

**Glen Canyon Dam Adaptive Management Work Group Meeting
April 29, 2009**

Conducting: Larry Walkoviak, Alternate for Secretary's Designee
Facilitator: Mary Orton

Convened: 9:30 a.m.

Committee Members/Alternates Present:

Jan Balsom, NPS/GCNP (alternate)
Charley Bullets, Southern Paiute Consortium
George Caan, Colorado River Comm./NV
Garry Cantley, BIA (alternate)
Jennifer Gimbel, Colorado Water Conservation Board
Jay Groseclose, NM Interstate Stream Comm.
Christopher Harris, Colorado River Board/CA (alt.)
Loretta Jackson-Kelly, Hualapai Tribe
Leslie James, CREDA
Robert King, UDWR (alternate)
Rick Johnson, Grand Canyon Trust (alternate)

Steve Martin, NPS/GCNP
Andre Potochnik, Grand Canyon River Guides
Ted Rampton, UAMPS
Tom Ryan, USBR (alternate)
John Shields, WY State Engineers Office
Sam Spiller, USFWS
Mark Steffen, Federation of Fly Fishers
Larry Stevens, Grand Canyon Wildlands Council
Brad Warren, WAPA
Bill Werner, ADWR
Mike Yeatts, Hopi Tribe (alternate)

Committee Members Absent:

Bob Broscheid, AGFD
Amy Heuslein, Bureau of Indian Affairs

Leigh Kuwanwisiwma, The Hopi Tribe
Gerald Zimmerman, Colorado River Board/California

Interested Persons:

Andrea Alpine, USGS
Matthew Andersen, USGS/GCMRC
Mary Barger, WAPA
Mike Berry, USBR
Nora Bryant, USGS/GCMRC
Shane Capron, TWG Chair
Kerry Christensen, Hualapai Tribe
Rick Clayton, USBR
Janet Cohen, NPS
Kevin Dahl, Nat'l Parks Conservation Assoc.
Bill Davis, EcoPlan Associates/CREDA
Kurt Dongoske, Pueblo of Zuni
Helen Fairley, USGS/GCMRC
Dave Garrett, M³Research
Pamela Garrett, M³Research
Anamarie Gold, USBR
Paul Grams, USGS/GCMRC
Martha Hahn, NPS/GCNP

John Hamill, USGS/GCMRC
Norm Henderson, NPS
Doug Hendrix, USBR
Glen Knowles, USFWS
Dennis Kubly, USBR
Barbara McKenzie, USGS/GCMRC
Ted Melis, USGS/GCMRC
Steve Mietz, USGS
Mary Orton, The Mary Orton Company
Don Ostler, Upper Colorado River Commission
Clayton Palmer, WAPA
Shelley Pistorius, USGS
Larry Riley, AGFD
Michael Schulters, USGS
D. Randolph Seahom, CWCB
Barbara Steffen, Fed. of Fly Fishers
Jason Thiriot, Colorado River Comm./NV
Palma Wilson, NPS

Meeting Recorder: Linda Whetton, USBR

Welcome and Administrative: Mr. Larry Walkoviak welcomed the AMWG members, AMWG alternates, and members of the public. A roll call was taken and a quorum (15 members) was established.

MOTION: [Approve the September 9-10, 2008 Meeting Minutes](#) (Proposed by Mr. Bill Werner, seconded by Mr. Christopher Harris). Mr. Sam Spiller and Ms. Jennifer Gimbel provided some minor edits. Without objection, the minutes were passed pending the changes noted.

Update on Steve Magnussen. Mr. Walkoviak said he had spoken to several members yesterday who were unaware that Steve Magnussen, the first Secretary's Designee for the AMWG, passed away in December 2008 after a long battle with pancreatic cancer. The AMWG recommended sending a condolence letter to Mrs. Karen Magnussen.

ACTION ITEM: Reclamation will send a letter on behalf of the AMWG to Mrs. Karen Magnussen expressing their condolences on Steve's passing.

Action Item Tracking Report (Attachment 1). Mr. Rick Johnson said he thought the Policy Issues Ad Hoc Committee was still open but since it wasn't listed on the previous or current report, he asked why it wasn't listed. He asked about criteria for putting action items on the report. Ms. Mary Orton explained that if there is an action item to set up an ad hoc group and members need to send their interest to the chairman, then it's put on the report as a reminder. Once the deadline passes, the item is removed from the list. She said it doesn't reflect all the issues that are still under discussion as opposed to the finite actions that people need to take or commitments that were made at the meeting.

ACTION ITEM: Reclamation will perform a review of the ad hoc group assignments that haven't been completed and report back at the next AMWG meeting.

Roles AHG and Desired Future Conditions Updates. Mr. Walkoviak combined these two items because of their similarities. He thanked the former Roles AHG members for their work and reporting back to Ms. Kameran Onley. Ms. Onley was hoping to complete the Roles AHG Report before her tenure expired but that didn't happen. Similarly with the DFC's, he said the DOI agencies started working on updating the DFCs and building on some of the previous work. The goal was to get those to the AMWG and then complete before Ms. Onley left but they were unable to accomplish that. Ms. Onley advised that since Department personnel were in transition and a new Secretary's Designee would be appointed, it would be better to put these items on hold and let the new appointees deal with them.

Legislative Updates. Mr. Dennis Kubly said he typically looks under three categories: energy, endangered species, and FACA issues. Energy: There have been 50 bills introduced thus far into Congress dealing with energy with the most important one being Public Law 111-5, the American Recovery and Reinvestment Act. He did a word search on that law and found one mention of hydropower that he thought the AMWG might find interesting. There is a temporary program for rapid deployment of renewable energy and electrical power transmission projects in section 1705. Endangered species: 15 bills have been introduced. He made note of two: 1) Amend the ESA of 1973 to provide for the suspension of each provision of the Act during periods of drought with respect to federal and state agencies that manage federal river systems that are located in each region affected by the drought. This bill was from the representative from Georgia which clearly shows drought is becoming an issue in other parts of the country. 2) A bill to temporarily prohibit the Secretary from considering global climate changes that are natural or manmade factor in determining whether a species is threatened or endangered for other purposes. FACA: He said there is an amendment to the Federal Advisory Committee Act to increase accountability of committees and other purposes that was referred out of the House Committee on March 10, 2009.

Mr. John Shields added there is a section in P.L. 111-11 which amends the authorities for the Upper Colorado and San Juan River Endangered Fish Recovery Programs and it extends the period of time during which the Secretary may extend appropriated funds for capital construction and provides authorization for an additional \$15 million for the Upper Colorado River program and an additional \$12 million for the San Juan River Basin for the endangered fish recovery program. In the case of the San Juan, it's anticipated that about \$7 million will be used to fix a rockslide on the San Juan River that has slid 12 times in the last five years and two of them have been pretty severe. Before Senator Domenici retired he pushed hard to get this authorization through the House and the Senate. He mentioned that Ms. Gimbel testified at the hearing that was held on July 8, 2008. This bill was bundled as part of the public lands omnibus bill. In the near future the House and Senate will introduce a bill to extend the period of authorization for the use of Upper Colorado River Basin Fund revenues for annual base funding purposes. This is a very simple bill and changes the date 2011 to 2023 so it will be co-terminous with the period of authorization extension that was provided in P.L. 111-11 and also makes it co-terminous with the cooperative agreement for the San Juan Basin Recovery Implementation Program.

Litigation Update. Mr. Walkoviak said the Grand Canyon Trust lawsuit is still under judicial review.

DOI Letters. Mr. Walkoviak referred the members to the several letters in their meeting packet from Ms. Onley and Ms. Lynn Scarlett, ex-Deputy Secretary of the Interior (**Attachments 2a-2d**).

Tribal Liaison Update. Mr. Walkoviak said about a year ago Ms. Lorretta Jackson-Kelly brought up the subject of having a tribal liaison position. He said the NPS has offered to support part of that position. As such, Ms. Janet Cohen has been selected and will be working with the tribal representatives.

GCMRC Updates (AIF=Attachment 3a)

Update on HBC numbers. Mr. Matthew Andersen provided an update on the ASMR model and said there is a paper that uses mark recapture data on adult HBC. This has been through extensive and critical peer review. The trend is that the adult HBC continues to increase. The number of chub in the Grand Canyon is between 6K-10K in Grand Canyon with a mid-range of 7,600. This information was summarized in a Fact Sheet (**Attachment 3b**). He said there was also an Open File report (**Attachment 3c**) prepared by Dr. Lew Coggins and the last few pages address the level of certainty/uncertainty. He also said Dr. Bill Pine and Dr. Carl Walters produced an article in the American Fisheries Journal on certainty of models and how they do and don't work.

Sediment and 2008 High Flow Experiment Update. Dr. Paul Grams distributed copies of his PPT, "Water Quality and Sediment, 2008 High Flow Experiment, and Integrated Flow, Temperature, and Sediment Modeling" (**Attachment 3d**). He concluded with the schedule for the Integrated Modeling Program for 2009-2011).

Status of Resources Fact Sheet. Dr. Ted Melis distributed copies of a Fact Sheet: Status and Trends Below Glen Canyon Dam Update—2009 (**Attachment 3e**). Ted said they're trying to provide this information on a more regular basis and provide links to the reports. He mentioned the concern about the quagga mussel risk and thinks it's unlikely this exotic species would become well established in Lake Mead or the tributaries below Lees Ferry.

