

**Glen Canyon Dam Adaptive Management Work Group Meeting
Webinar/Conference Call
May 6, 2010**

Conducting: Anne Castle, Secretary's Designee
Facilitator: Mary Orton

Convened: 12n (MDT)

Committee Members/Alternates:

Charley Bullets, Southern Paiute Consortium
George Caan, Colorado River Commission/Nevada
Kerry Christensen, Hualapai Tribe (alt.)
Jennifer Gimbel, Colo. Water Conservation Board
Ann Gold, Bureau of Reclamation
Amy Heuslein, Bureau of Indian Affairs
Leslie James, CREDA
Nikolai Lash, Grand Canyon Trust
Steve Martin, Grand Canyon National Park

Don Ostler, NM Interstate Stream Commission (alt.)
Clayton Palmer, WAPA (alt.)
Andre Potochnik, Grand Canyon River Guides
Ted Rampton, UAMPS
John Shields, Wyoming State Engineer's Office
Sam Spiller, U.S. Fish and Wildlife Service
Larry Stevens, Grand Canyon Wildlands Council
Dennis Strong, Utah Div. of Water Resources
Jerry Zimmerman, Colo. River Board of California

Committee Members Absent:

Perri Benemelis, AZ Dept. of Water Resources (alt.)
Loretta Jackson-Kelly, Hualapai Tribe
Arden Kucate, Pueblo of Zuni

Mike Senn, Arizona Game and Fish Dept.
Mike Yeatts, Hopi Tribe (alt.)

Interested Persons:

Paul Alley, USGS/GCMRC
Jan Balsom, Grand Canyon National Park
Cliff Barrett, CREDA
Glenn Bennett, USGS/GCMRC
Mike Berry, Bureau of Reclamation
Debra Bills, USFWS
Garry Cantley, Bureau of Indian Affairs
Shane Capron, WAPA/TWG Chair
Wayne Cook, WAPA
Marianne Crawford, Bureau of Reclamation
Bill Davis, CREDA
Mary Daugherty, USGS/GCMRC
Dave Garrett, M³Research/Science Advisors
Paul Grams, USGS/GCMRC
Tom Gushue, USGS/GCMRC
John Hamill, USGS/GCMRC
Paul Harms, NM Interstate Stream Commission
Christopher Harris, Colo. River Board of California
Norm Henderson, National Park Service

Rick Johnson, Grand Canyon Trust
Mary Killeen, Grand Canyon National Park
Robert King, Utah Division of Water Resources
Ted Kowalski, Colo. Water Conservation Board
Dennis Kubly, Bureau of Reclamation
LaVerne Kyriss, Western Area Power Admin.
Estevan López, NM Interstate Stream Commission
Barbara McKenzie, USGS/GCMRC
Steve Mietz, Grand Canyon National Park
Bruce Moore, Southern Nevada Water Authority
Dave Nimkin, NPCA
Mary Orton, The Mary Orton Company
Bill Persons, USGS/GCMRC
Mark Sogge, USGS
Jason Thiriot, Colo. River Commission/Nevada
Dave Trueman, Bureau of Reclamation
Dave Wegner, Water & Power Subcommittee
Palma Wilson, Grand Canyon National Park

Recorder: Linda Whetton, USBR

Welcome and Administrative: Ms. Anne Castle reminded the members that they decided to have this meeting by telephone and webinar because the agenda was limited and they wanted to save on travel costs. She advised the meeting had been noticed in the Federal Register, and said the purpose will be for the AMWG to review the GCDAMP proposed new budget process and have a preliminary look at the draft budget for fiscal years 2011-12. She noted a budget recommendation from the AMWG to the Secretary would not occur until August, and no final decisions on the FY11-12 budget would be made today. She apologized for the technical difficulties with the telephone conference call ports.

She noted that this would be a difficult budget year. Like many stakeholders around the table, the AMP has more program needs than funds to pay for them. She hoped the AMWG would be able to provide

direction to TWG, GCMRC, and Reclamation during the call to enable them to finalize a budget for approval at the August 2010 AMWG meeting.

The original conference call port did not have enough lines, and another call-in number was provided, but that number was not toll free. Prior to switching to the secondary number. Assistant Secretary Castle asked whether there was any objection to proceeding with the call given that the secondary number would have associated long distance charges. There was no objection, and the participants on the call dialed in to the new number. Once everyone had dialed in to the second number, Assistant Secretary Castle asked for confirmation that there was no objection to proceeding with the meeting. Hearing no objection, the meeting went forward.

