GLEN CANYON DAM ADAPTIVE MANAGEMENT PROGRAM
AMWG FACA COMMITTEE GUIDANCE

Purpose of this Document

During the first two years of implementing the Glen Canyon Dam Adaptive Management Program, it has become apparent that several aspects of the program, specifically relating to the Record of Decision, the Glen Canyon Dam EIS and the Grand Canyon Protection Act need to be clarified in order to facilitate and focus the activities of both the Adaptive Management Work Group Committee (AMWG) and its subcommittee, the Technical Work Group (TWG). It is the purpose of this document to provide that direction. The following guidance represents the Department's understanding and intent concerning the purpose and role of the AMWG Committee and the scope of work given to the Committee in its Charter, pursuant to all relevant law and Departmental policy. This guidance has been assembled with the assistance and legal guidance of the Office of the Solicitor and has been shared with all members of the AMWG prior to finalization.

Background

During the past century, there have been numerous developments affecting the Colorado River that have led to the present juncture. On November 24, 1922, the Colorado River Compact was signed at Santa Fe, New Mexico, allocating the water of the river between the Upper and Lower Basins, as defined therein, as well as establishing the rules, rights, and obligations governing the use of that water among the seven respective states within the Colorado River Basin. The United States also has a treaty with the United Mexican States (Mexico) guaranteeing Mexico 1.5 million acre feet annually from the Colorado River. Among the other obligations established in the Compact was that of the Upper Basin not to deplete the flow of the river at Lee Ferry "below an aggregate of 75,000,000 acre-feet for any period of 10 consecutive years."

Earlier, in 1908, Congress set aside the Grand Canyon as a national monument and in 1919 expanded the reservation and redesignated it as a national park. There are only about fifteen river miles separating the outlet works of Glen Canyon Dam and the upstream boundary (on the northerly side of the river) of Grand Canyon National Park. Later, Congress also established the area surrounding Lake Powell and extending down river to the Park boundary (except for the area within the pre-existing Navajo Reservation) as the Glen Canyon National Recreation Area, also managed by the National Park Service.

In large part in order to assure that the rights and obligations in the Colorado River Compact and the Upper Colorado River Basin Compact could be met without jeopardizing the water uses of the Upper Basin states in the future, Congress passed the Colorado River Storage Project Act on April 11, 1956, which provided the authority for the construction of the four "initial units" of CRSPA, namely Flaming Gorge, Aspinall, Navajo, and Glen Canyon dams. Glen Canyon Dam, storing more than 26 million acre feet, over 24 million of which represent active capacity, is situated immediately above Lee Ferry, the delivery point to the Lower Basin. In 1968 Congress passed the Colorado River Basin Project Act which among other things provided for coordinated operations of Colorado River Basin reservoirs. Until recently, Glen Canyon Dam has been operated with essentially two functions in mind: compact deliveries to the

Lower Basin, and hydropower generation. Compact deliveries from Glen Canyon assure that the Upper Basin can meet its delivery obligations to the Lower Basin states and effectively manage other Upper Basin reservoirs to meet Upper Basin water supply needs. Hydropower generation provides the revenues necessary to cover operation and maintenance costs as well as the revenues needed to assure repayment of CRSP projects.

During the 1980s, it became apparent that the existing pattern of dam operations was adversely affecting some of the riparian resources in the Park and the Recreation Area below the dam. The Department began studying the situation, initiated the preparation of an EIS, and then Congress passed the Grand Canyon Protection Act of 1992 to attempt to address this problem.

Authority (Questions 1a, 1b, 1c, 2a, 3, 4c, 5a, 5c, 5e, 6a, 6b, 7a, 7c, 8, 12c, 13a, 14)

Grand Canyon Protection Act, Legislative History, and Law of the River

It is quite clear that when Congress enacted the Grand Canyon Protection Act of 1992, 106 Stat. 4669 (GCPA), it intended to maintain all that had gone before – the Compacts, the Park units, and Glen Canyon Dam – and to find a way to operate the dam so as to "protect [sic], mitigate adverse impacts to and improve"[1] downstream NPS resources without interfering with the "Law of the River," including compact and treaty obligations for water delivery (GCPA, section 1802(a) and (b)). The Senate Report on the bill puts it quite simply: "The primary purpose of this title is to authorize changes in the operation of Glen Canyon Dam to prevent damage to downstream resources, principally the dam's power operations." The Secretary's responsibilities for water storage, allocation and delivery act as limits on the Secretary's discretion in implementing the GCPA. It is also clear that Congress understood that these objectives would have certain costs in the form of lost incremental hydropower generating opportunity (GCPA, section 1809) and that the existence of the dam was to be taken as a given.

