

**Glen Canyon Dam Adaptive Management Work Group (AMWG)  
Minutes of January 11-12, 2001 Meeting  
Phoenix, Arizona**

**Conducting:** Stephen Magnussen, USBR (Chairperson)  
**Recorder:** Linda Whetton, USBR

**FINAL**

**1/11/01 Convened:** 9:40 a.m. **Adjourned:** 5:25 p.m.

**Welcome and Introductions:**

Stephen Magnussen introduced himself as the Secretary's Designee and Chairman of the AMWG. He welcomed the members, alternates, and visitors to the meeting.

**Roll Call:** The members introduced themselves and identified whether they were an appointed member or an alternate. Steve recognized Kathleen Wheeler (Office of the Assistant Secretary of Water & Science) and said she would be present for the morning session. A quorum was established and attendance sheets were distributed (*Attachment 1*).

**Administrative Items:**

1. AMWG Charter. Steve announced the renewal of the AMWG Charter (*Attachment 2*). It was signed by Secretary Bruce Babbitt on January 10, 2001, and filed the same day.
2. AMWG Nomination Letters. The re-appointment letters naming the members to the AMWG have not been signed but should be within the next few weeks. The appointment letters for the new members have also not been signed, however, representatives from those organizations (FWS, NPS, and State of Colorado) will be serving as alternates at today's meeting.

**MOTION:** Recommend approval of the July 6-7, 2000, meeting minutes.  
Motion seconded and carried. Minutes adopted.

**Agenda Changes.** Since Kathleen will be leaving early, Steve suggested the budget discussion be moved to follow the legislative updates. Bruce Taubert mentioned bad weather is predicted for later today and requested some agenda items for tomorrow be moved to later today. Steve agreed and recommended today's meeting go until 5 p.m. and include basin hydrology and the LSSF update.

**Executive and Legislative Update** - Stephen Magnussen

3. Nomination of New DOI Secretary. As a result of the election and some of the delays, the transition process within the Department is a little behind. Gale Norton has been nominated by the President to be the new Secretary for the Department of the Interior. The confirmation hearings are scheduled for later next week. There are a number of names being mentioned for the next Assistant Secretary for Water and Science as well as the new Commissioner for Reclamation.
4. Committee Changes. There are a lot of personnel changes in the various committees, subcommittees, and staff offices. Consequently, the AMWG should pursue briefing the new members on the Adaptive Management Program.

5. Effects of H.R. 4733. Steve said this would be discussed later as part of the budget presentation but the effects of H.R. 4733 is that it put a cap on the amount of power revenues that can be used in the AMP. It has placed a constraint on the program which will have to be addressed as future budgets are prepared.

### **Discussion of H.R. 4733** - Randy Peterson and Barry Gold

H.R. 4733 was part of the FY 2001 Energy and Water Development Appropriations Bill. Last year there was language included in that bill which influenced the funding for the AMP. It did not cap the funding available for this program but addressed the funding from power revenues. The level was set at \$7.85M in 2001, indexed thereafter for inflation using the Consumer Price Index. It further defined that programmatic agreement and biological opinion issues were specifically to be included in the discussions of this program and in the budget. It also prohibited the use of voluntary power contributions on a contingency basis, although it did not prohibit those types of contributions or the seeking of appropriations from other sources in order to augment the power revenue funding source.

A number of members expressed their dissatisfaction with how H.R. 4733 was introduced and passed without an endorsement from the AMWG and questioned if there was a problem in the AMP process:

- Stakeholders received no advance notice from Interior/Reclamation on HR 4733
- There was no AMWG meeting called to discuss and consequently no AMWG consensus or recommendation on the proposed bill
- Concern about one stakeholder going outside the AMP process and how to keep it from happening again
- AMWG was involved in the institutional home for GCMRC but omitted entirely from this issue. Why?
- Secretary did not respond to stakeholders who wrote letters to the Secretary of the Interior opposing the funding cap
- As a FACA committee, should AMWG be involved in legislative matters?

Steve acknowledged that the stakeholders should have received responses to their letters and told them that having been in the discussions that took place, all their letters were reviewed and made available to personnel on the Hill as well within the Department. He assured the members their comments and suggestions were considered in the process. He is hopeful the letters will be sent out within the next few weeks and apologized for the delay.

Responding to a number of members requesting to hear from CREDA as well as understand the history behind HR 4733, Cliff Barrett said his motion at the last AMWG meeting was not to cap the program, but to adopt the AMP budget as a ceiling and have the GCMRC go back and re-prioritize their work. This was to ensure that the basic monitoring was under power revenue funding and not in the appropriations for USGS. He felt it was a very reasonable motion but it was defeated. He reminded the members that the cap was set on the program when Mark

Schaefer transferred the GCMRC from the Bureau of Reclamation to the USGS in a memorandum dated March 31, 2000. As to the genesis of what happened on the Hill, he said Leslie James was back in Washington on another issue and staffers came to her expressing concern about the growth and expansion of the AMP budget. They solicited CREDA's help in preparing some language to put in the bill.

