

**Minutes of Technical Work Group Meeting
July 23, 1998**

FINAL

Presiding: Robert Winfree (Chairperson)

Committee Members Present:

Clifford Barrett, RW Beck & Assoc.
Dave Cohen, Trout Unlimited
Wayne Cook, UCRC
Wm. Davis, EcoPlan Assoc./CREDA
Kurt Dongoske, The Hopi Tribe
Norm Henderson, GCNRA
Amy Heuslein, BIA
Gene Jencsok, CWCB

Robert King, UDWR
Tom Latousek, American Rivers
Don Metz, USFWS
Tom Moody, Grand Canyon Trust
Bruce Moore, USBR
Clayton Palmer, WAPA
Bill Persons, AGFD
Andre Potochnik, Grand Canyon River Guides

Committee Members Absent:

Mark T. Anderson, USGS
Kerry Christensen, Hualapai Nation
Joe Dishta, Pueblo of Zuni
Alan Downer, Navajo Nation

Christopher Harris, ADWR
Phillip S. Lehr, CRCN
John Shields, Wyoming State Engineer's Ofc
S. Paiute Consortium
Fred Worthley, CRBC

Alternates Present:

Wayne Cook, UCRC

Alternate For:

John Shields, Wyoming State Engineer's Ofc

Other Interested Persons Present:

Nancy Coulam, USBR
Ruth Lambert, GCMRC
Mike Liszewski, GCMRC
Steven Lloyd, USBR
Ted Melis, GCMRC

Tony Morton, USBR
Randy Peterson, USBR
Larry Sibala, BIA
Bill Vernieu, GCMRC

Recorder: Serena Mankiller, GCMRC Secretary

Convened: 8:03 a.m. **Adjourned:** 11:40 a.m.

MEETING OPENING AND ADMINISTRATIVE ITEMS

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

Minutes Approval: Minutes from the June 10, 1998, meeting need to be approved. Suggested changes may be submitted to the GCMRC Secretary by next week.

DISCUSSION OF TWG ASSIGNMENTS FROM JULY 21-22, 1998, AMWG MEETING

The Chairperson reviewed and the group discussed tasks from the AMWG meeting July 21-22, 1998, other continuing items for the fall TWG agenda, proposed activities and a schedule for completion of the tasks.

Item 1. Lake Powell Program: The AMWG is willing to approve the five-year plan (beginning with FY2000) when the TWG has completed the tasks outlined below.

- Task 1.**
- 1.1 evaluate MO's/IN's for the FY2000 Annual Plan, and the Long-term Plan for Lake Powell;
 - 1.2 distinguish among activities that are related to upstream, downstream and mixed (gray areas) resource effects;
 - 1.3 identify appropriate funding sources for the different components (particularly between upstream/downstream);
 - 1.4 provide a recommended funding breakdown to the USBR by September 1, 1998; the Chairperson shall submit through Bruce Moore to Steve Magnussen;
 - 1.5 report TWG's specific recommendations to AMWG at its January 12-13, 1999, meeting.

TWG Discussion: the Chairperson recommended that the above be accomplished through a position paper which includes:

1. details of program components;
2. funding levels;
3. identification of cooperators (especially in the Lake Powell agreement);
4. showing program integration (reinforces concept of an integrated science program);
5. identification of opportunities for increased efficiencies and data integration in Lake Powell.

Principles:

1. the research and monitoring program in Lake Powell related to downstream effects will remain part of the AMP;
2. activities related exclusively to upstream resource effects (upstream is clarified as being above GCD) will not be part of the AMP, as we are not determining a geographic separation of where the study is, but a geographic separation of where the resource effects are;

3. the USBR will be encouraged to use O&M funding to maintain the essential studies of dam operations effects that are related only to upstream resources (with USBR acceptance of the concept);
4. the intent is to maintain the resource effects split in future AMP programs such as the TCD monitoring and research program downstream vs. upstream effects, the IT program, etc. For the overall monitoring and research program related to GCD, the intent is to have an integrated program to look at effects of operations on resources wherever they occur. The other cooperators will be encouraged to help support the work, and the TWG will attempt to identify information on the potential resource effects;
5. upstream MO's and IN's should remain in the process, but be flagged to determine funding (this principle did not have consensus and was identified as needing further consideration);
6. conceptual model linkage issues will be reviewed. NPS wants a conceptual model; upstream/downstream split regarding Lake Powell conceptual model; possible redundancy of the two models.