The basic question Congress was addressing was how Glen Canyon Dam operations might be modified within the provisions of existing law so as to improve conditions for downstream NPS resources (with similar benefits certainly occurring on other similarly situated lands). The GCPA itself does not direct consideration of cultural resources within the boundaries of Native American reservations, only "the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established," although all federal agencies have similar obligations under other law. The entire adaptive management program (AMP), including the Grand Canyon Monitoring and Research Center and the Adaptive Management Work Group, must be understood within this context. In accordance with section 1804 of the GCPA, the EIS was conducted to attempt to find an answer to that question, and the 1996 ROD was the Department's best first answer. Recognizing that more experience and knowledge with operations might enable further refinements in operations and might further improve downstream resource conditions, however, Congress added section 1805 to the GCPA. This section required

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[1] The GCPA as printed contains a typographical error, using "project" instead of "protect." The legislative history makes clear that "protect" is what was intended; that word will be used throughout this document.

the Secretary to "establish and implement long-term monitoring programs and activities that will ensure that Glen Canyon Dam is operated in a manner consistent with section 1802," namely, "to protect, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established," within the parameters of other applicable law and the physical constraints of the dam. Accordingly, the Department included in the EIS and in the ROD the provisions setting up the AMP, thereby allowing for further refinement of and changes to dam operations to better meet the GCPA objectives.

The charge given to the AMWG in its Charter is to "facilitate the AMP, recommend suitable monitoring and research programs, and make recommendations to the Secretary as required to meet the requirements of the Act." The scope of the AMWG responsibility, therefore, is to identify aspects of dam operations that can be modified to beneficially affect the downstream resources identified as the focus of study (i.e. "the target") in the EIS. This covers flow rates, ramping rates, periodicity of peak flows, monitoring sediment input rates and the relation of sediment movement to water release and ramping rates, chemical content and temperature of releases, among possible others -- any aspect of dam operations, in other words, which has a reasonably demonstrable effect on the downstream resources sought to be improved by the GCPA. The key to the scope of AMWG's responsibilities is whether a specific desired resource effect downstream of the dam can be achieved through some manipulation of dam operations. Under the ROD, the upper limit of planned release level is 45,000 cfs. Long-term monitoring and research, including test flows within the current range of authorized operations, are intended to enable finer and finer tuning of operations over time, as additional knowledge and experience are gained, to better achieve the target mix of resource benefits, as outlined in the EIS, pages 54-65.

Without losing track of this primary focus on improving conditions for downstream resources, the Charter also specifies that the "AMWG may recommend research and monitoring proposals outside the Act which complement the AMP process, but such proposals will be funded separately, and do not deter from the focus of the Act." This would include anything the AMWG committee considers relevant but tangential or attenuated in its effects on riparian resources downstream of the dam, as identified above. The relevant Senate Report language says, after the discussion of the primary purpose of the Act, that: "other reasonable remedial measures may be available to the Secretary. The phrase 'exercise other authorities under existing law' means that the Secretary should consider and may implement non-operational measures to address downstream effects of Glen Canyon Dam if such other remedial measures meet this title's goal of protecting, mitigating damage to, and improving the resources downstream of the dam." Again, as emphasized in the Senate Report, "the water storage, allocation and delivery requirements of the Law of the River place substantial limits on the Secretary's ability to change other elements of GCD operations. All measures undertaken pursuant to the authority of this Act have as their focus the improvement of conditions for downstream resources within the two Park Service units." The TWG's responsibility is similarly limited, but even more so; it is to carry out only specific assignments within the scope of the AMWG's responsibility, as directed by the AMWG.

The AMWG was set up pursuant to the Federal Advisory Committee Act (FACA) and must comply with FACA's requirements for notice and public meetings, etc., as laid out in the GSA regulations at 41 CFR Subpart 101-6.10. The AMWG and TWG may establish their own

internal operating procedures as they wish, so long as they comply with the specific requirements of FACA and its implementing regulations.

