

**Technical Work Group Meeting**  
**February 26, 2002**  
**Phoenix, Arizona**

**Presiding:** Kurt Dongoske, Chairman

**FINAL**

**Committee Members Present:**

Perri Benemelis, ADWR  
Kerry Christensen, Hualapai Tribe  
Dave Cohen, Trout Unlimited  
Wayne Cook, UCRC  
William Davis, CREDA  
Brenda Drye, So. Paiute Consortium  
Lloyd Greiner, CREDA/UAMPS  
Norm Henderson, NPS/GLCA

Rick Johnson, Southwest Rivers  
Robert King, UDWR  
Bill Persons, AGFD  
Randall Peterson, USBR  
Nikolai Ramsey, Grand Canyon Trust  
D. Randolph Seaholm, CWCB  
Robert Winfree, NPS/GRCA  
Michael Yeatts, The Hopi Tribe

**Committee Members Absent:**

Robert Begay, Navajo Nation  
Jonathan Damp, Pueblo of Zuni  
Christopher Harris, CRBC  
Amy Heuslein, BIA  
Nancy Hornewer, USGS  
Matt Kaplinski, GCRG

Phillip Lehr, Colo. River Comm./NV  
Don Metz, USFWS  
Clayton Palmer, WAPA  
John Shields, WY State Engineer's Office  
John Whipple, NM Interstate Stream Comm.

**Alternates Present:**

Paul Barrett  
Wayne Cook  
Andre Potochnik

**For:**

Don Metz, USFWS  
John Shields, WY State Engineer's Office  
Matt Kaplinski, GCRG

**Other Interested Parties:**

Jan Balsom, NPS/GRCA  
Nancy Coulam, USBR  
Jeffrey Cross, NPS/GRCA  
Dave Foster, Lees Ferry  
Steve Gloss, GCMRC  
Barry Gold, GCMRC  
Loretta Jackson, Hualapai Tribe

Leslie James, CREDA  
Dennis Kubly, USBR  
Ruth Lambert, GCMRC  
Lisa Leap, NPS/GRCA  
Ted Melis, GCMRC  
Steve Mietz, GCMRC  
Tom Ryan, USBR

**Recorder:** Linda Whetton, USBR

**Convened:** 9:30 a.m.

### **Meeting Opening and Administrative Items**

Kurt welcomed the TWG members, alternates, and general public. Attendance sheets (*Attachment 1*) were distributed.

Kurt announced there would be a Native Fish Work Group meeting tonight at 7 p.m.

Barry Gold announced he will be leaving the GCMRC effective May 4, 2002. He has accepted a job with the Packard Foundation in California to be a program officer in their conservation and science programs and to help them develop a new program in the area of sustainability. He wants to carry things forward through the April AMWG meeting and then will have one week remaining at the GCMRC. Today will be his last TWG meeting.

### **Review of Action Items (Attachment 2).**

- 1 – Completed.
- 2 – Completed.
- 3 - Completed. Barry said the INs were never discussed at the AMWG meeting but they are on tomorrow's agenda.
- 4 – Bill Persons said he wasn't sure if Jeff had received any comments from the TWG or not or if he extended the deadline. He volunteered to take any comments from the TWG to Jeff. Dennis Kubly said Jeff had already sent out a document so there would be time to receive additional comments.
- 5 – Bill completed the paper but because Reclamation didn't have Internet/external e-mail capability, an e-mail poll was never done. Bill will do a presentation today.

**MOTION:** Move to approve the September 6-7, 2001, Draft Meeting Minutes  
Motion seconded.  
Motion passed pending edits.

**MOTION:** Move to approve the November 13-14, 2001, Draft meeting Minutes  
Motion seconded.  
Motion passed pending edits.

### **Review of Motions from Jan. 17-18, 2002, AMWG Meeting (Attachment 3a)**

Kurt asked for any comments on the motions. The following were made:

- Page 2. Strategic Plan motion should note where the general changes were made as part of that motion. (Change reflected in Passed Motions List – *Attachment 3b*)
- Page 4. Include text changes to introductory sentence on non-native fish control motion so the motion is complete. (Change reflected in Passed Motions List.)
- Page 6. Clarify KAS motion by adding the following sentence under the motion: Clarification on motion: AMWG accepted the TWG Ad Hoc Group Report and the one page list of recommendations. (Change reflected in Passed Motions List.)

