

Categorical Exclusion ChecklistProject: Fall Test Flow Release -- Glen Canyon Dam, ArizonaDate: October 7, 1997

Nature of Action: The Bureau of Reclamation proposes to do a test release of water from Glen Canyon Dam, at powerplant capacity, for 2 days, beginning November 3, 1997. The maximum rated powerplant capacity is 33,200 cfs, but due to the current status of the generating units, the maximum achievable during this event is expected to be only about 31,000 cfs. The release is viewed as an opportunity to test whether a designed release can move sediment that came down the Paria River and other ungaged tributaries to the Colorado River in Grand Canyon, AZ, this past August, and deposit it at higher levels on beaches along select reaches of the Colorado River.

Exclusion Category: 516 DM 6, appendix 9 B. Planning Activities 1. Routine planning investigation activities where the impacts are expected to be localized, such as land classification surveys, topographic surveys, archeological surveys, wildlife studies, economic studies, social studies, and other study activity during any planning, preconstruction, construction, or operation and maintenance phases.

Evaluation of Criteria for Categorical Exclusion

1. This action or group of actions would have a significant effect on the quality of the human environment. No X Uncertain ___ Yes ___

Note: At September 1997 meetings of resource research scientists and the Technical Work Group (a sub-group of the Adaptive Management Work Group-AMWG), subsequent to the September 1997 AMWG meeting, the proposed flow was discussed and there were no significant resource issues identified. Monitoring for impacts to the trout fishery in the Glen Canyon Reach will be done.

2. This action or group of actions would involve unresolved conflicts concerning alternative uses of available resources. No X Uncertain ___ Yes ___

Note: The requirement for Colorado River Annual Operation Plan review was discussed at the AMWG meeting and it was determined that because the releases were to be within powerplant capacity, and in accordance with provisions of the 1956 CRSP, the 1968 CRBP, and the 1992 GCP Acts, that it could proceed.

Evaluation of Exceptions to Actions Within Categorical Exclusion

1. This action would have significant adverse effects on public health or safety. No X Uncertain ___ Yes ___

2. This action would affect unique geographical features such as: wetlands, wild or scenic rivers, refuges, flood plains, rivers placed on the nationwide river inventory or prime and unique farmlands. No X Uncertain ___ Yes ___

3. The action will have highly controversial environmental effects. No X Uncertain ___ Yes ___

4. The action will have highly uncertain environmental effects or involve unique or unknown environmental risk. No Uncertain ___ Yes ___

5. This action will establish a precedent for future actions. No Uncertain ___ Yes ___

Note: This action is one of many expected research/test-related events that are likely to occur in the future related to determining how to operate Glen Canyon Dam most effectively for benefit of all resources. The results of such tests and research could lead the AMWG to recommend permanent changes to the Secretary of the Interior. The process was used throughout the period of the Glen Canyon Environmental Studies between 1982 and 1992 and during the period of interim flow operations between 1991 and 1996.

6. This action is related to other actions with individually insignificant but cumulatively significant effects. No Uncertain ___ Yes ___

7. This action will affect properties listed or eligible for listing in the National Register of Historic Places. No Uncertain ___ Yes ___

8. This action will adversely affect a species listed or proposed to be listed as Endangered or Threatened. No Uncertain ___ Yes ___

Note: In it's biological opinion for this action, the Fish and Wildlife Service determined that the test could proceed and there would be no jeopardy to any of the known endangered species. However, the Service recognized that there would be a take of both humpback chubs and Kanab ambersnails, so there were specific conditions established by the Service. For the snails, Reclamation agreed to monitor the degree of take before and after the test, the same as was done for the spring 1996 flood flow. For the chub, Reclamation agreed to develop a study to determine levels of take, including assessing overwinter survival, and implement it. Up to that time, Reclamation agreed to "limit future test flows" from October through February. Of 2 options - measure take of chubs now, or, develop methods to insure Reclamation will measure future takes, Reclamation agreed to the second option.

