed management guidelines as well as develop new guidelines. An area of needed focus is to use knowledge gained and adaptive management processes to fully evaluate opportunities to improve existing physical and other resource monitoring programs especially as relates to integration across resources and attaining stakeholders desired future conditions for the suite of AMP physical, biological, cultural and other resources evaluated. The brief summary and budget data is not specific enough to determine if these efforts would be a program thrust.
- Program elements outlined for biological resources including native and non-native fishes, riparian vegetation as well as aquatic ecology do demonstrate most of the emphasis and direction encouraged by stakeholders, managers and scientists. It is assumed that some increases in the vegetation monitoring program is a response in part to gain greater integration of native peoples programs. When compared directly against 2012 line item budgets the listed programs in the biological area appear to have overall increased funding of over \$1.2 million. Program expenditures for HBC mainstem aggregation and early life history studies (D&E) seem to have declined somewhat (\$35K, \$65K), whereas long-term monitoring of mainstem and LCR native/non-natives (F) has increased (\$388K). Non-native (primarily trout) work seems now to be captured in F.4 (detection; \$192K), G (native/non-native interactions \$277K) and H (RBT drivers \$814K).
- In 2012 a total of \$686K in program activity was directed specifically or in major part toward trout (does not include control costs). It would appear that \$1,283K is proposed for 2013, the majority in determining RBT biological attributes, i.e. feeding, growth, population parameters, etc. One would presume that most of the \$600K increase represents new project initiatives when comparing 2012 and 2013 project listings. Program area H does propose new activities to reduce uncertainties associated with RBT. Studies to reduce uncertainty regarding RBT predation on HBC was encouraged by the SAs in the 2012 program review.
- HBC populations have been in a more robust period over the past several years, providing lower risk opportunities to utilize discretionary monies to reduce uncertainties regarding habitat requirements and use, food base and effects of competition and predation. The proposed budget shifts in biology to continue and expand these efforts seem to follow general and specific requests of the AMP to address uncertainties in these areas. A question still exists as to the opportunity to evaluate the effects of the cold and warm cycles of water temperature on HBC over the previous decade. Given biology information

gains in the past three years a science assessment effort of existing data to address this question seems prudent. It would at the minimum help guide monitoring and research needs over the next 10-15 years so that we maximize learning on this issue.

- A question exists as to how needed future reviews of support programs such as DASA, survey, logistics etc. will be evaluated in the budget process if they are not specified as individual programs as in past reviews. Advances in both efficiency and effectiveness of these areas are critical to insuring quality future monitoring and research programs in the AMP and effective understanding of these findings by stakeholders and decision makers. It is hoped that these programs and budgets will be presented as areas in the Biannual Work Plan and Budget.
- In 2012 direction was given to the SAs to add into their review and service roles the following: Review support to the LTEMP process, service support to the TWG and GCMRC for completion of Core Monitoring Plans, and service support to the TWG and GCMRC in development and implementation of the Socioeconomic program. The SAs have and are providing these support activities. The SA Exec. Coordinator will work with the GCMRC Chief to resolve how the SA program requested by the TWG and AMWG can be attained.
- A need has been discussed in the SA Management Actions Report and in various TWG and AMWG meetings regards improving the adaptive management processes of the AMP, especially areas regarding the integration of management and science needs and processes. Important contributions to that effort are reports that evaluate progress across all resources such as the Knowledge Assessment and Score report, both of which are needed to inform the LTEMP process. Concern exists that an Assessment of Knowledge integrating our understanding of this ecosystem will not be developed as planned in 2013. It is not clear if the SCORE Report will be designed to fulfill this need. The budget does not address this critical activity unless it is incorporated in administrative planning.
- Completion of the Resource Core Monitoring Plans are not addressed in this budget unless in administrative planning, but must be accomplished for the LTEMP to be implemented. The TWG, GCMRC and SAs agreed to completion of this schedule of activities for 2012-2014. This is a critical task that must be accomplished but it is not highlighted in the budget.