TWG Discussion: A suggestion was made to form an ad hoc group. The group should investigate the new Clean Water Act action plan developed by the EPA because it includes a new funding mechanism for DOI agencies, and could be used for this purpose. Information is available through the internet.

Recommendation: A Lake Powell Ad Hoc Group was formed to gather information and prepare a draft document. It will meet on September 15, 1998, following the TWG meeting. The members are: Norm Henderson (Chair), Robert Winfree, Cliff Barrett, Bill Davis, Bill Vernieu (GCMRC), Barry Gold (GCMRC), Bruce Moore, Bill Persons, Gene Jencsok, Tom Moody, Clayton Palmer. The topic will be placed on the TWG agenda for September 14-15, 1998.

Item 2. Management Objectives & Information Needs: The AMWG approved: (1) the MO's and IN's (dated June 10, 1998) including Lake Powell; (2) TWG's request to annually review and update the MO's, work with the GCMRC and the SAB to make sure the IN's are properly integrated into a scientifically-balanced program, and that TWG present the program to the AMWG for approval before implementation.

Task 2. A schedule was not specified by the AMWG. The TWG plans to conduct the annual review after receipt of the final report on status of studies from GCMRC. The annual review will delete completed studies, add new IN's, and standardize the information needs scope.

TWG Discussion: The TWG will plan to begin the process in January 1999 and finalize it before the FY2001 budget.

Item 3. SAB: The AMWG approved the proposal to allow TWG review of SAB technical advice and scientific review information submitted to the AMWG and the SAB RFP language that it be a subcommittee of the AMWG receiving direction from and reporting through the Secretary's Designee (the AMWG Chairperson).

Task 3. The TWG will implement the SAB including the language approved at the AMWG meeting.

TWG Discussion: Barry Gold stated that the approved SAB RFP language was incorporated into the RFP yesterday and forwarded to Scott Loveless (USBR Solicitor's Office) for final review.

Item 4. BHBF Resource Criteria & Schedule: The AMWG requested the TWG to go forward with its work regarding the BHBF Resource Criteria.

Task 4. The TWG is to finalize and implement; expand criteria to include BHMFs up to powerplant capacity in other months; report back to AMWG in Jan. 1999.

TWG Discussion: The TWG will attempt to finalize edits today. Suggestion to reverse the graph to show that we begin evaluating resource criteria first, followed by environmental compliance and hydrologic criteria. The criteria revisions are to be finalized by the end of August 1998. Implementation of the criteria should be done before January 1999 as the reports are received by GCMRC from the research and monitoring studies.

Item 5. Kanab ambersnail/BHBF January-July 1999: Dennis Kubly (AGFD) gave a presentation on the KAS Recovery Program and snail translocation. Tony Morton reviewed the USFWS' draft definition of what a second population consists of, and discussed compliance issues related to a WY99 BHBF.

Task 5. 5.1 Compliance Team to continue work on issues regarding definition of established populations, establishment of a second population, and opportunities to accomplish conservation measures regarding flood flows.

5.2 Compliance Team is to confirm that compliance is in place if hydrological/biological criteria support a WY99 BHBF (maximum of

42,000 cfs) and related KAS compliance.

Item 6. BHBFs in Any Year/Programmatic Compliance: A programmatic approach should be pursued for potential flows covering the full range of possible timing, magnitude and duration.

Task 6. Evaluate a program of BHBF flows between January-July annually, between powerplant capacity and 90,000 cfs, 1-14 days, including fluctuating flows following, erosion effects, and possibility of higher flows during August-November associated with tributary input.

Item 7. Proposed Action for BHBFs above 45,000 cfs and Powerplant Fluctuations: (*Cook/Moody paper*) The AMWG requested recommendations on flow and impacts above 45,000 cfs.

Task 7. The GCMRC will continue work on this task and submit the proposed action back to the TWG in the original timeframe.

TWG Discussion: The GCMRC responded to the TWG's request for information in a letter (dated July 6, 1998) to Tom Moody from Ted Melis. The letter included a schedule of activities. Copies of the letter (Attachment 2) were distributed at the meeting. A problem was identified that this research task was not included in the Information Needs document and is presently an unfunded mandate.

