

Glen Canyon Dam Adaptive Management Program  
Technical Work Group  
**Conference Call**  
December 20, 2002

**Conducting:** Kurt Dongoske, Chairperson

**FINAL**

**Members Present:**

Kerry Christensen, Hualapai Tribe  
Wayne Cook, UCRC  
Cole Crocker-Bedford, GRCA  
Bill Davis, CREDA  
Lloyd Greiner, UAMPS  
Norm Henderson, GLCA  
Pamela Hyde, Southwest Rivers  
Matt Kaplinski, GCRG

Robert King, UDWR  
Phillip Lehr, Colo River Comm./NV  
Clayton Palmer, WAPA  
Bill Persons, AGFD  
Randall Peterson, USBR  
Nikolai Ramsey, Grand Canyon Trust  
John Shields, WY State Engineer's Office

**Committee Members Absent:**

Robert Begay, Navajo Nation  
Perri Benemelis, ADWR  
Dave Cohen, Trout Unlimited  
Jonathan Damp, Pueblo of Zuni  
Brenda Drye, So. Paiute Consortium

Christopher Harris, CRB/CA  
Amy Heuslein, BIA  
Nancy Hornewer, USGS  
Randy Seaholm, CWCB

**Interested Persons:**

Mary Barger, WAPA  
Gary Burton, WAPA  
Denny Fenn, GCMRC

Steve Gloss, GCMRC  
Dennis Kubly, USBR

**Recorder:** Linda Whetton

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In preparation for the conference call, Randy Peterson e-mailed the following documents to the TWG on Dec. 2, 2002:

- Memo to the TWG from Randy (**Attachment 1**)
- Table 1 – Original budget proposed at the July 17-18, 2001, AMWG meeting (**Attachment 2**)
- Table 2 – Revised budget recommended by GCMRC and the TWG Budget Ad Hoc Group (**Attachment 3**)
- Table 3 – Differences between Table 1 and Table 2 (**Attachment 4**)
- Table 4 – Comments and Response Table prepared by GCMRC in response to questions by the TWG and the Budget Ad Hoc Group (**Attachment 5**)
- Narrative of the Difference contained in Table 3 (**Attachment 6**)

Conference Call started at 8 a.m.

**Revised FY 2003 and FY 2004 Budgets.** The Chairperson asked the members if they had any questions regarding the FY 2004 line item budget. The following concerns were noted:

1. Lloyd Greiner said he had asked that a footnote be added (Attachment 5, pg. 4) to describe the experimental flow budget to be recognized as a cost to power. The footnote written says "cost or benefit" and CREDA would like to see "or benefit" deleted. If, in fact, there is a financial benefit, it will come back as a negative cost. Lloyd went on to explain that there could be power benefits but not financial benefits and CREDA was talking strictly cost. Randy said he thought they were talking financial only but questioned if there could be an experimental flow regime devised that could produce additional revenues for the basin fund. He thought the answer would be yes. If so, then that could be called a benefit from the power standpoint. Lloyd said he hasn't seen one yet but their thought was if there is a revenue flow to the basin fund, it would be a negative expense. It would show up in the footnote but instead of a cost, it would be recognized as a flow into the basin fund, if it were to occur. Randy suggested that since the wording in the footnote isn't going to affect the vote on the line item details, he asked Lloyd to provide some suggested language and GCMRC and Reclamation would discuss it further.

Matt questioned the wording of the "study costs/benefits" column in the hydropower section of the EA as an example of what Lloyd was talking about. Randy said one way to handle this might be to talk about it in terms of financial impacts, positive or negative, to the basin fund. Lloyd said that would be more accurate and definitive.

2. Clayton wanted to know whether the 2004 budget is still applicable given modifications to the 2003 budget to fund the experiment and whether that has cut some of the ongoing work that will affect the 2004 budget. Denny said GCMRC made the reductions in the 03 budget to fund the experimental flows in 03 by delaying some things - some of the overflights, remote sensing stuff, etc. None of the ongoing 04 projects will be affected by the cuts made in 03. The budget is still valid as it stands.

3. Clayton asked Mary Barger to address another concern. Mary said she was looking at two documents that were passed out at the TWG Meeting on Nov. 8: the revised budget and the experimental flows budget summary and said the numbers for FY04 don't match up. She doesn't see the same line items and asked if someone could explain the 04 experimental flow budget summary without sediment inputs as opposed to the 04 line item. She questioned the FIST line item, that it's not a line item but it shows up on the experimental flows budget. Mary also asked if it's known what the \$790,000 plus the \$1.6M would actually fund.

