

BAHG REPORT
FY2010-11 BUDGET AND WORKPLAN PREPARATION

For

TWG MEETING
JUNE 22-23, 2009

This report contains AMWG motions passed at the April 29-30, 2009, meeting that provide direction to the TWG for ensuing budget development. It also contains Bureau of Reclamation and GCMRC responses to those motions. Lastly, it provides CRAHG input to BAHG and BAHG input to TWG from BAHG discussions held during two conference calls June 9 and 12, 2009.

Note on the budget motion: AMWG considered each of the five enumerated paragraphs separately in the following motion. Paragraphs 3, 4, 5, and 6 were agreed to by consensus. The votes approving paragraphs 1 and 2, and declining to approve new language for paragraph 2, follow the full motion.

MOTION: AMWG gives the following direction to the TWG as it continues to work with BOR and GCMRC to develop a proposed budget, workplan, and hydrograph for FY 2010-11 for consideration by AMWG at its next meeting:

- 1. Continue to develop a budget based on an annual operations hydrograph for FY 10 and 11 water years of MLFF with fall steady flows in September and October.**
BAHG Chair Note: BAHG and TWG are proceeding to develop FY10 and 11 budgets with this assumption. Any change in plan for FY11 can be accommodated in the FY11 review that will take place in FY10 under the biennial budget process.
- 2. Move funding for “Mainstem Non-native Mechanical Removal” back to line 74 under the GCMRC budget and add funding for an additional removal trip, if TWG deems it necessary.**
GCMRC response: GCMRC continues to believe that a portion of this activity is a “management action” and should be implemented and funded outside the science program budget. \$300K is included in the FY 10 and 11 budget to implement nonnative fish control (coldwater species) as an ongoing experimental project. Experimental aspects of the project will assess more cost effective techniques for mainstem cold water nonnative fish control, as well as the influence of nonnative control on early life history success of native fish. Management agencies should secure an alternative funding source for this activity in FY 12 and beyond.
BAHG Discussion: This issue has not been resolved by the BAHG and remains one of the most difficult for deliberation by TWG, particularly as it relates to the use of Experimental Fund and Non-native Fish Control Contingency Fund dollars for this purpose. GCMRC has responded to the AMWG motion by proposing a portion of its previously identified FY10-11 funding to be used for this purpose, but they also proposed to remove a large portion of the funds needed from the Experimental Fund and the Non-native Fish Control Contingency Fund in the Reclamation budget. The amounts from the two funds proposed to be used by GCMRC for this purpose and other FY10-11 projects will be provided by GCMRC in its budget presentation. TWG members will hear from the PEP fish monitoring chair and from AGFD on their recent non-native control efforts. Both sources of information will be important to the decision on this use of funds.

3. **Develop scope and objectives for a geomorphological model that would evaluate dam effects on cultural sites, with no budgetary implications at this time for FY10-11.**

***GCMRC Response:** The AMP has received several recommendations to develop a geomorphic model from previous independent review panels, the most recent recommendation coming from the panel that reviewed the NPS legacy monitoring data. The proposal to develop a geomorphic model is also identified in the Monitoring and Research Plan. GCMRC is encouraged that the CRAHG and the AMWG is now advocating that a work group be established to define the specific purpose, scope and objectives of a geomorphic model;; we look forward to working with the group. We believe that within existing funding constraints, the primary focus in the FY 2010 and 2011 work plan should continue to be on piloting testing the archaeological site monitoring protocols, completing a PEP review, and developing a core monitoring proposal for TWG review.*

BAHG Chair Note: A geomorphical model ad hoc will be established at the June 22-23 TWG meeting. Helen Fairley will make a presentation on formation of an ad hoc at the TWG meeting.

4. **Work with the CRAHG, GCMRC, and BOR to do the following:**

- a. **Provide an explanation of current funding line items (more explicit description of accounting) and how they relate to the treatment plan and necessary compliance, including lines: 23, 31, 114, and relevant portions of lines 39-43.**

BOR Response: See below for relationship between lines 23 and 31. Lines 39-43 are appropriated funds provided by the 5 DOI agencies for tribal participation in the GCDAMP. Funds are held by DOI and billed by Reclamation after they are billed by the tribes. Line 114 covers power revenues for development of the Cultural Monitoring Research & Development administered by GCMRC.