Ms. Mary Orton reviewed the webinar instructions with the members.

Status of AMWG Nominations. Ms. Castle announced there were several nominations for AMWG members and alternates that have occurred in the past few months. However, they have not received official approval, which will affect some of the people and their ability to vote on any motions. The pending nominations are:

- Jerry Lee Cox (AMWG alternate-GCRG)
- Sam Jansen (AMWG member-GCRG)
- John Jordan (AMWG member-FFF)
- Leigh Kuwanwisiwma (AMWG member-Hopi)
- Mike Yeatts (AMWG alternate-Hopi Tribe)
- Estevan López (AMWG member-New Mexico)
- LaVerne Kyriess (AMWG member-WAPA)
- Bill Stewart (AMWG alternate-AGFD)
- Tony Joe (AMWG alternate-Navajo Nation)
- Alan Downer (AMWG alternate-Navajo Nation)

Agenda. Ms. Castle said there were two agenda issues: 1) The new budget process that was initiated following the AMWG August 2009 meeting where it's not only a two-year budget, but it's a non-rolling, two-year budget, and 2) The preliminary budget for fiscal years 2011-12. Ms. Castle reiterated today's objective would be for the AMWG members and members of the public to provide input to the TWG, GCMRC, and Reclamation. She said the TWG identified 17 issues to be discussed by the AMWG. Because not all those could be addressed in the remaining time, she said the comments provided by the AMWG would be brought up in the order of priority they were received. She referred to the memo sent out on May 5 (**Attachment 1**). She cautioned that if there is too much discussion on one particular issue, she may intervene to wrap it up. She said there would be an opportunity to provide additional comments to the TWG.

TWG Issue #17, Hydrograph. With respect to Issue #17, which has to do with the hydrograph or the release schedule from Glen Canyon Dam, Ms. Castle said the TWG identified they do not have a formal process for evaluating and identifying a proposed hydrograph. She said several comments were received from AMWG members on this issue and everyone recognizes this is a central issue to Glen Canyon Dam management and it is much broader than this particular budget. She said the Federal Register Notice did not include mention of a hydrograph so that issue would not be addressed today but would be on the agenda for the August 24-25, 2010, AMWG meeting. She also said the Federal agencies will be meeting prior to the August meeting to discuss it as well so the AMWG will have the benefit of hearing the Federal Family input on the hydrograph issue. For this budget process, they are not giving any change in direction to the TWG. They will develop the budget and hydrograph as they have in the past.

In response to Mr. Lash's comment that the FY2011 hydrograph is germane to Glen Canyon Dam operations and has everything to do with what's going on in the Grand Canyon, Ms. Castle said the TWG would do what it has always done in order to develop the budget, which includes reviewing the 24-month study provided by Reclamation. If there are differences within the TWG on hydrograph issues, they will be voted on but she would not pre-judge it.

New Budget Process. Mr. Capron referenced the Biennial Budget Process Paper (**Attachment 2a**). He said the paper was requested by the AMWG at the August 2009 meeting and the TWG has been working

on it for about a year in different forums. He said the paper includes all the details and process from where they were in 2004 with a rolling budget and moving that to a two-year fixed budget. The TWG approved it by consensus but still had some concerns so they asked the AMWG to approve it with the provision that the process be re-evaluated by the TWG after the first budget cycle is completed. Due to limited time on the call, he wanted to address two controversial issues:

Section 3.7, Hydrograph Development. Mr. Capron said the Budget Ad Hoc Group and the TWG tried to generally capture what a large number of people thought they had done in the past which was to recommend a hydrograph as part of the final budget based on the 24-month study coming out of Reclamation and make other considerations for science needs (overflights where steady flows might be needed for a certain amount of time or inclusion of two months of steady flows, etc.).

Section 3.9, Criteria for Review and Revisions of the Year-two Budget. Mr. Capron said this section lays out the process for making changes in the year-two budget and if the goal is to streamline the process and allow the budget to move forward with a little less effort in the second year, then they need a good process for how changes would be made in the second year so that they don't repeat work. He identified four issues: 1) scientific requirement or merit, 2) administrative needs, 3) unfunded projects and carryover funds, and 4) new initiatives.