9. This action threatens to violate Federal, State, and local, or tribal law or requirements imposed for protection of the environment. No Uncertain ___ Yes ___

10. The action will affect Indian Trust Assets. No Uncertain ___ Yes ___

Note: Tribes associated with Glen and Grand Canyons are represented on the AMWG and TWG.

NEPA Action Taken:

CE Checklist - This action will not significantly affect the quality of the human environment. It is excluded from documentation in an environmental assessment (EA) or environmental impact statement (EIS). Note: See also attached MEMO TO FILE, Questions & Answers related to this action.

Further environmental review and analysis is required. The following document should be prepared: EA EIS

Environmental Commitments, Explanation, and/or Remarks:

The intent of the test flow is to establish a high bank reserve of sediment for use in a possible subsequent spring 1998 beach/habitat building flow. Previously accumulated sediment deposits in the channel of the Colorado River were depleted by high flows through July. The high August inflows to the Paria has temporarily made more sediment available. Because a release of this particular magnitude, timing and duration has not been specifically planned and observed in the past, the event is also viewed as a test, with the objective of determining if sediment can be deposited in such a way as to be subsequently available to move during a higher flow event.

There are no reasonable alternatives to the proposed action. This specific action is unique because it's based on existing sediment conditions due to the August runoff into the Paria and the fact that there is enough water available in the system due to high inflows to attempt and move the sediment onto the banks. In fact, that available water must be moved downstream anyway, in anticipation of continuing high inflows, but it will take the available Paria sediment with it. Fashioning a 2-day release at powerplant capacity is expected to save the sediment and accomplish the required water release at the same time. The only other option is to choose not to do the test, bypass the opportunity, and lose the sediment downstream. Mark Anderson of the USGS explained that the data shows that the sediment from the Paria will be pushed out of the area should the maintenance flow not be done. This would result in a lost opportunity to deposit the sediment and keep it nearer where it will be needed in the future. Timing the release to occur as planned is important to avoid loss of the accumulated sediment from the Paria to downstream reaches of the river channel, beyond the beaches that are intended to be influenced.

The EIS Record of Decision placed a cap of 25,000 cfs on releases from GCD, with authorized exceptions allowed to accommodate emergencies, habitat maintenance flows, beach/habitat building flows, spill avoidance and/or floodflow releases. The intent of the long-term dam operations process, as explained in the EIS, was that the adaptive management program would be the vehicle for determining any recommended changes to dam operations. That would include modifications related to the season, magnitude, and duration of established flow patterns. The proposed flow represents a test of whether flows at or near powerplant capacity can move sediment into storage on the side of the river banks. The flow is not considered a habitat maintenance flow, a beach/habitat building flow, or even a modification of either of those. However, it is a change in operations from that established by the EIS ROD, the operating criteria, and the annual plan of operations. Therefore it is subject to review by the Adaptive Management Work Group to be considered for recommendation to the Secretary of the Interior for implementation. The AMWG discussed the proposal, a motion was made and seconded that the flows take place provided two pre-conditions were met: 1) that enough sediment is available and 2) that there would be no adverse impacts to downstream resources. The vote was unanimous to proceed accordingly.

Anthony G. Morton

Preparer's Name and Title: Anthony G. Morton, Environmental Compliance Specialist

Regional Archeologist Concurrence With Item 7: *Silvia Canade*

JL Regional Director or ITA Designee Concurrence With Item 10: *Dave C. Wood*

Concur: *Larry Walkowski* Date: 10/31/97
Division/Office Chief

Date: October 24, 1997

From: Anthony G. Morton, Environmental Compliance Specialist, UC-333

Subject: Proposed Fall 1997 Release from Glen Canyon Dam

The following questions and answers pertain to a proposal to make a special test release from GCD in October 1997, the reasons for the proposal, and the anticipated impacts.

Q: What is the proposed action?