Item 8. Budget: The AMWG approved the FY2000 \$7,271,000 budget, plus the remote sensing new initiative, plus the adjusted Lake Powell budget (regarding resource effects split) to be received from the TWG. The AMWG did not approve the budget protocols document, and requested more detail.

- Task 8.**
- 8.1 The TWG is to review budget items to reduce redundancy, determine appropriate agency costs and responsibilities, and add more descriptive detail on line items. It will accomplish this before the FY2001 budget (after January 1999).
 - 8.2 The TWG shall develop a more detailed and descriptive process for the overall AMP budget with a focus on where money is applied on achieving the IN's, how much money is going into each MO and IN, and the TWG shall approve the revised protocols.
 - 8.3 Barry Gold will prepare a full staffing plan of the GCMRC for the AMWG's review.

TWG Discussion: The smaller budget investigation team formed at the last TWG meeting which Clayton Palmer chairs may start work early on the above budget task 8.1.

FY2000 Budget: The budget process is not yet completed, and will be further defined by the Lake Powell split and remote sensing justification.

Remote Sensing Budget: The USBR identified a concern about the current lack of detail for the \$400,000 Remote Sensing portion of the IT Program. They felt this needs to be addressed before going forward with the budget. USBR suggested that limiting the amount of increase to \$200,000 may be politically prudent and would result in a more defensible budget. Some group members felt that this concern should have been addressed during budget discussions at the AMWG meeting. Mike Liszewski (GCMRC) reinforced that the program has been progressing as planned, according to a compressed schedule. The workshop was held in May 1998, and the resulting draft strategic plan will be reviewed by GCMRC Program Managers next week. The program presentation which will include justification is scheduled for the September TWG meeting. More detail is planned to be provided in January's budget submission. The remote sensing program budget may change as the details of the work plan are specified and possible management efficiencies identified between now and December 1998.

Recommendation: The TWG will go forward with the budget that the AMWG approved. The Lake Powell/resource effects split will be identified as agreed. The TWG will continue to work on detailing and justifying the budget for the USBR's January 1999 submission deadline to the DOI. The budget ad hoc group will continue to investigate program management efficiencies.

PA Program: A concern was expressed that the PA Program budget was increased by \$200,000 with no specificity, which in turn decreases GCMRC's budget, with no discussion in the TWG regarding the increase.

Senate Language: The group discussed the recent Senate language regarding possible future budget restrictions, and the importance to the AM process that the TWG members be united behind the budget if they are contacted by Senate representatives. An Effects Statement has been prepared regarding the FY99 budget, and the USBR and the Secretary will decide if it will be communicated to the Senate. The USBR plans to inquire informally to obtain clarification on the language and its associated boundaries.

Item 9. Flood Avoidance Measures and Frequency of Floods (Flash Boards): The AMWG was presented with TWG position papers analyzing implications of not permanently installing the flash boards (spillway gate extensions).

Task 9. Continue to report to the AMWG on progress of operations without the flash boards, how it affects frequency of BHBFs, 1:100 frequency of floods and spill avoidance criteria and report back as data becomes available about installation/non-installation.

TWG Discussion: A group will be formed to investigate the issue.

Item 10. Weekend/Evening Flows Issues/Operational Flows Study:

Task 10. WAPA shall continue to investigate issues regarding control of weekend and evening flows, protocols within the ROD, tied to research on ramping rates.

TWG Discussion: An "Operational Research Issues" Ad Hoc Group was formed with a charge to: attempt to develop an issues paper that identifies concerns, research issues and resource issues associated with weekend flows and ramping rates on downstream resources, and particularly including but not limited to recreational access, trout, trout fishermen, and downriver white water use. The members are: Clayton Palmer (Chair), Dave Cohen, Cliff Barrett, Randy Peterson, Bill Persons.

Recommendation: Status reports will be given at upcoming TWG meetings.

Item 11. Communications with Native American Tribes/Nations:

Task 11. Efforts to improve communications shall continue.

OTHER CONTINUING ACTIVITIES: No specific tasks were delegated to the TWG from presentations given to the AMWG at its July 21-22, 1998 meeting, but the TWG suggested that these topics stay on future agendas for continuing activities:

SCORE Report: The TWG shall evaluate the report in the fall of 1999.