Section 3.10, Strategic 3-year Budget Outlook. Mr. Capron said this is a part of the process that hasn't been implemented but was part of the 2004 vision for what the budget would include. They would include items in a 3-year outlook as part of a budget to be provided to the Secretary to consider in the development of future budgets to be submitted. In looking far enough ahead, they can actually request some of the long-term needs be considered by the Secretary. He feels this is a good time to consider this and make it part of the budget process. Mr. Capron said the TWG is looking for a motion from the AMWG to accept the budget process so they have an agreed upon budget process.

Ms. Castle opened up the issue for discussion. She said some people were having trouble getting on the webinar so asked them to speak up if they wanted to make any comments.

Draft Motion (Proposed by Mr. Caan, seconded by Mr. Stevens): To approve the Biennial Budget Process dated March 22, 2010, and to request that the TWG forward to AMWG an evaluation of the process after the first budget cycle is completed.

Comments:

- *Need explicitness in the language of what AMWG can and can't do and determine how much flexibility AMWG has so conflicts won't arise if an HFE comes up in March. (Lash)*
- *The paragraph in Section 3.7 is causing confusion and should be deleted. If not the whole paragraph, then the last two sentences should be deleted. (Gimbel)*
- *GCMRC has the modeling capability to help look at alternative hydrographs and how they affect different resources. (Kubly)*

As TWG Chair, Shane said he felt if the paragraph was deleted, he would interpret that the TWG's job is not to recommend a hydrograph because it would not be part of the budget process, so they would recommend a budget and workplan but no hydrograph.

Ms. Castle asked Mr. Caan if he was agreeable to the change Ms. Gimbel offered. Mr. Caan asked if development of a hydrograph was a new task. Mr. Capron said it was his understanding that as they go forward with this, they would get the 24-month study from Reclamation and consider changes to that process, entertain motions and possible changes to the hydrograph, and then the TWG would forward a recommendation to the AMWG. George said he agreed with Jennifer's change to remove the last two sentences. Larry also approved the changes to the motion. The deleted language was read: "*There are advocates among TWG members that the ensuing AMWG BWPB recommendation should be factored into the*

Annual Operating Plan process. Department of the Interior officials are investigating whether this connection has been agreed to an will determine how the AMWG proceeds when that investigation is completed.”

Mr. Lash commented that the AOP is the process where the real decisions are made and for the AMWG to have real input as a FACA committee to inform that process as well as Interior, they need to be tied into that process. Ms. Castle said discussion about the details and development of the hydrograph and the AOP would occur at a later date but she was inclined to call for the question. She asked if there were any additional comments or questions on the two-year budget process. Hearing none, she called for the question. Nikolai said the Grand Canyon Trust would object. Ms. Castle asked for a roll call vote.

Motion: (Proposed by George Caan, seconded by Larry Stevens): To approve the Biennial Budget Process dated March 22, 2010, with the exception of the last two sentences of Section 3.7 which are deleted, and to request that the TWG forward to AMWG an evaluation of the process after the first budget cycle is completed.

Member/Alternate	Agency Name	Vote	RESULTS
Kucate, Arden / Dongoske	Pueblo of Zuni	absent	Total Yes 16
- vacant -	San Juan Southern Paiute Tribe		Total No 1
Trujillo, Arvin / Downer / Joe	Navajo Nation	absent	Total Abstain 1
Senn, Michael / Stewart	AGFD	absent	Total Voting 17
Bullets, Charley	Southern Paiute Consortium	y	
Caan, George / Petersen	Nevada	y	2/3 = 12
Gimbel, Jennifer /	Colorado	y	
Lopez, Estevan / Ostler	New Mexico	y	Motion passes.
Heuslein, Amy / Cantley	Bureau of Indian Affairs	y	
Jackson-Kelly / Christensen	Hualapai Tribe (provisional vote)	y	
James, Leslie / Davis	CREDA	y	
Kuwanwisiwma, L / Yeatts	Hopi Tribe	absent	
Lash, Nikolai / Johnson	Grand Canyon Trust	n	
Martin, Steve / Hahn	National Park Service	a	
Potochnik, Andre	Grand Canyon River Guides	y	
Rampton, Ted / Barrett	UAMPS	y	
Gold, Ann / Ryan	Bureau of Reclamation	y	
Shields, John / Ostler	Wyoming	y	
Spiller, Sam / Knowles	Fish and Wildlife Service	y	
Jordan, John	Federation of Fly Fishers	absent	
Stevens, Larry	Grand Canyon Wildlands Council	y	
Strong, Dennis / King	Utah	y	
Kyriss & Palmer	WAPA (DOE)	y	
Benemelis, Perri (Alt)	Arizona	absent	
Zimmerman / Harris	California	y	

ACTION ITEM: If AMWG members/alternates have additional comments to provide on the budget process or the preliminary FY2011-12 budget, they need to submit those to Linda Whetton and Mary Orton by close of business ~~Friday, May 14~~ Thursday, May 20, 2010 (due date changed 5/13/10).