A: The Bureau of Reclamation proposes to do a test release of water from Glen Canyon Dam, at powerplant capacity, for 2 days, beginning at noon on November 3, 1997 and concluding at noon on November 5, 1997. The maximum rated powerplant capacity is 33,200 cfs, but due to the current status of the generating units, the maximum achievable during this event is expected to be only about 31,000 cfs.

Q: What is the purpose for this release?

A: The release is viewed as an opportunity to test whether a designed release can move fine sediments that came down the Paria River, and other ungaged tributaries to the Colorado River in Grand Canyon, AZ, this past August, and deposit it at higher levels on beaches along select reaches of the Colorado River.

Q: Why is the flow needed?

A: Previously accumulated sediment deposits in the channel of the Colorado River appear to have been depleted by high-constant flows between 21,000 and 27,000 cfs during Water Year 1997. The volume of channel-stored sand in the system is now near those that existed after 1986, the end of the last high-flow period. The intent of this proposed flow is to attempt and establish a reserve of fine sediment along shorelines and in eddies for use in a possible subsequent spring 1998 beach/habitat building flow. The high August inflows to the Paria and other tributaries has temporarily made more sediment available. Because a release of this particular magnitude, timing and duration has not been specifically planned and observed in the past, the event is also viewed as a test, with the objective of determining if sediment can be deposited in such a way as to be subsequently available to move during a higher flow event.

Q: Are there other alternatives to accomplishing the desired objective?

A: No. This specific action is unique because it's based on existing sediment conditions due to the August runoff from the Paria and other tributaries and the fact that there is enough water available in the system due to high inflows to attempt and move the sediment onto the banks. In fact, that available water must be moved downstream anyway, in anticipation of continuing high

inflows, but it will take the available Paria sediment with it. Fashioning a 2-day release at powerplant capacity is expected to save the sediment and accomplish the required water release at the same time. The only other option is to choose not to do the test, bypass the opportunity, and lose the sediment downstream.

Q: How did Reclamation determine there's extra water available to push this sediment with?

A: The following is from the Draft 1998 AOP: "During water year 1998, releases greater than the minimum release objective of 8.23 maf likely will be made to avoid anticipated spills and/or to equalize the storage between Lakes Powell and Mead. Under the most probably inflow conditions, releases of 10.95 maf would be made... The maximum probable inflow (5.3 maf) would require releases of about 25,000 cfs for a lengthy period of time."

Q: What if we fail to take action?

A: Mark Anderson of the USGS explained that the data shows that the sediment from the Paria will be pushed out of the area should the maintenance flow not be done. This would result in a lost opportunity to deposit the sediment and keep it nearer where it will be needed in the future. Timing the release to occur as planned is important to avoid loss of the accumulated sediment from the Paria to downstream reaches of the river channel, beyond the beaches that are intended to be influenced.

Q: Isn't this type of habitat maintenance flow or beach/habitat building flow already addressed in the GCD EIS and Record of Decision?

A: Not exactly. The proposed flow does not precisely fit the definition for either of those flows, but it contains elements of both. **Habitat maintenance flows** are defined in the operating criteria for GCD as "steady releases within powerplant capacity not to exceed 14 days in March, although other months will be considered under the Adaptive Management Program. These flows will not be scheduled when projected storage in Lake Powell on January 1 is greater than 19,000,000 acre-feet." Because the storage in Lake Powell on January 1, 1997 was over 19 maf, habitat maintenance flows cannot be scheduled during the 1997 water year. **Beach/Habitat Building Flows** are defined in the operating criteria as "controlled floods to occur as steady flows not to exceed 45,000 cfs, duration not to exceed 14 days...utilizing reservoir releases in excess of powerplant capacity required for dam safety purposes." Because the proposed flows are projected to be at powerplant capacity, they are not appropriately defined as beach/habitat building flows and that is not the intent anyway.

Q: What does the GCD EIS say about these types of flows?

