

**Technical Work Group
November 8, 2000
Phoenix, Arizona**

Presiding: Rick Johnson, Chairperson

FINAL

Committee Members Present:

Cliff Barrett, UAMPS
Robert Begay, Navajo Nation
Perri Benemelis, ADWR
Kerry Christensen, Hualapai Tribe
Dave Cohen, Trout Unlimited
Jonathan Damp, Pueblo of Zuni
Wm. Davis, CREDA
Kurt Dongoske, The Hopi Tribe
Brenda Drye, So. Paiute Consortium
Norm Henderson, NPS/GLCA
Amy Heuslein, BIA

Nancy Hornewer, USGS
Pamela Hyde, Southwest Rivers
Matt Kaplinski, GCRG
Robert King, UDWR
Phillip Lehr, Colo. River Comm./Nevada
Don Metz, USFWS
S. Clayton Palmer, WAPA
Bill Persons, AGFD
Randall Peterson, USBR
D. Randolph Seaholm, CWCB
Robert Winfree, NPS/GRCA

Committee Members Absent:

Wayne Cook, UCRCi
Christopher Harris, CRBC
John Shields, WY State Engineer's Office

Alternates Present:

For:

Other Interested Persons Present:

Timothy Begay, Navajo Nation
Gary Burton, WAPA
Nancy Coulam, USBR
Barry Gold, GCMRC
Suzette Homer, Pueblo of Zuni
Christine Karas, USBR
Dennis Kubly, USBR

Ruth Lambert, GCMRC
Lisa Leap, NPS/GCNP
Mike Liszewski, GCMRC
Ted Melis, GCMRC
Darlynn Panteah, Pueblo of Zuni
David Rubin, USGS

Recorder: Linda Whetton, USBR

Meeting Opening and Administrative Items

Nov. 8, 2000: Convened: 9:30 a.m.

WELCOME AND ADMINISTRATIVE:

The Chairperson welcomed the TWG members, alternates, and guests. All introduced themselves. The Chairperson determined there was a quorum established. Attendance Sheets were distributed (Attachment 1)

Agenda Changes:

Clayton requested that Nancy Coulam's presentation be postponed until later as he wanted WAPA's archeologist (Mary Barger) to be present. Agenda will be adjusted accordingly.

1. Approval of Sept. 20-21, 2000 meeting minutes (Attachment 2). The following corrections were noted:

- Page 1: add Ruth Lambert to attendance for Sept. 20 meeting.
- Page 2: Clayton said he was late and wasn't available to review the ground rules.
- Page 3, last paragraph, "lengthy discussion" doesn't really capture the essence of that discussion. **ACTION:** Randy Peterson will re-draft to include more details.
- Page 5, first paragraph, replace "road" trip with "row" trip.
- Page 8, Add "Palmer" after "Clayton"

Linda will make the above changes. Approval of the minutes will be on the agenda for the next TWG meeting in December.

2. Review of Action Items:

- Randy and Rick did not receive any comments following last month's TWG meeting on PEP integration. They made a second request for comments to be sent to them.
- Randy has not received the CD containing the guidance documents from Chris Harris. Upon receipt of the disk, copies will be made and distributed to the TWG.
- Budget AHC - Clayton said they had a meeting on Oct. 3 in Flagstaff to review GCMRC's 2002 work plan but haven't compiled anything. He anticipates getting the group together between now and the time comments are due to GCMRC.
- Randy noted the changes made to the TWG Operating Procedures in the Sept. meeting and noted that on page 2 (line 7) it talks about electing the chairperson in December. He suggested it be changed to: "the chairperson shall be elected in the summer meeting of the TWG or the first meeting prior to the start of the fiscal year."

Barry questioned if there was a need for the TWG Operating Procedures to be consistent with the EIS because the EIS reads, "it is recommended that the Secretary or his designee appoint the chair for the group on a two-year rotating basis" Randy responded that the TWG would probably feel more comfortable electing its own chair rather than have the Secretary's Designee appoint one. There was also some discussion on the term of the chair, whether it should be changed to two years. Some members felt the procedures were fine pending the above change by Randy. However, two additional changes were also suggested:

- pg. 1, under Operation, #1 (last sentence), change "meeting of the AMWG" to "meeting of the "TWG."

- pg. 2, under Vice-Chair Responsibilities, 4th para., change "by E-mail to co-chairperson" to "by E-mail to chairperson."

MOTION: Adopt the Operating Procedures (Attachment 3) consistent with the above changes.

Voting Results: Yes = 18 No = 0 Abstained = 0

Motion passed unanimously.