In an effort to keep stakeholders aware of legislative issues, the following suggestions were made:

- Develop better communication between Interior/Reclamation and AMP stakeholders
- Add legislative updates as a regular agenda item
- Bring the advisory body (AMWG) together on future issues (legislation, budget) which will affect the AMP.
- Clarify AMWG's role in legislative matters
- Inform AMWG of budget concerns (time frames)
- Request a legal review of AMWG Charter to see how issues fit into the AMWG charge
- Consider establishment of a needs based budget
- Renewed stakeholder commitment to the AMP, recognition of how far we've come in having dialogue with each other, the strength, not the fragility of the AMP
- Review the process of discussing AMP issues - ensure it's not broken

Given the concerns surrounding how legislation was proposed and what AMWG should do in a similar situation, Steve suggested a group be formed to address the issues and bring a motion to the next AMWG meeting. He asked Amy Heuslein to chair the group and asked for volunteers. The following people will assist Amy: Pam Hyde, Rick Gold, Ted Rampton, and Bruce Taubert.

**Action:** Amy and her group will prepare a motion relative to the above concerns and present to the AMWG at tomorrow's meeting.

Randy said he and Barry saw four major effects from H.R. 4733:

1. There needs to be better communication between the adaptive management process and the Department of the Interior. New language was written into the Charter stating a report from each meeting will go to the Secretary with a summary of the recommendations made.
2. The budget cap may change the budget process. Every year concurrence has been sought on approval of the budget bottom line. With a fixed amount from power revenues and merely an appropriations request, this approval may no longer be needed.
3. Because of the elimination of power revenues for contingency funding, the ability to conduct experiments will be different in the future. An additional source of funding, in addition to the power revenue funding, will probably be required.

4. This will eliminate the line between the administrative part of the budget and the scientific part of the budget. They intend to address the AMP budget holistically. If some money is not required in any given year for administrative costs, it could be moved to the monitoring and research portion of the budget.

Steve said he will commit to increasing the communication between the AMWG and the Secretary.

Bruce Taubert asked for clarification on responsiveness to experiments. He thought that part of what we did was to conduct experiments and that that was in the Act, the experimental nature of this process, and see if we may have a budgetary issue that keeps us from meeting the requirements of the Act. Randy said the effect of reduced funding may have some impact on our ability to conduct experiments. In the 1996 BHBF test, the science costs were in the neighborhood of \$1.5M. In the 2000 LSSF test, the science costs were approximately \$2.5M. The standard monitoring program that will be completed within the next year for the GCMRC is going to consume much of its budget so there is not a lot of flexibility to move other money toward some type of experimental flow research. It's important to establish from the start that those monitoring programs need to be consistent and stable across time so we can detect changes and trends that result from the collection of monitoring data.

Rick Gold said if we want to be prepared for some kind of experiment every year or every other year, we have to start factoring that into the budget. He suggested that if the experimental flow tests are required on any kind of regular basis, they could be part of the base request. If there are no year funds which can be accumulated, then it's a matter of getting appropriations for two years and knowing you will spend them in the third year.

Kathleen Wheeler stated the fundamental issue is how to fund and to determine what things absolutely need to be funded. To try and build up a fund is not totally realistic. If you provide a well supported budget and can justify it, you may get the money.

**AMP Budget.** Randy passed out copies of the GCD AMP budget proposed for FY 2002 (*Attachment 3*) and made the following points:

- Item 1C - No money has been spent on the Science Advisory Board as it has not been officially established. There is a very small amount targeted for future FACA administration but that is still uncertain.
- Item 1E - There are no funds budgeted for the Temperature Control Device because those funds come from appropriations through Reclamation's budget,
- Item 1F - Contract administration is substantially less than what was budgeted for 2001 and 2002 and it could well be that there could be some funds in 1F that could be transferred to other program activities. They had some difficulty tracking 2000 costs and actually have \$50,000 more in charges but are not sure which contract it goes against. It looks like the AMWG and TWG administrative expenses are in the right range.
- The budget description of Native American consultation was shifted to a separate line item. In the past this has been funded from the PA Budget.

Item 2 on Native American Involvement under the 2002 budget shows \$325,000 of power revenue funds that are being allocated to tribal consultation. In the past their needs have been identified as \$400,000; the difference is the expectation that we will get \$75,000 in appropriations. The request for additional funding for the tribes from appropriations is currently underway and a letter is being written which will allocate a share of this cost to each of the Federal agencies involved in this program, and it may be substantially more than \$75,000. We should know in the next month or so if that request is successful. If it is, that would free up the power revenue portion of 2A again for transfer to other program activities. Last year the Assistant Secretary for Policy, Management, and Budget issued a similar letter allocating to each Interior AMWG agency their share of \$15,000 a piece. The letter would probably take the same format but may have a higher dollar value this year.

Leigh Kuwanwisiwma questioned how the tribes were factored in under 3A. Randy referred him to a spreadsheet (*Attachment 4*) which details the preparation of the HPP and addresses how to treat cultural resources and their preservation in the Grand Canyon. Following the Protocol Evaluation Panel (PEP) Review, the PA group met and laid out a plan for accomplishing the 11 recommendations provided by the PEP panel. It's structured to be completed by FY 2003 within the existing annual PA budgets of \$573,000. When that 3-year effort and the preparation of the HPP is completed, there will be a clear roadmap in terms of how to approach cultural preservation in the canyon and certainly the tribes are involved in every step of the way as PA signatories. In fact, the tribes are being asked to help prepare some of the documents required as part of the HPP. Randy also passed out copies of a more detailed narrative of the specific PA activities. (*Attachment 5*).

