



**United States Department of the Interior**  
**GRAND CANYON MONITORING AND RESEARCH CENTER**  
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Flagstaff, AZ 86001  
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GCMR-700  
PRJ 13.00

April 25, 1997

**MEMORANDUM**

To: GCMRC Information (Planning) Group

From: L. David Garrett, Chief, Grand Canyon Monitoring and Research Center *LDG*

Subject: A "White Paper" For Implementing Adaptive Management Processes;  
Synopsis of April 4, 1997 Meeting

A meeting on the "White Paper" drafted by Reclamation/Grand Canyon Monitoring and Research Center (GCMRC), was held at GCMRC offices on April 4. Of the GCMRC Information Group invited, the following individuals attended the meeting:

J. Balsom (NPS)	M. Matter (WAPA)
G. Burton (WAPA)	D. Metz (FWS)
K. Christensen (Hualapai Nation)	T. Moody (GC Trust)
D. Garrett (GCMRC)	C. Palmer (WAPA)
B. Gold (GCMRC)	R. Peterson (BOR)
O. Gorman (USFWS)	L. Riley (AGFD)
R. Hart (USGS)	L. Stevens (ATA/GCMRC)
N. Henderson (NPS)	W. Vernieu (GCMRC)
R. Lambert (GCMRC)	R. Winfree (NPS)
S. Lloyd (BOR)	

The goal of this meeting was to discuss the issues addressed in the "White Paper," particularly with regard to development of the Annual Operating Plan (AOP), Bureau of Reclamation Operating Strategies for Glen Canyon Dam, and GCMRC contingency research planning.

Randy Peterson described the AOP process, the planning of which is coordinated by Reclamation and involves a 50-member AOP group. The AOP process begins in April with presentation of a Reclamation draft operating plan for the following year to the group. The AOP group is primarily concerned with whether the following year will be a low, normal or surplus discharge year to the Lower Basin. Reclamation bases a proposed monthly release schedule on the July storage in Lake Powell. The draft AOP is revised in July when Lake Powell storage is known.

We discussed the definition of spills, as potential planned project events versus power plant bypasses. The lack of definition of this term is related to conflicting statements in the 1956 CRSP Act, the 1968 Act and the 1992 Grand Canyon Protection Act (GCPA). The challenge in new dam management strategies will necessitate agreed upon interpretations of certain concepts, including spills, planned spills, risks, etc., in attempting to comply with both the 1968 and 1992 Acts.

The main drivers in decision making are considering both the AOP and AMP processes, Glen Canyon Dam safety, water storage and delivery, hydroelectric power generation, sediment supplies, natural resources (especially endangered species), and cultural resources.

A primary concern is how, where and when to resolve possible conflicts between the AOP and impacts of this discharge management plan on downstream resources which are to be protected under the 1992 GCPA through the AMP. This needs considerable discussion and interaction between the AOP and AMP parties. Bob Winfree, Norm Henderson, and Randy Peterson separately developed flow charts of potential interactions, decision points, needed activities, etc. These were presented and discussed. These charts contained probable calendars of decision-making points related to inflow predictions, and AOP development and modification of that process as new inflow predictions are developed. These charts were combined and edited during the meeting (Fig. 1). Please edit and add to this flow chart as you see fit.

It was proposed first that only high inflow years and high planned flows require contingency evaluation, because only in those years would the possibility of unanticipated high flows exist. However, changes to planned releases frequently occur as a result of forecast changes and contingency planning is required under all these scenarios. In addition, when considering issues of endangered species, especially fish, contingency flow and research plans might be needed for low flows as well.

The AMWG is anticipated to meet only twice a year, and therefore needs some mechanism for responding to short-term changes. The opportunity for refinement of the AOP exists in February through possible consideration of a "State of the Canyon Resources" report. A question remains as to which group or groups have responsibility for developing short-term recommendations on resource impact analyses when they are needed.

The meeting adjourned at 14:30. We look forward to your comments on these minutes, particularly your concerns and comments regarding the draft time schedule for decisions and actions flow chart.

cc: TWG White Paper Discussion Group