UPDATES:

1. Congressional Actions - Randy passed out a portion of the Bureau of Reclamation's appropriations bill for FY 2001 which capped the funding from power revenues (Attachment 4). He also distributed a copy of a Press Release (Attachment 5) issued by the Federal Energy Regulatory Commission (FERC) about a week ago and commented that this may have a significant affect on the power market during the coming year. It is a direct result of the extraordinarily high prices that resulted in California last summer which in turn affected the cost of the Low Steady Summer Flow test. The expected prices next summer are approximately 1 1/2 to 2 times as much as they were last year.

2. Transfer of GCMRC to USGS. Barry reported the GCMRC was transferred to the USGS on October 1, 2000. An Interagency Agreement was prepared which transferred funding from the Bureau of Reclamation to the USGS. All the contracts and personnel folders have been sent to the USGS. Everything should be completed by December.

There were a few questions raised by the USGS Contracting Office regarding Requests for Proposals. The USGS raised several concerns, the most notable being a "conflict of interest" in having members of the Technical Work Group able to bid on the RFPs and that perhaps their role on the TWG gives them a competitive advantage in bidding on the RFPs. They ended up getting policy guidance from the USGS in order to get the RFPs announced.

3. Charter and AMWG Membership Renewals. Randy reported that the AMWG has addressed the

issue of renewing the Charter and offered a number of recommendations for its modification. The Charter has been sent to Washington for processing (Attachment 6). He pointed out that the redline comments are the most substantive and important changes. It's anticipated the Charter and re-appointment letters will be completed by the first of the year.

4. Status of Budget Ad Hoc Committee. Cliff reported that at the last TWG meeting there was a lot of discussion about the budget process and how the budget is formulated. The Budget AHC consists of: Randy Peterson, Wayne Cook, Robert Begay, Bill Persons, Barry Gold, Rick Johnson, Norm Henderson, and Cliff as the chairman. He reported that they have exchanged a few e-mail messages. Their working document came from the comments on the flip charts recorded at the last meeting and the original set of budget protocols. He is waiting for the committee members to send him more ideas which he will compile into a report, send it to the members, and have something ready for the TWG meeting in January. Barry suggested that each Federal agency send Cliff a timeline on how each of their agencies deal with the 3-year budget call.

ACTION: Send a timeline to Cliff.

5. Status of KAWG Response to KAS Expert Panel Review. Christine Karas reported there are some continuing questions on the different issues. Chris was asked to discuss the position of the KAWG. They agree, disagree, and are undecided on some issues. She didn't want to speak for any other agencies or groups so if anyone was interested in a specific position, she recommended they contact that person/entity directly.

The KAS panel would like to see more work done on genetics, shell morphology, anatomy, taxonomy and are recommending a more expansive study outside of the Colorado River basin. In general, the KAWG agrees. This is a needed and good thing to do but leads to additional questions/concerns, re: funding sources, incidental take, etc. Chris reviewed some areas of concern:

How much habitat is required? The KAWG is divided on this. The panel tried to describe the historic conditions and use that type of information to draw conclusions. Some KAWG members feel it is an appropriate approach while others feel it is a new situation and a new river post dam and perhaps not entirely valid.

Is the KAS a distinct population or a distinct taxon? Some division on this question because they don't have enough information. Some people were concerned that the panel looked at it as certain species or populations within species winking on and off and that seemed to not really jive with the previous information that this is a genetically distinct population so those two things don't seem to quite clarify one another.

How much population and/or habitat can you take? Can you go to higher floods without damaging this particular population? The logic of the panel was that since the construction of

Glen Canyon Dam, the amount of habitat available has expanded by about 40%. Therefore, perhaps a take about 40% would be acceptable. Again, KAWG members were divided on this. *The usefulness of conducting some kind of population viability analysis.* The panel recommended against this and felt it wouldn't be a useful approach. She wasn't sure of the KAWG's opinion.

Additional populations, moving the KAS. The panel said there was no need to take KAS from more than one location to ensure a diversity in the genetics, and that inbreeding wasn't a problem. They recommended against additional captive populations and establishing additional populations in the wild. The KAWG is divided on this issue as well.

There were questions on Vaseys Paradise and the Three Lakes population. The panel believes the Vaseys Paradise population is unique but feel additional studies are needed. The KAWG agrees. *The issue of the recovery plan and should the recovery plan be rewritten.* The panel's recommendation was that it should be rewritten as soon as taxonomy, anatomy, etc. issues are clarified. The KAWG would probably still be divided because there are some members who feel it could be worked on right now while others feel more information is needed. Another recommendation is that the recovery plan should undergo a rigorous peer review similar to the peer review process that has been set up for the AMP. She has discussed this with the biologists in the FWS regional office who have the lead on the recovery plan. Larry England feels that there isn't enough new information to warrant a rewrite of the recovery plan at this time.