- Nikolai offered a clarification on Robert's Rules of Order: You can't pre-empt or foreclose out of a discussion that has taken place by calling for the question. What happens then is a vote is taken and it requires a 2/3 majority to stop discussion at that point.

**Legislative Updates.** Randy said there hasn't been much happening to the Energy Security Act bill, HR 4, except there was an amendment added in by Senator Hatch that talks about alternative fuels use and some tax rebates for fuel cell and hybrid vehicles. ANWR is still included so it will continue to be a very controversial bill.

**Assessment of System Control and Data Acquisition (SCADA) GCD Gage:** Bill Persons passed out copies of a paper he prepared on the GCD Gage (*Attachment 4*). He obtained the SCADA data from Kirk LaGory at Argonne and also pulled gage data off the USGS web site for comparison purposes. He said there was some missing SCADA data and asked Kirk about it. Kirk told him it wasn't uncommon to not have all the information posted because the web site isn't updated on a regular basis. When the SCADA data is posted, it is in a table format. It's a bit cumbersome to convert into a data file that is easy to use compared to the USGS site so his evaluation is that the SCADA is not always available or at least it's not available on the Internet or in a place where you can get to it easily. The USGS data is easily available. He feels the SCADA is unreliable, partly because it's not posted and is missing data values. The USGS publishes their data so they go through a review process and it becomes officially released data. The USGS also uses a very consistent data format. His recommendation is the GCD Gage should be kept operating.

Ted said the plan is to keep operating the gage through September 30, 2002. Randy Peterson asked if it made sense to try and get an answer from WAPA if they can post the data in a more timely manner. Bill said he would like to see the data updated every two weeks but even a month would be better than it is right now.

Randy said he would like to hear from some of the researchers on how important the data is in real time to them. Ted said the move to establish a record there wasn't driven by a research need from the GCMRC but was primarily from a discussion among TWG members about the frequency of violations of the ROD and stage discharge relationships. They don't have a particular research project they can point to.

**MOTION:** Task WAPA and BOR to look into and resolve SCADA information and make a conscious decision between now and September on what to do with the gage.

Motion seconded.

Call for the question.

Public Comments: None

Voting results: Yes = 15 No = 0 Abstaining = 0

Motion passed.

**Cultural Protocol Evaluation Panel (PEP) Report** – Randy asked how many people had received Mary Barger's report from the Cultural Resources PEP Ad Hoc Group. Only four members indicated they had received the report. Randy asked if the TWG would have enough time to review the document (6 pages) between now and tomorrow if Mary were to show up. Bob Winfree added that some comments were not included in the report. In order to make sure the TWG had the most current version to review and allow for time to discuss the report, Kurt advised Mary's presentation be re-scheduled for the May TWG meeting.

### **Ad Hoc Group Updates:**

Kurt passed out a listing of the current ad hoc groups (*Attachment 5*) and asked the members to review and update it accordingly.

Experimental Flows – Randy Peterson reported that the Experimental Flows Ad Hoc Group hasn't had any activity since December. They developed 6-8 different ideas for experimental flows, mostly around sediment, and then turned to the native fish issue and asked the Native Fish Work Group and specifically some of the NFWG researchers to come up with a "straw person" for the group to consider as they developed the overall program of experimental flows and they have yet to report back to the Experimental Flows AHG. They are waiting for their response and when that comes in, they will formulate all the considerations into an integrated program to address all the resources, including vegetation resources such as the OHWZ, recreational resources, and cultural resources.