Temperature Control Device: A draft EA is out to a limited distribution for comment. The TWG was reminded to submit comments now rather than later because of the No Action Alternative. Dave Trueman was asked to provide more detail to enable researchers to evaluate the assumptions and structure embedded in the models used to develop some of the results requested in the EA. The TWG wishes to review the research and monitoring budget in detail, separate it into upstream and downstream resources, and incorporate the budget split into the research plan. More detail on the proposed monitoring and research plan and attached out year budget can be provided after the FY2000 Annual Plan is drafted by GCMRC. The TWG can review the budget over the next two years as details are added. The TWG would like to further discuss the above issues, the No Action Alternative in the EA, and contingency budgeting. The

review shall not impede Dave Trueman's schedule/process.

Recommendation: This topic will be placed on future agendas for discussion during regular budget reviews.

OTHER NEW BUSINESS

AMP/PA Integration: (Attachment 1) Kurt Dongoske distributed the revised document which includes a proposed schedule. The TWG will review the work that is prepared by the PA group. The TWG wishes to receive more detail on the PA budget process and what will be applied to proposed work in terms of compliance. The TWG shall review it and identify any omissions to be incorporated. Recommendations may be made to modify the schedule, and will be submitted to the PA group.

Recommendation: The TWG shall submit comments to Kurt Dongoske by August 31, 1998.

Compliance & Process for Seasonal Tributary Events: The TWG revisited an issue from last year to have compliance and a process in place for a powerplant capacity flow to react to a possible fall LCR/Paria tributary sediment input event. The TWG discussed issues including reservoir storage levels and definition of a test flow under the ROD, resource impacts and utilization of the effects matrix process, if sufficient benefit was realized from the last HMF, other agency consultation and the CE checklist, and humpback chub overwintering survival constraints. Two issues were identified: (1) operating criteria flexibility; (2) NEPA reporting and whether or not the resources will benefit. July through October was identified as the season for tropical storms. Tony Morton felt that, given a proposed action, he could possibly have the process completed by the fall monsoon season (September/October).

An ad hoc group was formed with a charge to: review what was accomplished in last fall's HMF, whether this is something the TWG wants to recommend again, determine whether the timing should be tied to opportunistic environmental sets of climate events such as a tributary inflows, review environmental compliance issues, review the 1997 BO, and return with a plan for how to accomplish this that may include a recommendation to the AMWG that the ROD be modified with respect to HMFs. The members are: Randy Peterson, Clayton Palmer, Wayne Cook, Tony Morton, Andre Potochnik, Don Metz, Barry Gold (GCMRC), Ted Melis (GCMRC), and Bill Persons.

Recommendation: The ad hoc group shall select a chairperson today and give status reports at upcoming TWG meetings.

NASA Proposal: Feedback was requested on the status of the recent NASA proposal regarding remote sensing funding. Ted Melis stated that the June 26, 1998, deadline for submitting a proposal was not met, and GCMRC plans to submit a proposal for NASA's fall procurement schedule.

Information Technology Workshop: Mike Liszewski (GCMRC) had planned to hold a workshop in the fall to demonstrate and provide hands-on training to the TWG on some of the IT processes being developed in the GCMRC. The process includes database information system, GIS, and the library automation system. It was also intended to obtain feedback on GCMRC's overall strategy towards meeting the TWG and the AMWG's needs. The TWG is interested in learning, but suggested either demonstrating one component per TWG meeting or utilizing a full TWG meeting after January 1, 1999. Mike Liszewski will provide a demonstration at the September TWG meeting, and make a decision about the hands-on training arrangements.

Compliance Team/KAS Second Population Issue: The TWG discussed current KAS issues at length. The Compliance Team was requested to reevaluate its charge regarding what can be accomplished under its current guidance. Amy Heuslein stated that federal agencies involved in the Southwest Strategy formed an Issue Workgroup to develop ways to streamline Section 7 activities. They produced a "Near Term Efficiencies" document which will be potential policy for agencies to implement. The Consultation Team should incorporate recommendations from that document into its KAS issues process.