Because there is new information, Reclamation would like to develop a recovery implementation plan. The concept would be to have people who have worked with the species and are familiar with the literature to do a synthesis of the literature. Ultimately, the goal would be complete recovery and de-listing of the species. The next KAWG meeting is scheduled for Nov. 30.

ACTION: Place on agenda for next TWG meeting.

6. **Status of PA Group response to PEP Review** - Deferred until next day.

TECHNICAL ISSUES

1. **Power Economics and Repayment** - Cliff Barrett provided an explanation of the Basin Fund, rate setting, and CREDA's concerns about the impacts of non-reimbursable funding of AMP on the Fund and rates. The Basin Fund is a separate fund set up in the US treasury by the CRSP Act where revenues can be held and used to fund CRSP operations without the requirement to obtain annual appropriations from Congress. Funds are taken annually from the Basin Fund to pay for operation and maintenance expenses (OM&R) of the project. These expenses include operation and maintenance of the project including extraordinary maintenance and replacements. The cost of power purchases required to meet contract commitments is also included in OM&R.

All power revenues are deposited into the fund and are available to fund OM&R . Funds surplus to OM&R are either retained in the Basin Fund to meet future contingencies, or transferred to the General Fund of the Treasury..

In addition to OM&R, the Sec. 1807 of the GCPA authorizes the use of power revenues to fund the long-term monitoring and research programs authorized in Sec.1805. This work is funded from power revenues collected into the Basin Fund.

The source of money going into the basin Fund to fund all the above activities is the sale of power and the revenues that result from those sales. The rate at which firm power sales are made is determined by the annual Power Repayment Study.(PRS). In its basic terms the PRS is an estimate of long-term costs and long term generation from which a rate is determined which will cover the costs over the period of repayment (about 60yrs). The costs to be paid in include the OM&R as discussed earlier, and repayment of capitol costs of both CRSP and participating projects power and irrigation features with appropriate interest charges, over the time period allowed in the CRSP Act.

To comply with the provisions of Sec 1807 GCPA that the AMP costs shall be non-reimbursable, the AMP costs are not included as expenses in the PRS, and are thus not provided for in the power rate, making them “non- reimbursable” to the power contractors. The Act also, provides that these expenditures for AMP will be treated as having been returned to the Treasury as repayment of the capitol costs. Western accomplishes this within the PRS calculations.

The problem that is caused by the above-described process is one of cash flow. It is clear that there are more cash demands on the Basin Fund (OM&R plus AMP funding, plus transfers to Treasury) than there is cash inflow (revenue based on a rate that does not include AMP funding.) Over some long period of time the offsetting credits toward repayment will correct the problem. But in the short term Western must pay out more from the fund than it is collecting. This is especially true in times of low hydrology and made worse when AMP experiments increase the need for direct funding of research and monitoring as well as cause increased power purchases.

One way of addressing this problem is to control the amount of power revenues that can be drawn from the Fund and used directly for the AMP on an annual basis. This is why the recent Congressional initiative to place a cap on use of power revenues was supported by CREDA . A second way is to provide for additional power revenues to keep the Basin Fund solvent in years of unusually high purchase power cost, such as 2000. Western is currently pursuing that option and is in the process of implementing an adder to the rate to be used in years of high purchase power costs caused by low hydrology or AMP testing that creates cash flow problems in the Fund. One

effect of this is to require power customers to pay for AMP costs in the short term, with the benefits of “non-reimbursability” falling in to customers sometime in the future.

The power customers, through CREDA, are expressing some concern with Western’s approach to solving the immediate cash flow problem, and have suggested alternative solutions that are under discussion.. CREDA is also in discussion with Western over the methods by which the “repayment crediting” feature of Sec 1807 GCPA is being accomplished.

Attachment 7 is a chart prepared by Western which illustrates the Basin Fund operation.

ACTION: - WAPA is preparing a brochure on the power rate process and Clayton will provide copies to the TWG when it becomes available.

2. **Report on LSSF Costs** - Clayton reported that over the summer season, WAPA spent \$55M to meet its contractual obligations to CREDA, of which \$16-24M were attributed to the LSSF. The question of whether it is \$16M or \$24M depends on how you treat the added revenues that they got in April, May, and September from the spike flows. The GCPA requires that WAPA identify the costs of studies and BOR and WAPA have agreed that studies include test flows, costs of purchased power for test flows. WAPA submitted a proposal this spring to the GCMRC to do a financial impact of the LSSF. The schedule was to have a draft report in June and a final report in December. WAPA has completed the draft study but may want to wait until after April to do the report so they can use actual dam release volume figures. They will be holding a workshop on WAPA’s methodology for establishing financial impacts due to environmental constraints in Salt Lake City in December or January. Clayton will inform the TWG of the workshop and would also like to have the GCMRC participate.