Cultural Resources Monitoring Update. Ms. Helen Fairley distributed copies of her PPT, "Update on the Cultural Monitoring R&D Project," (**Attachment 3f**).

Several concerns were expressed by the members that included why the USGS press release didn't mention the increase of chubs, that the GCDAMP is not tied into the Fact Sheets, and whether there is an approach in place for what is going on below the LCR.

Monitoring and Research Update (AIF and GCRMC Documents = Attachment 4a)

Monitoring and Research Plan (MRP) and Strategic Science Plan (SSP). Mr. John Hamill said this process started with the Science Planning Group in 2005. The products were the basis for the development of a Strategic Science Plan and a Monitoring and Research Plan. He gave an accompanying PPT presentation.

TWG Chair Report. Mr. Shane Capron said he is excited to work with the program and appreciated WAPA allowing him to work with the TWG. He gave a PPT, "MRP/SSP Revisions, TWG Actions" (**Attachment 4b**).

Concerns included planning for present compliance and holding discussions with Interior and revising the SCORE report. The following motion was proposed:

MOTION (Proposed by Bill Werner, seconded by Jay Groseclose): AMWG recommends to the Secretary of the Interior that he approve the Strategic Science Plan revisions dated April 2009 and the Monitoring and Research Plan amendment dated March 24, 2009.

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, Christopher	California	Y
Gimbel, Jennifer	Seaholm, Randy	Colorado	Y
James, Leslie	Vacant	CREDA	Y
Steffen, Mark	Steffen, Tim	Federation of Fly Fishers	Y
Spiller, Sam	Knowles, Glen	U.S. Fish and Wildlife Service	Y
Potochnik, André	O'Brien, John	Grand Canyon River Guides	Y
Lash, Nikolai	Johnson, Rick	Grand Canyon Trust	N
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	Y
Groseclose, Jay	Ostler, Don	New Mexico	Y
Bulletts, 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
		Total Yes	19
		Total No	2
		Total Abstaining	0
		Total Voting	21
		2/3 =	14
		Motion Passes	

2007 and 2008 Biological Opinion Conservation Measures Update (AIF = Attachment 5a)

Razorback Sucker Habitat Assessment for Potential Augmentation. Dennis Kubly said that razorback sucker haven't been given a lot of attention in the adaptive management program because it is very rare and this reach of the Colorado River may have never supported high numbers of this endangered species. He presented a PPT, "Conservation Measures Razorback Sucker" **Attachment 5b**).

Science Plan for Fall Steady Flows and Near Shore Ecology. Mr. Matthew Andersen gave an accompanying PPT presentation (**Attachment 5c**).

Humpback Chub Translocation. Mr. Glen Knowles presented a PPT, "Humpback Chub Translocation and Refuge Development" (**Attachment 5d**). Glen spoke about the Chute Falls Translocation effort being initiated as part of the 2002 Biological Opinion. Glen reported that 1,466 juvenile were translocated during the following years: 2003=300, 2004=300, 2005=567, and 2008=299.

Shinumo HBC Translocation Site. Dr. Steve Mietz gave a PPT on the translocation site" (**Attachment 5e**). The site was chosen because of the location of the barrier falls that keeps non-native fish from moving up into the tributary. Steve said the summer field schedule would be as follows: May 2009 = non-native removal; June 2009 = monitoring equipment installation, non-native removal, and translocation via helicopter; July 2009 = monitoring trip 1; and September 2009 = monitoring trip 2.

Non-Native Fish Control Plan. Mr. Matthew Andersen gave a PPT, "Nonnative Fishes Control Plan" (**Attachment 5f**). The draft plan should be available to the TWG within the next few weeks and hopefully a final ready for the AMWG's approval in August.

Mr. Mark Steffen expressed concern about the need for new NEPA compliance especially if mechanical removal is continued on non-native fish and the concerns expressed by people in seeing the fish electrocuted or poisoned. Mr. Brad Warren said with regard to the nearshore ecology plan, it was his understanding that a piece of that would be to complete the LSSF and feed into the fall plan. Matthew responded that currently there is no one at GCMRC to do the LSSF so they're going to do some summary work but won't have the LSSF synthesis done at the same time. Mr. Kurt Dongoske recommended that as they develop the fish control, they also consult with the tribes.

Defining Management Actions. (AIF = Attachment 6a). Mr. Capron presented a PPT, "Defining Management Actions" (Attachment 6b). Mr. Walkoviak said there is the notion that this is a policy-type decision that has to be made. He said the ideas need to get generated and when the new people come into the Department, they will need to weigh in on those. He advised the AMWG to not get ahead of what people in the Department might want to do.

Regarding the question of what is related to a management action and what is in and out of the program, Brad said from WAPA's perspective, the GCPA says the Secretary will operate the dam in a manner consistent with the various authorities. When the AMWG talks about nonnative fish removal, he said it doesn't relate to operation of Glen Canyon Dam. The actual effort is to remove fish. WAPA would like to see the chub come back but it's still a question of what this program is and what is recommended to the Secretary to meet the goals and resources of the Park.

Mr. Randy Seaholm said in 2001 the AMWG wrestled with what's in and out of the program. In 2003 people were in agreement the program was supposed to have management actions transferred to the responsible agencies. Mr. Chris Harris said there is utility in going back to see what has been done since the program was established. If there are some things that state and federal agencies can do, that would be fine but the management actions need to be done through this AMP. He suggested the AMWG may want to put together a small group of people to work with the new administration and just leave it at that for the time being. Mr. Robert King agreed with Chris but stated GCMRC has no management authority so the program needs to recommend whether when something leaves the monitoring and research arena and goes to the managing agency as a management action, and then the funding must follow.

Final FY08 Expenditures and Carryover, and FY09 CPI Increase (AIF = Attachment 7a) Mr. Hamill introduced Ms. Barbara McKenzie who serves as GCMRC's budget analyst. He gave a PPT presentation, "GCMRC FY08 Expenditures, Carryover and CPI Allocations" (Attachment 7b). He referred to Table 1 and Table 2 which had projects that fell into the planned or non-discretionary allocation of GCMRC FY08 Carryover. The total amount of carryover and additional FY09 funds was \$1,244,064. There was almost \$700K that was planned for FY08 high flow test. Table 3 allocated about \$500K of discretionary funds for maintenance and equipment that was wearing out.

USBR FY08 Expenditures. (Attachment 7c) Mr. Kubly presented a table which showed the expenditures in FY08. For the last three years Reclamation has been collecting the funds for tribes and thought they were lost, but now things can be funded out of tribal expenditures. Reclamation ended up with a 4.9% CPI increase so had more money available than was anticipated. They calculated the amount that would've been available which goes into the underfunding amount. In FY09 they established a non-native fish control contingency fund and think it's necessary to establish this fund and carry it through in ensuing years to be prepared for a non-native fish, particularly warmwater species, population explosion.

Meeting Status Update. Ms. Orton distributed copies of the Budget Discussion Procedures (Attachment 8a) and reviewed the remaining agenda items with the members.

Review of FY10-11 Priorities, Preliminary Budget, and Hydrograph. (AIF = Attachment 8b) Mr. Capron gave a PPT, "FY 2010-11 Budget TWG Actions" (Attachment 8c).

Mr. Kubly directed the members to look at page 14 in the Review of AMWG Priorities handout. Both Reclamation and GCMRC are assuming 0% CPI for FY 2010 based on results preceeding months. He said it makes good sense to take off the CPI early in the budget process. If there are any questions for the POAHG, they should contact Doug Hendrix.

Mr. Hamill presented a PPT "GCMRC's GCDAMP Preliminary FY 2010-11 Budget" (**Attachment 8d**).

Ms. Orton advised the group to cross out "item k" on page 3 as it has been completed. She said there would be time for questions and discussion of a motion at tomorrow's meeting.

Q: At one point do we know when something is complete? I was curious about the treatment plan review. I'm also curious about the economic studies and how much is power paying for? What flow regimes haven't been addressed? (Balsom)

A: There is that role to do economic analysis so it's out there and we want to make that clear. It's AMWG's opportunity to give us more direction. Your discussion about activities to management actions just goes back to management actions. We don't know where the funding will come from. (Capron)

C: We're supposed to be implementing management actions. We're trying to change the system when we do flows. There was a cap set on this program and we never figured out what it would ultimately cost. We need to take a more comprehensive look. It should be about management, compliance, etc. That's the reality of it. When we go to management actions, there is a risk. We don't have real good decision making processes. (Hamill)

Q: The assessment of the treatment plan? (Balsom)

C: The science advisors sent out an RFP and that was only recently finalized in February. The treatment plan is out for review. (Garrett)

Q: They had recommended two removal efforts. Can you explain that? (Senn)

A: They are doing one removal trip. From AGFD it looks like 2003 numbers in trout have moved up quite a bit. There might be an effort to have a second trip in 2009. We'll work through our first year. In our deliberations, we talked about how many trips were needed. There were six trips initially but the TWG felt it was more reasonable to plan for two. We don't have a lot of technical numbers so we're not sure how many trips are necessary. (Capron)

C: Regarding the geomorphological study, it was my understanding the intent of the model was to tease out the differences between the cultural sites and dam impacts. The question has to do with the removal money. It's not in the Center's budget but is in Reclamation's side of the budget. (Warren)

Q: Is it appropriate with projects being prioritized to know what replaces the cost of doing removal in your budget? (Spiller)

A: On page 23 of the AIF, there are many costs – salaries, some of the principal coordinators. Our costs go up 5-7% every year. I'll get with Barbara McKenzie and provide that information to you. (Hamill)

Q: Considering there is a nonnative fish removal going on in the river, I don't see why we can't wait and see how that goes before deciding what to do next. If we do that, then I won't have to vote no, won't have to write a minority report, and you won't have to read it. (Steffen)

Grand Canyon Protection Act Annual Report to Congress. Mr. Johnson said that there are many annual requirements and it helps the members to make their recommendations to the Secretary. He provided background information and a proposed motion (**Attachment 9**).