The revised Budget Process Paper (**Attachment 2b**) was updated on May 7, 2010 by Mr. Capron.

FY11-12 Preliminary Budget (AIF = Attachment 3a). Ms. Castle stated this was a difficult budget to prepare because everyone is going through tough economic times and tough choices have to be made. With respect to Interior budgets, she said the President has mandated to free budgets starting with 2010

so they can't expect additional funds. She said they would be using the AMWG Stakeholders' Priorities and Comments: FY 11-12 Budget and Budget Process (**Attachment 3b**) document for discussion.

Reclamation's Proposed Budget: Mr. Kubly referenced Reclamation's memo and the accompanying Draft FY2011-12 GCDAMP budget (**Attachment 3c**). He gave a PPT presentation (**Attachment 3d**) and said the proposed budget is predicated on a 0% CPI rate and reminded everyone that it was -1.3% last year. He said that up through March 2010, and the accumulated CPI for the last 12 months preceding is at 2.3%, it looks like they're moving in the direction of additional funding. Reclamation's portion is about 20% of the total budget and rather than go through all the line items, he thought it would be good to concentrate three funds where there may be some questions: 1) Compliance Documents, 2) the Experimental Flow Fund, and 3) the Warm Water Non-Native Fish Suppression Contingency Fund. He said they're proposing to carry those over and build those funds to do the work in years when there is a need. He pointed out that the anticipated EIS costs will exceed the projected budget so Reclamation is proposing to use unexpended FY10 Canyon Treatment Plan funds and also to provide support from appropriated funds as was done for the LTEP.

GCMRC Budget: Mr. Hamill presented a general overview of GCMRC's budget. He referenced the April 6, 2010 memo (**Attachment 3e**) and two tables (**Attachment 3f**) that were sent out yesterday. He said their budget is consistent with the FY10-11 workplan and budget that was approved by the Secretary last fall. He emphasized GCMRC's budget is largely a continuation of many resource monitoring efforts related to various adaptive management program goals which accounts for two-thirds of the entire budget. He believes it's appropriate given that monitoring is key to understanding resources, status and trends, evaluating the effects of how dam operations are changed, implementing other management actions, and evaluating the effectiveness of those activities. It also provides for a continuation of the nearshore ecology study and the fall steady flow evaluation. It provides for physical and biological or ecosystem modeling efforts although those have been scaled back from a development phase into more of an operation and maintenance mode. He said there are only two new initiatives: 1) Development of a SCORE report and a Knowledge Assessment in FY11-12, and 2) funding for looking at some alternatives upstream to downstream mechanical removal, and non-native fish research alternatives. He referred to Attachment 2 which provided a side-by-side comparison by goal of all the different projects and a very short summary and said the table was an attempt to summarize what the major areas of emphasis and, in some cases, de-emphasis are by goal.

Mr. Hamill talked about some of the challenges and the deferred or scaled back projects they anticipate dealing with. In normal cases most of their costs increase annually by about 5% each year. In reality, they started FY10 with about a \$400K deficit which they had to make up right at the start. There was increasing demand for funding for a variety of management and compliance activities as well as demand for new science projects. The non-native fish management alternative is an example of that. In addition, there is about \$2.7 million that is deferred or scaled back projects.

The final table he presented focused on some potential funding sources to cover some of the shortfalls that are anticipated. If the CPI is increased from the assumed 0% to 2.5%, that would generate about \$250K. He thought the AMWG would want to see funding for the HFE science support and the Long-Term Experiment and Management Program (LTEMP) EIS. If there is a desire to continue non-native fish removal down at the Little Colorado, research in the Lees Ferry area to look at non-native management there, and Chute Falls translocation, they could be very expensive.

Sufficiency and Uncertainty of Budget. Mr. Capron said there were 17 issues raised by the TWG which have been highlighted and organized based on the number of responses provided by AMWG members along with a few additional ones that will also be discussed.