Clayton said the prices this summer were four times the historical rate. WAPA spent \$55M in purchased power. Of that, \$16M was a result of the LSSF so \$4-6M was the result to the LSSF test if they had historic pricing. Another concern was that some damage occurred to the electrical systems resulting from the LSSF. Clayton feels those damages were a result of the dry conditions and not from the LSSF. He will be attending a CREDA meeting tomorrow to discuss a rate increase and will be presenting information on what they anticipate will be next summer’s expenses and the possibility that they will have dry conditions again.

3. **Hydrologic Conditions** - Randy Peterson reported that October was a continuation of a trend that started late in the summer with basin precipitation about 140% of normal and the current snow pack a little over 130% of normal. They believe that this fall precipitation will have a positive effect on the efficiency of the following spring runoff and that the fall storms have recouped much of the soil moisture deficit which is a very positive sign. The expectation for next year’s runoff is that the

June flow will be near normal, which isn't too much of a change from the 94% of normal that Tom Ryan cited last month.

Referring to Attachment 8, the releases in November will be approximately 13,500 cfs, the same as in December and January, whereas in October, they were 6,700 cfs. WAPA found that the rate increase would not be implemented in time to keep the basin fund from going broke. Reclamation moved some releases scheduled for February and March 2001 and released them in November 2000, increasing the November releases by 200,000 acre-feet additional water. That will not have any effect on the total water year release. That had the effect of increasing cash flow into the basin fund by \$10-11M. WAPA had previously purchased some contracts for power expecting low release conditions through the fall and winter months. By allowing the additional releases, a portion of those contracts were sold back. That will not have any effect on the total water year release. The trend is still for the releases to be closer to the minimum probable than the maximum probable. The expected annual release volume is about 9.6 maf. It's currently a situation where Lake Mead at the end of the water year is expected to be below Lake Powell. Because of that, Reclamation will release water from Lake Powell to Lake Mead making the contents of those reservoirs approximately equal. Every month the reservoir operations table is updated and adjustments are made throughout the year.

4. **Results of Long-term Monitoring and Research** - Ted Melis reported that last April the GCMRC sent out a mailing with five technical articles which had been received by the GCMRC as final deliverables as part of their physical science monitoring research program. They were authored primarily by David Rubin and David Topping of the USGS, Jack Schmidt from Utah State University, and the sandbar monitoring team from Northern Arizona University. Responding to a request from Kathleen Wheeler, the GCMRC started working with the authors of those papers and asked them to prepare a summarization (Attachment 9) of what they thought the implications were for the AMP. He announced that Dr. Rubin was present at today's meeting to answer any questions.

With respect to what the GCDEIS termed the BHBF and its use to try and conserve and restore sandbar resources, it's basically a two-fold approach to try to achieve sand conservation and restoration of physical habitats. The first being to try to bank or accumulate multi-year sand inputs that come in from the tributaries downstream. The second step is to restore and sustain channel margin and eddy sand bars by periodically releasing the high flows. In other words, mobilizing the material stored from year to year on the bed, to move it up on along shorelines into areas where those bars support terrestrial and aquatic habitats. He showed a few slides the result of the high flows (Attachment 10). He reported that based on the NAU dataset, the findings indicate that within Marble Canyon, which is considered one of the critical reaches, the sandbar areas above the 20,000 cfs stage level have decreased since 1991 by about 22% on average. To go along with

that, there are at least seven independent sources of monitoring data that show continued decline in sand resources within Marble Canyon. Although they saw some fairly dramatic responses to the 45,000 cfs flow in 1996, as well as in November 1997 high powerplant flow of 31,000, those sandbar responses were relatively short-lived. The decade averages indicate a downward decline.

The second part of this suggests that the ROD operations from about the beginning of the middle to the upper range of powerplant releases, result in high rates of sand export. Tributary inputs are trapped downstream on a scale of days to months. This would fly in the face of the idea of multi-year inputs being banked in the channel bed. Multi-year sand accumulation is probably only likely under ROD operations when releases are limited to about the 8-10,000 cfs flow range.

MOTION: Form an ad hoc group to work with the GGMRC to develop a white paper on the current understanding of sediment storage and transport and what that means to the AMP.

This group will bring recommendations back to the TWG.

Motion seconded.

Voting Results: Yes = 20 No= 0 Abstained= 0

Group:

Chair: Ted Melis

Matt Kaplinski Bill Davis

Pamela Hyde

Rick Johnson

Nancy Coulam

Gary Burton

Lisa Leap

Randy Peterson

Robert Begay

Don Metz/Debra Bills

Product due date: January/February 2001

Ideas on task for Experimental Flows Ad Hoc Group - Randy Peterson said he would like to reconvene the Experimental Flows Ad Hoc Group with a very narrow charge to: 1) develop a program of experimental flows to comply with the RPA in the Biological Opinion for low steady summer flows with high spring flows, 2) develop triggering criteria for determining when that situation might exist, and 3) develop a "program of experimentation" to deal with questions still remaining about BHBFs.