Pam said she recalled at the last TWG meeting there was some discussion around this and that basically there hadn't been a final determination of which studies were going to be conducted under the experimental flows partly because they didn't know which part of the flows were going to go. Steve said the various scenarios with sediment and without sediment were presented to the TWG and they haven't changed since then. Denny said the 03 budget was band-aided together from a variety of sources, including the funding from three other agencies that the Asst. Secretary has directed money to be put into. For FY04 they're counting on the President's budget showing some money for science support in the USGS budget, \$1M which is earmarked for this experimental flows effort so GCMRC thinks FY04 is covered in terms of funding.

4. John Shields said the handout on Nov. 7 showed the total 04 expenditures in terms of the total funding requested as \$1,703,000. It indicated that there was going to be \$800,000 to be used from other funds. Denny said they hope to cover the largest needs out of the \$1M Congress will appropriate. However, John said the current handout shows \$1.685M as being

the appropriations request whereas what was handed out on Nov. 8 at the last TWG meeting reflected \$1.703M and questioned the discrepancy. Randy said the way they came to the \$1.685 was they took the bottom line budget that the AMWG approved in July of \$11,014,000 which included an appropriations request and then subtracted all the projects that were part of the long-term program that needed to be conducted with or without an experimental flow and ended up with a block of money that fit under an appropriations request. That was almost entirely allocated with the exception of tribal participation and consultation under the experimental flows portion of the budget. John suggested that because the Dec. 2 handout was different from what was handed out at the TWG meeting on Nov. 8, he felt the TWG should amend today's recommendation to include an updated version of the experimental flows budget summary without sediment inputs and attach it to the recommendation so the AMP will have that information in hand and the TWG will also have some confirmation of that the \$1.685M is the amount they are recommending. Randy said there is still some uncertainty about how much money would be spent in 03 and 04 for experimental flows depending on whether inputs occur.

John expressed difficulty with not providing Congress with a total budget recommendation because what is being recommended on experimental flows isn't specific to flows, with or without sediment inputs. Cole said it was his understanding that if there wasn't a sediment flow at the time anticipated that the appropriated money would then be carried over to the next fiscal year until there was adequate sediment to do that portion of the experiment. John countered that that information wasn't indicated on the Nov. 8 handout.

Randy concurred with Cole. Reclamation is going to ask for more appropriations than will be needed and will carry money not used in 03 over into 04. They are asking the Department for \$1M per year for 2 years. Randy said the request has already gone to the White House and the AMWG has already approved the total budget of \$11.014M. Randy said he believes the budget sent out on Dec. 2 does a good job of identifying the projects that should be funded by power revenues and are required as part of the long-term monitoring and research program and then allocate the rest of the money for the required experimental flow work.

John said he was concerned that no information is being provided or recommendation vis-à-vis the experimental flow budget. He thinks Mary raised a good question and added that if the AMWG is going to send forward a recommendation, it should include information about the experimental flows other than one number in one table in the end. Randy said that while John's comment is valid, that is not the way budgets are sent to Congress - it is one number and one table. John said he felt the experimental flows budget summary sheets should be attached to the current version of the recommended budget when forwarded to the AMWG. Matt said he didn't think that should be done since the TWG hasn't seen a Science Plan. The budget summary table is all that's been seen for the experimental flows in 04. He doesn't think it's ready to go forward as a recommendation other than as a bottom line number. Pam also agreed with Matt and rather than putting it in as part of the budget recommendation, she said GCMRC should be prepared to provide a final science plan with the associated costs. Randy asked Denny if that could be accomplished and Denny said it could. GCMRC has a larger science plan prepared but would have to cut half of it out because of funding limitations but it's just a matter of doing it in concert with the final funding availability. Denny said they would have it done in time to present with the final budget to the AMWG in January.

**MOTION:** Move we accept the 04 budget and recommend it to the AMWG as it was distributed on Dec. 2, 2002.  
Motion seconded.

**MOTION:** Move \$50,000 out of the 04 budget to the 03 budget for evaluation of the captive breeding program.

Kerry asked what would happen if the evaluation says that we need to move forward immediately in 04 with the captive breeding program. Are we assuming the Fish and Wildlife Service is going to fund that? Steve said GCMRC moved the \$50,000 in 04 to the experimental flow fund and re-programmed. Randy said they've talked about that issue with the FWS and the Albuquerque FWS has been receptive to placing that type of activity in their budget. However, they were talking 05 because it's getting a bit late to program anything in 04 but if what Kerry says is true and something needs to be started within the next year or so, then the AMP is going to have to re-think prioritization of the line items as well as look for more funding from appropriations within the Department.