One area that has been a source of recent discussion has been the question of planned high releases from Glen Canyon Dam for such purposes as "beach habitat building flows." The Department expects the AMWG to work and provide its recommendations within the following context. Since the GCPA is clear that it was not intended to modify the compacts or "the provisions of the Colorado River Storage Project Act of 1956 and the Colorado River Basin Project Act of 1968 that govern allocation, appropriation, development, and exportation of the waters of the Colorado River Basin" (GCPA, section 1802(b)), any operational changes under the auspices of the GCPA are clearly subordinate to and must fit within the constraints of those provisions. Historically, there have been differences of legal opinion over some related issues, such as whether releases of water above power plant capacity, if made for authorized purposes, can be considered as not constituting "spills" within the meaning of section 602(a) of the Colorado River Basin Project Act of 1968 and the Operating Criteria implemented pursuant to section 602, and more recently over whether the GCPA "amends" existing law by adding additional authorized purposes for the operation of Glen Canyon Dam. These legal issues have not been finally resolved, but given the limitations provided in the ROD, the Glen Canyon Dam operating criteria, and the 1996 agreement between the Department and the Basin States, it is believed that they have been adequately addressed. Clearly, section 7 of the CRSPA, which directs the Secretary "to produce the greatest practicable amount of power and energy that can be sold at firm power and energy rates" provided that the primary purposes of compact deliveries and state compact allocation development are not precluded or impaired, remains in effect, even though the GCPA (section 1809) authorized, and the EIS/ROD implemented, an incremental reduction in the value of the hydropower resource. Under the conditions of those documents (the ROD, the operating criteria, and the 1996 agreement), flows above power plant capacity would be conducted utilizing reservoir releases required for dam safety purposes. The Department is currently focusing on operational modifications at release levels below 45,000 cfs. Modifications to the operating criteria involving flows above 45,000 cfs would require additional NEPA compliance.

EIS/ROD (Questions 1b, 4c, 5a, 5c, 7b, 7c, 12a, 12b, 12c, 13a, 13b, 13c, 13d, 13e, 13f, 15)

As mentioned above, the EIS conducted on Glen Canyon Dam operations contains the Department's selection of a mix of targeted resource benefits and its attempt to balance these benefits against costs to hydropower generation. As stated in the ROD:

> The goal of selecting a preferred alternative was not to maximize benefits for the most resources, but rather to find an alternative dam operating plan that would permit recovery and long-term sustainability of downstream resources while limiting hydropower capability and flexibility only to the extent necessary to achieve recovery and long-term sustainability.

The ROD represents the Department's "first cut" on providing an answer as to how that target might be achieved. The EIS and ROD are relevant to the AMP process in several respects. First of all, the EIS identifies the specific downstream resources sought to be benefitted (i.e. "protected, mitigated for, or enhanced") by changes in dam operations (see EIS, pp. 54-57 and Table II-7). Secondly, its discussions and analyses of various alternatives provide a starting point for the state of the science at the time the decision was made to implement the "modified low fluctuating flow" pattern of operations with a commitment for long-term modifications in response to further research. In the language of the ROD, "the Modified Low Fluctuating Flow Alternative was selected as the preferred alternative because it would provide the most benefits with respect to the original selection criteria, given existing information."

The monitoring, research and experimental programs are intended to develop additional information, working with the AMWG recommendations, "which could result in some additional operational changes." The selection criteria against which such changes are to be measured, however, remain unchanged. Elsewhere the ROD amplifies that this alternative was selected because it "meets the critical requirements of the sediment resource by restoring some of the pre-dam variability through floods and by providing a long-term balance between the supply of sand from Grand Canyon tributaries and the sand-transport capacity of the river" with corresponding benefits to habitat. The ROD, in part in conjunction with the EIS, also describes in detail the decision made, including modifications to the selected alternative, specific environmental and monitoring commitments, the scope and objectives of the AMP, the role and function of the Grand Canyon Monitoring and Research Center (GCMRC), and the role expected for the AMWG and TWG. It is important to understand that before either the targeted resource blend or the operational pattern in the Glen Canyon Dam operating criteria can be changed materially, additional NEPA work would have to be done.

