

**Minutes of Technical Work Group Meeting
September 14-15, 1998**

FINAL

Presiding: Robert Winfree (Chairperson)

Committee Members Present:

Mark T. Anderson, USGS
Clifford Barrett, CREDA
Kerry Christensen, Hualapai Nation
Dave Cohen, Trout Unlimited
Wayne Cook, UCRC
Wm. Davis, EcoPlan Assoc./CREDA
Kurt Dongoske, The Hopi Tribe
Alan Downer, Navajo Nation
Christopher Harris, ADWR
Norm Henderson, GCNRA

Amy Heuslein, BIA
Gene Jencsok, CWCB
Rick Johnson, Grand Canyon Trust
Robert King, UDWR
Tom Latousek, American Rivers
Phillip S. Lehr, CRCN
Bruce Moore, USBR
Clayton Palmer, WAPA
Bill Persons, AGFD
Andre Potochnik, Grand Canyon River Guides
S. Paiute Consortium

Committee Members Absent:

Joe Dishta, Pueblo of Zuni
Don Metz, USFWS

John Shields, Wyoming State Engineer's Ofc
Fred Worthley, CRBC

Alternates Present:

Debra Bills, USFWS
Wayne Cook, UCRC
Loren Panteah, Pueblo of Zuni

Alternate For:

Don Metz, USFWS
John Shields, Wyoming State Engineer's Ofc
Joe Dishta, Pueblo of Zuni

Other Interested Persons Present:

Gary Burton, WAPA
Nancy Coulam, USBR
Christine Karas, UC USBR
Ruth Lambert, GCMRC
Mike Liszewski, GCMRC
Steve Lamphear, GCMRC
Mark Gonzales, GCMRC

Tom Moody, Grand Canyon Trust
Tony Morton, USBR
Randy Peterson, USBR
Larry Sibala, BIA
Bill Stewart, Univ. of Illinois
Bill Vernieu, GCMRC

Recorder: Serena Mankiller, GCMRC Secretary

9/14/98: **Convened:** 10:12 a.m. **Adjourned:** 4:48 p.m.

9/15/98: **Convened:** 8:08 a.m. **Adjourned:** 4:45 p.m.

MEETING OPENING AND ADMINISTRATIVE ITEMS

Welcome: Robert Winfree, the Chairperson, convened the meeting and welcomed committee members, member alternates, and guests. A quorum was present.

Review of Agenda: The Chairperson reviewed the agenda.

Attendance Sheets: Distributed.

Review of Minutes: Minutes of July 23, 1998, were not completed, and will be distributed as soon as possible.

OTHER ADMINISTRATIVE BUSINESS

Gene Jencsok stated that an additional population of rare snails has been discovered, and requested a report to be given during the KAS update. A copy of a news clip (Attachment 1, *Salt Lake Tribune* article dated August 30, 1998) was available for the TWG to review.

Bill Persons distributed a Meeting Evaluation Form (Attachment 2) which he would like the TWG to fill out and return to him by the end of the meeting.

ADMINISTRATIVE BUSINESS

AD HOC GROUP REPORTS AND OTHER OFFICIAL REPORTS

Budget Ad Hoc Committee: Norm Henderson reported that on June 23, 1998, the TWG tasked the ad hoc group to gather information and report back on the intent to separate Lake Powell Management Objectives and Information Needs which address upstream versus downstream resource effects responsibilities. Norm Henderson prepared and distributed a white paper (Attachment 3) for the ad hoc group to review, and the ad hoc group will meet today following the TWG meeting. The ad hoc group will attempt to reach consensus on the split, and request the GCMRC to prepare a budget estimate on the portion of work it is responsible for. Information regarding the split and the budget will be presented to the TWG at its November meeting for a final review and recommendation to Reclamation. It was intended to have this process completed in September, and Reclamation is submitting its budget estimates to the Department of the Interior and to OMB this week, but now plans to make adjustments on the pass back from OMB.

