

DRAFT

Glen Canyon Dam release issues recommended for further study

Recommendations by the TWG to the AMWG

drafted by T. Moody 11/24/97

At its September 1997 meeting, the Adaptive Management Work Group (AMWG) tasked the Technical Work Group (TWG) with defining a process and criteria for alternative operations at Glen Canyon Dam in response to inflows during the forecast season. During discussion on these topics, two other additional release issues were identified; flows greater than 45,000 cfs during Beach Habitat Building Flows and broader fluctuations within powerplant capacity.

Beach Habitat Building Flows greater than 45,000 cfs

Short duration flows greater than 45,000 cfs have been informally proposed by sediment researchers as beneficial to downstream resources. Many of the researchers who presented papers at the Symposium on the 1996 experimental spike flow commented on the benefits of shorter, higher flows. However, flows of this magnitude would necessitate the use of the dam's spillways and there is substantial opinion within the TWG that such flows would be outside current operating criteria as described in the GCDEIS and secretary's ROD. The uncertainty in benefits and costs to the downstream resources and hydropower and institutional questions need to be thoroughly defined and examined.

Broader fluctuations within powerplant capacity

If the proposed criteria and process for spills in response to high reservoir levels and runoff forecasts is adopted by the AMWG and implemented, these operations may result in more frequent BHBF and Habitat Maintenance flows and additional dynamics that benefit downstream resources. If additional dynamics are added to the system, it is the feeling of the members of the TWG that it may allow broader use of flow fluctuations without impacting downstream resources. We suggest that a careful review of the current limits to fluctuations within the operating criteria (<25,000 cfs) should be undertaken. Additionally, the use of fluctuations at high powerplant discharges (> 25,000 cfs) may reduce the erosional impacts of these high flows on sediment resources while the ability to load follow at these flows may benefit the hydropower resource.

Proposed TWG Recommendation to AMWG:

These are important issues that deserve more thorough and open discussion and evaluation. We recognize that they lie outside the tasks given the TWG by the AMWG. Therefore, we recommend that the AMWG formally task the members of the TWG, in conjunction with the Grand Canyon Monitoring and Research Center, to explore and evaluate the scientific, technical and institutional benefits and costs involved with these flow issues and necessary compliance issues with the Endangered Species Act, National Environmental Policy Act, and/or National Historic Preservation Act. The TWG and GCMRC would report to the AMWG at its next meeting with this information and recommended next steps.