Mr. Tom Ryan said the Annual Report to Congress was mentioned at the August meeting last year. He went through the reports Reclamation has been doing and admitted there are things that require more attention. Rick said he would like to see Reclamation/DOI produce all the documents for the AMWG. He doesn't feel the annual review of resource status meets the intent of the Charter language. Mr. Jay Groseclose said it's not the purpose or direction of AMWG and it would be quite a consuming task to undertake. The motion was put to a roll call vote:

MOTION (Proposed by Rick Johnson, seconded by Andre Potochnik): There are several duties and reporting requirements related to the Glen Canyon Dam Adaptive Management Program. These duties and reports include:

1. Operating Criteria for Glen Canyon Dam;
2. Period Review of the Operating Criteria;
3. Annual Report to Congress;

4. Annual Plan of Operations;
5. Annual Allocation of Costs report;
6. Annual review of resource status;
7. Annual review of program status;
8. Annual coordination between the AMP and the AOP;
9. Annual Comprehensive Review for a FACA committee.

The AMWG recommends to the Secretary of the Interior that he direct the relevant agencies in the Department of the Interior to complete items 1-8, with review and input by the AMWG, by the end of calendar year 2009. The AMWG further recommends that item 9, conducted by the General Services Administration, be shared with the AMWG.

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Werner, Bill	Vacant	Arizona	N
Heuslein, Amy	Cantley, Garry	Bureau of Indian Affairs	N
Vacant	Ryan, Tom	Bureau of Reclamation	A
Zimmerman, Jerry	Harris, Christopher	California	N
Gimbel, Jennifer	Seaholm, Randy	Colorado	N
James, Leslie	Vacant	CREDA	N
Steffen, Mark	Steffen, Tim	Federation of Fly Fishers	N
Spiller, Sam	Knowles, Glen	U.S. Fish and Wildlife Service	Y
Potochnik, André	O'Brien, John	Grand Canyon River Guides	Y
Lash, Nikolai	Johnson, Rick	Grand Canyon Trust	Y
Stevens, Larry	Vacant	Grand Canyon Wildlands Council	Y
Kuwanwisiwma, Leigh	Yeatts, Mike	Hopi Tribe	A
Jackson-Kelly, Loretta	Vacant	Hualapai Tribe	A
Martin, Steve	Balsom, Jan	National Park Service	Y
Caan, George	Vacant	Nevada	N
Groseclose, Jay	Ostler, Don	New Mexico	N
Bulletts, Charley	Skrzynski, LeAnn	Southern Paiute Consortium	A
Strong, Dennis	King, Robert	Utah	N
Rampton, Ted	Barrett, Cliff	UAMPS	N
Warren, Brad	Palmer, Clayton	Western Area Power Administration	A
Shields, John	Ostler, Don	Wyoming	N
		Total Yes	5
		Total No	11
		Total Abstaining	5
		Total Voting	16
		2/3 =	11
		Motion Fails	

Science Advisors Nominations. (**AIF = Attachment 10 and PPT**) Dr. Dave Garrett presented a PPT, "Strategy for Science Advisor Expertise to Respond to Emphasis Areas of the GCDAMP; 2009-2013." He asked if the proposal was acceptable and if there were any nominations. He would like to provide three names to GCMRC. He said the science advisors have a time commitment of about 20 days a year and emphasized that some reviews have a 2-3 week turnaround deadline. He concurred with Dr. Larry Stevens that having a biostatistician is going to be important to understand the array of information coming out of the program. Mr. Dongoske said he was disappointed to see the social sciences aspect relegated to part-time status and asked if Dr. Garrett could clarify his work as the Executive Director and his function as a science advisor. Dr. Garrett said that in 2005 the chief of GCMRC determined they couldn't afford two people. He does a formal review of products because that is how the science advisory group is structured.

ACTION ITEM: AMWG members should send nominations (names) for science advisors to Dave Garrett by May 29, 2009.

Public Comments: None.

Adjourned: 5 p.m.

**Glen Canyon Dam Adaptive Management Work Group Meeting
April 29, 2009**

Conducting: Larry Walkoviak, Alternate for Secretary's Designee
Facilitator: Mary Orton

Convened: 9:30 a.m.

Committee Members/Alternates:

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Charley Buletts, Southern Paiute Consortium
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Steve Mietz, USGS
Mary Orton, The Mary Orton Company
Don Ostler, Upper Colorado River Commission
Clayton Palmer, WAPA
Shelley Pistorius, USGS
April Reese, Land Letter
Larry Riley, AGFD
Michael Schulters, USGS
D. Randolph Seahom, CWCB
Barbara Steffen, Fed. of Fly Fishers
Jason Thiriot, Colorado River Comm./NV
Palma Wilson, NPS

Meeting Recorder: Linda Whetton, USBR

Welcome and Administrative: Mr. Larry Walkoviak welcomed the AMWG members, AMWG alternates, and members of the public. A roll call was taken and a quorum (15 members) was established.

Basin Hydrology. Mr. Rick Clayton presented a PPT, "Upper Basin Hydrology and Operations 2009-2010" (**Attachment 11**).

C: *The transition from August to Sept 2010 is disastrous. You are going to strand all the living organisms along the shoreline. The number is too low. (Steffen)*

R: *We agreed to target 10,000 but that's something up for negotiation. Perhaps we could transition down. (Clayton)*

Q: *Looking at the flows equalization and looking at what we saw yesterday in terms of sediment transport at certain flow levels, I'm trying to understand how you go from knowing there are certain release patterns to be done and also*

knowing we have conservation of sediment resources in the canyon. How do those things come together in terms of how we schedule so that we can maximize retention of sediment in the system and meet the requirements we have for equalization? (Balsom)

A: You're touching on a huge challenge that we have. When equalization is triggered, a large volume of water all of sudden must be released. We're trying to be proactive about releasing that equalization water. If you look at the second to last slide, equalization in 2010 essentially gets triggered in April. You have equalization water in Jan-Feb-Mar and that's anticipatory. We're trying to move water as early as we can with managing the risk level of equalization not being triggered early. If I don't release this water here, then I have to pile that water on top of the later months which makes it even more difficult in terms of sediment retention. It is an extreme challenge to manage the equalization volume to try to release and retain sediment. That was a problem in 2008 and I expect it will be a problem down the road. (Clayton)

Review of FY10-11 Priorities, Preliminary Budget, and Hydrograph (continued). Mr. Walkoviak asked for any additional comments from the AMWG.

- Larry Stevens said he would like the AMWG to start looking at the issue of extirpated species. It would be useful to review historical documents.
- Bill Werner said the budget didn't balance on the order of \$700K. As the group looks at different concepts, they need to ask if something has to happen, when something needs to happen, and where is it appropriate. There are significant issues to deal with and there may be some things that are less in their discretion.

Mr. Walkoviak said there was a fairly lengthy motion the TWG wanted the AMWG to provide guidance for further work by the TWG. He cautioned that the AMWG will get into specific budget details at the August meeting.

Grand Canyon Wildlands Council Motion. Dr. Larry Stevens provided copies of his "GCWC Draft White Paper: Extirpated Species in the Colorado River Ecosystem" (**Attachment 12a**) and proposed the following *information-based* motion:

MOTION (Proposed by Larry Stevens, seconded by Andre Potochnik): In recognition of GCDAMP Goal 3 and towards management of the Colorado River through an ecosystem approach, AMWG directs TWG to establish a Species of Concern (SMC) Ad Hoc Committee, co-led by Grand Canyon Wildlands Council, NPS, and FWS, and charges it to produce a report by May 1, 2011 that contains the following with regard to extirpated species and other species of management concern in the CRE:

- a review of information about and assessment of the status, habitat needs, and ecosystem roles of the species, and
- recommendations on options and costs for improved stewardship of the species, including the potential for re-establishment / reintroduction.

AMWG further requests the participation of GCMRC in this work SMC Ad Hoc Committee.

Dr. Stevens presented a PPT, "AMP Goal 3: Extirpated or At-risk Species in the Colorado River Ecosystem Downstream from Glen Canyon Dam." (**Attachment 12b**). He reminded the group that this is an information request but that if a risk assessment was needed, then money may also be needed. There would be no money needed for the ad hoc group. Mr. Senn said that AGFD has an interest in participating in the ad hoc group.