FY 1999/2000/2001 Budgets: Bruce Moore stated that, based on concerns expressed last year by the TWG about having a final budget by the April/May timeframe, he and the GCMRC would like to revise the protocols. The TWG/AMWG officially have to have it in the budget process by August 1st so it may be assimilated into the overall budget estimates for the USBR. He proposed two date changes for the TWG budget protocols process schedule which would better coordinate with the USBR and AMWG review process: (1) by April 1st that we would have an idea of the bottom line on Program Areas I-VI and it would be included in the submittal on the overall revenue budget that is sent to CREDA for review; (2) at the July AMWG meeting final approval of the budget numbers to go in the BOR's budget estimates documents would be requested. This allows the AMWG to have final approval on the budget recommendation to the Secretary which is included in USBR's budget estimate documents. Next year AMWG can react to a final budget for 2001, and the TWG should start working on the bottom line during the next four months. Mr. Moore clarified that the budget submittal to the DOI in May is for appropriated dollars only. The GCMRC, USBR and TWG would work on the detailed work plan for FY2001 in September 1999 while we're

working on a detailed work plan for FY2000.

Recommendation: The budget protocol process document will be revised and presented to the TWG for approval.

Bruce Moore and Barry Gold reviewed the previous/current/next year budget at length (Attachment 4, Revision dated 9/14/98). FY98 was overbudget by approximately \$200,000. GCMRC deobligated some old contracts which did not utilize all the monies after work was completed, and postponed releasing three RFPs until FY2000, so the budget is currently level as of September 10, 1998. It is not yet known if the budget will show a surplus or deficit by the end of the fiscal year. FY1999 total is \$7,193,000. \$50,000 is USBR's appropriated monies for Native American meeting participation, so actual budget estimates are \$7,143,000. The two new initiatives are included: remote sensing for \$400,000; Lake Powell \$325,000 (to be discussed and either left at \$325,000 or new approved number). The summary sheet (pg. 1) includes the approved FY99 Annual Plan column and it reflects some areas where detail was unavailable. Program Management monies were more clearly defined by moving \$160,000 under Bureau Support Services (contracting services). \$20,000 was moved from Socio-economic to Physical who is doing the work on camping beaches. The USBR's new regional computation procedures will result in a 20% increase in overhead. The TWG wishes to comment on detail and develop a detailed work plan for FY2000. Barry Gold proposed schedules for the Annual Plan and Strategic Plan (Attachments 5a, 5b) which provides substantial time for review. The TWG scheduled a meeting in October.

Recommendation: The TWG would like to be notified and review information about any required budget adjustments that result in either a substantial shortage or substantial surplus, so they may give input (consent on budget cuts, etc.). The Budget Ad Hoc Group will continue to meet as usual, give a status report in November, report back at the December 8, 1998 meeting and seek final TWG approval on the FY2000 budget. The TWG will meet October 26, 1998 from 9:30 a.m. to 4 p.m. at a location to be announced for the purpose of reviewing the GCMRC FY2000 Annual Plan and 2000-2004 Strategic Plan.

Nancy Coulam reviewed and explained the proposed PA budget for FY99-2004 (Attachment 6) at length. Page 1 shows the proposed Cultural Resource Budget for FY99-2004. The budget is an approximation. It does not exactly match the PA budget (Program Area IV-C) from the AMP budget (presented by Bruce Moore) which includes logistics costs. The PA budget reflects a 5% inflation increase from FY2000-2004. Page 2 shows the proposed Data Recovery for FY2000-2004, and does not include logistics. The TWG and AMWG may give input to the budget, but the input does not have to be agreed with nor abided by. The TWG is reminded that compliance with the NHPA, in particular Sections 1 & 6, is an environmental commitment in the ROD and the EIS, and the USBR is held legally responsible to be in compliance.