Sediment - Ted Melis said the Sediment Ad Hoc Group met several times and prepared a White Paper which was distributed to the TWG over the past few months and discussed by the AMWG at their meeting in January. The AMWG voted to adopt the findings and recommendations of the White Paper. One of the recommendations was to keep the ad hoc group together for continued discussions between the cooperating scientists, TWG members, and the GCMRC. Ted said John Shields abstained from voting on adoption of the white paper at the AMWG meeting because of the way the final version was prepared. He asked the TWG if they would like to see the GCMRC take that document, give it a standard format, and then make it available through the GCMRC web site along with the Rubin, et al memo. He said he would be willing to take on that task if directed by Barry and the TWG but feels the final responsibility probably lies with the chairman of the Sediment Ad Hoc Group (Matt Kaplinski). Randy said Reclamation has a writer-editor who could be tasked to do the work and asked if the paper should be edited even though the AMWG already approved. Wayne Cook (John's alternate) said he would check with John and see what his feelings are and get back to the TWG.

Ted said the group hasn't had any meetings since last fall because the TWG hasn't directed them to work on any particular issue.

Budget Ad Hoc Group – Randy said the USGS appropriations request by the President did not include the dollars requested by the AMP. Congress has yet to take up the details of that budget so between now and September, the Budget Ad Hoc Group will be involved in the 2003 budget. He is going to try and get them to meet during the month of March to take up the 2003 budget from the standpoint of prioritizing 2003 work.

Barry said the \$250,000 that Denny had committed to stayed in but the \$774,000 wasn't in there. He said on the House side Joel Kaplan has been requesting a lot of information and feels Congress is going to try and support the USGS budget more strongly than the President proposed. Barry said if anyone wants to write Joel a letter indicating support for the AMP, he can provide Joel's address. The Senate is not doing anything.

TWG Small Group – Randy Peterson said this ad hoc group was formed with the purpose of gaining a common understanding of what was desired for the canyon. They took on some of the hardest issues – sediment, trout, native fish - and came up with some bullet items on goals and targets for those subjects. With approval of the Strategic Plan, Randy said he wasn't sure there was any additional work required

of the group. Because there was a lot of time spent in resolving a number of issues, Randy Seaholm thought it might be important to develop a white paper identifying what the group accomplished and perhaps include it as an appendix to the Strategic Plan.

**ACTION:** Randy Peterson will write a White Paper on the issues the TWG Small Ad Hoc Group fleshed out in preparing the Strategic Plan. This will be sent to the TWG prior to the May 16-17, 2002, meeting.

**Non-native Fish Control Work Group.** Kurt said the AMWG charged the TWG to develop a 2002-2006 research and monitoring work plan to meet MO 2.5 and 2.6 of the Strategic Plan. As such, he asked the TWG members who wanted to participate on the ad hoc group. The following volunteered: Paul Barrett, Kerry Christensen, Dave Cohen, Jeff Cross, Bill Davis, Dave Foster, Steve Gloss, Norm Henderson, Rick Johnson (Chair), Dennis Kubly, Ted Melis, Bill Persons, Andre Potochnik, and Nikolai Ramsey.

**Aerial Photography.** Steve Mietz gave a PowerPoint presentation (*Attachment 6a*) and passed out copies of the FY2002 Annual Overflight Description (*Attachment 6b*). The members raised the following concerns:

- Selecting Friday before a long weekend. Lloyd Greiner will discuss with Clayton Palmer.
- Are flights being driven by science or budget constraints? Answer: A little of both.
- Need to inform the anglers and general public.

**ACTION:** Bill Persons said he would inform some of the angler clubs in the Phoenix area of what the Non-native Fish Control Group is proposing to do. AGFD welcomes help from other agencies but does not want to be the lead agency. Andre Potochnik said something could also be published in the GCRG quarterly newsletter (deadline is May 1, 2002.)

**ACTION:** The Bureau of Reclamation will send out a press release informing the public of Glen Canyon Dam releases surrounding the aerial photography scheduled for the Memorial Day weekend.

**Basin Hydrology.** Tom Ryan presented several graphs on basin hydrology:

**Snow Conditions** (*Attachment 7a*). Higher percentages in northern Utah and gets extremely dry toward the San Juan.

**Upper Colorado Precipitation.** (*Attachment 7b*). In August 2001, had average precipitation. Late August it got very dry in the basin and then got a lot of snow around November. Second week of December through the present, it's been very dry. Expect the numbers will be similar or the same for February.