Ms. Gimbel said she was confused because she felt the group was getting into recovery of species. She asked Mr. Seaholm to address the issue. Randy reminded everyone that the AMWG went through an "in and out" process in 2001 and reached unanimity and this is becoming the type of recovery effort that they wanted to avoid. This effort will lead to more recovery efforts and they will lose sight of the monitoring that needs to be done. He feels the Secretary needs to tell the AMWG if this is a monitoring program and not a recovery program. There was no opposition to having the extirpated species and looking at an ecological system as a whole, but it's not appropriate to bring it into the program. Mr. Johnson concurred with Randy in that he felt the issue needs to go to the Secretary.

Kurt said his concern was not with the intent of the motion but that it asks the AMWG to micro manage the TWG and have the TWG develop the two bulleted items. Dr. Garrett added that SAs have always supported knowledge assessment and pushed ecosystem policies and encouraged the group that GCMRC would have some involvement in this and should come out as a science document.

Changes to the motion:

In recognition of GCDAMP Goal 3 and towards management of the Colorado River through an ecosystem approach, AMWG requests clarification from the Secretary of the Interior on whether Goal 3 of the GCDAMP Strategic Plan should to produce a report by May 1, 2011 that contains the following with regard to extirpated species and other species of management concern in the CRE:

- a review of information about and assessment of the status, habitat needs, and ecosystem roles of the species, and
- recommendations on options and costs for improved stewardship of the species, including the potential for re-establishment / reintroduction.

AMWG further requests the participation of GCMRC in this work.

In the absence of an historian, Ms. Orton said at the AMWG August 2003 meeting, the AMWG passed a motion with regard to the report from the In and Out Committee. The motion passed on a vote of 18 to 1 with one abstention and in that report the AMWG identified each Information Need. The AMWG categorized in one of three ways: a, b, and c, "a" was Information Needs that were appropriate for funding by power revenues and for accomplishment by GCMRC so 100% within the program. It's appropriate for GCMRC to work on it and power revenues should fund it; "b" was GCMRC can work on it but shouldn't be funded by power revenues; and "c" was they're part of the Strategic Plan because they're part of the overall program for the Colorado River ecosystem. They should be funded and accomplished under the authority of an entity other than GCMRC. The one Research Information Need under Goal 3 was a "c" so it was designated by AMWG at that time as outside the program. This did not go to the Secretary. The report was accepted as a working document so the Secretary was never asked to respond to that or to make a determination so if the AMWG wants clarification from the Secretary, then this may be the way to address this issue.

Mr. Dongoske suggested the ad hoc group might want to prepare a report with recommendations and submit that to the Secretary and ask for guidance at that time.

This motion was moved to later in the day but the following comments were captured prior to passing the motion:

- *Would like to see BIA and Hualapai added to the list*
- *Would like to see Goal 3 mentioned still because we may end up going back to the usual suspects.*
- *Goal 3 only mentions four species all of which pose a risk to the HBC so by having that in there just focuses right directly on those four species. The river otters eat a lot of fish so they can be a big problem and with others we have the hybridization problem.*
- *We should take Goal 3 out because Larry's right that is it up to the ad hoc committee to look at and this makes it more palatable for some of us to move forward on this. Rather than a definite report, perhaps a draft report could be presented to AMWG sometime in between that and the final report in 2011.*
- *On page 11, #3 in the Strategic Plan, it gives this group a broad statement to look into this issue. The group needs to look at the various species and then assess feasibility.*
- *In looking at that last sentence about the review of information you might think about that as an activity for your science advisors.*

FINAL MOTION (Proposed by Dr. Larry Stevens, seconded by Dr. Andre Potochnik): In recognition of GCDAMP goals toward management of the Colorado River through an ecosystem approach, AMWG directs the TWG to establish the Species of Concern Ad Hoc Committee (SMCAHC) and requests the participation of GCMRC in that ad hoc committee, to produce a draft report to be presented to AMWG on or before by May 1, 2011, that contains the following with regard to species of management concern in the CRE: A

review of information about an assessment of the status of habitat needs and availability, and ecosystem roles of the species.

Motion passed by consensus.

Grand Canyon River Guides Motion 1 (Attachment 13a). By way of background information, Dr. Andre Potochnik said at the last AMWG meeting there was a presentation by Scott Wright from USGS on whether there was enough sand in the long-term to do a sustained sediment resource regardless of dam operations. Because GCRG is very concerned about sediment resources in the Canyon and other resources of concern that depend on the sandbars of the Canyon, he wanted to pursue looking at equalizing monthly volumes in an attempt to restore and maintain sediment resources from the canyon. Dr. Wright's paper recommended that in order to sustain sediment resources over the long-term that high flow experiments, that is to say pulses of water from the dam high enough to move sediment up to areas where it's needed, would be necessary in the long-term as well so that was the impetus for his first motion. Andre said he originally put the two motions together but his colleagues said they should be slipped into two motions because they were really considering two different actions, one high flow experiment for next year, and the other on the equalized monthly volumes and how that might look if they were to do such. He presented his first motion:

MOTION (Proposed by Mr. Potochnik, seconded by Mr. Johnson): AMWG recommends to the Secretary of the Interior that during FY2010-11 that a high flow experiment be conducted if and when sediment-enriched conditions are reached, as described in U.S. Geological Survey, 2006.

Andre reiterated his concern that the AMWG not forget about the HFE in FY10-11 as a possible action if the sediment enriched conditions occur. He feels it's just a matter of time before they occur and wants the AMWG to be proactive in developing a plan rather than reactive when the situation occurs. He wants a placemaker in the budget and following yesterday's discussion it appeared to him that Experimental Flow Fund money could be used.

C: Suggest you include the 2006 USGS citation and title. (Harris)

Q: Will environmental documents have to be prepared for a high flow test and if so, how much would that cost? (Groseclose)

A: Yes, the Experimental Flow EA done in 2008 includes one high flow test. It doesn't preclude additional high flow tests in that 5-year period, but it also doesn't cover a high flow test so environmental compliance would be required. (Ryan)

C: I just want to say my opposition to HFEs in the past was because of concern for the aquatic foodbase and it really occurred because of the 2004 flood in November which I believe was damaging to the aquatic foodbase and to fish. However, this last one done in the spring really changed my mind on HFEs even though I feel they're too controversial. (Steffen)

C: The background on the AIF lists relevant science as a section and includes a memo which mentions that, but it should also include the final EA and the 2007 biological assessment. And as was correctly pointed out by Andre and by Tom, the Final EA neither mandates nor precludes future tests but the EA and the BA both are pretty specific about what additional work needs to be done before more, as they're now popularly called High Flow Experiments or Beach/Habitat-Building Flows, are to be conducted and there is a requirement in the EA that full scientific and public analysis of the 2008 experiment be completed. There is language to that effect in the BA that says there will be the development of predictive and other analytic tools to inform future tests before they're done and that there will not be a proposal to do additional high flow tests until the information from the 2008 HFE is fully analyzed, as presented to the AMWG and to the general public, in incorporated into appropriate analytical framework based on predictive models and other analytic tools. And as we know from the presentations yesterday, the timeline set forth yesterday that some of that won't be completed until the end of fiscal year 2010. Unfortunately the EA and the BA conditions and prerequisites in them have not been included in information that was provided to you and so on that basis alone, it would be necessary to object this motion being approved by this committee because of commitments made in the past. (Shields)

Q: John, assuming that this is passed and making the assumption that you already have a full plate, what are you going to defer? (King)

A: If that were to occur this fall, we would probably defer or delay the production of some of these reports that are in the pipeline. If it didn't occur this year and it was a 2011 sediment input or something that was later in the year, we would probably be able to accommodate it much more easily. (Hamill)

C: *I just wanted to make a comment to Andre's presentation. He is correct that the options were looked at and kind of supported by the group leading up to or involving the LTEP. All the options did include the HFEs but this discussion is in some ways implying the HFE was an automatic given and at least from the option that we put forward, that's correct. The HFE was an element of that option, but other operations were also an element so I think people need to keep that in mind and we do support HFEs. I do have a concern that the synthesis is not done. There does need to be additional discussion on the sediment trigger. I thought we heard yesterday from John that there is not agreement on what the sediment trigger is so we all have a lot of work ahead of us. I think it's premature for this motion at this point. (James)*

After further discussion and proposed changes to the motion, the following was put to a roll call vote:

MOTION (proposed by Dr. Potochnik, seconded by Mr. Johnson): AMWG recommends to the Secretary of the Interior that during FY10-11 a high flow experiment be conducted if and when sediment-enriched conditions are reached, as described in U.S. Geological Survey, 2006 (USGS, Assessment of the Estimated Effects of Four Experimental Options on Resources Below Glen Canyon Dam Draft Report dated October 27, 2006), contingent upon satisfying language in section 1.4.2, requiring data analysis and reports in the Biological Assessment on the Operation of Glen Canyon Dam and Proposed Experimental Flows for the Colorado River Below Glen Canyon Dam During the years 2008 through 2012.