The PA calls for inventory and evaluation of sites in the 255 mile stretch below the dam. 336 properties were identified, 326 of those are considered eligible for the National Register for Historic Places. Also, the Grand Canyon as a whole will be nominated to the NRHP as a place of traditional significance to all of the PA signatory tribal groups. Past monitoring shows 24 of these NRHP-

eligible properties significantly eroding and can no longer be preserved in place. These sites have have potential to yield important information about the past. We are proposing to recover the data before it is lost, which is estimated to cost about \$4000 per cubic meter (plus 5% inflation) through the year 2004. The PA and the GCPA call for continual monitoring of the 326 eligible resources and the Canyon as a whole as a TCP. It was noted that all 24 threatened sites need immediate attention, but the budget spans five years of work to be done.

Compliance Ad Hoc Group: Tony Morton reported that the Compliance Ad Hoc Group met recently regarding WY99 and future year BHBFs, and current status of compliance. The AMWG had recommended that compliance activities be ceased for a WY99 BHBF of 45,000 cfs or greater due to the KAS reestablishment restriction. The ad hoc group was allowed to pursue compliance for a BHBF of less than 45,000 cfs as long as the 10% take level of KAS was not exceeded. The specifics of that level have not yet been determined. A status report will be obtained after the next KAS survey trip. Additional populations of what appear to be KAS were recently discovered in Utah. This new information may be utilized by the USBR to reconsult with the USFWS.

The ad hoc group wishes to pursue compliance for a BHBF above 45,000 cfs between May-July 1999 if the hydrology is appropriate, and feels it would have completed the compliance process by March, although this is in contrast to what the AMWG directed the group to do. We will have information ready by January 1, 1999, to determine if we can do a flow of 42,000-43,000 cfs magnitude (not exceeding 10% take) if there is a hydrologic trigger in January or February and the aforementioned compliance was not ready. It was suggested to form a science panel of snail experts to review and evaluate current information on population and RPMs in the BO to determine how appropriate they are. GCMRC revised the 1998 BA (Attachment 7) to include potential impacts to TES for a flow up to 60,000 cfs.

Recommendation: Submit BA comments to Tony Morton within two weeks, and then the decision will be made about convening a snail science panel to review the draft, which could be done on October 24, 1998, following the Conceptual Modeling Workshop.

The issue of fluctuating flows was discussed at length. The GCMRC had recommended (from a compliance standpoint) to the Compliance Team on June 25, 1998 to not do both treatments simultaneously. The load-following flows were removed as an experimental element from the next BHBF because it would confuse the determination of impacts being caused by a spike flow versus impacts caused by the fluctuating flows following the spike. The load-following flows will be postponed for a future BHBF. The GCMRC had responded in a letter to Tom Moody (Attachment 8) on the TWG request, suggesting adding activities to the physical sciences PEP, and continue review in the October 1998 Conceptual Modeling Workshop. The issue remains open. Some members want to see a fluctuating flows experiment combined with a 45,000-60,000 cfs flow to scientifically separate the effects, and others would like to examine flows above 45,000 cfs and fluctuating flows separated. It was also suggested that since baseline data exists on a 45,000 cfs flow, and if compliance is not ready for a 60,000 cfs flow, a 45,000 cfs tested together with fluctuating flows following may be appropriate. The group discussed potential impacts to the compliance timetable and GCMRC staff workload; and whether these are included the IN's and if

so are they a top priority. A vote was taken on compliance for a WY99 flow. The TWG postponed a vote on the element of load following until more feedback on good experimental design is received from the GCMRC, as well as Clayton Palmer's white paper outlining the new sediment paradigm. A question was raised about funding for the research plan. Barry Gold will work on the research plan, and Bruce Moore will investigate funding. Barry Gold can have the conceptual modeling team run policy screening exercises using 60,000 cfs flow parameters.

Recommendation: The TWG voted (21 For/2 Against) for the USBR to move forward with compliance for a WY99 flow between 45,000-60,000 cfs for 2-4 days between Jan-July with no load following. The issue of load following will be discussed at the November TWG meeting.

The USFWS reminded the TWG about the Humpback chub restriction on fall (October-February) test flows greater than 30,000 cfs. The USFWS inquired about the possibility of low steady flows for 1999. The contract to develop the plan will be awarded in 1999, so seasonally-adjusted low flows will not occur before the spring of 2000. A problem was identified that USBR has not yet implemented SASF's specified in the 1994 BO, and recent data indicates that if the USBR proceeds with great caution, SASF's can be implemented. Christine Karas (USBR) stated this piece of information can be used to reconsult on the chub and SASF's, but with limited monetary and staff resources, the priority issues need to be established before the USBR can move forward on it.