**Lake Powell Unregulated Inflow WY 2002.** (*Attachment 7c*) Coming into 02, considerably below average.

**Variability of Lake Powell Apr-Jul Inflow, Based on Feb 2002 Mid-Month Forecast.** (*Attachment 7d*) Could have a dry spring with warm, dry winds. It's looking like WY 2002 will not only be the third consecutive year of below average inflow but the inflow in 2002 will be less than what was observed in 2000 and 2001.

Glen Canyon Releases, Based on Feb. 2002 Final Forecast (*Attachment 7e*). We're in an 8.23 maf release year. If it gets drier, the 8.23 maf release pattern not will change. If it gets wetter, and the April through July inflow forecast increases beyond 5 maf, storage equalization will be made from Glen Canyon Dam in the summer of 2002, with total releases for the year then being somewhat higher than 8.23 maf.

Lake Powell Elevations, Based on Feb 2002 Final Forecast (*Attachment 7f*). If there is not sufficient water in the upper basin, then equalization is turned off. We are not too far from that right now. Tom said they are looking at a process for implementing specific interim criteria on 602(a) storage, but there is nothing in place right now. Reclamation has a proposal from the Basin States through the interim surplus criteria process. One of the provisions the Basin States agreed to is that equalization releases from Lake Powell will not be made if Lake Powell is projected to end the water year below elevation 3630 feet. Reclamation has done some modeling to see how the system could change based on implementing that little piece. There is very little difference because you don't change the 8.23 only the equalization. It only affects that small component of equalization.

Experimental Flows – Steve Gloss passed out copies of his PowerPoint presentation (*Attachment 8a*). Based on the motion that was made at the AMWG meeting on Jan. 18, 2002, Steve said there is a fairly short time frame to respond. He passed out a memo dated Feb. 15, 2002, with two attachments, 1) updated draft of recommended flow scenarios, and 2) document which captured questions & answers during the Feb. 8<sup>th</sup> conference call (*Attachment 8b*).

Adjourned: 5:10 p.m.

**Technical Work Group Meeting  
February 27, 2002  
Phoenix, Arizona**

**Presiding:** Kurt Dongoske, Chairman

**Committee Members Present:**

Robert Begay, Navajo Nation  
Perri Benemelis, ADWR  
Kerry Christensen, Hualapai Tribe  
Dave Cohen, Trout Unlimited  
Wayne Cook, UCRC  
William Davis, CREDA  
Brenda Drye, So. Paiute Consortium  
Norm Henderson, NPS/GLCA

Rick Johnson, Southwest Rivers  
Robert King, UDWR  
Bill Persons, AGFD  
Randall Peterson, USBR  
Nikolai Ramsey, Grand Canyon Trust  
D. Randolph Seaholm, CWCB  
Robert Winfree, NPS/GRCA  
Michael Yeatts, The Hopi Tribe

**Committee Members Absent:**

Jonathan Damp, Pueblo of Zuni  
Christopher Harris, CRBC  
Amy Heuslein, BIA  
Nancy Hornewer, USGS  
Matt Kaplinski, GCRG

Phillip Lehr, Colo. River Comm./NV  
Don Metz, USFWS  
Clayton Palmer, WAPA  
John Shields, WY State Engineer's Office  
John Whipple, NM Interstate Stream Comm.

**Alternates Present:**

Paul Barrett  
Wayne Cook  
Andre Potochnik

**For:**

Don Metz, USFWS  
John Shields, WY State Engineer's Office  
Matt Kaplinski, GCRG

**Other Interested Parties:**

Nancy Coulam, USBR  
Jeffrey Cross, NPS/GRCA  
Dave Foster, Lees Ferry  
Steve Gloss, GCMRC  
Barry Gold, GCMRC  
Loretta Jackson, Hualapai Tribe  
Leslie James, CREDA

Dennis Kubly, USBR  
Ruth Lambert, GCMRC  
Ted Melis, GCMRC  
Steve Mietz, GCMRC  
Mary Orton, The Mary Orton Company  
Tom Ryan, USBR

**Recorder:** Linda Whetton, USBR

**Convened:** 8:18 a.m.

### **Meeting Opening and Administrative Items**

Kurt welcomed the TWG members, alternates, and general public. Attendance sheets were distributed.