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	A
Zimmerman, Jerry	Harris, Christopher	California	N
Gimbel, Jennifer	Seaholm, Randy	Colorado	N
James, Leslie	Vacant	CREDA	N
Steffen, Mark	Steffen, Tim	Federation of Fly Fishers	A
Spiller, Sam	Knowles, Glen	U.S. Fish and Wildlife Service	A
Potochnik, André	O'Brien, John	Grand Canyon River Guides	Y
Lash, Nikolai	Johnson, Rick	Grand Canyon Trust	Y
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	Y
Caan, George	Vacant	Nevada	N
Groseclose, Jay	Ostler, Don	New Mexico	N
Bulletts, 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	N
Shields, John	Ostler, Don	Wyoming	N
		Total Yes	8
		Total No	10
		Total Abstaining	3
		Total Voting	18
		2/3 =	12
		Motion Fails	

Grand Canyon River Guides Motion 2. Dr. Potochnik said he proposed the following motion based on a growing concern that a high flow experiment can and does restore sandbars throughout the ecosystem and is very effective in doing so. But in terms of sustainability of sediment in the long term, it's how the Dam is operated in between times or subsequent to a high flow experiment, it has a lot to do with whether the sediment is retained where it's needed in the system. In view of that the concept of equalizing the monthly volumes throughout the year and that more sediment is transported out of the system and eroded from sandbars when going to higher flows, higher average daily flows, equalizing monthly flow volumes might reduce the impact to sediment sandbars that were created during the high flow experiment. He said he

thought it was a possible way of operating the Dam between high flow experiments to better conserve sediment. He feels the AMWG has a say in how the Dam is operated even though they may not be directly involved in the AOP process. He thought it would be beneficial to have some discussion but didn't feel the group needed to vote on the motion. However, he wanted it considered as a consensus/no consensus vote.

MOTION (Proposed by Mr. Potochnik, seconded by Mr. Johnson): AMWG recommends to the Secretary of the Interior that during FY10-11, an equalized monthly volume experiment be conducted to: test and improve sediment transport models; and, determine if sediment can be sustained and near shore habitat stabilized for the benefit of the ecosystem.

Comments:

- *I'm very enthusiastic about studying the effects of constant flows and steady flows on the biological habitats on the river. Keeping this as a learning process is really important. I would vote for this simply because of the experimental opportunities it would provide, but I'm still concerned about what these flows actually mean to the ecosystem. (Stevens)*
- *Unless you know you have an 8.23 maf year, it's not doable. You don't know whether you're going to have equalization or not and so there is no way to have a full year of equalized monthly volumes unless you know exactly what that volume for the year is. Another thing you should be aware of is if you equalize the monthly volumes for the entire 12-month period, our contracts are structured so that we don't deliver power on an equal monthly basis. We deliver it higher month power during the peak months of December or January and July and July and least amounts during the off-peak months of April-May and Oct-November. If you equalize the months, it causes us to be short of power to meet our contracts during those peak months and it will cause us to be long on power in the off-peak months. It also affects the ones we have because we are short during the peak months and would have to buy from the market in order to meet the contracts and peak months our prices tend to be higher and in the off-peak months we will be long on power. We will be selling the excess off in times when prices are down because they are off-peak months. So this would have a definite financial impact to power. We haven't run any kind of studies of what the magnitude of impacts would be, but I feel safe in saying it would be in the seven figures and that's about as far as I can go. (Warren)*
- *This proposal, if passed and approved, would require significant environmental compliance. As Brad alluded to, we don't know whether next year is going to be equalization or 8.23 maf so there is a difficulty in implementing it in the next water year. We would have to do environmental compliance between now and the end of this fiscal year which is a tall order particularly when we have other environmental documents to complete. (Ryan)*

Andre emphasized that they're not necessarily proposing 12 months of equalized monthly volume. It could be an April-September or October, or something less than a 12-month period. The question is: Is it better constrained if sediment transport models to have in place for how much sediment is moved out of the system under different conditions? Right now they have modelers who can do that but they have large error bars around the results. He feels if a test could be done, they could constrain those models better and better know what they're dealing with. He said he was uncomfortable with the recent study by GCMRC in that the study did not look at this question and the error bars around the results were so large that it didn't give them much confidence in what might be the outcome of such an experiment. He said that's why he put the word "experiment" in the motion. Maybe it's just a one-time experiment that would help constrain what the tradeoff would be in costs but doing something like this might reduce the HFEs by mitigating the loss of sediment between HFEs. He said either way there are costs involved and the question needs to be answered as to what is the proper balance in terms of long-term sustainability of sediment in the system.

- *It seems that we're looking at an experiment as something that has to happen rather than maybe the first step is to do a theoretical research experiment, an experiment that basically with modeling components looks at various scenarios of monthly volume equalization in the abstract and some of the power models would have to be integrated together in order to address this. One thing I'm always concerned about is tinkering in the canyon itself and not knowing some of those results and how much of this we could actually do not using the Grand Canyon as a giant flume but maybe do it, look at these things and it may be a number of elements of the AMWG that need to be brought together through their various resource disciplines to actually look and see what we could actually do in a theoretical sense. (Balsom)*

- *The AMWG may recommend research within the authority of the GCPA and this may complement the AOP, the proposal may or may not be inside or outside AMP funding capability and that's consistent with adaptive management. I would like to see this referred to an ad hoc group to determine what we can and can't do. (Spiller)*
- *I just wanted to amplify what Brad said. I think in the past when we've looked at experimentation, this was a factor the group hadn't considered. Currently there is an awful lot of discussion in Congress and everywhere about carbon-based resources. I would just like to point out that when this hydropower renewable resource is not available or is restricted and the customers have to be out on the market replacing the resource to meet the customer needs, those resources are probably 99% not always going to be renewable carbon free resources. Most likely they are going to be for gas type resources so I think that's a factor that we all need to keep in mind when we're looking at any type of experimentation and any type of impact to the hydropower resources and we really haven't done that. We need to think a little bit more broadly about the impacts that these changes have on that issue. (James)*
- *Absent an economic analysis of what the impact will do to the Basin Fund and in Utah knowing that it's rural Utah, you would have to carry a disproportionate share. I can't support the motion until we know what those numbers are. Somebody has to pay for it and right now in Utah it's going to be the rural areas which are not doing the best. (King)*

Based on the discussion, Andre amended his motion to read:

MOTION (Proposed by Dr. Potochnik, seconded by Mr. Johnson): AMWG establishes an ad hoc committee to analyze and assimilate GCMRC's analysis of the results of the 2008 high flow test, and convey that information in a timely manner to AMWG in anticipation of developing flow or release scenarios to more cost-effectively operate Glen Canyon Dam to benefit downstream resources. Consensus was not reached, and the proposer of the motion asked that a vote not be taken.

Review of FY10-11 Priorities, Preliminary Budget, and Hydrograph (continued). Mary directed the members to the AIF, page 2, it lists the motion that Shane went over in detail yesterday starting with the second motion requested:

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.
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.
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.
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.
 - 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.
 - c. Discuss the necessity of the \$70,000 for the NPS (line 114).
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.
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.
- 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.
 - 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.
 - 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.
 - 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 to the AMP for projects funded by BOR funds. BOR should investigate options to provide staff resources in tracking reports.
 - f. Goal 8: GCMRC should develop an on-the-shelf HFE science plan for a potential next HFE.
 - g. TWG understands that GCMRC will attempt to provide historical expenditures by project (going back 3 years) in the workplan.
 - 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).
 - 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.
 - 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.
 - ~~k. AMWG should evaluate the prioritization of program areas (to satisfy compliance concerns).~~

Mary said the first step would be to focus on items 1-5 because the TWG is seeking specific direction while items under #6 will require further TWG deliberation. She advised there are two elements to #2, the first one is move the \$140K under GCMRC and the second element is to add a second trip which would double the cost. She said it was unclear of the money and the year involved under #3 so the AMWG may want to discuss that further. As #4 was written, it doesn't refer to specific dollar amounts but Shane said yesterday that as far as he was concerned, the intent of TWG was to actually add back \$160K for treatment and tribal support work. If dollars have to be added back in, then the AMWG needs to discuss further. She said #5 doesn't have budgetary implications but asks the AMWG to ask TWG to return with some pros and cons and a discussion paper to be acted upon later on how the AMWG would do the budget in the future. She invited Shane to address item #4.

Shane said the TWG looked at three different proposals to add more funding into the cultural program and they really couldn't resolve the technical issues. He wanted to make AMWG aware of those proposals and then the TWG needs to go back and re-evaluate those on a technical basis and truly try to understand how they fit into the overall implementation of our cultural program and that they are justified. If the TWG feels they are justified expenditures, they could come back to the AMWG with a budget in August which would include the additions.

Mr. Walkoviak said he would entertain a motion.

MOTION (Proposed by Mr. Ryan, seconded Mr. Bill Werner): I'll offer the motion as written on page 2 of the AIF but not including 6k. The chairman restated that the motion was made and seconded that the items on page 2 and 3 but striking item #6k.

Discussion

Mary asked if there were any objections to any other items in the motion. There were objections to 1, 2, 3, #4, and #5. Number 6 was not addressed. She suggested beginning with the least contentious issues first.

Andrea asked Shane if the TWG had gotten to the lowest priority items. Shane told her that as new things get proposed, they are vetted through the CRAHG, BAHG, and TWG. Then those individuals/groups proposing new projects must identify where the money would come from in the budget. He said this year was a little different because they started out with a budget that wasn't balanced with \$150K over and so they're now in a situation of having no carryover funds. As such, the non-native removal issue was a new issue to deal with along with funding for the cultural program which had \$70K in the GCMRC budget but was taken out of funding that would have gone to the Park Service. The TWG didn't have time to dig into this so he said his approach was to bring it before the AMWG and let them know where the TWG currently is and then go back and do the remaining work. He asked the AMWG if they had any guidance on where to look for additional money and any priorities they wanted to change.