Recommendation: The issue of SASFs shall be further discussed in the Compliance Ad Hoc Group, and the dialog may continue at the November 16-17, 1998, TWG meeting.

Kanab ambersnail: Dennis Kubly (AGFD) reported that a Biological Evaluation was released on the translocation process. No significant adverse effect is expected from the removal of donor stock from Vaseys Paradise. However, an unknown percentage of individuals had been lost from a known populated area because of talus slope movement above Vaseys Paradise due to a flash flood. 450 2-5mm length individuals were moved, 150 at each of the three selected sites. Young individuals were selected because the possibility of transferring a parasite is greatly lessened. The KAS were active immediately and took quickly to the vegetation in the release areas. A monitoring trip is scheduled for the end of September, which will provide an opportunity to see the success of these efforts before the KAS hibernate for the winter. Some individuals from the new populations that researcher Vicky Meretsky discovered in Utah (Attachment 1) were submitted to a taxonomist who classifies via morphology and genetics. It is hoped to have the morphology and preliminary genetics done by the October 1, 1998, KAWG meeting. The TWG discussed the current BO restriction that says the second population is to be in Arizona. The USFWS stated that Reclamation may submit new information to reinitiate consultation, and the distinction between Arizona versus Utah populations may be reconsidered by USFWS in its continuing efforts to preserve, restore and downlist the species from endangered to threatened. Christine Karas said that the risk to the species must also be considered: its location (protected area versus leased/private land), status, and future continued survival.

Temperature Control Device: Bruce Moore reported that Dave Trueman (USBR) is incorporating comments received from the TWG on the preliminary draft EA. Public release of the official draft

is still scheduled for December, 1998, and the TWG may comment again at that time. SWCA's fish integration report will be reviewed to determine if any new information should be added to the EA. GCMRC is currently reviewing the EA. It was decided that an automatic hoist will be utilized, which provides some remote control capability from the GCD's control center. This will not change the estimated cost. The TWG requested a document which outlines why a particular comment was not incorporated into the EA.

Operational Issues: Clayton Palmer reported that he is gathering data on the issue of downramps at 1500 cfs. He is investigating methodologies the USBR uses to reports water releases, and how that shows up at the Lees Ferry gage. He wanted to have information available for the first ad hoc group meeting, which may occur before the November TWG meeting.

Fall HMF Ad Hoc Group: Randy Peterson (USBR) reported that he drafted a short proposal and submitted it to Tony Morton (USBR) for compliance comments. Barry Gold will submit biological and physical comments as to the appropriateness of such a flow. The flow would be less than powerplant capacity, but there may be young-of-year chub and backwater siltation issues to evaluate. The proposal will be distributed to the ad hoc group to obtain comments, solicit impacts analyses ideas. NEPA and ESA compliance activities may be pursued.

Hydrology Report: Randy Peterson (USBR) reported that the next couple of months will average 15,000 cfs flow from GCD, and December-January will be a little higher. It is relatively close to an 8.23 MAF release year, and there is a possibility (1:3) of a low flow in 1999, because there will be no equalization releases this year. There is also the possibility of a high flow because Lake Powell is full and there is a 1:3 chance of a BHBF being triggered if compliance is completed. La Nina has already started to form which is causing ocean temperatures to be 2-4 degrees cooler than normal for this time of year. Historically, this indicates an above normal chance of high winter precipitation, and a dry spring. It is predicted to last until March or April.

Resource Criteria: Barbara Ralston (GCMRC) reviewed TWG comments and how they are reflected in the document. The group discussed flow issues. The intent was to put this process in place and use it to evaluate the resource effects and for making a decision for or against a WY99 flow. Ongoing monitoring reports are due in by November 30 which may be utilized to begin evaluating the resources.