**Experimental Flows (continued).** Barry introduced several graphs that he and Tom Ryan worked on last night (*Attachment 9a*). Comments and Questions were recorded on Flip Charts (*Attachment 9b*). Barry reviewed the process for the AMWG mailing and gave a PowerPoint presentation on things to be addressed in Version 2.0 (*Attachment 9c*).

Kurt questioned the TWG members about the proposal for flat flows. Bill Davis expressed reservation and wasn't sure his AMWG member would agree. Wayne also had some reservations.

AOP Dates: (probably held in Las Vegas)

May 15

June 13

September 19

### **Action Items/Assignment Dates:**

March 15, 2002 – GCMRC will mail out Preliminary Experimental Design to the TWG

March 20, 2002 – The TWG will hold a conference call to address additional concerns and GCMRC will prepare a Final Report for inclusion in the AMWG meeting packet.

March 22, 2002 – The meeting packets will be mailed to the AMWG.

**Report on Ad Hoc Committee for Strategic Planning (AHCSPP)** – Mary Orton presented the tasks the AMWG assigned to the AHCSPP at their last meeting:

1. Development of a process and timeline for prioritization, in order to complete the Strategic Plan.
2. Development of a process and timeline for completion of Information Needs and Management Actions, in order to complete the Strategic Plan.
3. Development of a process and timeline for identification of which MOs are in and which are out of the AMP, in order to complete the Strategic Plan.
4. Consideration of the addition of a new MO 7.3, "maintain suitable water quality in GCD releases to meet downstream Management Objectives."

She referenced her memo to the TWG dated Feb. 20, 2002 (*Attachment 10*) and informed the TWG what the AHCSPP was recommending under each task. The members had the following questions and concerns:



- Why 24 votes and 1 vote/goal?
- Why sequence MOs rather than RINs and MAs? (CMINs have to occur and would be excluded)
- Some resources are implicitly important due to their non-renewal nature.
- Define “in” and “out” of AMP-pay source?
- Should we sequence resources based on their status/condition or should we sequence questions about the resources?
- Should MOs be determined to be in or out of program (AMP) before sequencing?
- SP ad hoc to consider TWG comments.
- Add motion to March 20 TWG phone call, agenda to readdress issue, pending additional SP and ad hoc discussion.

**ACTION:** TWG should send comments to Mary Orton ([mary@maryorton.com](mailto:mary@maryorton.com)) by **March 7, 2002**.

**Non-native Fish Control** – Rick Johnson said the group was charged with four things to do from the AMWG:

1. Evaluate methods to remove non-native fish, except rainbow trout, from Bright Angel Creek in 2002
2. Evaluate methods to remove non-native fish from the LCR in 2002
3. Gather public input and conduct public education and environmental compliance on long-term removals in #1 and 2 above,
4. Establish a TWG ad hoc committee to develop a 2002-2006 research monitoring and management work plan for meeting MO 2.5 and 2.6 of the August 17, 2001, Draft of the AMP Strategic Plan. The TWG will report back to the AMWG at the next meeting,

They started with #2 because that was the cleanest having to do with the feasibility analysis for catfish and carp in the LCR. All the steps Bill wanted out, that he was in the process of doing, made sense for the feasibility of work this year so they went to the second one which was in Bright Angel. That one was a lot more difficult as there is less correspondence between what concerns were and what their guess was on available funding. They cut the scope back down to evaluating the weir and shocking in Bright Angel but probably not doing the survey work because they likely don't have the funding to do that. They're referring #3 back to the AMWG Public Outreach Ad Hoc Group to see if they can facilitate a multi-agency approach in doing the public relations work. They did not get to #4 because they ran out of time. They are going to try to get that together via e-mail or conference call starting next week. They are not at the point of providing a recommendation at this point in time.

Bill Persons added that the plan will be to try and catch catfish and carp in the LCR starting in April in conjunction with the HBC monitoring with the Fish and Wildlife Service. They'll go back and bait the nets in June because they won't be interfering with the other monitoring efforts. They will try and get a count, look at size composition, diet, and report back to the TWG four weeks after the field trip. The money is there – Reclamation will send to GCMRC and then he'll work with them.