Item #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): Mr. Caan said he just wanted to know whether or not it was appropriate for the TWG to come forward with a recommendation at this time and wondered if there could be a discussion paper developed on the pros and cons of a biennial budget. Shane said the TWG had a lot of work to do this summer, but Dennis added that he felt a discussion paper could be prepared for the next AMWG meeting.
Consensus on #5.

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

Item #1 (Continue to develop a budget based on an annual operations hydrograph for FY10 and 11 water years of MLFF with fall steady flows in September and October): Rick said the Grand Canyon Trust disagreed with the hydrograph that's outlined in #1. Because the group is arguing the merits of that, he didn't feel the need to argue on them anymore. He said he wouldn't vote against the motion.

Item #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): Mr. Steffen said he didn't support mechanical removal of non-native fish and suggested it either not be done or remove the funding so it can't be done. Mr. King reminded the group that the scientists recommended the work to be continued.

C: So we're proposing to remove it from the budget because mechanical removal of non-natives is basically a management action and our understanding of the intent of studying removal of non-natives was to determine the efficacy of that. Our understanding was the original study proposal was for 16 years in length with 4 years of removing fish, 4 years of non-removal, and then 4 years of removal alternating. To hear that this is proposed to be removed

poses some very large questions that need to be answered about the amount. So the arguments I'm hearing, well this should be a management action because we know it's the right thing to do, and yet I'm not hearing that we have any idea at all of what that amount is or what the right thing to do is. (Senn)

Q: *Mary: So I just want to clarify that if you move this funding back to line 74 in the GCMRC budget, you are saying that it is still part of science? So moving it back supports your position?*

A: *Dennis: Yes.*

Q: *This is a question for Reclamation. Can you address your latitude is as far as the requirement or the option to do this removal because it is a conservation measure? (Warren)*

A: *It is a conservation measure. It is a requirement. The number of trips is not necessarily nailed down. If we need to do two trips, the decision will be based on what we see down near the confluence of the LCR and in consultation with the Service. It is a requirement. (Ryan)*

Q: *Tom, Does this specifically say that the non-native fish control has to be the same that we were already doing or could it be some other type of non-native fish control perhaps in the LCR? (Steffen)*

A: *It's my recollection that's it is mainstem.*

C: *Also, as a method to find the money. Perhaps after the trip that's going on right now, we might get new information as to whether we need to do it again next year. If we don't need to do, it could help balance the budget. (Steffen)*

C: *As I stated yesterday, the Pueblo of Zuni believes this issue has not been adequately addressed by the AMWG regarding the cultural values of the Zuni, the taking of life and the location of where mechanical removal takes place. (Dongoske)*

C: *I concur that I would like to look at whether this is a necessary or appropriate act and also echo what Kurt said as it relates to the Hopi Tribe's concern about taking life in that area but also what Mark said that it may or may not be necessary. When this original study was proposed, the Hopis agreed that it may be valid if it was going to address the efficacy of whether it was successful in fitting the cut. At this point we still have no news if it is or isn't and so it's getting harder for the Hopi Tribe to consider it as just a routine action. I think part of the reason this got bumped up at the AMWG level was because it ties into the bigger issue of management actions. (Yeatts)*

C: *I'd like reiterate my concern yesterday that even if it's not done, it's very important to understand what we're doing and a reach not being affected by human beings at this level. The reason is the section of the river and whether the work is done at the LCR or not. It is still very important to know what happens to the trout population. Even if we're treating this as a management action, it still needs to be put in the context of what the controls are doing above. (Stevens)*

C: *I think from the point of view of my constituency having lights on and generators running is an impact to the quality of the Grand Canyon river experience that people don't particularly like and it's very difficult for me to explain to people that this is actually benefiting the chub. Secondly, we originally agreed to not turn off this part of the experiment for four years and now we turned it back on again in order to determine or tease out whether it's naturally warming the waters below reservoir levels that's causing the increase of the chub or whether it's removal of the trout. (Potochnik)*

C: *I'm a little bit confused maybe the Bureau or FWS can explain. It may be desirable, not desirable or worth or not worthy of doing so I would like to hear whether it's required or not required even if we don't think it's advisable. If it is required, who is requiring it and what can we do with the information that may be opposed to what should be done. (Caan)*

R: *I think it's both advisable and required. We've heard from the scientists that they felt like this was a prudent activity to continue. It was more important to continue that effort even though it makes it more difficult in answering that science question which is helping the most, the warmer water or mechanical removal. I see us moving into a different mode at four trips a year and now maybe looking at one or maybe two. It's important we address whether we need a second trip but from my perspective, we need at least one. We're doing one this year and possibly two and it's important to continue this effort for the resource and we have compliance obligations as well. (Ryan)*

Q: *Dr. Garrett, have the Science Advisors recommended when it is time to turn this off and that the risk was too great to turn it off? (King)*

A: *The Science Advisors looked at recent work and Carl Walters has made several statements around implications of humpback chub, young of year, and other impacts from the trout to be significant. We know they are predators in this system and the SAs have advised that that should and could continue. We have not gotten into this issue of whether or not it's a management action or science. (Garrett)*

C: *First of off I want to state we agree with AGFD. I think this is still in research mode and we're still learning from this. Let me try to paraphrase and I'll be as specific as I possibly can on the biological opinion. Since it says under Non-native Fish Control, page 54, "continue efforts to assist the Park Service and the adaptive management program." The reason we stated it that way was to be collaborative in doing actions within this program in control of both cold and warm water non-native fish species in both the mainstem of Marble and Grand canyons and its tributaries, including returning and implementing levels of non-native fish control as necessary. The reason we were so general in that statement was to support adaptive management. We felt like as you move forward through things with Bureau of*

Reclamation moving forward with this BO and this specific conservation measure, you don't know what the data is going to tell you on year X so that's why it's worded the way it is. We are concerned because we know rainbow trout feed on humpback chub and we need adaptability and again we don't want piscivory to get out of hand so essentially from our perspective it's a mechanism to keep this under management control as we develop the research to accomplish the most appropriate way to control non-native fish. (Spiller)

C: There are two issues wrapped up together, one is policy and one is technical. The policy issue asks whether we think non-native removal needs to be done in the next couple of years and this really gets back to the BO requirements. By having one trip a year we would be making a policy decision that we want to do some. And then there's the technical side and on that side the TWG hasn't done a very good job, and part of it's timing and informing you to help you make that decision, and that's why you're having a hard time. First, we need more information. What does this summer look like? And we need to know a little bit more about what's going on down there. We used to do it in the first part of 2003, 2004, and 2005. I think we did six trips per year and now we're talking about one. It's a big difference in removal effort. He said one trip versus two isn't really that much of a difference. We're talking one trip versus six that we used to do before to get that decline. Stock dynamics were different in the system at the time, trout maybe weren't as robust as they are now, but there may have been some systemwide declines in trout at the same time with the removal. There's a lot of science underneath this and we don't have a lot of information right now. I think the TWG needs to do a good job working with GCMRC once we get some information from this first removal and putting this together and having a better idea of a recommendation later on. Another problem we're going to have is we don't know what our target is and so we really need some more clarification. I think this program needs more clarification on some levels of the removal target or trout or we're going to have a very hard time from the TWG level making a recommendation to this group on that. I don't know if that helps you or not but I think TWG's job is to think a little bit more about the technical side, if we do one trip versus two trips, will we see an effect in trout, can we go out there and remove enough trout in one or two trips that will drop the population level down which I think is our expectation is that we have an impact or will it not so there needs to be some more work done there. (Capron)

From the comments made, Ms. Orton said she captured Mr. Steffen's suggestion that the TWG reconsider the mechanical removal program. She said the chairman would allow more time for discussion but then they would move on discussing the second concern under item #2.

C: I was involved in planning the early mechanical removal project as an experiment and obviously the goal was to learn about what the effective methods might be and whether or not that would have any repercussions for recruitment of native fish. In the past five years there is some new information that I would encourage the group to consider perhaps in the next TWG meeting. While Dr. Lew Coggins was training in Florida two years ago, he published what became a relatively renown international paper on the topic "discard mortality and management implications therein" and I've talked with Lew about this and I think Matthew probably has too. The modeling that can go on to try to assess what the implications are from a fisheries management point of view when you're trying to basically target the harvest of one species and the discard of the species that's not of interest and what the mortality is that's incurred on the species that's discarded. In the mechanical removal program we're obviously trying to harvest the non-native fish in a sense. We catch native fish and it proves interesting and useful to have all that additional native fish catch data that will attest to that. When we don't do mechanical removal, we have less information about trout and less information about native fish. When we do mechanical removal, presumably we remove non-native fish, whether that's effective or not, but there is the possibility that we can incur additional mortality on the native fish of interest. And so this paper might be of interest to the TWG in their consideration of this topic. (Melis)

Mr. Walkoviak asked if there was any objection to consensus on number 2 which reads, "AMWG gives the following direction to TWG to reconsider whether the program should continue the mechanical removal program." Noting there were objections, he asked for a roll call vote:

Vote on Item #2: AMWG gives the following direction to TWG to reconsider whether the program should continue the mechanical removal program.