Current Consultation Team members are: Tony Morton, Chair (USBR) Barry Gold (GCMRC), Bill Persons, Bob Winfree, Ruth Lambert (GCMRC), Larry Stevens (GCMRC), Barbara Ralston (GCMRC), and Rick Johnson/Tom Moody. The group was expanded to include non-federal and state agency representatives, and re-named "Compliance Ad Hoc Group." All federal members who have certain agency compliance and decision-making responsibilities will retain them as individual members and make their decisions, but the group will discuss the issues and look for solutions. Wayne Cook and Clayton Palmer joined the ad hoc group, and Nancy Coulam (USBR) should replace Ruth Lambert. The group shall be kept small to enable it to move forward on issues.

Recommendation: The ad hoc group shall determine the need to continue working towards full compliance for WY99 considering the three-year concept (conducting spike flows every three years to benefit specific resources), or if a 42,000 cfs flow in WY99 is recommended, and explore innovative solutions to the compliance impasses such as the KAS second population establishment issue. Nancy Coulam and Tony Morton shall follow up to ensure that tribal consultation on compliance issues is effectively accomplished, and that they are informed of details about actions being proposed or strongly considered. Dialog will begin by letter informing the tribes of the formation of the Compliance Ad Hoc Group, the status, and an invitation to participate. The letter shall be courtesy copied to the BIA, Steve Magnussen and Jan Balsom. The group shall report information on innovative solutions back to the TWG for recommendation.

Management Objectives & Information Needs: The Chairman consulted with recreation interests about the schedule for annual review of the MO's and IN's, which has been changed from September 1998 to after January 1999. It is advisable for the TWG to wait until after January 1999 for several reasons:

- most FY98 research reports will have been completed and received
- it will allow new elements, deletions, and revision to the scope of IN's to be completed over a period of months
- recreation's revisions will not impact the FY2000 program
- MO's were developed based on resource categories defined in the EIS, and therefore, the IT Program (identified by recreation as an omission) was consciously omitted
- the FY2001 Annual Plan will not be developed until the summer of 1999 and will require updated MO's and IN's at that time

Aerial Photography: Tom Moody announced that aerial photography is planned to be conducted over Labor Day. The GCMRC has not received guidance regarding the stage/level, but is operating under the assumption that the agreement previously reached is that flow levels would not be decreased below the lowest stage at which the dam is fluctuating over Labor Day (approximately 12,000 cfs). In high hydrology years, the flows will not be dropped down to 8,000 cfs (a level which impacts trout and biological resources). Discussion ensued regarding standardization of a flow level to maintain consistent annual data points. Two issues were identified: (1) resource issue: don't decrease flows below existing dam operations levels; (2) scientific issue of baseline levels.

Recommendation: Aerial photography will be conducted during the lowest flow level at which the dam is operating over Labor Day. The GCMRC will review data to determine the scientific issue of baseline levels. The public and NPS will be notified by Randy Peterson and the GCMRC Logistics Coordinator regarding the timing and level of flows.

MEETING REVIEW AND WRAP-UP

Upcoming Meetings:

The TWG discussed upcoming meetings and set the following schedule. Meetings will be held at the Embassy Suites unless otherwise indicated. Agenda items are subject to change with prior notice.

September 14-15, 1998: 9/14: 10 a.m. - 5 p.m.; 9/15: 8 a.m. - 4 p.m. The Chairperson reviewed proposed agenda items including: LCRMCP, Cultural/Recreation presentation, Information Technology Program presentation, AMP/PA Integration decision, FY2000 draft Annual Plan review, Ad Hoc Group status reports.

November 16-17, 1998: 11/16: 10 a.m. - 5 p.m.; 11/17: 8 a.m. - 4 p.m. The Chairperson reviewed proposed agenda items including: 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 Airport Conference Room location. The focus of this meeting is to elect a Chairperson for the TWG; 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 only, following the AMWG meeting);
1/14: 8 a.m. - 12 p.m. (Tentative and subject to cancellation depending on amount of business).
The focus of this meeting is to review AMWG assignments, and the SCORE Report review.
TWG members who fly in were reminded to plan flexibility into their return flight itineraries.
The USBR will publish the FRN in December (15 days prior to the meeting).

Next AMWG Meeting: The TWG was reminded that 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.

Respectfully submitted,

Serena Mankiller, GCMRC Secretary

General Key to Adaptive Management Program Acronyms

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