Among the environmental commitments made in the ROD was the commitment to restrict Glen Canyon Dam release upramp rates to 4,000 cfs per hour and downramp rates to 1,500 cfs per hour. Consistently with interagency agreements between BOR and the Western Area Power Administration (WAPA) both prior and subsequent to the 1996 ROD, these figures should be understood to represent a firm limit on changes in release rates integrated over each hourly interval, to be enforced by the Secretary, subject to being exceeded only in times of emergency unless and until changed by subsequent decision of the Secretary.

As part of the adaptive management process, studies and information needs specified in the EIS/ROD are expected to be completed and to result in the identification of new information needs or definitions of effects, impacts and mitigation requirements.

All applicable federal laws must be complied with, including NEPA, NHPA, ESA, FACA, and the APA, in addition to the federal laws considered part of the "Law of the River." It is not expected that the Adaptive Management Program will result in additional required NEPA compliance unless additional resources (i.e. "management objectives") are identified and targeted for inclusion in the revised dam operations beyond those identified in the existing EIS.

Organization (Questions 8, 9, 10, and 11)

Prior to the EIS and ROD various Federal Agencies (e.g. BIA, WAPA, BOR, NPS, FWS) had various statutory responsibilities for compliance with laws involving such areas as the environment, historical and cultural resources, and threatened and endangered species. These

agencies have frequently entered into agreements among themselves to take specific actions to meet those statutory requirements. It was assumed when the AMP was adopted by the Secretary that it would include all studies necessary to determine the effects of GCD operations on the designated resources selected in the ROD. Some of these studies meet scientific needs and also meet statutory requirements under NEPA, ESA and NHPA. In fact the EIS identified some specific studies that would be a part of the AMP, such as the study of low steady flows.

The Secretary of the Interior established the AMP with four key elements: AMWG, TWG, GCMRC, and the IRP (Independent Review Panel). The four have distinct roles, but ultimately the Secretary of the Interior is responsible for seeing that the monitoring and necessary research is done to evaluate the impacts of adjustments made to dam operations. The EIS document prepared by the Secretary envisioned the AMP program to be a somewhat all-encompassing investigation of impacts, while still respecting the statutory obligations of each of the Departmental agencies. One of the mechanisms chosen by the Secretary to receive feedback through the AMP is the AMWG, which is to provide recommendations on the content of the various budgeting and planning documents. The AMWG can *recommend* studies and priorities for implementing individual studies during those reviews, preferably by consensus. In doing so, all members of the AMWG are assumed to be equal in importance when voting on recommendations, including federal agencies. However, final decisions as to the management of Interior facilities and resources, what studies to implement, when, and using funds from which sources remain, by statute, with the Secretary of the Interior and the appropriate Interior agencies.

Funding (Questions 2b, 4a, 4b, 5b, 5d, 6a, 7a, 17, 18, 19, 20, and 21)

Funding for any federal effort comes from the statutory authorities provided by enacted laws. In the case of the AMP, several funding authorities can come into play -- the most visible being the Grand Canyon Protection Act (GCPA) of 1992. The GCPA makes several statements with regard to potential sources of funds and also imposes some restrictions. With regard to the use of revenues generated from the sale of electric power, section 1807 is specific and restrictive. The hydropower revenues may be used for preparation of the EIS, including supporting studies, and the long-term monitoring programs and activities described in section 1805. Both hydropower revenues and appropriated funds can be used for administrative expenses to implement the specified work. However, the use of such funds to pay expenses of non-government employees may be covered under FACA and other fiscal regulations and must be treated on a case by case basis. The GCPA also authorizes such sums to be appropriated as are necessary and encourages use of other authorities under existing law to determine the effect of the Secretary's actions under section 1804 (c) and 1805 (b) on the natural, recreational, and cultural resources of Grand Canyon National Park and Glen Canyon National Recreation Area. The activity and its authorization determine the funding. To date, hydropower revenues have been the source of funding for almost all AMP activities because they meet the definition above. Research and monitoring proposals outside the Act which complement the AMP process are to be separately funded.

As stated in the authorities section above, the focus of the GCPA is downstream of the dam and primarily on the operations of the power plant. The existence or construction of the

dam and its associated impacts is not a focus. This is clear in both the EIS and ROD, i.e. in the EIS at page 2, top of page, right hand column "Since the dam has long been completed, alternatives to the dam itself have been excluded from the scope of the analysis."