Recommendation: The TWG recommended changes to the diagram, which Dr. Ralston will revise. The document shall be finalized, the process shall be implemented for one cycle and reevaluated. If improvements are suggested, they will be added for the following year.

AMP/PA Program Integration: Kurt Dongoske reported that the document is still in draft form.

Recommendation: Submit final comments to Kurt Dongoske by September 30, 1998.

LCRMCP: (Attachment 9) Chris Harris summarized the program's activities. There is a possibility of activities in Grand Canyon covered by the LCRMCP which could bring funds or

biological expertise to the AMP to coordinate activities.

Recreation Research: (Attachment 10) Bill Stewart (University of Illinois) gave a detailed report on recreation research which is a GCMRC Cultural Resources Program project. In response to questions from the audience, he outlined the objectives of the research. The previously scheduled evening workshop was cancelled.

GCMRC FY2000-2004 Strategic Plan Review: Barry Gold and GCMRC Program Managers reviewed the strategic plan at length. The TWG gave comments. Negative feedback was received on the Physical Resources Program desire to map the entire canyon. An Ad Hoc Writing Group was formed to write a short document on how the change in going from floods in lower water years to high water years affects the thinking about the management actions discussed in the original EIS, and to link HMFs to that. Members are: Tom Moody (GRCG), Randy Peterson (USBR), Wayne Cook, Barry Gold (GCMRC) and Larry Stevens (GCMRC). Debra Bills will give the USFWS perspective, but is not a member of the ad hoc group.

Recommendation: The TWG's comments will be incorporated into the plan. Detailed descriptions are to be shown in the annual plan rather than the strategic plan. The second draft of the Strategic Plan is scheduled for review by the TWG on November 16, 1998.

Information Technology Program Review: Michael Liszewski, Mark Gonzales and Steve Lamphear (GCMRC) gave a lengthy presentation of the GCMRC Information Technology Program, which included goals and objectives of the Survey and GIS departments, DBMS, and how the program can assist in stakeholder information needs in terms of content and delivery of information. The Survey department wants to establish a control and bathymetric map for the entire canyon to establish baseline data for future monitoring. Steve Lamphear discussed aspects of using remote sensing to collect data for resource monitoring, which results in less physical intrusion into the canyon. He felt that investing in remote sensing equipment would eventually money for the program. Mike Liszewski cautioned that keeping the equipment updated may not result in a monetary savings, as was reported in past TWG meetings.

Recommendations: The TWG requested that the computer presentations shown at this meeting be made available on the AMWG/TWG web site.

MEETING REVIEW AND WRAP UP

New Business: Robert Winfree reported that federal agencies participated on a week-long Interagency Cooperation river trip to view resource effects, discuss issues related to the AM program, compliance, and have policy discussions. Copies of the issue papers are available. The trip was scheduled in response to a request last year by Patty Beneke to promote federal agency communication and cooperation. Mark Schaefer would like the AMWG to participate on a similar trip in the spring or summer of 1999. A question arose about the funding for the trip. River logistics costs came out of the GCMRC Logistics budget, and was estimated at \$12,000. The

federal agencies paid for salary and travel to and from Flagstaff. The current size of the GCMRC staff versus what was originally envisioned during the EIS process issue was discussed on the river trip. Barry Gold will prepare a comprehensive staffing plan detailing duties and provide the information to the AMWG at its January 12-13, 1999, meeting.

Dave Garrett Update: Barry Gold stated that the medical condition of Dave Garrett (Chief, GCMRC) is still uncertain. The TWG wishes him a speedy recovery.

Upcoming Meetings:

Lake Powell Ad Hoc Group: September 15, 1998, following the TWG meeting.

TWG Meetings:

October 26, 1998 from 9:30 a.m. to 4 p.m. at the BIA offices, 400 N. 5th St., 12th Floor, Phoenix, Arizona, for the purpose of reviewing the GCMRC FY2000 Annual Plan and 2000-2004 Strategic Plan and budgets.