After some discussion, the following motion was made:

MOTION: Convene an Experimental Flows Ad Hoc group to:

1. Make recommendation for flows in 2001 by Dec. 7 TWG meeting
2. Develop a program of experimental flows to address remaining questions about BHBFs
3. Develop triggering criteria to determine when ~ 8.23 MAF release year exists.
4. Develop a program of experimental flows to comply with RPA of BO, using the SWCA report as a starting point.

Voting Results: Yes = 18 No = 0 Abstained: 0

Group:

Chair: Randy Peterson

Don Metz

Clayton Palmer

Bill Davis

Rick Johnson

Cliff Barrett

Barry Gold

Norm Henderson/Bill Jackson

Bob Winfree (available after Dec. 7)

ACTION: Randy will provide copies of the SWCA report to the group members.

2002 AMP BUDGET

1. **FY 2002 GCMRC Budget and Work Plan**(Attachment 11). Barry pointed out that there were some typos in the plan that was mailed out so he distributed substitution pages (Attachment 12). He advised the members they would have until November 22 to provide additional comments. In order to meet the 30-day mailout to the AMWG, he will need to mail the final draft by December 8. Comments were recorded on flip charts (Attachment 13).

There were a number of questions regarding the prioritization process and how the budget was developed. Barry explained that the GCMRC took the highest priority information needs along with the existing recommendations from the PEP which needed to be implemented and developed an overall budget. They looked at how much money was available from power revenues and indexed that to reflect inflation. There was a difference of \$1M between the financial requirements of the AMP and the funding allowed for power revenues. He hopes that by the AMWG meeting in January, there could be a resolution that the AMWG supports the USGS in seeking appropriated dollars to accomplish the goals of the program.

ACTION: The GCMRC will draft some language describing their prioritization process.

Amy Heuslein commented that there were several areas in the work plan that needed to include tribal involvement (refer to flip charts 2 and 3) and that perhaps it would be good to include some

of the Tribal Executive Orders. She suggested Ruth call her for copies of those.

ACTION: Ruth will contact Amy for some these Tribal Executive Orders.

Kurt commented he knows the GCMRC is trying to incorporate tribal perspectives in more of their programs. He would like to see the GCMRC reflect what the tribes need in terms of monitoring the resources that are important to them. The tribes are being constrained into reacting to the RFPs in terms of how long-term monitoring of the CRE is being done by outside contractors. He would like GCMRC to ask the tribes to submit a proposal on how they would look at an integrated resource and monitoring program and how it could be articulated into a long term monitoring program for the GCMRC.

Deadline for sending final comments to the GCRMC: November 22, 2000

2. **Bureau of Reclamation AMP Budget** - Randy reported that the PA Signatories have met and addressed the 11 recommendations and have drafted a 3-year plan to accomplish them all within the existing PA budget that they have historically used. The administrative, tribal funding, and PA portion of the budget is \$1,399,000. Randy also said that discussions have started with the Federal agencies about seeking appropriation for tribal funding.

Adjourned: 5:15 p.m.

**Technical Work Group
November 9, 2000
Phoenix, Arizona**

Presiding: Rick Johnson, Chairperson

FINAL

Committee Members Present:

Robert Begay, Navajo Nation
Perri Benemelis, ADWR
Kerry Christensen, Hualapai Tribe
Dave Cohen, Trout Unlimited
Jonathan Damp, Pueblo of Zuni
Wm. Davis, CREDA
Kurt Dongoske, The Hopi Tribe
Brenda Drye, So. Paiute Consortium
Norm Henderson, NPS/GLCA
Amy Heuslein, BIA

Pamela Hyde, Southwest Rivers
Matt Kaplinski, GCRG
Robert King, UDWR
Phillip Lehr, Colo. River Comm./Nevada
Don Metz, USFWS
Bill Persons, AGFD
Randall Peterson, USBR
D. Randolph Seaholm, CWCB
Robert Winfree, NPS/GRCA

Committee Members Absent:

Cliff Barrett, CREDA
Andres Cheama, Pueblo of Zuni
Nancy J. Hornewer, USGS
Wayne Cook, UCRC

Christopher S. Harris, CRBC
S. Clayton Palmer, WAPA
John Shields, WY State Engineer's Office

Alternates Present:

Gary Burton

For:

Clayton Palmer, WAPA

Other Interested Persons Present:

Nancy Coulam, USBR
Jeffrey Cross, NPS
Barry Gold, GCMRC
Suzette Homer, Pueblo of Zuni
Dennis Kubly, USBR
Lisa Leap, NPS/GCNP

Mike Liszewski, GCMRC
Ted Melis, GCMRC
Mary Orton, Mary Orton Company
David Ostergren, NAU
Darlynn Panteah, Pueblo of Zuni

Recorder: Linda Whetton, USBR

Meeting Opening and Administrative Items

Nov. 9, 2000: Convened: 8:10 a.m.