***GCMRC Response:** In the previous budget reviewed by TWG and AMWG, Line 114 referred to the Cultural Monitoring R&D project. The cultural monitoring R&D project is developing objective monitoring protocols to 1) evaluate status and trends in the condition of archaeological sites and other historic properties, 2) assess the role and impacts of dam operations in affecting resource condition, and 3) assess the effectiveness of check dams and other forms of treatment that are intended to control erosion or mitigate adverse effects from dam operations. These objectives are compatible with the intent of Section 106 compliance monitoring, in that Section 106 directs federal agencies to consider the effects of their undertakings (in this case, dam operations) on historic properties. The intent of this R&D project is to develop a monitoring program that will complement existing NPS compliance programs through the collection of quantitative monitoring data which can be used by NPS and the AMP to objectively assess the effects of dam operations and the effectiveness of erosion control activities or the effectiveness of other management actions that may be undertaken by the program in the future, such as High Flow Experiments.*

- b. **Describe why the treatment plan cannot be fully implemented using the current line items described above, specifically the \$500,000 allocated in line 31 and ~ \$147,000 in line 23.**

BOR Response: The treatment plan can be implemented with the \$500,000/year identified, however monitoring of treatments is proposed to be accomplished with the assistance of the tribes, trained by NPS and funded from appropriated funds provided by the DOI agencies. If these funds are for some reason not available, monitoring funding will have to come from the treatment plan funds. The tribal resources monitoring done with power revenues identified in line 31 follows the protocols developed by the tribes and presentations on their work provided to TWG. The archaeological site monitoring is not covered by these funds.

***GCMRC Response:** GCMRC has had limited involvement with the current treatment effort. We recommend completion of the Science Advisor's independent review of the treatment plan before additional funds are committed to the project. We also have concerns about expanded funding for this management and compliance activity with AMP funds—expansion of this project will impact the funding available for the future monitoring and research programs.*

- c. **Discuss the necessity of the \$70,000 for the NPS (line 114).**

GCMRC Response: Archaeological Site Research and Monitoring Project. NPS has denied the permit to carry out the LiDAR portion of the project that was included in the FY 08 and 09 work plans. Based on this

denial, FY 2009 funding for the Project was reallocated to address other priority needs in the GCDAMP FY 2010-11 biennial work plan. GCMRC continues to believe the project is a scientifically credible approach to developing a monitoring program to assess the impacts of dam operation on archaeological sites in the Grand Canyon. Thus, we continue to recommend funding for the project in FY 10 and 11. However, without a Park permit we will be unable to complete the work that is described in the work plan.

CRAHG Response from 6/11/09 meeting: The CRAHG is still recommending the 70K be added back into the budget for NPS participation. The role of this funding is to address coordination aspects of compliance activities beyond those specific to the actual data recovery, including monitoring (NPS/CRMP, Tribal, and GCMRC) and data management integration. The CRAHG recommended that the funding come from one of the following:

- a) carryover
- b) reduce number of cold-water non-native removal trips
- c) sediment program
- d) quality of water program

BAHG Discussion on CRAHG Proposal: The CRAHG proposal was accompanied by a NPS budget for approximately \$111,000. No explanatory language was provided on how funds would be expended or how they would satisfy cultural monitoring needs. The BAHG recommended that NPS provide this information to TWG and that the CRAHG better define how it was moved to support this project and what reasons were put forward for selecting the funding sources identified above. If not presented prior to the meeting for consideration, CRAHG/NPS reasons will be provided there.

5. Develop a discussion paper on the pros and cons of the two budget approaches described in Issue of Concern #9, for submittal to AMWG at its August meeting.

BAHG Chair Note: Discussion paper in development; to be presented to TWG at June 22-23 meeting.

GCMRC Response: GCMRC supports this recommendation. Before approving the FY 10-11 budget, a clear agreement should be developed on how the biennial budget process will work. GCMRC believes that the primary purposes of the biennial budget should be to streamline the AMP budget process, free up time for agencies and AMP to address other priority needs, and allow for better integration of AMP funding needs into agency budget process.