To illustrate the range of activities and associated funding, some examples are provided below:

- Studies of control sites in Cataract Canyon or on reservation lands, for example, may be supported by revenues, if the studies are determined through scientific peer review to be necessary for determining the effects of the Secretary's actions downstream within the park units under 1804(c).

- Studies of water quality in Lake Powell are allowable if necessary to determine the effects on downstream resources. Studies of the effects on cultural resources around the rim of Lake Powell are not allowable under AMP (GCPA) funding.

- It is reasonable to assume that while the primary focus is on power plant releases the releases from the bypass tubes and spillway outlet works also fall into the operational category and funding could be used to conduct experiments and study impacts from their operation. In fact, this has already occurred to a degree during the 1996 beach habitat building test flow when the bypass tubes were used.

All Federal agencies have a special responsibility to Native Americans by law, including statutes, treaties, and executive orders. With the Secretary of the Interior being trustee, Department of the Interior agencies have a special role. Certainly the direct impacts of the dam operations on the Native American trust resources within the park units can and should be funded from hydropower revenues, but such impacts outside the boundaries of the river corridor in the park units must be studied using other appropriated funds. Participation in the AMP or education activities should be funded from appropriate sources. For instance education activities may come under self-governance and self-determination programs and be funded from BIA funds, activities surrounding general NPS requirements may be funded from NPS funds, and participation in AMP work group activities may be specific enough to be funded by revenues or appropriations from BOR. Funding of Native American activities should be a shared responsibility.

Other Compliance and Consultations (Questions 11, 16, and 21)

Prior to passage of GCPA and formation of the AMP, federal agencies had many responsibilities embodied in existing law. Those responsibilities remain today. The GCPA, EIS/ROD, and AMP did not take over responsibility for nor remove the legal obligations of the agencies to fulfill existing legal mandates. The GCPA states as much in several places. The AMP is a process by which the Secretary of the Interior has chosen to include all studies and

other compliance activities necessary to determine the effects of GCD operations on designated resources and to modify operations to meet the purposes of the GCPA.

It is possible that some of the studies recommended and performed under the AMP and the AMP budget will coincide with and help to satisfy obligations of the federal agencies under other laws, such as the Endangered Species Act. The obligations imposed by other laws must be complied with by the responsible agencies, whether they are funded as part of the AMP process or separately. The AMP budget does not imply that these compliance functions will automatically be assumed or raised to a higher priority through the AMP process, although where reasonable, the AMP process may assist or even satisfy such functions in a given instance -- "two birds with one stone," so to speak.

While the AMWG and TWG should be aware that the involved federal agencies face these responsibilities, those factors should not detract from the committee's focus as described in the GCPA, EIS, ROD, and Charter. The committee's recommendations for studies and their relative priorities should remain on the effects of dam operations on downstream resources within the park units. The implementation of such studies, their timing and funding and the like remain the decision of the Secretary and the federal agencies, as noted earlier.

Embodied in the NEPA process is the requirement to comply with ESA and cultural laws in order to discuss and present the impacts on all resources and eventually arrive at a preferred alternative. For example, the AMWG is not chartered to be a formal participant in ESA consultation processes. However, the AMP does not prevent AMWG members from participating as members of the public or in their other official capacities. In this regard, AMWG should focus on helping Reclamation determine how to apply the reasonable and prudent alternatives within the area of concern of the GCPA. In regards to the consultation requirements under NHPA, the action federal agencies and affected tribes have signed a programmatic agreement (PA) document and hold periodic meetings. Parties not signatory to the PA are welcome to attend and comment. Here too, however, the ultimate decision on how to proceed rests with the Secretary of the Interior and the federal agencies delegated the responsibility for management of the resources.

Other Program Relationships

While programs in other areas of the Colorado River do not require direct input from the work performed for the GCPA, it is certainly envisioned that information will be shared and that participants will keep abreast of other relevant basin activities. The GCPA requires compliance with existing laws and consultations with a variety of groups. To meet that requirement it is important that all members share knowledge obtained from activities arising from e.g. the upper basin recovery program, the salinity control program, and the lower Colorado multi-species conservation program.

APPENDICES:

QUESTIONS

Scott Loveless has responded to and the TWG has discussed a list of questions which was prepared by Bob Winfree on December 15, 1998, and which was attached to Steve Magnussen's memo of December 29, 1998. Those discussions generated the following additional questions for Scott from TWG. The following numbered list embodies the questions that led to the above guidance document.