November 16-17, 1998: 11/16: 10 a.m.-5 p.m.; 11/17: 8 a.m.-4 p.m. Proposed agenda items: GCD power replacement report; PEP Program final reports; resource criteria for 1999 flood season re: proposal above 45,000 cfs; Ad Hoc Group status reports.

December 8, 1998: 10 a.m.-4 p.m. at the Phoenix Sky Harbor Airport Meeting Room, Terminal 3, Level 2. Agenda: elect a TWG Chairperson; finalize the AMWG meeting information package; discuss budget issues and finalize the budget.

January 13-14, 1999: 1/13: 3 p.m.-5 p.m. (Two hours following the AMWG meeting); 1/14: 8 a.m.-12 p.m. (Subject to cancellation depending on business). Agenda: review AMWG assignments and the SCORE Report. TWG members should plan flexibility into their return itineraries. The USBR will publish the FRN 15 days prior to the meeting.

Next AMWG Meeting: The next AMWG meeting will be held January 12-13, 1999, at the Embassy Suites Hotel in Phoenix, Arizona.

Public Comment: The Chairperson requested comments from the public at the end of major topics. Comments made are contained in the text of these minutes.

There being no further business, the Chairperson adjourned the meeting at 4:45 p.m. on September 15, 1998.

Respectfully submitted,

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Serena Mankiller, GCMRC Secretary

General Key to Adaptive Management Program Acronyms

ADWR - Arizona Department of Water Resources	snail)
AF - Acre Feet	KAWG - Kanab Ambersnail Work Group
AGFD - Arizona Game & Fish Department	LCR - Little Colorado River
AGU - American Geophysical Union	LCRMCP: Little Colorado River Multi-Species Conservation Program
AM - Adaptive Management	MAF - Million Acre Feet
AMP - Adaptive Management Program	MA - Management Action
AMWG - Glen Canyon Adaptive Management Work Group	MO - Management Objective
AOP - Annual Operating Plan	NAU - Northern Arizona University (Flagstaff, AZ)
BA - Biological Assessment	NEPA - National Environmental Policy Act
BE - Biological Evaluation	NHPA - National Historical Preservation Act
BHBF - Beach/Habitat-Building Flow	NPS - National Park Service
BHTF - Beach/Habitat Test Flow	O&M - Operations & Maintenance (USBR funding)
BIA - Bureau of Indian Affairs	PA - Programmatic Agreement
BO - Biological Opinion	PEP - Protocol Evaluation Panel
BOR - Bureau of Reclamation	Powerplant Capacity - 31,000 cfs
CAPA - Central Arizona Project Assn.	Reclamation - United States Bureau of Reclamation
cfs - cubic feet per second	RFP - Request For Proposals
CRBC - Colorado River Board of California	RPA - Reasonable and Prudent Alternative
CRCN - Colorado River Commission of Nevada	SAB - Science Advisory Board
CREDA - Colorado River Energy Distributors Assn.	SWCA - Steven W. Carothers Associates
CRSP - Colorado River Storage Project	TCD - Temperature Control Device (for Glen Canyon Dam water releases)
CWCB - Colorado Water Conservation Board	TCP - Traditional Cultural Property
DBMS - Data Base Management System	TES - Threatened and Endangered Species
DOI - Department of the Interior	TWG - Glen Canyon Technical Work Group
EA - Environmental Assessment	UCR - Upper Colorado Region (of the USBR)
EIS - Final Environmental Impact Statement	UCRC - Upper Colorado River Commission
ESA - Endangered Species Act	UDWR - Utah Division of Water Resources
FACA - Federal Advisory Committee Act	USBR - United States Bureau of Reclamation
FEIS - Final Environmental Impact Statement	USFWS - United States Fish & Wildlife Service
FRN - Federal Register Notice	USGS - United States Geological Survey
FWS - United States Fish & Wildlife Service	WAPA - Western Area Power Administration
FY - Fiscal Year (Oct 1 to Sept 30 each year)	WY - Water Year (a calendar year)
GCD - Glen Canyon Dam	
GCMRC - Grand Canyon Monitoring and Research Center	
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 species list -	