WELCOME AND ADMINISTRATIVE:

The Chairperson welcomed the TWG members, alternates, and guests. All introduced themselves. The Chairperson determined there was a quorum established. Attendance Sheets were distributed (Refer to Attachment 1)

Announcements:

Bill Persons said that the Desert Fishes Council is meeting next week in Death Valley. There will be some papers presented including some work the GCMRC has sponsored on native fish in the Colorado River. If anyone wants more information, he has a schedule of their presentations and a web page address.

Bill also put a copy of the historic fact sheet with a sign-up sheet on the table because he didn't have enough copies to pass out. If you want a copy, put your name on the sheet and he'll get you one.

Barry said there are also two fact sheets for Lake Powell: 1) First Annual Report on Lake Powell Data, and 2) copy of the paper that is going to appear in Ecological Abstracts along with a series of papers with Lake data.

Management Objectives - Mary Orton informed the members they would be reviewing three documents:

1. Comments on Strategic Plan from the TWG meeting held on Sept. 21, 2000 (Atch.14)
2. Draft Schedule for Developing AMP Strategic Plan, Qualitative MOs and INs (Atch.15)
3. Comments on Strategic Plan Document from the AMWG Meeting, July 2000 (Atch. 16)

At the last meeting they discussed what should be in the Strategic Plan and how it should be put together. They got comments both on process and content (Attachment 13) . From the list made, the AHC reviewed the Strategic Plan to insure that it included what had been suggested.

Mary said the small groups are taking the qualitative targets that were developed by the Ad Hoc Committee and turning those into current and target level numbers for each of the MOs. If they don't have numbers, they will be defining Information Needs. The AHC is not going to meet

before the TWG meets again so the output from the small groups will go directly to the TWG. The AHC will take ensuing TWG comments, integrate them into the process, and then come back to the TWG. The results of the small groups will be sent to the TWG by November 28, 2000. At the Dec. 7 TWG meeting there will be a discussion of the quantitative targets. Then on Dec. 8, the AHC will meet to take a look at them. On December 15, an update on the quantitative targets will be sent out to the TWG and then on January 10, the TWG will again address them.

ACTION: Linda will mail the AMWG Comments and Response document to the AMWG members.

Rick reviewed the small group assignments and asked for updates from each chairperson.

Food & Fish (Goals 1,2, 4) Chairs: Barry Gold and Pamela Hyde

Status: Barry reported that the group met and reviewed all the goals. They are in the process of revising the MO tables and comparing notes. The group will review and then send bring forward to the TWG.

Water (Goal 5) Chair: Wayne Cook

Status: Randy said that Wayne has contacted some people who he believes are central to discussing some of the water chemistry issues. He intends to do some conference calls and e-mails. He feels that his small group will follow after some of the other small groups.

Sediment (Goal 6) Chair: Andre Potochnik

Status: Andre has contacted a number of people. He thought his group would also follow after some of the small groups.

KAS/SWWF/Riparian(Goals 7,8, 9) Chair: Bob Winfree

Status: Bob said he has contacted about 20 people and has received about 10 responses and he has 10 new names that haven't been contacted yet. Next week there will be another mailing going out.

Goal 9, MO33, and Goal 12 Chair: Kurt Dongoske

Status: The Cultural Resource small group met on Oct. 19. They represented the tribes, GCMRC, BOR, WAPA, GCNP. They had a member from the Cultural PEP Board. Kurt is going to design the targets and send them out to the cultural resource group. They will then review and supply him with their comments and then they will be given to the TWG. Also, Kurt mentioned that he no longer has e-mail so if anyone needs to contact him, do so by phone, fax, or U.S. Mail.

Recreation (Goal 10) Chair: Andre Potochnik

Status: Matt reported there was a call for a meeting to discuss campsites usage, critical reaches, and which metrics should be used. The goal was to get a group of people together that actually do the campsite monitoring for the GCMRC and get together on those goals. The group hopes to meet again next week.

Power (Goal 11) Chair: Ted Rampton

Status: Barry said that Ted sent out some e-mail messages but he hasn't seen anything.

AMP (Goal 13) Chair: Pamela Hyde & Barry Gold

Status: Barry said they are addressing via conference call. There are only 3 people in the group. Pam said she felt the co-chairs needed to talk first about process before moving forward.