TWG Issue #3. Using the experimental fund for other purposes and the lack of a science plan going into the next HFE.

TWG Issue #4: Using the warm water non-native fish contingency fund.

TWG Issues #5 and #16: TWG #5 is the group of unfunded projects and #16 is the LTEMP funding issue and the potential lack of money in the budget right now to adequately fund that process.

Mr. Kubly said this is what they saw last year when it was agreed to move funds from the experimental fund and the warm water non-native fish contingency fund. If changes like that continue to occur, the program is jeopardizing longer term endeavors that are uncertain. The TWG would like to see planning in place to deal with budget changes.

Mr. Hamill said he thought some of these things have evolved from research into management and should be funded by management agencies. He sees an almost endless list of management and compliance activities and feels this program needs to come up with a long-term strategy for how it's going to accomplish both because they're critical to the success of the program. With respect to the experimental fund, he doesn't think it's prudent at this time to use the experimental fund only to support high flows. Given the shortage of funds doing so would unnecessarily constrain using AMP funds to address a variety of these priority needs that seem to be emerging. On the warm water non-native fish contingency fund, GCMRC has recommended that a contingency fund be established up to the point of about \$900K. Warm water non-native fish management is very expensive and they don't think it's prudent to take funds from the science program

Comments:

- *Would like to see TWG work with GCMRC to develop a budget that includes funding for management actions and environmental compliance and bring back to the AMWG to see what tradeoffs are needed. (Palmer)*
- *Determine what is needed to use extramural funding in the AMP. Would also like to see basic inventory of life forms in the river corridor other than plant life, topics around missing species, and related research projects, and need for an archived and integrated information system. (Stevens)*
- *Science Advisors endorse seeking external funding and also have a 3-year planning direction proposed by TWG to orchestrate some sort of an initiative on it this year. (Garrett)*
- *Exercise caution on using outside funding sources because GCMRC has to peer review and coordinate which will add to their budget. (Ostler)*
- *Need for consensus to not raid the experimental flow fund and other large pots of money but continue to search for how to keep the program balanced with management and science. (Martin)*
- *Even with limited budgets, conservation measures need to be fully funded. (Gold)*
- *TWG needs to recommend how to look for future funding to meet compliance responsibilities. (Caan)*

TWG Issue #10: This refers to line 160 in the budget table and relates to the evaluation of RBT and BT movement study. Mr. Capron said the TWG's concern was that although there may be or may not be adequate money to look at the natal origins of trout issue, there certainly didn't appear to be money for looking at alternatives to mechanical removal of fish and so they suggested an increase of \$200K to \$300K without knowing what a statement of work would be. He referred to Section b and said he wanted to talk about three important issues that relate to trout:

1. A study to look at the natal origins and movement of RBT and BT in the system. Without that knowledge, it's very difficult to design a trout control program if you don't know where they're coming from and where they're going. It's currently funded in the budget.
2. The need to look at alternative methods for trout control in the system to lead the removal in the LCR Reach. This will be addressed in an EA Reclamation is preparing this summer. The potential cost could be \$200K-\$300K.
3. The need for some type of trout control contingency fund. This could potentially cost up to \$1 million. Mr. Kubly said Reclamation delivered a BA to the FWS on April 30 regarding the proposal to cancel mechanical removal during May and June this year. They will hear back from FWS in the form of a BO.

Mr. Hamill said the scope and costs of what would be needed to look at alternatives to the current mechanical removal project is highly uncertain at this point in time and he expects that some of that will be defined through processes outside the AMP, namely the compliance processes, ESA consultation, and NEPA compliance, etc., and so it's going to be difficult to put firm estimates on those given that uncertainty. He said there is a little over \$100K to look at the issue collectively next year with the understanding that guidance would be coming forward. He said they canceled mechanical removal for this year which freed up money in the 2010 budget and so they proposed to start collecting some baseline information on movement of trout out of Lees Ferry downstream and to get a handle on the effectiveness or efficacy of some removal efforts upstream. That proposal will be brought forward for review by the TWG and DOI agencies.