Jeffery Cross said that GCMRC and the NPS are going to look at how they might contract the work out as there have been a lot of groups who have expressed interest in doing the work. Once they get a contract out in the next several months, the contract will start the permanent process with the NPS to accomplish the work and testing the feasibility of the weir.

Persons suggested three options of disposing of the fish: 1) if they don't catch very many fish, they can be cut up and used for bait, 2) if they catch a few more, cut them up and throw them in the river, and 3) put them in 5-gallon buckets with rock salt and sling them out. If they start taking tons of fish, then they're going to have a problem. He's hoping that since they're only doing it for two weeks at a time (before they get a chopper coming in), they will be able to sling load out if they need to. He said disposal is still kind of a touchy issue and feels that should be part of the evaluation as well.

Randy asked what the group had decided and what they are going to tell AMWG so it can be put on the April AMWG agenda. Rick said the ad hoc group would prepare a report and present to the AMWG in April. The full report will be given to the TWG at the May meeting.

**ACTION:** Rick Johnson will provide an update on the group's proposed feasibility plan and other work at the next AMWG meeting to be held on April 24-25, 2002. He will provide a full report to the TWG at the May 16-17, 2002, meeting.

**FY 2004 Budget** – Randy said he and Barry would present what was different from this budget and those presented in previous years (*Attachment 11a*) and take any comments, concerns, questions today and then meet with the Budget Ad Hoc Group over the next 2-4 weeks to discuss the budget. They would then work with GCRMC to address concerns raised today, revise the budget, and send it back out to the TWG in April. The TWG would then review the budget at the May meeting and approve it in preparation for the AMWG meeting in July.

For his part, the funding has been continued as in the past for administration, tribal participation and consultation, compliance documents, contract administration. Rick Johnson asked why there were no dollars tied to the Temperature Control Device. Randy said no power revenue dollars will be spent on the TCD, either for analysis, compliance, or construction because it is funded out of appropriations. In the future, this line item will be dropped from the budget.

Randy said there was a change in the Experimental Flow Fund. The GCMRC will be asking for \$500K in USGS appropriations and the USBR is planning on using \$500K from power revenues to fund that work.. This is a needs based budget and so we may not get the funding to do all the work. The Budget Ad Hoc Group will determine what needs to be deferred, prioritized, etc. They are looking at having \$1 million in the fund in 2004.

Nancy Coulam said that the Programmatic Agreement portion for 2004 is tracking right along where it should be according to the PEP and the approved recommendations from the PEP. There are three

items: 1) Reclamation administration, 2) the completion of the Historic Preservation Plan, and 3) treatment and monitoring implementation. She said the PA and the TWG Ad Hoc Group made a recommendation that a treatment plan be prepared and also that a separate monitoring plan be prepared. The PA and the TWG Ad Hoc Group thought that didn't make sense and have recommended that those be combined into one treatment and monitoring plan. The completion part of the HPP has a number of little sub-plans that are within it but 2004 should bring completion of the plan.

Kurt asked if the money identified for treatment and monitoring implementation could have a part go toward the contract to develop a treatment and monitoring plan, a part towards some type of resolution of adverse affects on sites that are being threatened in 2004, and a part could fund a base monitoring effort by the Park. Nancy said she had no definitive answers and wasn't sure when the contract would get awarded. She said a lot of the work depends on the research design and how much of a direction it provides the contractor for the treatment and monitoring plan.