There was some discussion on prioritization. Rick said that the group is not at the point of doing prioritization as that will come at the management action level. Mary said she thought they were talking about sequence order so that the AMWG could give direction to the GCMRC on MOs, INs, and MAs. She thinks the question refers to prioritization of resources. Rick clarified that what they will find in the INs are some MOs totally lacking information so then it might be a high priority to get to a target. He suggested looking at the MOs under the goal as a suite: all of the things have to be done in order to achieve the goal. The priorities happen at the next step. Mary suggested it might be better to use the words "sequence order" rather than priority because priority implies that one thing is more important than another.

Bill Persons expressed concern about the word "maintain" (page 2, MO 39). Mary said that it hasn't been decided yet so we don't really know what word to use until we see the target and current levels. The use of "maintain" means we are there, while "enhance" means to make a positive contribution (Flip Chart, Attachment 17).

Bill Davis cautioned that we need to be consistent with recovery goals being established for endangered fish. Rick said the TWG's intent is to try and be consistent with the recovery plans but that we are not encumbered to adopt their recovery goals. *Should AMP management objectives for threatened and endangered species parallel objectives in FWS recovery plans?* Mary said that AMP management objectives for threatened and endangered species need to be consistent with our vision, mission and goals and the current Fish and Wildlife Service recovery plans. AMP objectives need to be consistent with our vision, mission, and goals to meet principle 1, and AMP objectives may not be identical to recovery plan objectives simply because those objectives, the recovery plan objectives, descend from different goals.

Bill stated there is a tie-in between the AMP goals and the recovery goals. He said there is a dispute in how you determine a viable population in the lower basin vs. what they're using right now

to establish goals in the upper basin. He sees that as a conflict and expressed concern as the TWG is moving to adopting goals, actual numbers, for the Grand Canyon population. He would like to get it resolved before the numbers are adopted in the Federal Register process for the FWS recovery goals.

Bill said he works with the Federal Register process quite a bit and every time something is published, it has a tendency to be set in stone. He would like to prevent that from happening and feels that if the TWG has an idea right now, they should input that process today rather than waiting until the notice is published. He said there is a Management Committee meeting scheduled for November and feels that it would be the appropriate forum to present our concerns. However, Robert King stated that the Management Committee does not have the final say on the recovery plan, it is the FWS Recovery Team.

Pam Hyde commented that if it's the TWG responsibility is to provide information and recommendations to the AMWG, then there are two options to pursue: 1) Take the information and recommend to the AMWG they discuss this issue at their January meeting and potentially come up with a recommendation to the Secretary on integration of these to insure there is not a conflict between what is been looked at by FWS in their upper basin and what is being considered in the AMP in the lower basin unit, and 2) for each of the stakeholder groups to provide their separate input and identify themselves as members of the AMP and cumulatively FWS may get the message that there is concern from the participants about consistency.

ACTION: Linda will provide a list of the names and addresses for the regional directors in Region 2 and Region 6. Pam Hyde will provide Linda with the website address for the Draft recovery goal document. Linda will e-mail to all TWG members and alternates.

Mary asked the members if they had any other comments on the draft schedule (Attachment 14). She informed the TWG that each time the ad hoc committee meets, they will be looking at this document and to see if adjustments need to be made.

There was a discussion of upcoming meeting dates (Attachment 18).

Reclamation's PA FY01-03 Plan - Nancy Coulam said the TWG has asked to have a strategic 5-year plan but she is not quite to the point of doing a 5-year plan but has more or less 3 years roughed out (Attachment 19). The vision for this plan is that they are going to adopt the PEP recommendations to achieve compliance with GCPA and the NHPA. Their compliance goals are to complete the stipulations in the PA, with the HPP the top priority. The total cost comes to \$550,000, some of which are projected costs but is the best estimate at where they are today.

Nancy referred to the spreadsheet she passed out (Attachment 20). These are the dollars spread out over the next three years. The columns reflect whether it is PA or GCMRC program funds. The reason for that is a lot of these things are shared in responsibilities in science and monitoring efforts of the GCMRC and the GCPA activities and the PA compliance. A lot of the activities are integrated and she tried to reflect that.

She asked the TWG what they thought about convening a workshop to determine what it would take to separate effects of dam operations from dam existence and natural processes. She estimated the cost to be around \$45K. Another option would be not to do a workshop but perhaps identify who we needed to ask the questions to, sole source some money to them, and ask for a white paper.

Nancy said they are looking for a synthesis of answers. There was quite a bit of discussion surrounding an arbitrary split as it applies to Sections 106 or 110 of the NHPA. Nancy said the real crux of the issue ultimately comes down to money and the responsibility that goes with it because they need to identify the effects and mitigate if possible.

Rick asked if there were any members who didn't support the workshop. There were no objections.