GCMRC Budget - Barry Gold referenced the memorandum dated January 5, 2001, (*Attachment 6*) which included three budget attachments he will address today. He started with the 5-Year Budget Report and explained that the budget reporting from the GCMRC is more detailed in response to the request for more information. They show actual expenditures for FY 1998, 1999, and 2001, what is budgeted for FY 2001, and the proposed budget for FY 2002. Barry pointed out that GCMRC has changed how projects are structured so when you examine the detailed project accounting, things that had been broken apart are now combined in some cases.

Barry directed the members to look at the GCMRC Program and Operations Budget FY-2000 Status of Funds document. He pointed out that the actual budget for 2000 was \$6,229,000. They had \$1.76M in carry over from 1999 to 2000 from science activities that weren't obligated so the total budget for FY 2000 was \$7,405,900. They spent \$5,860,034 on the annual work plan activities and almost \$1M to support the LSSF test. In 2000, they also finished a review of all the contracts that had been put in place under GCES and GCMRC, making sure the old contracts were closed out.

The LSSF Status of Funds table is the cost accounting for the LSSF. He pointed out is that they received supplemental funding to carry out the monitoring and research. They received \$2.4M of power revenues from WAPA and \$100,000 from Reclamation. As already mentioned, GCMRC used carry over funds for the LSSF work. As part of the LSSF, they had budgeted for a

science symposium, tentatively scheduled for April, at which time the scientists will present their findings. GCMRC wants to produce a contributed volumes to distribute all the LSSF findings.

Barry passed out copies of a cost account report (*Attachment 7*). The GCMRC had been asked to provide what it actually costs to do the work - GCMRC salaries, travel costs, contract costs, logistics costs, survey support costs, and capital equipment costs for specific projects. The last page indicates how GCMRC staff spend their time. Bruce said the AMWG had questions a couple of years ago about where contract dollars were being spent and how the GCMRC staff was spending their time, as the AMWG was trying to make important budget decisions. The smaller the budget gets, the more important a document like this becomes. It was the feeling among several AMWG members that this type of detailed report wasn't really necessary. While it might be beneficial for Barry to know how his staff spends their time, the AMWG didn't feel the information was needed.

**GCMRC FY 2002 - M&R Work Plan (Attachment 8)** - Barry said the process they went through for the work plan was they got AMWG approval of the bottom line in July 2000 and then worked with the TWG in developing the work plan. The GCMRC used the current PEP recommendations to make changes in program activities, constructed a draft budget, then looked at the power revenue funding cap they had, and determined it was not enough to do all the work they had planned. Thus, they are seeking \$1M in appropriated funds to help support the activities described in the work plan. When GCMRC was transferred from Reclamation to the USGS, the USGS became the most likely candidate to seek those additional funds. Barry went to the USGS and they agreed to include the \$1M in their appropriations request. Barry and the USGS developed a budget request for this amount.

In discussions with the TWG, the TWG wanted the high priority work done first and have requested that work to be funded from power revenues. Barry talked to the Management Team (representatives from NPS, USBR, USGS, AS-WS Office) and they advised Barry to follow the strategy he and the USGS developed. If it turns out that the GCRMC doesn't get the USGS funding, then they will have to go back and re-prioritize the work to be done. That led them to craft the following text "should the appropriated funds requested to support the GCMRC 2002 work plan not be fully funded, GCMRC will first work with the USGS to try and secure the acquired funds using all available budget mechanisms."

Cliff said CREDA's position is very clear that they want the research and monitoring program, which was authorized by the GCPA, particularly the baseline monitoring, to be funded from power revenues so there is no question about what is going to be done every year. Cliff said he's okay with the paragraph as long as they have good understanding of exactly what the process is going to be and who is going to be involved if the appropriations don't come through. The AMWG needs to discuss that.

Rick Gold said there are times that Federal agencies can't reveal what has or hasn't happened at the Bureau level, the AS level, the Dept. Level, or OMB level until the President's budget has

been signed and made public.

The following suggestions were made:

- schedule a meeting or a phone call around the time the budget is released
- after the appropriations bill is signed, have a phone call to discuss
- have a fallback position going in by this group (know ahead of time how AMWG wants to prioritize the budget)
- consider lobbying for more money by non-Federal AMWG members
- get the baseline monitoring done every year
- power revenue funding going to core monitoring and research program
- preserve some flexibility to handle unscheduled events

**MOTION:** Recommend that the Secretary adopt the FY 2002 AMP Work Plan and budget (\$6.576 GCMRC, \$1.399M Admin., + \$1.01M appropriated) for total of \$8.985M.

**MOTION:** Recommend support for the USGS seeking appropriations for the AMP.

**MOTION:** Recommend that Secretary seek funding for AMWG Federal agencies to support tribal participation.

**MOTION:** Recommend that the TWG Process Group be charged to develop and ensure implementation of the prioritization process.

**MOTION:** Recommend that the Secretary seek funding for AMWG Federal agencies to support scientific activities related to experimental flows in FY 2002.

Steve suggested the members caucus during lunch and be prepared to vote on the motions when they return.