Matt said that when the recommendation goes forward, it should be clarified that we're not necessarily sending forward what we need, we're sending forward what we can get from the core monitoring to support a gutted experimental flow fund. The budget is insufficient for what the program needs to have but it's a recommendation for a budget of what we can do.

Gary Burton asked if the budget cuts were made by the Budget AHC. Dennis said the cuts were made by the GCMRC. Randy added that while the revised budget wasn't brought before the full TWG, any reductions in the science plan were discussed with the Budget AHC. The Budget AHC did not enforce or recommend any cuts, but rather participated in an open discussion with GCMRC about whether projects were of high, medium, or low importance; whether it could be deferred; and whether if there was or was not sediment how that would affect the proposed project. GCMRC took that information and came up with the current budget.

Call for the question.

Matt asked if we were losing \$95,000 in appropriations (under C2 in the original budget) for streamflow and fine-sediment transport. Denny said he couldn't respond but would talk with Ted and e-mail a response back to Matt and the other TWG members later today.

Update: Denny responded to Matt's question in an e-mail sent to Linda on 12/20/02, which she forwarded to the TWG (**Attachment 7**). It read:

The \$95K in question was to purchase improved, near-time sediment monitoring stations for the Paria River and other important spots on the Colorado River within the study area. This effort was moved to the experimental flows budget and the equipment has been purchased and installed under that effort. The network is up and operating at this time. Hence, nothing was lost by this cut in the FY03 GCMRC regular operating budget. It was simply a bookkeeping decision to purchase this equipment under experimental flows but it will also serve the regular monitoring and research program of GCMRC.

Kurt suggested that unless there are no major objections, the budget should be approved by consensus. There was no objection. Motion passed.

**Move Programmatic Agreement Activities to GCMRC.** Kurt said another recommendation presented at the last TWG meeting was that all monitoring and research funded under the AMP would have to go through the competitive peer review process. He asked Randy to talk about that.

Randy said that was the first part and the second part was specifically that we would move the monitoring and research shown under the Programmatic Agreement line item to the science plan under GCMRC as a way of implementing the first statement. That wasn't shown in what was sent out and the numbers won't change but it could be shown simply as a line item under whatever category is appropriate under GCMRC as monitoring and research of cultural resources for example. Reclamation's administrative costs would be separated out but any monitoring and research that's recommended by the PA would be placed under the GCMRC for their administration.

Denny said he talked extensively with Ruth Lambert about making that change and she told him it sets a bad precedent because the Programmatic Agreement is a much more management activity and the responsibility falls on the NPS to execute in the Park rather than a science activity. While GCMRC could provide peer review and other services, she feels it's not appropriate to add to the scientific activities of the GCMRC because it mixes up management and science too closely. Randy asked if the issue should be remanded to the Budget AHG for further discussion. Denny concurred and felt it deserves more dialogue rather than making a quick decision. Kurt suggested that perhaps the Budget AHG, NPS and GCMRC could provide a discussion paper on the pros and cons of that sort of a move. Cole advised that Lisa Leap also needs to be involved in those discussions and Kerry feels the tribes should also be consulted. Norm said he would also like to be involved in that process.

**ACTION ITEM:** The Budget AHG along with personnel from NPS and GCMRC will develop a discussion paper on the pros and cons of moving the Programmatic Agreement budget from Reclamation to the GCMRC.

**Non-native Fish Control Report.** Kurt asked Bill Persons to give a brief update on the Non-native Fish Control Report (***Attachment 8***). Bill asked the members if they had any questions or were ready to recommend the report to the AMWG. He said the Grand Canyon Trust expressed a few concerns in that they were looking at a more comprehensive plan that would address both MO 2.5 and 2.6 as well as temperature control, increased turbidity, and sediment augmentation. Bill said the ad hoc group worked on the plan but felt it was beyond their ability to put such a comprehensive plan together so they focused their efforts on non-native fish control.

Nikolai Ramsey said the way he read the motion approved at the AMWG meeting in January, the AMWG was asking the TWG to develop a work plan for MO 2.5 and 2.6 but it's clear to him that developing a work plan for any time period, 5 years, 10 years, for bringing the HBC to a viable population is a daunting task. He feels the ad hoc group addressed a piece of the problem because it was somewhat manageable but it doesn't help with regards to getting the HBC out of their desperate condition. He reported that Lew Coggins estimates there are about 1100 adults or less at the 200 mm size. Nikolai feels the ad hoc group has taken a beginning step but feels a more sequential process is needed.