A: The EIS Record of Decision placed a cap of 25,000 cfs on releases from GCD, with authorized exceptions allowed to accommodate emergencies, habitat maintenance flows,

beach/habitat building flows, spill avoidance and/or floodflow releases. The intent of the long-term dam operations process, as explained in the EIS, was that the adaptive management program would be the vehicle for determining any recommended changes to dam operations. That would include modifications related to the season, magnitude, and duration of established flow patterns. The proposed flow represents a test of whether flows at or near powerplant capacity can move sediment into storage on the side of the river banks. The flow is not considered a habitat maintenance flow, a beach/habitat building flow, or even a modification of either of those. However, it is a change in operations from that established by the EIS ROD, the operating criteria, and the annual plan of operations. Therefore it is subject to review by the Adaptive Management Work Group to be considered for recommendation to the Secretary of the Interior for implementation.

Q: What did the AMWG have to say about the proposal at it's meeting in Phoenix in September?

A: The group discussed the proposal, a motion was made and seconded that the flows take place provided two pre-conditions were met: 1) that enough sediment is available and 2) that there would be no adverse impacts to downstream resources. The vote was unanimous to proceed accordingly.

Q: So, has Reclamation determined that there will or won't be any adverse resource impacts?

A: That was left to the resource managing entities and interested parties to determine, as it was for the EIS. At meetings of resource scientists and the TWG Sub-group, subsequent to the AMWG meeting, the proposed flow was discussed and there were no significant resource issues identified.

Q: If there are no resource issues identified, then why is Section 7 consultation being engaged in?

A: Reclamation has decided to submit a biological opinion to the FWS on the likely effects of the flow to endangered species as an added precaution to verify that there won't be irretrievable or otherwise unacceptable effects to endangered species. For example, Reclamation has been operating on the premise that releases higher than 25,000 cfs are potentially harmful to native fish (could wash the fish out of backwaters) if they occur between March-October (see Exhibit C of the Operating Agreement between Reclamation and Western). Also, we need to know if kanab ambersnail must still be surveyed and any individuals moved to higher ground for any flows scheduled above 25,000 cfs, as required in the biological opinion for the spring of 1996 beach/habitat building flow.

Q: Doesn't the proposed flow have to be reviewed not only by the AMWG but the group that formulates the Annual Operating Plan for the Colorado River, including Glen Canyon Dam?

A: Yes. The proposal is one not previously designed or planned and therefore it should go

through both the AMWG and the AOP processes for consideration and approval by the SOI. However, the requirement for AMWG consideration is done, given that the AMWG was unanimous in support of the flow if the preconditions were met. The requirement for the AOP review was discussed at the AMWG meeting and it was determined that because the releases were to be within powerplant capacity, and in accordance with provisions of the 1956 CRSP, the 1968 CRBP, and the 1992 GCP Acts, that it could proceed.

Q: Does NEPA apply to this action?

A: Yes and no. NEPA does not technically or legally apply to the proposed flow because it is within the established authorized operational limits for Glen Canyon Dam. However, in the EIS ROD, Section VI, Item 1, titled Adaptive Management, it's stated that the Adaptive Management Program includes:

“development of a long-term monitoring, research and experimental program which could result in some additional operational changes. However, any operational changes will be carried out in compliance with NEPA.”

Reclamation therefore evaluated the proposed action for potential impacts and determined that the test flow may be categorically excluded from further NEPA compliance (EA or EIS). While Reclamation recognizes that there is value in voluntarily completing a more complete and formal NEPA process, such as doing an EA or EIS, to serve as a means to more formally evaluate potential affects to resources of concern and provide for input by interested publics beyond the AMWG, in this case, it appears that doing that would serve only to more elaborately document the lack of concern expressed by the various resource representatives at the AMWG and TWG meetings and also delay the proposed start date for the test, with the potential to lose the opportunity to do it at all. Therefore, we feel that the test flow may proceed as planned and that any potential impacts that may occur are either beneficial or within the range of acceptable consequences.