**MOTION:** Adopt all five motions.

Motion seconded.

Discussion:

- Dave Sabo: I can't support. I have a cap anyway.
- Rod Kuharich: Concern about experimental flows but will live with it.

**Public Comments:** None

The members voted on the final motion.  
Motion carried.

**Current Power and Generation Issues** - Dave Sabo said a lot of things have been occurring in the utility industry lately which may involve the potential use of Glen Canyon Dam to meet emergency conditions for California. The press had reported that the Bureau of Reclamation and WAPA operated Glen Canyon Dam to meet emergencies in California. The truth of the matter is

GCD was operated one time on September 18, 2000. The Secretary of Energy's Office got a call from California saying that a stage 3 (blackout situation) was imminent. This had been anticipated and there had been a lot of discussions between the White House, California, and the Secretary of Energy's Office, and the President had issued an Executive Order on August 3, 2000, (*Attachment 9*). The order reads, "During power shortage emergencies, it is also important that we increase our generation of power in the west, much of which is supplied to California customers. Therefore, I'm also directing the federal agencies that generate power and the federal power marketing administrations take all possible steps to maximize the power electricity that can be delivered to California." Dave said that made him very nervous because he wasn't sure everyone had a good understanding of what it means when they actually increase the generation and supply it outside of the federal customers.

The Bureau of Reclamation determines the amount of water that is going to be released each year and that decision determines the amount of power generation available to sell to our customers. If they have to increase that generation, they use up a portion of that water during the year and if it's going to go to California, then it's not going to go to their firm power customers and the difference has to be made up somewhere. They are still under contract to their firm power customers to supply a certain amount of energy to them. In anticipation of that, WAPA established a set of criteria (*Attachment 10*) by which they would agree to operate GCD to avoid going into a blackout. WAPA came to find out later that the September 18 release was really an economic emergency. The White House had sent the order back down through the Secretary of Energy for WAPA to increase releases at GCD so they provided 400 megawatts for 4 hours to California. That was water that became unavailable at that point in time for the rest of the firm power customers and he was going to have to purchase energy to make up the difference.

Since that time, WAPA has not been called. There were many close calls and currently there is another imminent stage 3 because of the incoming storm. WAPA is the generation of last resort. Dave also presented some of the history behind the utility industry (*Attachment 11*).

The dilemma is that there is just not enough generation right now to meet most of the demands in either cold or hot periods. Everything has been focused on gas generation. There is a 30% reduction in the reserves this year for this winter and they are anticipating the gas reserves for California will be gone by summer so they're going to be in a difficult situation to meet any generation requirement using gas. The problem is happening all over the west.

Last summer when the experiment was started, they had \$100M in the basin fund, money normally transferred to the Treasury but can be used and then repaid. Prices going into the LSSF experiment were reasonable. He didn't think it would cost more than \$12M, but \$55M was spent through August. Because the prices have been so high this winter, he has spent another \$50M making purchases to get us through the winter. He normally would spend about \$6M a year under normal conditions. Because there is such a cash flow problem, they expect to increase CREDA's rates. They are actually going to put in place a mechanism where if he sees the basin fund is going to go deficit, which he can't allow to happen by law, he will start increasing the amount of money coming in from the customers to keep some money in the basin

fund. What does all this mean to Glen Canyon? We will probably be forced more and more to meet emergency conditions, to look at alternative modes of operation for a lot of the facilities, not just GCD, depending on what the Administration and Congress do.

**Performance Evaluation Survey** - Mary Orton said she received good feedback from AMWG and TWG members relative to her performance as a facilitator for this process. There were two main areas of improvement identified: 1) the need to ensure everyone has an opportunity to speak, and 2) the appearance of a bias on her part. She wasn't sure what bias meant because it wasn't specified. However, both were mentioned enough to warrant her attention and she assured the AMWG she is working on them. She encouraged the members to talk with her personally or make Randy aware of any concerns they have with her role as she wants to continue to improve the process.

**Strategic Plan** - Mary reviewed the agenda for today's meeting: 1) Time schedule for adoption, 2) Approve amendment to Principles, 3) Approve amendment to Goals, 4) Approve qualitative targets, and 5) Review Vision Narrative. The Ad Hoc Committee on Strategic Planning has met more than a dozen times since the AMWG meeting in July 2000 and have done a great deal of work toward completing this by July 2001 so it can have an impact on the GCMRC FY2003 work plan. The ad hoc members include: Cliff Barrett, Kerry Christensen, Wayne Cook, Kurt Dongoske, Any Heuslein, Pamela Hyde, Rick Johnson, Randy Peterson, Andre Potochnik, Ted Rampton, Bob Winfree, Jerry Zimmerman, and Barry Gold.

Mary reviewed the current schedule for completing the Strategic Plan (***Attachment 12***). She informed the members that the Report to AMWG Addendum (***Attachment 13***) is a new document which shows in redline the work that has been done since the meeting packet was mailed to them. The AHC felt the AMWG deserved to see and take action on the qualitative targets as the AHC recommends them today, not something that was three weeks ago when the packet had to be mailed. The TWG has reviewed the changes in detail over the past two days and have unanimously recommended some changes to the qualitative targets and other aspects of the MOs. The documents they will be using today are the Recommendations from the TWG (***Attachment 14***) and the Addendum. She will be telling the AMWG what the AHC and TWG recommends they do. If there are any substantive questions on what those recommendations are, she anticipates a TWG or AHC member will respond. She will record comments/changes on flip charts (***Attachment 15***) which will go back to the AHC for further revision of the document.

