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United States Department of the Interior

SEP 0 8 2000

NATIONAL PARK SERVICE
1849 C Street, N.W.
Washington, D.C. 20240

IN REPLY REFER TO:
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Memorandum

To: Commissioner, Bureau of Reclamation

From: Director

Subject: Comments on the Colorado River Interim Surplus Criteria Draft Environmental Impact Statement 4000

The National Park Service (NPS) appreciates the opportunity to work closely with the Bureau of Reclamation as a Federal Cooperating Agency in the preparation of the subject Draft Environmental Impact Statement. This cooperation facilitated direct and early input into the preparation of this document. As a consequence, we have been successful in resolving many NPS resource issues as well as clearing up any misunderstandings and routine editorial issues. We look forward to continuing to work with Reclamation to complete this document within the timeframe specified by the Secretary. The enclosed comments represent the most important NPS issues related to the description and analysis of impacts to the resources of the three affected park units -- Grand Canyon National Park, Glen Canyon National Recreation Area, and Lake Mead National Recreation Area.

In addition to finalizing the EIS, and because of the important issues surrounding the interim surplus criteria, the NPS would like to participate, to the extent possible, in the development of the Record of Decision for this document.

We appreciate all of your cooperation on this effort. If you have any questions, please feel free to contact me or Michael Soukup, Associate Director for Natural Resource Stewardship and Science at 202-208-3884.

Attachment

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cc: NPS Regional Director, Intermountain Region, Denver, CO
NPS Regional Director, Pacific West Region, San Francisco, CA
BOR Regional Director, Upper Colorado River Region, Salt Lake City, UT
BOR Regional Director, Lower Colorado River Region, Boulder City, NV
Superintendent – Grand Canyon NP; Glen Canyon NRA; Lake Mead NRA
Molly Ross, K.C. Becker, Robert Snow – DOI Office of the Solicitor
Assistant Secretary for Fish and Wildlife and Parks
Nancy Hayes – Office of ASFW
Deputy Secretary Hayes

NATIONAL PARK SERVICE
COMMENTS
COLORADO RIVER INTEIM SURPLUS CRITERIA
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

September 8, 2000

The National Park Service (NPS) has appreciated the opportunity to work closely with Bureau of Reclamation (Reclamation) staff in Boulder City, Nevada, as a cooperating agency in the development of the DEIS for assessing the effects of Colorado River Interim Surplus Criteria. This cooperation facilitated direct and early input into the preparation of this document that includes an analysis of the effects of alternative interim surplus criteria on the resources of Grand Canyon National Park, Glen Canyon National Recreation Area, and Lake Mead National Recreation Area. As a consequence, we have been successful in resolving many NPS resource issues. The NPS will continue to work closely with Reclamation to provide this level of input for the FEIS.

The NPS does, however, have certain unresolved issues concerning the analysis of impacts to certain resources potentially affected within the three park units.

1 Scope of the analysis – The DEIS uses different methodologies to assess the various resources. Predicted changes in water levels of both reservoirs are made utilizing the 10th, 50th, and 90th percentile of potential hydrological inflows. Annual depletion projections for the three lower basin states are also assessed using these three percentile values. The analysis of cultural resource impacts utilizes 10th percentile water levels to show the most severe drawdown impacts. Equalization assumptions utilize the worst case hydrologic scenarios to protect 602(a) storage within Lake Powell. The DEIS specifically states that the 90th and 10th percentile lines "bracket" where 80 percent of the future water levels would occur (and presumably 80 percent of the impacts). Given this, it is problematic that the above resources are addressed in a comprehensive fashion in the DEIS but that the consequential effects of water level changes on many other affected NPS resources are made using only median water levels. By conducting resource analysis in this fashion, the potential impact of the proposal tends to be minimized and the full range of effects not disclosed. It would seem appropriate to either fully bracket the potential effects (as was done for many other resources) or clearly disclose the rationale for limiting the scope of the analysis.

2 The DEIS states that interim surplus criteria would be implemented for only 15 years, but assesses the effects of the criteria for a 50-year period. After the 15-year period all alternatives revert to baseline conditions (75R), which is one of the alternatives. Why is one alternative continued through the entire 50-year period of analysis when the others are not? The likelihood of the criteria reverting to this baseline is minimal. It would be appropriate for the FEIS to provide some analysis of the effect of continuing with the various alternatives throughout the 50-year period.