6. Continue to address the following issues of concern:

- a. **General comment on core monitoring:** The budget assumes that we will have moved forward on core monitoring for a number of Goals under the AMP. Although this is reasonable to consider TWG believes it is premature. TWG will begin to consider the General Core Monitoring Plan this summer and from there will have a better idea what may constitute core monitoring. TWG should, within the core monitoring discussion, evaluate cost-effectiveness of current monitoring programs (precision, accuracy, cost trade-offs). GCMRC is planning a core monitoring workshop before the next TWG meeting to discuss the draft plan.

GCMRC response: Core Monitoring: GCMRC does not believe this initial designation of several projects for Core Monitoring status pending TWG review and approval is premature; we are merely attempting to follow the agreed upon schedule and process identified in the Monitoring and Research Plan. As noted above a TWG discussion of the General Core Monitoring Plan will occur this summer.

BAHG members continue to remain concerned about a potential premature movement to Core Monitoring prior to agreement by TWG on cost, precision, and breadth of the monitoring. GCMRC should consider using a "provisional" designation for the proposed core monitoring until such time as TWG has agreed to the general Core Monitoring Plan and associated issues on this very important program activity.

- b. **General comment on the workplan.** TWG is looking for additional clarity in the workplan on staff funding including a current GCMRC organizational chart. TWG requests the following: (a) that staff time for individual projects be allocated under those projects, (b) time be allocated in the workplan such that a substantial amount of time, about 20%, is allocated to writing reports and publications, and (c) any new staff additions or deletions be clearly outlined in the budget introduction and appropriate projects.

***GCMRC Response:** We provided an updated organization chart to the TWG and AMWG (see GCMRC web site at: http://www.gcmrc.gov/files/pdf/gcmrc_org_chart.pdf) and will identify any new permanent positions that will be established in FY 10-11. The level of detail provided in the preliminary and final budget/work plan was discussed and agreed to by the TWG and GCMRC several years ago. The BWP provides a summary of funding by project by major funding category (GCMRC staff, logistics, equipment, contracts etc.). Providing information on how GCMRC staff time is allocated among projects is beyond the scope of what we intend to provide; this is unnecessary detail that will lead to inappropriate micro management by the TWG. With respect to suggestion b, timely data analysis and reporting is a major focus of the FY 2010-11 budget and work plan. Following is a list of reports/analysis that will be included in the FY 10-11 BWP:*

- 2008 HFE projects 1 – 5 reporting
- HFE synthesis of results 1996, 2004 and 2008 tests
- Camp site monitoring data analysis and reporting
- Channel mapping data analysis and reporting (Goal #8 sediment monitoring and change detection to compliment sand mass balance monitoring)
- Aquatic Food Web research findings
- Coordinated Image analysis of terrestrial resources (2005 versus 2009 overflight imagery)
- Ecosystem modeling and data gaps science and stakeholder workshops
- Integrated sediment, flow, and temp modeling
- Riparian vegetation synthesis
- 2000 Low Summer Steady Flow synthesis
- Knowledge assessment workshops and SCORE II reporting on experimental treatments

- c. **General comment on Goal 10.** There is a lack of economic analysis capacity in the program to evaluate trade-offs or other economic concerns. Additional capacity should be considered. Unknown funding needs at this time.
BAHG Chair Note: GCMRC, WAPA and NPS will collaborate on development of a workshop that will evaluate program needs, including funding, to address the lack of economic analysis capacity. This subject likely will be brought back for consideration in the FY11-12 budget cycle.

***GCMRC Response:** The AMWG or DOI needs to determine whether additional economic analysis capacity is an AMP priority. It has been clearly identified as a priority by the Science Advisors and by previous NAS/NRC reviews of the program. However, it is currently not reflected in the AMWG priority questions or called for in the Monitoring and Research Plan.*

- d. **Line 74: Priorities and funding under Goal 2.** GCMRC should provide an explanation of where funding used in FY 2009 for Mainstem Non-native Mechanical Removal has been reallocated within the program.