**MOTION:** Motion to adopt the changes.

Motion seconded.

Discussion: Refer to flip chart notes

Public Comments: None

**AMENDMENT TO MOTION:** Move to change Principle 6 (to read: range of operational or legal flexibility).

Discussion: Refer to flip chart notes

Public Comments: None

Voting Results:        Yes = 12        No = 2  
Motion carried.

**MOTION:** Motion to adopt the changes.

Motion seconded.

Discussion: None

Public Comments: None

Voting.

Motion carried.

Steve said that unless there were significant negative votes, he would not count.

**MOTION:** Adopt all the changes to the 12 goals, including #10, including the referral and two suggestions that Sam had for the AHC.

Motion seconded.

Discussion.

Public Comments: None

Voting.

Motion carried.

**MOTION:** Approve qualitative targets for Goal 2, 8 qualitative targets and 3 referrals to AHC, TWG recommendation.

Motion seconded

Discussion: None

Public Comments: None

Voting.

Motion carried.

**MOTION:** Approve qualitative targets for Goal 3.

Motion seconded.

Discussion: None

Public Comments: None

Voting.

Opposed: 1 (Bruce Taubert) Both the native fish and the trout, the target is the level at which trout do not impinge on native fish. I guess for my perspective I'm not sure that's a realistic target because there is a lot that has to go into getting to that target. I think what you do is evaluate the impacts and then look for realistic targets, or mechanisms to accomplish it and then you go into additional dialogue to see how you might do these things.

Motion carried.

**MOTION:** Approve qualitative targets for Goal 4 with the TWG amendment and 2 referrals

Motion seconded.

Discussion: None

Public Comments: None

Voting.

Motion carried.

**MOTION:** Approve qualitative targets for Goal 7 with 2 qualitative targets and a referral to the AHC

Motion seconded.

Discussion: None

Public Comments: None

Voting.

Motion carried.

**MOTION:** Approve qualitative targets for Goal 8 with amended by TWG.

Motion seconded.

Discussion: None

Public Comments: None

Voting.

Motion carried.

**MOTION:** Approve qualitative targets for Goal 5

Motion seconded.

Discussion: None

Public Comments: None

Voting.

Motion carried.

**MOTION:** Move the qualitative targets associated with Goal 6 be remanded to the Ad Hoc for revision based on the input from AMWG that is reflected as a result of yesterday's and today's discussions.

Motion seconded.

Discussion: None

Public Comments:

Loretta Jackson stated the Hualapai Tribe wants to have the place the way it is written because their studies have always shown impacts below Separation Canyon. We fought to do studies below Separation Canyon because it was our thought that the environment and downstream of Glen Canyon Dam was being affected by the operations. The experimental flows in 1996 showed that the dam did have effects on the sediment down below Separation Canyon. We strongly oppose this change.

Voting.

Motion carried.

Mary informed the members that given some of the passionate discussions the ad hoc committee has had on Goal 6, she expects the AMWG will be just as enthusiastic in their discussion. In fact, she said the ad hoc committee anticipates more work will need to be done and are recommending that it be sent back to them for more work before it can be recommended to the

AMWG for approval.

Given the time constraint, Steve asked if the members wanted to continue or discuss Goal 6 at another time. Mary advised they could stop after discussing 6 and said her reason for suggesting was that there were some small groups comprised of TWG members and outside scientists who provided a lot of input on the MOs. The ad hoc committee went through that information and made changes only through goal 6. She thought the AMWG might not want to spend a lot of time on the other ones because they would most likely see more changes. However, she asked the members to read through the other ones and if they had any comments or suggestions, they work with their TWG members to better understand or contact a member on the ad hoc committee for more explanation.

**MOTION**: Goal 6: Approve all qualitative targets with removal of all language after the word “wildlife” in far right column.

- include TWG amendments
- refer other qualitative targets to the AHC

Motion seconded.

Discussion:

Geoff Barnard: I would like to speak against the motion. I think it is an extremely important one. We're under the gun, in a stage 3 oxygen emergency here, and I don't think we ought to gavel this one down.

Dave Cohen: I would prefer we go ahead with my motion. I didn't hear anything that changed. I kept hearing the same repetitive argument.

Bruce Taubert: Just go with the first part of the motion and get rid of all that below “wildlife.” I think we've discussed that until we're blue in the face and then have the group look at the rest of it but I think we still want to have more discussion.

Pam Hyde: I'm feeling railroaded here. I think I made a suggestion about other language that might be ... I think we're trying to hustle out of this room and take a vote on this thing and we haven't finished the discussion. I would like an opportunity to deal with this in the morning and take a vote.

Public Comments: None

Voting Results:        Yes = 8        No = 10

Motion failed.