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, Christopher	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	U.S. 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
Bulletts, 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
		Total Yes	10
		Total No	9
		Total Abstaining	1
		Total Voting	19
		2/3 =	13
		Motion Fails	

Ms. Gimbel said she wanted Mr. Caan to talk about why he opposed the motion. Mr. Caan said he wasn't going to change his vote but was merely going to say that when a group is asked to reconsider a motion and aren't told what is going to be done after their reconsideration, it leaves it open-ended and they have enough work to do without trying to figure out what it is that they're being directed to do. He felt the motion was clearly open-ended and didn't feel the group had worked through all of it to give the TWG direction which ends up being a science issue discussion by the group.

Mr. Walkoviak thanked him for his comment and asked Ms. Orton to continue with discussion on the original Item #2.

[Original Item #2](#). Ms. Orton said they would now go back to the original item under #2 which is "[Move funding from mainstem non-native mechanical removal back to line #74 under the GCMRC budget and add funding for an additional removal trip.](#)"

C: To qualify whether the second trip is necessary, you could add the words "if TWG deems it necessary."

Q: One trip is already built into the current budget, right? And so does Reclamation object to that one trip remaining in their budget? (Warren)

A: Our interest is seeing that it be done. (Ryan)

Q: Again, how much is Reclamation's portion of the budget? (Warren)

A: The \$147K is for one monitoring trip because the budget came balanced without any removal trips. Reclamation added it in to their side so they were over the total amount of roughly \$147K in FY10. So keeping one in is \$147K over, whichever side it goes to. (Capron)

Mr. Walkoviak asked if there was objection to consensus. Noting there was, he asked Ms. Orton to explain the voting process on this and then take a roll call vote. Ms. Orton said the AMWG was now being asked to give TWG the following direction with regard to the FY10-11 budget: Move funding from "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."

[Vote on Original Item #2: Move funding from "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.](#)

Member	Alternate	Stakeholder Group Name	Vote
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Werner, Bill	Vacant	Arizona	Y
Heuslein, Amy	Cantley, Garry	Bureau of Indian Affairs	Y
Vacant	Ryan, Tom	Bureau of Reclamation	Y
Zimmerman, Jerry	Harris, Christopher	California	Absent
Gimbel, Jennifer	Seaholm, Randy	Colorado	Y
James, Leslie	Vacant	CREDA	Y
Steffen, Mark	Steffen, Tim	Federation of Fly Fishers	A
Spiller, Sam	Knowles, Glen	U.S. 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
Bulletts, 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
		Total Yes	11
		Total No	5
		Total Abstaining	4
		Total Voting	16
		2/3 =	11
		Motion Passes	

Item #3: (Develop a general proposal incorporating technical information for a geomorphological model to evaluate dam effects on cultural sites). Ms. Orton asked for comments.

C: Western was going to suggest that as we heard yesterday that the time wasn't right for this study or model to be developed so Western suggests this be deleted from the motion. (Warren)

C: I agree with most of what Brad says although I don't think we want to delete it. I think the concept still needs to be developed but I don't think it's certainly right that it be part of the budget at this point so I would look at some more general directive of remanding it back to the TWG and probably the CRAHG to actually fully develop the concept and what is exactly meant by the geomorphological model and put together a fully developed proposal. I don't think it's ready at this point. (Yeatts)

C: Just to clarify what my position was yesterday. I did not support funding for this in FY10-11 but I did support to better define what the scope and the activities were on such monitoring because it is something that is in the MRP and is something we have support in but it's just not right for funding at this time. (Hamill)

C: Just to give you some background on this geomorphic model. It was during some presentations to the CRAHG by Joel Pedersen and others that we realized that the Center's cultural program has been looking at both the natural and cultural processes that are operating on the surface geomorphological sites and how those are impacting the integrity of those sites. We also realized that the excavations that are being done by the National Park Service and the ones being done under Section 106 responsibilities funded by the Bureau of Reclamation give us a window into how the sites were made and how they're preserved with stratigraphic sequences that are available for us to analyze if those sites recede, how the river has behaved prehistorically prior to the dam, and we can look at the cut and filling episodes that the hydrology of the river provides us with in terms of the history of those sites. Given that information and bringing it into a model we thought would be useful in trying to tease apart what are dam effects, i.e., those that affect the hydrology and those that do not. (Dongoske)

Ms. Orton read the concerns she captures in a possible motion: **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.**

Mr. Walkoviak asked if there was any objection to consensus. Hearing none, there was consensus on #3.

Item #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, b) Describe why the treatment plan cannot be fully implement using the current line items described above, specifically the \$500,000 allocated in line 31 and ~ \$147,000 in line 23, c) Discuss the necessity of the \$70,000 for the NPS (line 114).

Ms. Orton asked for comments on this item.

C: *I'm wondering about part b, describing why it can't be fully implemented with the money. It seems like that's just part of the deliberation process and how much is needed for the program for compliance so what I would want to say is that I understand that stuff hasn't been getting done and that we would urge the Park Service and the Center to resolve the differences and so that we can proceed with getting compliance completed and to ensure the budget includes enough money so that the parties can resolve their differences and move forward. (Warren)*

Q: *Are you suggesting a change to the motion or just urging your colleagues to consider? (Orton)*

A: *The latter. (Orton)*

C: *I thought I heard Reclamation report yesterday that there was some funding left on the table in terms of the appropriated dollars that were available to the tribes that could potentially be applied to doing cultural work? Could that be something that we ought to consider in our deliberation with how to fund some of these activities? (Hamill)*

R: *Yes. (Ryan)*

Q: *Could that be made part of this motion if that's the case? Or is it necessary? (Hamill)*

A: *I think it's probable but Mike Berry advised me that it's still subject to full vetting with the tribes in terms of how those unexpended funds are utilized in the program. I think there is potential there but I'm not sure we've gotten to yes yet but perhaps to "maybe." (Ryan)*

Mr. Walkoviak asked if there was any objection to consensus on #4? Hearing none, there was consensus on #4.

Ms. Orton summarized what the AMWG had voted on:

- You have either come to consensus on or come to a 2/3 vote on 1, 2, 3, 4, and 5 with some changes.
- Item #1 – No change.
- Item #2 – you added the clause, "if TWG deems it necessary."
- Item #3 - Instead of a general proposal ... scope and objectives for a geomorphological model with no budgetary implications.
- Item #4 – No change.
- Item #5 – No change.

Because it was time for public comments on the agenda, Mr. Walkoviak asked if there were any. Hearing none, he directed Ms. Orton to ask for any comments on Item #6.

Item #6: (Issues of Concern).

C: *I think the gist of #6 is to provide some feedback to the TWG on priorities so I would like to provide some priorities. On item 6c, and the economic analysis, I would like to ask that if it can be done without budgetary impacts that John Hamill and Dave Garrett convene a meeting of interested parties to pursue and discuss how we might proceed with additional economic analysis in the future and whether John believes that can be done without budgetary impacts. (Warren)*

R: *Normally when we do these kinds of things and in other words pull together a kind of a workshop to have a discussion about where we're at and where we go, we will invite outside experts to that process. We have some capability to do that through the science advisors and I guess I'd have to ask Dave on how much flexibility would exist within his budget to do some of that. In terms of if we could keep it narrowly focused and maybe if there was some support capability through Western to bring some people together, I don't see this as being a very major position on the budget to accomplish that. I'd be happy to do that. I think it's something that we've been trying to facilitate for awhile and so I think it would be a good direction to pursue. (Hamill)*

C: The science advisors would work with you on that and this would be something like a day workshop involving some AMWG, TWG, GCMRC, and possibly outside experts. (Garrett)

C: As far as general guidance, I think we all realize that something's got to give. It's a huge shortfall, \$700K for each of these years. We would like to be able to get through this without going over here. It's been a head scratching as to how the TWG will work through this and Shane and the group has a daunting effort I'm sure. As far as general priorities, Western would like to suggest that when considering the priorities here and the large amount of dollars that need to be dealt with it and reduced from plans and proposals, that priorities for funding be given to the fish, compliance activities, those sorts of things and less so and if I had to say where to take money, I would suggest that money come from the massive amounts that we spend on sediment and some of the data gathering. (Warren)

C: With respect to *item j* and the notion that there is difficulty in getting at what the total "burden" for each budget line item, perhaps somebody could help me understand why that's not being disclosed readily if I'm reading this right. (Shields)

R: Much like the President has asked for transparency in how we're spending all the stimulus dollars, that's always my goal for everything we do here. So the only thing I would tell you and I think this is trying to get down to – we've always told you what the total burden is and that the \$1 million we contribute is to lower our overhead costs. Our actual costs are much higher. So I always want to fully disclose. The whole issue and I think this was to get down for each budget line by each project. There is a lower overhead rate when we take money out of the agency. There is at least half of it that goes out to cooperators. So to me the question is what detail level do you want us to go to and how much time do you want us to spend on accounting versus doing. So I'm perfectly willing to get folks to do that for you if that's really going to help you make a decision. What does it get down to? Is this going to help you decide yea or nay or is it something you just want to know for informational purposes, but we are always going to disclose how much things cost and anyone can come see the books anytime they want. (Alpine)

C: I am prepared to show carryover funding in a more explicit way in the budget. I think we agreed that we would show carryover from one year to the next like some of the carryover that we discussed yesterday. We always show the burden associated with the various projects. We've resisted trying to show all the details of that. (Hamill)

Ms. Orton said the plan now was to take a vote on the whole motion. Mr. Walkoviak asked if there was consensus. Mr. Johnson said he objected to #1 so he would vote no on the overall budget. It was decided to take a roll call vote on #1.