GCMRC response: There are two primary budget items that received the money (\$141,023 in 2009) previously allocated for the mainstem removal project:

1. *The salaries at USFWS, AZGFD, and USGS are only going up each year. GCMRC always receives requests for more funding for salaries from the cooperators each year, and USGS salaries also increase.*
2. *An additional \$25,000 was provided for the remote PIT tag project in 2010 to provide for more equipment and the expertise to install it. This project has, to date, received broad support from the fish*

cooperators (primarily FWS, AZGFD, GCMRC, and BOR) because of its potential to reduce personnel costs in the future to get the same, or even more, data on the tagged fish (primarily HBC) that use the LCR.

3. Funding was provided for monitoring rainbow trout redds and larvae in the Lee Ferry reach. In FY 08 this work was funded under the HFE, so additional funds needed to be provided for this activity from the annual budget in FY 2010 -11. These costs may be adjusted depending on the outcome of the May 2009 PEP review.

- e. **General comment on accounting. Currently, BOR does not have adequate staff resources to track reports due by GCMRC from the workplan. Thus, there is inadequate tracking of deliverables by the AMP for projects funded by BOR funds. BOR should investigate options to provide staff resources in tracking reports.**

BOR Response: BOR has hired a staff member (in a pre-existing position) whose job responsibilities will include acting as a Contracting Officer's Technical Representative on fund transfers to USGS-GCMRC. That individual also will work with GCMRC to identify and track deliverables for funds transferred.

GCMRC response: Since many of the deliverables are being developed by GCMRC, additional tracking and reporting on these deliverable will have staff implications for GCMRC as well as for BOR. GCMRC will work with BOR to address this need.

- f. **Goal 8: GCMRC should develop an on-the-shelf HFE science plan for a potential next HFE.**

GCMRC Response: GCMRC will present 2008 HFE results at the TWG meeting in January 2010. The reports will be made as part of the annual reporting meeting being organized by the TWG chairs. A synthesis of the results of the 1996, 2004 and 2008 will be completed by the end of fiscal year 2010. While it is important to fully evaluate all of the learning that has come from the past three high flow experiments, it is clear that additional sand-enriched higher flows and continued long-term monitoring will be needed to answer the primary strategic science question – "Is there a flow only (using only the existing downstream sand supply) operating strategy for rebuilding and maintaining sandbars along the Colorado River below Glen Canyon Dam?" GCMRC is concerned that developing a HFE Science in FY 2010 will delay the reporting schedule for various projects in FY 10 (see 6 (b) above), including the HFE synthesis and possibly the knowledge assessment workshops and SCORE II report set for FY 2011. FY 11 is the most appropriate timeline for developing a long term plan for future HFEs. Options for how to proceed with additional HFE's in a manner that will not impacting reporting schedules and requirements will be discussed at the TWG meeting on June 22, 2009.

To support effective HFE planning and implementation the GCMRC recommends the following actions by the AMWG/DOI:

- Revise the 1998 hydrologic triggers for Beach/Habitat-Building Flows in light of the new information that has become available to managers about sand conservation options since the 1995 EIS was completed.
- Develop criteria for sandbar conditions below the dam that are needed/desired for achieving the goals of their 2003 Strategic Plan; making sure, on the basis of best available science information, that their recommended desired future conditions are both attainable and measurable.
- Develop and agreed to a structured approach and timeline for evaluating the results of past HFEs and determining how to proceed from a science, compliance and management standpoint. The crisis planning and compliance that have accompanied AMP/DOI deliberations of past HFEs have been very disruptive and needs to be avoided in the future.

- g. **TWG understands that GCMRC will attempt to provide historical expenditures by project (going back 3 years) in the workplan.**

GCMRC Response: GCMRC will provide a summary at the TWG meeting for funding that was budgeted / approved for projects dating back to FY 07.

- h. Goal 2 (line 67): AMWG should be aware that the implementation of the warm-water non-native control plan efforts in 2011 may have budget implications (moving from the testing phase to non-native control implementation).**

GCMRC Response: Warm Water Nonnative Control: Funding is included in the budget for implementation of high priority research and monitoring elements of the NIN control plan (early detection, species risk assessment, source assessment). No funding is included for funding warm water nonnative fish control. This is a potentially expensive undertaking that could seriously impact the AMP science program in future years. AMWG should consider how this and other management/compliance programs will be funded and implemented in the future.