John Shields said that the AMWG motion doesn't direct the AHC to do anymore. This led to a discussion on what the intent of the motion was. It was decided that the TWG would forward the report to the AMWG but would also ask for clarification on the motion as to what additional steps need to be taken to improve conditions for the HBC.

Bill Davis said that one of the difficulties the group had was that the management objectives referenced in the motion no longer exist. The MOs actually adopted by the AMWG are quite

different from the ones that originally referenced the motion. One of the difficulties they had was deciding which MOs to accept - the MOs referenced in the AMWG motion or the ones they actually adopted.

Randy said he had some questions on the report and referenced pages 13-14 where there are a number of recommendations to evaluate non-native fish control. He thought the premise behind the EA was that non-native fish were competing and predating on the HBC and that was the top issue to address. He asked the AHC why they felt a substantial period of evaluation was needed rather than getting started with non-native control. He also asked why the tributaries were left out of their discussion, other than Bright Angel Creek.

Bill Person said the concept of evaluation comes from two things: (1) just from the AMWG framework – they weren't sure the actions would do any good for HBC in light of the cold clear water which is also limiting HBC and so they felt testing various hypotheses with management actions should be undertaken. (2) As far as the other tributaries within Grand Canyon, it was his understanding that that would not happen until there was a period of public outreach and public information. They felt that Bright Angel was done as an evaluation. If it turns out to be an effective management activity, then it's his assumption they will have to do an environmental assessment and get public input and at that point would propose looking at other tributaries.

Cole said he could fill in the budget amount for FY 2003-2006 on page 15 of the report. He said NPS has \$562,000 (from visitor entrance fees) available for implementation if the feasibility study is proof positive and if approval occurs through the National Environmental Policy Act.

Bill Davis said he wanted to clarify #8 on the bottom of page 14. He said the group struggled with how to determine what GCMRC should be doing and what the AMP should be doing. In other words, through these other recommendations, evaluations, and methods we come up with something that is going to work, then those should be implemented by the management agencies. It's not a GCMRC or AMP job to go out and actually do the management action. The NPS has taken the right approach in actually spending money to do the action as a follow up to the AMP's recommendation.

Matt said efforts should be made to ensure that the information being gathered at Bright Angel by NPS is integrated back into GCMRC so that it can come back to the TWG and back through reports. Randy agreed because it points out the strength of the adaptive management program.

Gary asked if there were any pictures of the weir that could be shown to AMWG. Cole said there were some taken during the first week of operation and he would e-mail to Linda Whetton so she forward to the TWG (**Attachment 9**). Cole also said that they would like to send more up to date pictures prior to the AMWG meeting.

**ACTION ITEM:** Cole will send the pictures to Linda for forwarding to the TWG and will also provide updated pictures prior to the AMWG meeting.

Matt said he wanted to emphasize the need for more public outreach, awareness, and education.

Dennis added that he wasn't sure if everybody understands that what the ad hoc group is asking is that the AMWG reconsider it's exclusion of RBT from control activities in Bright Angel Creek and the thought there was that it doesn't make very much sense to have all the emphasis

on mechanical removal and control in the mainstem and then exclude the same species from control in tributaries.

Bill Davis said the group also discussed that the Park Service, independent of the AMP, could go ahead and remove RBT regardless of what the AMP wants. If they make a decision that RBT and brown trout are problematic for them in Bright Angel Creek, as a management agency they could take appropriate action. Cole concurred that they have the regulations to do so.

Randy asked how much coordination the ad hoc group had with the upper basin recovery program, non-native control effort. Bill said it was a fair amount and that the recovery program had put out several reports and the group looked at those. Also, since Bill Davis and Gary Burton are members of the recovery program, they were able to obtain input from other members as well.

Bill asked if there were any other revisions to make to the report. He made note of them and will revise.

Randy asked if anyone wanted to craft a motion for recommending the report to the AMWG. It was decided he would draft something and e-mail to the members. Most members indicated they would be okay with the motion based on today's discussion. Randy asked that if anyone had any objections, they should address them in the conference call scheduled immediately following this one.