1. (a) What is the scope of the AMWG Charter?

   (b) How do the EIS, the ROD, and the Act impact the scope?

   (c) Can the AMWG charter expand upon the scope and authorities in the Act? (EIS & ROD)

2. (a) Is the AMP limited by section 1804? Can AMWG recommend changes in the operating criteria?

   (b) Can the program expend funds to study (research) impacts of proposed (recommended) changes that are clearly beyond the limitations of Sec. 1804(c)?

3. What constitutes the target?

4. (a) Can funds as designated in 1807 be used to fund studies outside the effects of dam operations (outside the operational confines of the dam)?

   (b) How direct must the impacts be to allow funding under 1807?

   (c) Where does the burden of proof lie for determining the effects of dam operations?

5. (a) Is the AMP limited to power plant operations when hydrologic triggering criteria are not met? (paraphrase, Can you do an experimental flood when not required for dam safety purposes.)

   (b) Does the GCPA authorize funding to be used for mitigation of power plant operations, or is it broader; e.g., mitigate for spillways, bypass tubes, dam existence (Furnace Flats)? (i.e., Can AMP funding be used to mitigate sediment reduction, temperature averaging effects due to the existence of GCD.)

   (c) Does NHPA require mitigation for damage to properties eligible for listing on the National Register of Historic Sites as a result of the dam's existence?

   (d) Does the law allow for funding mitigation activities related to construction [existence] of the dam versus operations of the dam?

(e) Were power plant spills other than those hydrologically induced authorized by the Act?

6. (a) Does the monitoring program allow for research and monitoring of potential effects of releases up to 256,000 cfs?

(b) What is the legal boundary for lateral extent for all resources?

7. (a) When is it appropriate to propose experiments outside the preferred alternative?

(b) Can experiments be performed which are outside of the ROD?

(c) What are the limitations when performing an experiment outside the ROD?

8. What are the TWG responsibilities relative to review and editing of the monitoring and research plans prepared by GCMRC?

9. What organization is responsible for developing needed AMP planning documents and reports other than science program reporting?

10. Do recommendations of all stakeholders represented in TWG and AMWG carry equal weight in [TWG/AMWG] decisions?

11. The AMP has only been in place for a few years. Before the AMP, the various Federal Agencies involved had certain statutory responsibilities for environmental, historical and ESA compliance and they entered into agreements to take specific actions. Does the existence of an AMP budget automatically assume these compliance responsibilities for the agencies; and if so, do the agencies compliance responsibilities automatically become the dominant focus of the program? (e.g., Biological Opinion, Cultural Resources, etc.)

12. (a) Can the management objectives as outlined in the EIS be changed and, if so, how much can they be changed?

(b) Are the management objectives as outlined in the EIS different from the expected changes in management goals adopted by the Secretary when he selected the preferred alternative?

(c) Were the recommended changes in power plant operating criteria made to achieve the desired changes in management goals?

13 (a) What is the force and effect of the ROD?

(b) What limits does it put on our actions?

(c) Are there any parts of the paper, prepared by Reclamation and WAPA and distributed at AMWG, which are illegal?

(d) Are the numbers in the ROD hard and fast?

(e) Is it possible to exceed them?

(f) What is the penalty for exceeding limits specified in the ROD?

14. Does the GCPA authorize activities on Native American reservation lands (for example, above 124,000 cfs outside Grand Canyon National Park on Hualapai land)?

15. When is it appropriate to propose experiments outside the ROD?

16. Are there any prohibitions about AMWG contributing to the formal consultation on BO for Kanab Ambersnail?

17. What are the limits of the use of GCPA funds on other areas outside those specified in the GCPA, Grand Canyon National Park and the Glen Canyon National Recreation Area? For example, what is the restriction on the use of funds on tribal lands? Further, what about the effects that are caused by the action but do not have a resultant influence downstream? For, example what if there were effects of dam operations in Lake Mead? Could GCPA funds be used to study impacts to Lake Mead caused by operational impacts of Glen Canyon Dam? I'm thinking here of whether these funds could be used to study the effects of operations on an endangered bird species in delta area of Lake Mead.