BAHG Response: GCMRC's response still does not address the funding shortfall for control of warm-water non-native fish in 2011 if the need arises. Their proposal to use Reclamation's non-native fish control contingency fund for mechanical removal of cold water fish further exacerbates this problem. TWG should consider this issue in concert with that of funding for mechanical removal of non-native fish as prescribed by AMWG. GCMRC should make clear what uses it foresees for power revenues in line 66 and how the lack of identified funding for non-native control is in agreement with the AMWG directive.

- i. Goal 2: GCMRC should investigate research into determining the natal origins of trout in the LCR reach of the mainstem. This investigation should consider the feasibility of whether to specifically target juvenile fish that are not currently being tagged.**

GCMRC Response: Natal Origins of Trout: GCMRC made a presentation on this topic to the TWG at their October 2008 meeting. The conclusion of this presentation is that all available data suggest that the majority, but not all, of the rainbow trout found downstream of Lees Ferry are spawned between Glen Canyon Dam and Lees Ferry. Some TWG members recommended additional research to increase the certainty of this conclusion. GCMRC agreed to initiate a literature review to bring together available information on this topic and review this topic with the protocol evaluation panel in May 2009. PEP recommendation will be presented to the TWG.

BAHG Response: The commitment made by GCMRC was not for a literature review, but rather a published, peer-reviewed manuscript on this subject as indicated in the action item tracking for TWG (see October 15-16, 2008, TWG meeting minutes). The BAHG will hear from the PEP on this subject at the TWG meeting and provide further input. The question of where trout are originating from in Grand Canyon is important to the GCDAMP goal for segregating the river at Lees Ferry with management for trout above and management for native fish below.

- j. Budget general. GCMRC should disclose the total "burden" for each budget line item, the amount of carry-over for each budget line item, and that a crosswalk be provided from the 2009 budget to the 2010 and 2011 budget so that changes in the budget/workplan for each item can be understood.**

GCMRC Response: Burden by project: USGS appropriated funding (about \$1M) is being used to reduce the burden rate assessed by USGS on AMP projects. Providing detailed project by project accounting on how USGS cost share funds are allocated among projects is beyond the scope of what we intend to provide; this unnecessary detail will not improve the TWG's technical review of the budget or work plan.

Budget Motion, Paragraph 1:

MOTION: AMWG gives the following direction to the TWG as it continues to work with BOR and GCMRC to develop a proposed budget, workplan, and hydrograph for FY 2010-11 for consideration by AMWG at its next meeting:

1. Continue to develop a budget based on an annual operations hydrograph for FY 10 and 11 water years of MLFF with fall steady flows in September and October.

RESULTS	
Total Yes	16
Total No	1
Total Abstain	2
Total Voting	17
2/3 =	12
Motion passes.	

Member	Alternate	Stakeholder Group Name	Vote
Werner, Bill	- vacant -	Arizona	y
Heuslein, Amy	Cantley, Garry	Bureau of Indian Affairs	y
- vacant -	Ryan, Tom	Bureau of Reclamation	y
Zimmerman, Jerry	Harris, Chris	California	
Gimbel, Jennifer	Seaholm, Randy	Colorado	y
James, Leslie	- vacant -	CREDA	y
Steffen, Mark	Steffen, Tim	Federation of Fly Fishers	y
Spiller, Sam	Knowles, Glen	Fish and Wildlife Service	y
Potochnik, André	O'Brien, John	Grand Canyon River Guides	a
Lash, Nikolai	Johnson, Rick	Grand Canyon Trust	n
Stevens, Larry	- vacant -	Grand Canyon Wildlands Council	a
Kuwanwisiwma, Leigh	Yeatts, Mike	Hopi Tribe	y
Jackson-Kelly, Loretta	- vacant -	Hualapai Tribe	
Martin, Steve	Balsom, Jan	National Park Service	y
Caan, George	- vacant -	Nevada	y
Groseclose, Jay	Ostler, Don	New Mexico	y
Bullets, Charley	Skrzynski, LeAnn	Southern Paiute Consortium	y
Strong, Dennis	King, Robert	Utah	y
Rampton, Ted	Barrett, Cliff	UAMPS	y
Warren, Brad	Palmer, Clayton	Western Area Power Administration	y
Shields, John	Ostler, Don	Wyoming	y

Budget Motion, add to paragraph 2:

2. Reconsider whether the program should continue the mechanical removal program.

RESULTS	
Total Yes	10
Total No	9
Total Abstain	1
Total Voting	19
2/3 =	13
Motion fails.	