**Adjourned:** 5:35 p.m.

**Glen Canyon Dam Adaptive Management Work Group (AMWG)  
Minutes of January 11-12, 2001 Meeting  
Phoenix, Arizona**

**Conducting:** Stephen Magnussen, USBR (Chairperson)  
**Recorder:** Linda Whetton, USBR

**FINAL**

**1/12/01 Convened:** 8:00 a.m.

**Adjourned:** 11:30 a.m.

**Welcome and Introductions:**

Stephen Magnussen introduced himself as the Secretary's Designee and Chairman of the AMWG. He welcomed the members, alternates, and visitors to the meeting.

**Roll Call:** The members introduced themselves and identified whether they were an appointed member or and alternate. With a quorum established, attendance sheets were distributed.

**Hydrology Update** - Randy Peterson reported that the basin conditions for the last month have been very dry with a high pressure zone over the basin. As a result, the snowpack integrated average has deteriorated from 92% of normal last month at the beginning of the month to 82% right now. If you compared last month's snow map to this month's (*Attachment 16a*), you would see that most of the basin has dried out. Much of the basin is in the 70's and 60's percent of normal, a few areas of 80. The National Weather Service uses the current snowpack conditions from today and assumes average precipitation and temperature for the remainder of the runoff season through the end of July. They run that through their models which produces a percent of normal runoff. The forecast is usually some type of middle ground between average for the rest of the year and the current snowpack. So if future precipitation is average, current snowpack is 82%, then the runoff is somewhere between the two. The inflow estimated for the entire water year right now is about 89% of normal. There is about 70% of the snow accumulation season remaining through July so there is still a lot of time for this to change.

A second handout (*Attachment 16b*) depicted the estimated releases for the remainder of the year. The probability of a low 8.23 maf release year occurring is somewhere in the 25-30% range. The pattern of this being a 8.23 maf release year is very typical when one would see it coming. Last year if we were forced to release a 8.23 maf, since we made higher releases in the fall, we would have made much lower releases the remainder of the year. The message is that there are a lot of different ways for an 8.23 maf year to be released. The average release year is in the order of a 10.5-11 maf. You can see the releases up through May are going to be following an 8.23 release schedule. We have quite a bit of storage in order to accommodate any future increases in the forecasted runoffs. That's why the BHBF likelihood is rather low.

**AMWG Update on LSSF (1/12/01).** Barry Gold said he wanted to provide some updated information on the flows that were run last summer. He reminded everyone that this was a test in the concept, that, in fact, they did not run the full hydrograph from the flows in the SWCA

report on endangered fish flows. The hydrograph runs from March 1 through February 28 and what they ran this year was really from March 1 through the end of September. His preference was to wait until spring before presenting this information until they had the reports back from the scientists so he stated the information was preliminary at best. He proceeded with a PowerPoint presentation (*Attachment 17*).

**Report by Experimental Flows Ad Hoc Group** - Randy Peterson stated that as a result of the 1995 Biological Opinion, Reclamation has been tasked in one of the RPAs with developing a program of experimental flows. Those experimental flows are designed to test the effect of dam releases during low release years on the endangered fish. The flow program is not defined but the concept in the opinion calls for steady flows, high in the spring and low in the summer. Last year, of course, was a test of the concept of the idea and he feels it was extraordinarily valuable even if it was just to learn how to monitor those types of flows. The GCMRC is currently in the middle of re-evaluating and testing their long-term native fish monitoring program and recently had a stock assessment workshop. Last year was valuable in helping that effort to test some of the new ideas and perhaps to explore some additional things that might be monitored that haven't been monitored in the past. The TWG also believes there is a need to develop a program of experimentation on BHBF's. We've had one spike flow or BHBF event and a lot was learned from that but there are still a lot of questions, particularly with respect to higher magnitude and shorter duration types of events. The ad hoc group was assigned those two tasks. Accompanying the Biological Opinion flows is the need to define triggering criteria or determination criteria for when such an event might occur. (Refer to Experimental Flows Ad Hoc Group Meeting Minutes - *Attachment 18*). They think this job is going to be much more complex than the BHBF triggering criteria. They expect to have this assignment completed this year and will be meeting in the next few months and by the July AMWG meeting will have something to recommend to the Secretary in terms of at least the BHBF portion of these programs of experimental flows.

The ad hoc group came up with several conclusions: If a BHBF were to be triggered this year, that we would go ahead and run one, even though there is no money for experimental flow monitoring and research. The group concluded that since these are triggered very rarely and that if we had the opportunity, we shouldn't lose it. They realize that they don't know everything about spike flows but do know enough that given the current status of the sediment storage, that it would be expected to be a positive event. The group then addressed the habitat maintenance flows issue. They saw an extraordinarily interesting event last fall and in some ways many of them have been pushing for the concept that if these tributary flow events were to occur in the summer or fall, that we should do a HMF to move the sediment from the main channel and put it into the eddies and up to the 30,000 cfs level on the channel margins. Otherwise, with the half life of this sediment input unless you take action quickly with some type of HMF, it's their opinion that you lose the sediment.