#### **MOTION:**

TWG recommends that the AMWG approve the TWG Non-native Fish Control Ad Hoc Group Plan and recommends further that the AMWG:

- develop a comprehensive strategy for ensuring the viability of native fish populations, with emphasis on listed species,
- control non-native fish in additional tributaries, after public input through appropriate agencies,
- increase focus on management actions rather than just evaluations, and
- clarify the AMWG directive to the TWG to consider actions to improve conditions for the HBC, i.e., for ". . . meeting MO 2.5 and 2.6 of the 17 August 2001 draft of the AMP Strategic Plan."

Grand Canyon Trust - John asked if the Grand Canyon Trust was going to formally notify each of the AMWG members of their recent Notice of Intent letter. Nikolai said he will e-mail the NOI letter and the press release to Linda so she can forward to the AMWG and TWG. He also mentioned the documents can be found on their web site: <http://www.grandcanyontrust.org>

**ACTION ITEM:** Nikolai will send the documents to Linda for forwarding to the AMWG & TWG.

Science Symposium – Kurt said that Denny wanted to change the dates for the Science Symposium and asked the members to check their schedules. It was decided Denny would send an e-mail out to the members on suggested dates and have the members respond to him individually.

Call concluded: 9:55 a.m.

## General Key to Adaptive Management Program Acronyms

ADWR – Arizona Department of Water Resources  
AF – Acre Feet  
AGFD – Arizona Game and Fish Department  
AGU – American Geophysical Union  
AMP – Adaptive Management Program  
AMWG – Adaptive Management Work Group  
AOP – Annual Operating Plan  
BA – Biological Assessment  
BE – Biological Evaluation  
BHBF – Beach/Habitat-Building Flow  
BHMF – Beach/Habitat Maintenance Flow  
BHTF – Beach/Habitat Test Flow  
BIA – Bureau of Indian Affairs  
BO – Biological Opinion  
BOR – Bureau of Reclamation  
CAPA – Central Arizona Project Assn.  
cfs – cubic feet per second  
CRBC – Colorado River Board of California  
CRCN – Colorado River Commission of Nevada  
CREDA – Colorado River Energy Distributors Assn.  
CRSP – Colorado River Storage Project  
CWCB – Colorado Water Conservation Board  
DBMS – Data Base Management System  
DOI – Department of the Interior  
EA – Environmental Assessment  
EIS – Environmental Impact Statement  
ESA – Endangered Species Act  
FACA – Federal Advisory Committee Act  
FEIS – Final Environmental Impact Statement  
FRN – Federal Register Notice  
FWS – United States Fish & Wildlife Service  
GCD – Glen Canyon Dam  
GCMRC – Grand Canyon Monitoring and Research Center  
GCNP – Grand Canyon National Park  
GCNRA – Glen Canyon National Recreation Area  
GCPA – Grand Canyon Protection Act  
HBC – Humpback Chub (endangered native fish)  
HMF – Habitat Maintenance Flow  
HPP – Historic Preservation Plan  
IEDA- Irrigation and Electrical Districts Association of Arizona  
IN – Information Need  
IT – Information Technology (GCMRC program)  
KAS – Kanab ambersnail (endangered native snail)  
LCR – Little Colorado River  
LRRMCP – Lower Colorado River Multi-Species Conservation Program  
MAF – Million Acre Feet  
MA – Management Action  
MO – Management Objective  
NAAO – Native American Affairs Office  
NAU – Northern Arizona University (Flagstaff, AZ)  
NEPA – National Environmental Policy Act  
NGS – National Geodetic Survey  
NHPA – National Historic Preservation Act  
NPS - National Park Service  
NRC - National Research Council  
NWS - National Weather Service  
O&M - Operations & Maintenance (USBR funding)  
PA - Programmatic Agreement  
PEP - Protocol Evaluation Panel  
Powerplant Capacity - 31,000 cfs  
Reclamation - United States Bureau of Reclamation  
RBT – Rainbow Trout  
RFP - Request For Proposals  
RPA - Reasonable and Prudent Alternative  
SAB - Science Advisory Board  
Secretary(=s) - Secretary of the Interior  
SWCA - Steven W. Carothers Associates  
TCD - Temperature Control Device (for Glen Canyon Dam water releases)  
TCP - Traditional Cultural Property  
TES - Threatened and Endangered Species  
TWG - Glen Canyon Technical Work Group (a subcommittee of the AMWG)  
UCR - Upper Colorado Region (of the USBR)  
UCRC - Upper Colorado River Commission  
UDWR - Utah Division of Water Resources  
USBR - United States Bureau of Reclamation  
USFWS - United States Fish & Wildlife Service  
USGS - United States Geological Survey  
WAPA - Western Area Power Administration  
WY – Water Year (a calendar year)