Member	Alternate	Stakeholder Group Name	Vote
Werner, Bill	- vacant -	Arizona	n
Heuslein, Amy	Cantley, Garry	Bureau of Indian Affairs	y
- vacant -	Ryan, Tom	Bureau of Reclamation	n
Zimmerman, Jerry	Harris, Chris	California	absent
Gimbel, Jennifer	Seaholm, Randy	Colorado	y
James, Leslie	- vacant -	CREDA	n
Steffen, Mark	Steffen, Tim	Federation of Fly Fishers	y
Spiller, Sam	Knowles, Glen	Fish and Wildlife Service	n
Potochnik, André	O'Brien, John	Grand Canyon River Guides	y
Lash, Nikolai	Johnson, Rick	Grand Canyon Trust	a
Stevens, Larry	- vacant -	Grand Canyon Wildlands Council	y
Kuwanwisiwma, Leigh	Yeatts, Mike	Hopi Tribe	y
Jackson-Kelly, Loretta	- vacant -	Hualapai Tribe	y
Martin, Steve	Balsom, Jan	National Park Service	n
Caan, George	- vacant -	Nevada	n
Groseclose, Jay	Ostler, Don	New Mexico	y
Bullets, Charley	Skrzynski, LeAnn	Southern Paiute Consortium	y
Strong, Dennis	King, Robert	Utah	n
Rampton, Ted	Barrett, Cliff	UAMPS	n
Warren, Brad	Palmer, Clayton	Western Area Power Administration	y
Shields, John	Ostler, Don	Wyoming	n

Budget Motion, Paragraph 2:

MOTION: AMWG gives the following direction to the TWG as it continues to work with BOR and GCMRC to develop a proposed budget, workplan, and hydrograph for FY 2010-11 for consideration by AMWG at its next meeting:

2. Move funding for “Mainstem Non-native Mechanical Removal” back to line 74 under the GCMRC budget and add funding for an additional removal trip, if TWG deems it necessary.

RESULTS	
Total Yes	11
Total No	5
Total Abstain	4
Total Voting	16
2/3 =	11
Motion passes.	

Member	Alternate	Stakeholder Group Name	Vote
Werner, Bill	- vacant -	Arizona	y
Heuslein, Amy	Cantley, Garry	Bureau of Indian Affairs	y
- vacant -	Ryan, Tom	Bureau of Reclamation	y
Zimmerman, Jerry	Harris, Chris	California	
Gimbel, Jennifer	Seaholm, Randy	Colorado	y
James, Leslie	- vacant -	CREDA	y
Steffen, Mark	Steffen, Tim	Federation of Fly Fishers	a
Spiller, Sam	Knowles, Glen	Fish and Wildlife Service	y
Potochnik, André	O'Brien, John	Grand Canyon River Guides	a
Lash, Nikolai	Johnson, Rick	Grand Canyon Trust	a
Stevens, Larry	- vacant -	Grand Canyon Wildlands Council	a
Kuwanwisiwma, Leigh	Yeatts, Mike	Hopi Tribe	n
Jackson-Kelly, Loretta	- vacant -	Hualapai Tribe	n
Martin, Steve	Balsom, Jan	National Park Service	y
Caan, George	- vacant -	Nevada	y
Groseclose, Jay	Ostler, Don	New Mexico	y
Bullets, Charley	Skrzynski, LeAnn	Southern Paiute Consortium	n
Strong, Dennis	King, Robert	Utah	n
Rampton, Ted	Barrett, Cliff	UAMPS	y
Warren, Brad	Palmer, Clayton	Western Area Power Administration	y
Shields, John	Ostler, Don	Wyoming	n