Barry pointed out that when the EIS was written, the concept was that if you got these periodic inputs of sand from the tributaries, it was stored in the main channel, and after a couple of years then you could run a BHBF or a HMF. In the more recent analysis of the data the science

suggests that these inputs move through the system rather quickly and so if you really want to conserve it, it's probably a different mix of HMFs to bank it and then BHBFs periodically to really move it up higher. Regarding the Biological Opinion flows, the group's sense that there were probably several options for this type of approach: (1) run a repeat of this last year's flow, (2) to have a typical monthly release pattern but with fluctuations, and (3) last year's monthly flow pattern but with fluctuations. They sought Rich Valdez' opinion on the issue because he and SWCA prepared the report for the GCMRC which is now initially forming the basis for this program. What they called for was an initial year of monitoring ROD flows under existing monthly volumes for an 8.23 release year and then having a couple of years following that of high steady spring flows and low steady summer flows in order to compare the two for some type of cause and effect comparison. The experimental flow ad hoc group considered with GCMRC the capability to measure those Biological Opinion flows. When they had that discussion, GCMRC's recommendation was to let them finish their revision of the long-term native fish monitoring program before you start experimentation. They were set back a year because of the 2000 low steady summer flows and didn't want that to happen again. Between the discussions of the ad hoc group, TWG, and GCMRC, it was determined that if we had an 8.23 maf release year this year, it would be Reclamation's intent to run ROD operations. If a BHBF is triggered, Reclamation intends to run one. If there are fall tributary events, we will conduct a HMF and will try and find enough money to at least identify the sediment impacts for both those events. If it's an 8.23 maf release year, they will run ROD operations.

Rick Gold added that WAPA has been in the middle of a rate increase process. There has been a comment period which he believed the first cut was made in early December. Because Reclamation knew the ad hoc group was working on the science behind these tests, they asked WAPA to delay the closing date of that comment period which they did. In mid-December after this first experimental flow group met, Reclamation looked at the data and advised WAPA that it was not likely Reclamation would run steady flows through this year (*Attachment 19*). They did that to give WAPA the maximum amount of information possible for their rate adjustment process.

**Status of TCD and Interim Surplus Criteria** - Dennis Kubly said it was about a year ago that a presentation was done on the TCD, followed by a workshop which discussed the issues surrounding the TCD. One of the objectives that hasn't been met is the development of a research and monitoring plan to assess the effects of the TCD if the decision were made to construct and operate. He reviewed some of the past history via a PowerPoint presentation (*Attachment 20*).

The schedule is to have a Draft EIS completed in March and a Final in June. He plans to have another workshop in January 22-24, 2001, with a smaller group of people as a TCD Expert Panel Workshop. He will provide results from that workshop at the next AMWG meeting.

**Interim Surplus Update** - Randy said there is a new publication of an Environmental Impact Statement that is now final. It's the interim surplus guidelines or criteria for the lower basin states. It is available on the Lower Colorado web site (<http://www.lc.usbr.gov>). It's also

available by calling Jayne Harkins at 702-293-8190. This has been out in final since December 8, 2000, and the signing of the ROD will be in San Diego, California, on January 16, 2001. Jayne Harkins made a presentation at the July 2000 AMWG meeting on this subject and laid out some of the impacts that were expected as a result of interim surplus guidelines.

**Recovery Goals** - Randy introduced Henry Maddux. Henry was the program director for the Upper Colorado Recovery Implementation Program for several years and is the new State Supervisor in Utah, replacing Reed Harris. He is here today to address the issues surrounding the recovery goals for endangered fish, both in the upper and lower basin.

Henry stated they have been working on the recovery goals for a little over a year now. They hired a consultant, Rich Valdez, to take the lead on it. They went through a process of drafting some goals, meeting with the Colorado River Fishes Recovery Team a few times, meeting with the San Juan Group, and meeting with a lot of upper basin groups in putting together recovery goals. The Humpback Chub Recovery Plan is a fairly small document and what they are putting together is an amendment to that recovery plan. Basically the recovery plan calls for viable self-sustaining populations and removing the threats that exist to the species. He passed out copies of the Humpback Chub Amendment (*Attachment 21*). When a species is listed, it is primarily based on threats, including things like disease, predation, habitat loss, etc. The HBC was put on the list of endangered species in 1967 prior to the ESA and was grandfathered in as an endangered species. There really wasn't good documentation of the threats. The process of downlisting and delisting is basically the reverse process of listing, so they look at all five categories of threats. The two main areas of focus that this amendment is going to have is: (1) demographics, and (2) threats.

The regional director was briefed again this week on the progress of the recovery goals and when they will be published in the Federal Register. The latest revision is to be completed by January 26, 2001. The regional director wants to review them again and also have the regional solicitor review them as well. Once changes are made, the regional director wants them to meet with the state wildlife agencies in the seven basin states, other Federal agencies, affected tribal governments, with the MSCP, and AMWG. It's not necessarily to make changes to them but he wants to know their biggest concerns. Region 6 FWS will publish the revised recovery goals in the Federal Register around the end of March and prior to those being published, they will do another road trip to meet with congressional staff, states, and the media.

In the Upper Basin, the program participants believe that they had a commitment that recovery could be achieved independently of the lower basin. Basically, once the fish were in good shape in the upper basin, they could be downlisted and delisted separately. To do that requires the process of distinct population segments. The way the goals are written right now, they divide the Colorado River Basin into two recovery units: the upper basin, which includes the San Juan River, and the lower basin. They also include preparation of a distinct population segment analysis at the time, in either the upper or lower basin, when downlisting goals met.