Pam questioned if the PA Signatories also wanted to adopt all the recommendations in the PEP. If so, then it would come to the TWG and the TWG would need to ask "*in the context of the Adaptive Management Program, do we feel that all those recommendations need to be done?*" The TWG could then forward that with the PEP and the PA Signatories response to the AMWG. Nancy said she would send a letter to the TWG with this information. Ruth and Barry are doing the same thing. The two documents will come forward to the TWG and she believes the TWG should do a written response that will go to the AMWG.

Status of 2001 Science Symposium - Barry Gold reported that the 2001 Science Symposium will be held in April 2001. Every other year the GCMRC has been hosting a science symposium and presented the past year's results. In the off years, they have used the forum provided by the Colorado Plateau Field Station which holds a biennial conference on the Colorado Plateau. This is the year that the GCMRC would host. They have been talking about doing it in Flagstaff or Phoenix with sufficient notice so that they will get broad participation. He will try and bring a confirm date to the next TWG meeting in December.

Upcoming PEP Review Schedules - Barry reported that the upcoming PEP for the Integrated Water Quality Program (IWQP) will occur Nov. 27 - Dec.1. The first couple of days the PEP will be in the field and the public day will be Thursday, Nov. 30, at the GCMRC. It will be a day long

series of paper presentations with the PEP panel. On Dec. 1 they will go into their executive writing sessions.

The last PEP is the Aquatic Food Base and Fish. They have only started out how to fit it in during the March-April time frame given everything else that is going on. It will be one in which they take the panel into the field. They will go on the river for a week and then back to Flagstaff for scientific presentations before they go into their writing session. As soon as those dates are firmed up, he will e-mail the TWG members.

Science Advisory Board - Barry said they were in the process of finalizing the 12 areas in which they were seeking people and were preparing one-page biographies to the AMWG and TWG when Kathleen Wheeler called and asked to review the package. As soon as she finishes her review, they will be ready to send forward a recommendation to the first ten people in the operating protocols and get letters of invitation sent.

ACTION: Place on agenda for next TWG Meeting.

Core Questions Relating to MOs and Resources - Dennis Kubly said there seems to be indications that we need to improve communication within the AMP. This came up during the last meeting when people were talking about House Bill 4733 and who had been involved and whether or not everyone felt like they had the opportunity to participate. That wasn't just for the TWG but went through layers within and across the agencies. You assess the problem, design a program to address the problem, implement, monitor, evaluate, and adjust as necessary. There are also "do" loops within each process. Sometimes people get stuck because they haven't really identified the process through these "do" loops. When he speaks of structure of this program, the structure that everyone is pretty much familiar with is hierarchal. He sees three separate lines of communication:

- The first is how do you integrate science into the process. How should information flow from the boxes (entities) and back and forth from what comes out of the science arena to management and be integrated into their decisions and then come back down the loop for an actual action that would be implemented by an agency.
- The second one has to do with formulation of recommendations. Maybe information doesn't flow or shouldn't flow through the hierarchy the same way as when you are looking at formulating recommendations.
- The third one was compliance. When he looked at compliance, he saw a different role for some of the agencies within the AMP and they really do have statutory responsibilities (for example, permitting).

Depending on which of the three sets you are talking about, the entities in the boxes have different

identities. He asked if this would be a fruitful process. The idea is to go through and ask ourselves where are the field scientists? And who do they communicate with? Who does the SAB communicate with? Have there been documents formulated by the AMWG and sent directly to the Secretary of the Interior? We all have our perceptions about how the lines of communication work but part of the problem with process is that some of these aspects of information aren't working the way we've characterized them in our minds.

Based on some of the comments received, Dennis will prepare another more detailed draft and present at the next TWG meeting.

Meeting Review - Randy asked for comments on the meeting. The following were offered:

- positive meeting
- nice to get some technical information from the GCMRC
- the agenda was pretty full
- consider doing 2-day meetings rather than 1.5 days
- make an effort every meeting to block a half day for technical information
- people committing themselves to listen to the reports
- good job chairing the meeting
- thank Barry for budget presentation and good format

Suggestions:

- things we didn't get to on the agenda - core questions relating to MOs and resources, tribal participation and PA budget items
- time at TWG meeting on Dec. 7 to discuss agenda items for AMWG meeting?
- Nancy's PA compliance tables with out year projections - would be nice to have included as well
- Total GCMRC & AMP budget - add them together for a final number

Future agenda items:

- PEP process
- SAB update (consider putting on the AMWG agenda)
- Future budgets should include percentages of total budget in terms of application to Biological Opinion and the Programmatic Agreement
- LSSF update and preliminary findings before 6 months after the experiment is over
- Scientific presentations
- Balance the concerns of preliminary data with the need to get something to the group that the

data was collected for.
Update from Experimental Flows AHC
Discussion of ad hoc response to TWG

Adjourned at: 12:15 p.m.

General Key to Adaptive Management Program Acronyms

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

WY - Water Year (a calendar year)