18. Can GCPA funds (nonreimbursable power revenues) be used for agency compliance responsibilities related only to the operation of Glen Canyon Dam? Specifically, can they be used to pay for continuing activities related to BOR or NPS NHPA, Endangered Species Act Biological Opinion requirements, NEPA compliance etc. The BOR has made a very strong argument in the past that these activities are strictly an agency responsibility and outside the purview of the AMP (The AMWG makes no recommendations to the secretary on these issues). If so, and because they are not related directly to section 1804 or 1805 of the GCPA how can GCPA funds be used to support them?

19. Can GCPA funds be used to support salaries, travel, per diem etc. not directly related to Section 1804 and 1805 activities? For example, it would seem that there is a fundamental question related to the legitimacy of the use of GCPA funds for agency or stakeholder salary costs related to administration of the AMP. Sections 1804 and 1805 make no mention of administration costs for an AMP, and AMP is not directly related to research, studies, or the preparation of the EIS

20. Can GCPA funds be used to assist tribes to attend and participate in the AMP process?

21. If the BOR has legal obligations as a result of the Biological Opinion, are these obligations automatically the obligation of the AMWG?

AMWG OPERATIONS

FACA Overview

AMWG Member List and statement of their constituency and mission, including potential conflicts

AMWG Charter

Proposal for Renewal of AMWG Charter

AMWG Operating Procedures

Appropriations Committee language re: budget

Budget (current)

Issues papers and AMWG Guidance Document

Other issues yet to be resolved

TWG OPERATIONS

TWG Member List

TWG Operating Procedures, Proposal to Modify OP, Ground Rules, Consensus Definition, Recommendations regarding travel payments to TWG members

Ground rules for meetings

Code of conduct

Definition of consensus

GCMRC OPERATIONS

Letter Establishing GCMRC

GCMRC Monitoring and Research Center Guidelines
Center Protocols

RFP's and AMWG input
Peer Review
Administrative review (focus on priority information needs, permitting and compliance
responsibilities
Awarding contracts, competition
Information transfer (reports, workshops, etc.)

Annual Plan (current)

Strategic Plan (current)

LAWS, AGREEMENTS

Law of the River synopsis

Colorado River Compact, November 24, 1922

Colorado River Storage Project Act, April 11, 1956

Colorado River Basin Project Act, September 30, 1968

Long-Range Operating Criteria, 1970

Long-Range Operating Criteria, October 30, 1992

National Environmental Policy Act (Section 7 consultation)

Grand Canyon Protection Act, October 30, 1992 and Legislative History

National Historic Preservation Act (Sections 106 and 110)
Programmatic Agreement on Cultural Resources, August 30, 1994

Historic Preservation Plan

Endangered Species Act

36 CFR 2.5 (research and specimen collection in National Park Service areas)

Record of Decision, Glen Canyon Dam Final Environmental Impact Statement. 10/25/96

BOR-WAPA Operating Agreement

Biological Opinions
Final GCD EIS (included by reference)

Rebecca Tsoi article on trust responsibility

GLEN CANYON DAM OPERATING CRITERIA

Operating Criteria for Glen Canyon Dam In Accordance with the GCPA, 2/24/97

Operating Guidelines Associated with Glen Canyon Dam Operating Criteria 7/7/97

Operating Criteria and other Operating Parameters (C. Palmer 7/97)

Annual Operating Plans

AMP REPORTS AND RECOMMENDATIONS:

TWG Position Paper - Glen Canyon Dam Spillway Gate Extensions

Integration of Programmatic Agreement with AMP, Federal/Tribal Trust Responsibilities

BHBF Triggering Criteria

Spill avoidance

Glen Canyon Dam release issues recommended for further study, and GCMRC reply

Report of the NEPA/ESA Issues Subgroup

Recommendations to the TWG for expediting environmental compliance and improving coordination on Biological Opinion Issues

Letter to Secretary Babbitt from non-federal members

Management Objectives (current)

Information Needs (current)

Resource Criteria (current)

Report to Congress (current)

State of Natural and Cultural Resources in the Colorado River Ecosystem (current)

Lake Powell Assessment

BHBF Flow alternatives

TWG, TWG, AND AMWG
MEETING AGENDA AND MINUTES
1995, 1996, 1997

TWG, TWG, AND AMWG
MEETING AGENDA AND MINUTES
1998