Comments:

- *Support the proposal but it's important to get input from the management agencies, the tribes, and interested fish entities on how to proceed. (Spiller)*
- *Our recommendation is that we do some planning and compliance before we shift where we're doing mechanical removal and also give full evaluation for some flow only options that could help us with trout management. (Martin)*
- *This is the bandwagon that RBT are jeopardizing HBC seems to be contested with the work in Shimumo Creek. The NPS is pretty well positioned to be able to analyze conditions in Shimumo Creek and relate that perhaps to the mainstream and that might be a suggestion for further advancing the discussion of the role of RBT in HBC population dynamics. (Stevens)*
- *Perhaps the thought ought to go into what do we need as a minimum contingency fund and what do we want to have in place and then if we need to go to a higher level because of the outcome of the biological process, where would we recommend that money come from and present that to the AMWG. (Caan)*

TWG Issue #2: This has to do with the HBC translocation program above Chute Falls. Mr. Capron said the TWG believes this is an important compliance requirement and should be implemented. It's one of the things, based on the research that's been done so far, that had a positive impact on HBC. About \$100K and \$150K would be needed each year. Mr. Hamill said that Matthew Andersen told him one thing that hasn't been taken into consideration in both the non-native fish removal issue as well as this one is that the HBC population has changed pretty significantly in the last 7 or 8 years. A lot of these things they're doing now were promoted at a time when the population was declining at a relatively low number and now that seems to have changed somewhat. However, those changes really have not been factored into whether the trigger for doing non-native fish removal or how frequently translocation is needed.

TWG Issue #1: Mr. Capron said this was a Western proposal for a new start in the workplan for power economics. It would be at no cost to the program, however, there would be associated costs with GCMRC for overseeing it and doing the peer review work.

Line 184. Mr. Capron said this was a deferred project for implementing the results of the Economic Value Workshop. TWG considered this as part of the 17 issues but that motion failed by one point actually. He reminded the AMWG that they had asked the TWG to look at the recent report from the Economics Workshop and make a recommendation at the August AMWG Meeting.

Comments:

- *We appreciate WAPA offering the opportunity but perhaps an economist for DOI or NPS could help with it. We would like to see it be completely independent and something all of us can agree to. (Martin)*
- *Concur with Steve's suggestion but am concerned that the surveys of recreational users and surveys of tribal interests takes time and effort and we need to get going on that sooner than later. We can't keep putting these things off as we have done for so many years in this program. It's been a recommendation of the National Research Council since the beginning of this program that we get a better handle on this and we've never really acted on it. (Potochnik)*

- *The way I read the proposal was that it is limited to power economics and that there would be very clear transparency peer review, oversight, or whatever needed to be undertaken but it certainly was not going to preclude all those topics that were discussed at the Socio-economic Workshop. I saw this as just an initial step that leads to getting some, almost free, offer of work on the power economics involving the models that had been developed by Argonne National Labs. (James)*

Ms. Castle said the discussion seemed to be focused on the credibility of the study if Western were to do the study. She suggested they talk about ways to craft that process so they would end up with a product that was credible to the AMWG.

Ms. Gold said they could probably set up a peer review process any way they wanted. Mr. Martin said the Park Service would like to see somebody from the School of Forestry or MIT do the peer review.

Dr. Garrett said he was asked to look at Western's proposal. He said GCMRC would write the study plan as well as do the oversight and accommodate the external review. He reminded the group that credibility of science is all that anyone has when it comes to trying to develop policy. Maintaining that credibility requires some vigilance and part of that vigilance is making sure that any and all efforts are made to ensure independence and excellence. One of the concerns that the Science Advisors have had in the one declining budget is that organizations and programs reach out and try to gain support as much as they can and often have to give up some of the controls of good confidence in the output. He stressed the importance of oversight being maintained by the independent science agency (GCMRC) so there is only one independent science group that makes those assessments of credibility that either refuses to publish or refuses to grant publication of that information.

Mr. Martin said he felt with Western doing the work it was almost like a fundamental paradigm shift in how the AMP is being run in that all the stakeholders would contribute to science based on the expertise they have in recreation, economics, and other things.

Ms. Castle said it didn't sound like there was universal support for Western's proposal. She suggested the issue be brought back to the AMWG for a more thorough discussion in August with a proposal that would include the kind of transparency, assumptions, and methodology that was suggested.

Public Comments: None

Ms. Castle reminded the members and the public that the next AMWG meeting would be on August 24-25, 2010, in Phoenix. She thanked everyone for their participation and adjourned the meeting.

Adjourned: 3:30 p.m.