Vote on Item #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.

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, Christopher	California	Absent
Gimbel, Jennifer	Seaholm, Randy	Colorado	Y
James, Leslie	Vacant	CREDA	Y
Steffen, Mark	Steffen, Tim	Federation of Fly Fishers	Y
Spiller, Sam	Knowles, Glen	U.S. 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	Absent
Martin, Steve	Balsom, Jan	National Park Service	Y
Caan, George	Vacant	Nevada	Y
Groseclose, Jay	Ostler, Don	New Mexico	Y
Bulletts, 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
		Total Yes	16
		Total No	1

		Total Abstaining	2
		Total Voting	17
		2/3 =	12
		Motion Passes	

Mr. Walkoviak asked if there was consensus on the whole motion as amended. He then asked for public comments on the motion.

Mike Yeatts said he was unclear on how to vote given that if a person voted no on any one of the components would they have to vote no for the whole motion. He asked how that was going to be addressed because there were a large number of people who voted no on some portion of it. He felt the group was essentially asking the TWG to continue working on this budget process and taking into consideration the individual votes. He wasn't sure how to vote on the whole motion.

Ms. Orton said the AMWG Operating Procedures doesn't address that specifically. She said the people around the table would take a look at the motion as a whole right now, how it's been amended, decide whether they can support it as a whole. If the motion goes forward, then that's the direction the TWG gets from the AMWG, if it makes the 2/3 majority. If it fails, then there is no direction to the TWG for their budget deliberations except for what they might have gleaned from the discussion.

Dr. Stevens suggested that since they had already voted on the individual amendments, the final motion should just be the one presented at the start of the budget discussion (made by Tom Ryan).

Ms. Gimbel suggested that since a motion was already taken on each of the individual pieces they're done with their job. The TWG was looking for direction and the AMWG has given them that direction. She said that unless it's in the Operating Procedures somewhere that they need to consider the motion as a whole. The AMWG is not being asked to vote on the budget but to give direction to the TWG for further action.

Ms. Orton reminded them that they had not taken action on item #6 formally. There was confusion as to whether there was consensus on #6. (Note: Upon review of the discussion from the meeting tapes, there was no consensus on #6 as noted by the meeting recorder.)

Mr. Walkoviak recapped that all the elements of the motion were addressed and said he was feeling from the sense of the group that there is no sense to go over that information again. He asked if the group understood what was done. Hearing no objection, a final motion was not taken.

Archaeological Sites Analysis with HEC-RAS Model. (**AIF = Attachment 14a**). Helen Fairley said this came out of a motion that was passed at the last AMWG meeting and in condensed form it was to review the flow levels associated with 150 archeological sites that have been identified for monitoring or impact mitigation. She said she would focus on the first part and then Shane would conclude the presentation. She distributed copies of her PPT, "Analysis of Virtual Shorelines in Relation to Archaeological Sites in the Colorado River Ecosystem" (**Attachment 14b**).

TWG Actions. Shane Capron said he would talk about the TWG actions related to the analysis. He gave a PPT presentation titled, "Archaeological Sites Analysis, TWG Actions" (**Attachment 14c**). The TWG was asked to technically advise on this and also advise on how the flow lines could be used to make choices about monitoring and mitigation sites in the future.

Q: Does this include the effect of fluctuating flows? (Spiller)

A: No, it doesn't. It just projects a steady flow basically. (Fairley)

Q: The relationship between states and discharge is going to be important to other people. It's also going to be important to other resources so this approach is the cultural question but my presumption is that there will be in the future a necessity to evaluate that relationship of this application to other resources like fish and fish habitat for example. (Kubly)

C: For information for the AMWG, TWG, and others, Western signed the Memorandum of Agreement for the treatment plan for 2009 and will be forwarding to Reclamation this week. You will all be getting a copy because we did include a cover letter that expressed some concerns we still have with the treatment of sites and our continued press that we prioritize the sites that can be reasonably shown to be related to dam operations as we talked about, not merely because there is a dam there preventing 210,000 cfs flows or limited to 45,000 cfs so you get spill conditions and so we still want to see that emphasis to be able to prioritize the sites that would be or could be affected by the dam operations. (Warren)

Lees Ferry Trout Fishery Ad Hoc Group Report. (AIF = Attachment 15) Sam Spiller said in the Environmental Assessment that Reclamation produced in regard to the high flow test, there was a commitment initiated by Ms. Brenda Burman to improve communications with the Lees Ferry Trout fishing entities, both with the businesses and the sport fishermen. The Arizona Game and Fish Department took the lead on that by offering their system of communicating with the fishermen to see if this could be accomplished as far as improving communication. He referred the group to look at page 3 on the AIF which is the report from the group. He summarized the report briefly and noted the recommendations are very important.

Adjourned: 12:40 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	KA – Knowledge Assessment (workshop)
AF – Acre Feet	KAS – Kanab ambersnail (endangered native snail)
AGFD – Arizona Game and Fish Department	LCR – Little Colorado River
AGU – American Geophysical Union	LCRMCP – Lower Colorado River Multi-Species Conservation Program
AIF – Agenda Information Form	LTEP – Long Term Experimental Plan
AMP – Adaptive Management Program	MAF – Million Acre Feet
AMWG – Adaptive Management Work Group	MA – Management Action
AOP – Annual Operating Plan	MATA – Multi-Attribute Trade-Off Analysis
BA – Biological Assessment	MLFF – Modified Low Fluctuating Flow
BAHG – Budget Ad Hoc Group	MO – Management Objective
BCOM – Biological Conservation Measure	MRP – Monitoring and Research Plan
BE – Biological Evaluation	NAAO – Native American Affairs Office
BHBF – Beach/Habitat-Building Flow	NAU – Northern Arizona University (Flagstaff, AZ)
BHMF – Beach/Habitat Maintenance Flow	NEPA – National Environmental Policy Act
BHTF – Beach/Habitat Test Flow	NGS – National Geodetic Survey
BIA – Bureau of Indian Affairs	NHPA – National Historic Preservation Act
BO – Biological Opinion	NPS – National Park Service
BOR – Bureau of Reclamation	NRC – National Research Council
CAPA – Central Arizona Project Association	NWS – National Weather Service
GCT – Grand Canyon Trust	O&M – Operations & Maintenance (USBR funding)
CESU – Cooperative Ecosystems Studies Unit	PA – Programmatic Agreement
cfs – cubic feet per second	PEP – Protocol Evaluation Panel
CMINs – Core Monitoring Information Needs	POAHG – Public Outreach Ad Hoc Group
CRBC – Colorado River Board of California	Powerplant Capacity = 31,000 cfs
CRAHG - Cultural Resources Ad Hoc Group	PPT – PowerPoint (presentation)
CRCN – Colorado River Commission of Nevada	R&D – Research and Development
CRE – Colorado River Ecosystem	Reclamation – United States Bureau of Reclamation
CREDA – Colorado River Energy Distributors Assn.	RBT – Rainbow Trout
CRSP – Colorado River Storage Project	RFP – Request For Proposals
DASA - Data Acquisition, Storage and Analysis	RINs – Research Information Needs
DBCB – Colorado Water Conservation Board	ROD Flows – Record of Decision Flows
DBMS – Data Base Management System	RPA – Reasonable and Prudent Alternative
DFCAHG – Desired Future Conditions Ad Hoc Group	SA – Science Advisors
DOE – Department of Energy	Secretary – Secretary of the Interior
DOI – Department of the Interior	SCORE – State of the Colorado River Ecosystem
EA – Environmental Assessment	SHPO – State Historic Preservation Office(r)
EIS – Environmental Impact Statement	SOW – Scope of Work
ESA – Endangered Species Act	SPAHG – Strategic Plan Ad Hoc Group
FACA – Federal Advisory Committee Act	SPG– Science Planning Group
FEIS – Final Environmental Impact Statement	SSQs – Strategic Science Questions
FRN – Federal Register Notice	SWCA – Steven W. Carothers Associates
FWS – United States Fish & Wildlife Service	TCD – Temperature Control Device
FY – Fiscal Year (October 1 – September 30)	TCP – Traditional Cultural Property
GCD – Glen Canyon Dam	TES – Threatened and Endangered Species
GCT – Grand Canyon Trust	TWG – Technical Work Group
GCMRC – Grand Canyon Monitoring & Research Ctr.	UCRC – Upper Colorado River Commission
GCNP – Grand Canyon National Park	UDWR – Utah Division of Water Resources
GCNRA – Glen Canyon National Recreation Area	USBR – United States Bureau of Reclamation
GCPA – Grand Canyon Protection Act	USFWS – United States Fish & Wildlife Service
GLCA – Glen Canyon National Recreation Area	USGS – United States Geological Survey
GRCA – Grand Canyon National Park	WAPA – Western Area Power Administration
GCRG – Grand Canyon River Guides	WY – Water Year (a calendar year)
GCWC – Grand Canyon Wildlands Council	
GUI – Graphical User Interface	
HBC – Humpback Chub (endangered native fish)	
HMF – Habitat Maintenance Flow	
HPP – Historic Preservation Plan	
IEDA – Irrigation & Electrical Districts Assoc. of Arizona	
INs – Information Needs	
IT – Information Technology	

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