Another area of controversy has been in the numbers of individuals in each population. Region

6 FWS arrived at a number looking at the demographics or age structure, life history, those types of aspects of the population as well as genetics. There are a lot of assumptions that go into picking this number. Region 6 FWS determined that the populations had to contain a minimum, for HBC, of 2100 adults. Some people were concerned that this number was too low. Other issues included things like legal protection of flows and conservation plans at the time of delisting. These are plans that will ensure that the species remain off the endangered species list, also things like monitoring, non-native control actions, or legal protection of flows, that they will be maintained in perpetuity. Some felt that the time to recovery that they were talking about was either too short or too long and then a lot of people had questions about the relationship of the recovery goals to existing biological opinions. The recovery plans are basically guidance. They identify what needs to be done for recovery. They are not a regulatory document in the sense that they demand somebody do something. You hope that recovery plans and recovery goals are used in guidance in developing biological opinions but they basically have different missions.

Currently there are six populations of HBC, five in the upper basin and one in the Grand Canyon. Region 6 FWS called for 2100 fish in each of the core populations but also have a second level check which says the first time you get a satisfactory population estimate of what's out there, the population can't drop significantly below that existing number. What FWS didn't want to send is a message that said *if a population is higher than that, it could be reduced down to this level*. What they want to say is what's out there has to be protected and can't decline. They have other statistical evaluations they looked at, the trend over the time period for downlisting and delisting as well as looking at recruitment of young into the adult population. What FWS doesn't want to do is downlist or delist when they don't feel comfortable that the population is functional.

The recovery goals as written are an adaptive management approach. Through the process of downlisting, they are implementing and evaluating actions and trying to determine what's needed ultimately to delist the fish. It's kind of an implementation stage. Up to the point of delisting, when you have to have the flows finalized (legally protected or provided) and everything is basically in place, the process is adaptive management. FWS does that because they recognize there are uncertainties and assumptions and a lot they still don't know.

Henry responded to questions from the group and said the regional director wants him to report back to the AMWG after additional comments have been received so he intends to make a more formal presentation in a couple of months.

**Science Advisory Board Update** - Barry said a copy of the finalized operating procedures for the scientific advisors and a list of names with brief resumes was mailed out to those individuals interested in serving on the SAB. Letters were also sent requesting their formal participation in the Science Advisory Group. The GCMRC has contracted with Dr. Dave Garrett to serve as the Executive Secretary for that group.

**Review of the 2001 M&R Activities** - Barry stated that because of the LSSF and the switch in contracting from Reclamation to the USGS, the contracts for 2001 have been delayed. They are

currently involved in peer review panels (January 26-27) and as soon as those are completed, they will e-mail a table to the AMWG which will indicate what was proposed in the workplan, and contracts and activities with brief descriptions. He apologized for the delay.

**Update from AMWG Discussion on 1/11/01:** Amy Heuslein reported that the group assigned to work on a motion relative to keeping AMWG members involved in budget and legislative issues met yesterday and offer the following motion:

**MOTION:** The AMWG may make recommendations to the Secretary of the Interior in response to future legislation or appropriations that may affect or impact the Glen Canyon Dam Adaptive Management Program. This may be accomplished when an AMWG member requests to the Chair, an issue to be addressed either at a regular meeting of the AMWG, at a special meeting or during a conference call. AMWG members will discuss the issue and if appropriate, make recommendations on the issue to the Secretary of the Interior in a timely manner. When any other potentially controversial topics are identified by any AMWG member, they should notify the Chair so that this procedure can be implemented.

Motion seconded.

Discussion: None

Public Comments: None

Voting.

Motion carried.

**ACTION: Add to the AMWG Operating Procedures**

Steve mentioned there had been some discussion yesterday about the AMWG providing additional guidance to the ad hoc group on Goal 6 and its MOs. It was decided to give each member 2-3 minutes to express their concerns. Their comments (*Attachment 22*) will be given to the ad hoc group.

**Draft Detailed Outline for the AMP Strategic Plan** - Randy passed out copies of the Plan (*Attachment 23*) and asked for comments to be sent to him within the next two weeks.

**Vision Statement / Narrative Update.** Rick Johnson said that on the river trip last year, they came up with a one paragraph vision statement. A lot of people felt it needed more explanation so a TWG ad hoc group was formed to prepare some narratives. Barry Gold was the scribe and compiled all of them. The narratives were brought to the TWG and discussed. The TWG felt it needed a more overall vision of what was wanted as far as riparian, riverine, cultural, recreational goals, etc. A lot of the concepts had been embodied in the MOs but this was a way to bring it all together and paint a picture of what they eventually wanted to see in Grand Canyon. The TWG felt it was a good idea but didn't feel it was far enough along to bring to the AMWG, however, they want to make sure that the AMWG feels it is worth continuing to work on.

There were no negative comments offered so Steve advised the TWG ad hoc group continue to

work on them and bring something forward to the AMWG at a later date.

**Future AMWG Meetings:**

**April 12-13, 2001 (Thu-Fri)**

Agenda items:

- Strategic plan
- TCD presentation

**July 17-18, 2001**

Agenda items:

- Approval of the entire Strategic Plan
- 2003 budget discussion

**Adjourned:** 11:30 a.m.

### General Key to Adaptive Management Program Acronyms

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