Respectfully submitted,

Linda Whetton
U.S. Bureau of Reclamation
Upper Colorado Region

General Key to Adaptive Management Program Acronyms

ADWR – Arizona Dept. of Water Resources	HBC – Humpback Chub (endangered native fish)
AF – Acre Feet	HMF – Habitat Maintenance Flow
AGFD – Arizona Game and Fish Department	HPP – Historic Preservation Plan
AIF – Agenda Information Form	INs – Information Needs
AMP – Adaptive Management Program	KA – Knowledge Assessment (workshop)
AMWG – Adaptive Management Work Group	KAS – Kanab ambersnail (endangered native snail)
AOP – Annual Operating Plan	LCR – Little Colorado River
BA – Biological Assessment	LRRMCP – Lower Colorado River Multi-Species Conservation Program
BAHG – Budget Ad Hoc Group	LTEP – Long Term Experimental Plan
BCOM – Biological Conservation Measure	MAF – Million Acre Feet
BE – Biological Evaluation	MA – Management Action
BHBF – Beach/Habitat-Building Flow	MATA – Multi-Attribute Trade-Off Analysis
BHMF – Beach/Habitat Maintenance Flow	MLFF – Modified Low Fluctuating Flow
BHTF – Beach/Habitat Test Flow	MO – Management Objective
BIA – Bureau of Indian Affairs	MRP – Monitoring and Research Plan
BO – Biological Opinion	NAU – Northern Arizona University (Flagstaff, AZ)
BOR – Bureau of Reclamation	NEPA – National Environmental Policy Act
CAHG – Charter Ad Hoc Group	NHPA – National Historic Preservation Act
CAPA – Central Arizona Project Association	NPS – National Park Service
GCT – Grand Canyon Trust	NRC – National Research Council
CESU – Cooperative Ecosystems Studies Unit	O&M – Operations & Maintenance (USBR funding)
cfs – cubic feet per second	PA – Programmatic Agreement
CMINs – Core Monitoring Information Needs	PEP – Protocol Evaluation Panel
CRBC – Colorado River Board of California	POAHG – Public Outreach Ad Hoc Group
CRAHG - Cultural Resources Ad Hoc Group	Powerplant Capacity = 31,000 cfs
CRCN – Colorado River Commission of Nevada	R&D – Research and Development
CRE – Colorado River Ecosystem	RBT – Rainbow Trout
CREDA – Colorado River Energy Distributors Assn.	RFP – Request For Proposals
CRSP – Colorado River Storage Project	RINs – Research Information Needs
DAHG – Desired Future Conditions Ad Hoc Group	ROD Flows – Record of Decision Flows
DASA - Data Acquisition, Storage and Analysis	RPA – Reasonable and Prudent Alternative
CWCB – Colorado Water Conservation Board	SA – Science Advisors
DBMS – Data Base Management System	Secretary – Secretary of the Interior
DOE – Department of Energy	SCORE – S tate of the C olorado R iver E cosystem
DOI – Department of the Interior	SHPO – State Historic Preservation Office(r)
EA – Environmental Assessment	SOW – Scope of Work
EIS – Environmental Impact Statement	SPAHG – Strategic Plan Ad Hoc Group
ESA – Endangered Species Act	SPG– Science Planning Group
FACA – Federal Advisory Committee Act	SSQs – Strategic Science Questions
FEIS – Final Environmental Impact Statement	SWCA – Steven W. Carothers Associates
FRN – Federal Register Notice	TCD – Temperature Control Device
FWS – United States Fish & Wildlife Service	TCP – Traditional Cultural Property
FY – Fiscal Year (October 1 – September 30)	TES – Threatened and Endangered Species
GCD – Glen Canyon Dam	TWG – Technical Work Group
GCT – Grand Canyon Trust	UCRC – Upper Colorado River Commission
GCMRC – Grand Canyon Monitoring & Research Ctr.	UDWR – Utah Division of Water Resources
GCNP – Grand Canyon National Park	USBR – United States Bureau of Reclamation
GCNRA – Glen Canyon National Recreation Area	USFWS – United States Fish & Wildlife Service
GCPA – Grand Canyon Protection Act	USGS – United States Geological Survey
GLCA – Glen Canyon National Recreation Area	WAPA – Western Area Power Administration
GRCA – Grand Canyon National Park	WY – Water Year (a calendar year)
GCRG – Grand Canyon River Guides	
GCWC – Grand Canyon Wildlands Council	

Q/A/C/R = Question/Answer/Comment/Response

Updated: May 12, 2010