Barry passed out a list of changes (*Attachment 11b*) and a revised budget (*Attachment 11c*) and proceeded to explain those changes:

- V.A.1. Monitoring & Inventory of Terrestrial Resources. An RFP was awarded in 2000 which will come to conclusion in 2003 and so a new RFP will be issued to start the next phase. They hope to refine the technique for the monitoring and inventory terrestrial resources in the first three years. The next RFP will be for five years for monitoring.
- V.A.3. New Research in Terrestrial Ecosystems. This is intended that by 2004 to really start looking at the Old High Water Zone issues. This was approved in 2003 and they are asking for \$100K of appropriations from the USGS. That commitment came from the USGS at the last AMWG meeting.
- V.B.2. Monitoring Downstream Fish. The first RFP was awarded for three years and it comes to a close in 2004. There is a going to be a little bit of refinement of that work and a new RFP will be issued for five years of monitoring downstream fish.
- V.B.4. Monitoring Lees Ferry Trout. The first two years of the initial proposal will be completed with Arizona Game and Fish Dept. They will be evaluating for any additional adjustments and a new RFP will be issued in 2004 for five years.
- V.B.8. Captive Breeding Program Feasibility. As GCMRC has started to watch the HBC numbers decline and being responsive to the RPA on second populations, they felt it was time to look at what would be required if the program decided to do captive breeding, either from stock that might be used to establish a second population or a refugia is stocked. The idea would be to bring in some geneticists to help make some recommendations.
- V.C.2.a., b, c, - They are proposing to fund all from appropriations. Ted Melis wants to look at suspended sediment transport and would like to install some automated pump samplers to get a better refinement on sediment budget, and then install some sensors on the Paria River that would give them advance warning that there would be some inputs coming down so if they wanted to move to some kind of flow, they would get a signal to begin something.

- V.C.7. LCR Integrated Studies. There are a whole range of hypotheses about what is happening with HBC and they should have by the end of the year the hydrologic record on the LCR digitized and available for some more detailed analysis. They would like to take an historical look at what has been happening with the hydrology in the LCR as groundwater depletions have been produced and the storage capacity in the watershed has increased, it may have changed the inflows.
- V.D.7. Cultural Affiliation Study. Ruth Lambert said this is the one new project in the Cultural Resource area. The project is conceived to consist of tribal information, histories, and oral histories on their affiliation to the project area in the CRE. She views it as a companion project to the research design and a component of the HPP that was recommended through the PEP process.
- VI.B.5. Decision Support System. This has been in two previous budget requests that were zeroed out but as they started to go through the AMWG planning process they realize that their data sources are becoming rich enough in terms of modeling capabilities and some of their refinements. It would really be efficient if they could create a decision support system to link the data sources together with models and thus have a more efficient tool in order to ask the appropriate questions. A lot of the GIS and remote sensing and GIS has helped give them the spatial character that they need along with a lot of the more detailed modeling in both the fisheries area by putting together with historic trends and doing some habitat based monitoring and the kind of increased refinement that Ted is getting with Steve Wiele's work. They are proposing that as you get into more complicated experiments and perhaps ask some questions on shorter time frames, it might be a good time to really think about investing in this decision support system so we have a rigorous framework for asking these questions.
- They will also be asking the USGS for \$500K for the Experimental Flow Fund.

Barry explained the budget breakdown and said the TWG may want to consider two things:

- 1) Do they agree with the new studies that are proposed?
- 2) Do they agree with what funding is being sought out of appropriations?

The TWG provided the following comments:

- Delete TCD line item since no AMP funds are used for this
- Question about nature of monitoring and treatment implementation
- PA → \$400,000 to fund (potentially) planning document, treatment of adverse effect, and monitoring
- Identify links to MOs

**ACTION:** TWG members should provide any comments they have on the proposed FY 2004 Budget to Randy Peterson and Barry Gold by March 15, 2002.

**ACTION:** The Budget Ad Hoc Group will meet later in March to discuss prioritizing the FY 2003 work needs and review the proposed FY 2004 AMP Budget. TWG approval of the 2004 budget will occur in May and the AMWG will recommend the budget in July.

**Information Needs** (*Attachment 12*) – Barry said they went through a lot of effort to get the INs finalized and bring forward to the January AMWG meeting with hopes of getting them adopted and that additional issues would be addressed in the process of sequencing and developing the GCMRC Strategic Plan. When Mary raised the issue this morning, at that point there were three questions that arose and one was: Did the proposed new MOs make sense and were these three INs dealing with non-use values? He discussed with Randy and it was decided to get feedback from the TWG on which INs they had the most concerns about. GCMRC would then separate them out for further discussion, create a process for discussing the issues and concerns around those INs, bring them back to the TWG with whatever the proposed resolution is and then move forward. He would like to get guidance from the TWG on adopting the remainder of the INs.

The TWG provided the following comments:

- Comments at AMWG meeting should be considered/included
- Need to revert back to adopted S.P. document for MO's and IN's → use approved MO #'s
- Clean up size classs for HBC
- Proof document
- MO's under goal 12 not acceptable
- How we address sequencing of target levels
- Targets should meet "picture" of ecosystem and "IN/OUT" of program
- Should be no INs under Goal 3
- Need more discussion on MO 7.3 proposed for water quality

#### Process

- Identify big concerns (RIN 12.1.1 – 4, RIN 3.1.1, MO 7.3, INs under Goal 10)
- AHCSPP to meet to resolve big concerns - > issue papers
- Bring S.P. results to TWG meeting prior to sequencing
- Order to targets / define IN/OUT of AMP
- Need better definition of "marketable capacity," "reserve group obligations"
- Need more discussion on water quality goal before going on to 7.3

Barry wondered if something needed to be added to the sequencing step, to actually have a point where something is written about some of the INs, where they are not only sequenced but there are expectations that they will either be done by this program or not. He feels there's been some inconsistency because someone will want something out, someone will want something else in, and then you have to figure out who will fund the work. It isn't a level playing field because opportunities come up to get information to make the program move forward, and they take advantage of those opportunities.

Barry said if the big concerns could be identified, then the AHCSPP could be tasked to review and bring a proposed resolution back to a future TWG meeting. He felt it was important to get that done before moving into the sequencing process that Mary described. He also suggested adding two elements to

the sequencing process: 1) identify some order of targets that we want developed, and 2) identify/clearly label which of the INs are the responsibility of this program and which of the INs we would expect to be done by others. He asked if the TWG wanted to lay out a timeline for doing that.

**ACTION:** Comments on any “big issue” INs should be mailed to Mary Orton by March 15, 2002. The AHCSP will discuss and provide comments to the TWG on the March 20<sup>th</sup> conference call.

**ACTION:** The TWG Members should prepare issue papers on the following if they have concerns: RIN 12.1.1-4, 3.1, MO 7.3, and the IN’s under Goal 10.

Norm said before bringing the INs forward with comments, the philosophic distinction between what the program is and isn’t should be settled. He feels the TWG is not getting to the fundamental issue of whether this program is a broad umbrella and it doesn’t matter who funds it or is the AMP only what’s funded. He said that if the TWG could get that distinction made then those things fall out immediately.

**ACTION:** Norm Henderson will write a White Paper on the question of whether the Adaptive Management Program is a broad umbrella program or a program that addresses only issues funded from AMP funds.

### **Future Agenda Items:**

May TWG Meeting:

- MO or IN
- Aquatic PEP Report
- Cultural Resources PEP Report
- SCORE Report
- Non-native Control recommendation
- GCMRC Strategic Plan
- 2001 Monitoring results
- Exp. Flows update & discuss long-term exp. Flow program
- ad hoc updates (02-03 exp. Flow, budget)
- 5-year Lake Powell Program
- Status of 2000 LSSF reports
- Approval of 2004 budget draft work plan, recommendation to AMWG to adopt
- S.P. Ad Hoc Committee Process for sequencing and the INs

Adjourned: 3 p.m.

**Next Meeting:** Thursday, May 16, 2002 (9:30 a.m. – 5 p.m.)  
Friday, May 17, 2002 (8 a.m. – 3 p.m.)

**Location:** Bureau of Indian Affairs  
2 Arizona Center  
400 N. 5<sup>th</sup> Street  
Conference Rooms A&B  
Phoenix, Arizona

**Hotel Block:** Holiday Inn Express & Suites  
6<sup>th</sup> and Fillmore  
Phoenix, Arizona  
602-452-2020  
Rate: \$79 + tax  
**BLOCK CLOSES:** April 22, 2002

## 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: Lower 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	WY - Water Year (a calendar year)
IEDA - Irrigation and Electrical Districts Association of Arizona	