1

1: The methodology used for analysis of various resources was dependent upon the amount of information available and the potential effects identified through modeling. These methodologies are described for each resource/issue analyzed in the various sections of Chapter 3 of the EIS. Note that analysis of recreation resources within both the Glen Canyon and Lake Mead National Recreation Areas determined specific probabilities for certain elevations important to shoreline facilities and navigation with the NRAs. The FEIS contains additional discussion and probability analysis for specific reservoir surface elevations identified through discussions with NPS and others during preparation of this document.

2: As noted in this comment, the interim surplus criteria would be in effect for 15 years, after which these criteria would terminate and determination of surplus conditions would revert to the current AOP procedures. However, the model operation for each alternative was extended beyond the interim period, to 2050, with the interim criteria reverting to the baseline criteria, so that any after effects resulting from the alternatives would be indicated. The baseline model operation was also extended to 2050 so that comparisons could be made. The baseline operating strategy in the DEIS was not an alternative, but was established as a "benchmark" against which to compare the effects of the alternatives, as discussed in Section 2.2.5. This continues to be the case for the modeling analyses in this FEIS.

COMMENT LETTER

RESPONSES

3 Recreation – The DEIS addresses the effects of water level changes on recreation facilities (marinas) in Lake Powell and Lake Mead caused by interim surplus criteria by quantifying the costs associated with facility adjustment and capitol acquisition both incrementally and over the 15-year period. The FEIS should quantify the total cost for the entire 15-year period for the 10, 50, and 90 percent hydrologic inflow projections. The DEIS suggests that one or more marina sites could become inoperable at certain unspecified water levels. However, no analysis of these critical levels is provided. Such analyses could easily be made using existing GIS and other data. The effects of marina closures could have broad economic consequences to the local and regional economy that should be recognized and summarized in the FEIS. Further, the effect of such closures on the ability of our concessionaire to make a profit should be analyzed; especially the ability of the Navajo Nation to open and operate their new facility at Antelope Point on Lake Powell should be discussed.

4

5 River flows below Glen Canyon Dam – The DEIS does not assess the effects of interim surplus criteria on operational river flows below Glen Canyon Dam within Grand Canyon and Glen Canyon. The DEIS states that any effects would be handled through the Glen Canyon Dam Adaptive Management Program (AMP). While the discussion to handle effects through the AMP is reasonable, the potential consequences of the criteria should be clearly specified as they are for flows below Hoover Dam. Further, the potential consequences to resources caused by any change in flows through the Grand Canyon should be specified especially for threatened and endangered and other special status species.

6

7 Beach Habitat Building Flows (BHBFs) – BHBFs are an important management tool affecting the natural and cultural resources in Glen Canyon and Grand Canyon. While the DEIS section on BHBFs shows a minor impact due to implementation of the interim surplus criteria, clarity would be enhanced by a more compete display of the frequency analysis. We suggest that a continuous curve of the frequency of occurrence of BHBFs supplement Table 3.6-1, and that some additional description be added on how the likelihood of BHBFs changes with specific reservoir elevations as a result of the surplus alternatives.

8 Additional research is required to better understand and optimize the effects that BHBFs have on the environmental resources downstream of Glen Canyon Dam. The NPS recommends that the Record of Decision for this EIS direct the Glen Canyon Dam Adaptive Management Program to consider and address a program of several test flows to research alternative BHBF designs. The NPS suggests that these research tests may be implemented independent of the hydrologic triggering criteria required to conduct BHBFs for Adaptive Management purposes, while maintaining the integrity of the hydrologic criteria for long-term implementation of BHBFs.

9 Threatened and endangered (T&E) fish species – T&E fish species are described for the Colorado River and San Juan River inflow areas of Lake Powell. Specifically, the DEIS acknowledges that critical habitat has been designated for the razorback sucker, Colorado pikeminnow, and bonytail chub. However, the effects of Lake Powell water levels and interim surplus criteria were not included within the environmental consequences section of the DEIS. If there are potential impacts on these species, they should be described in the FEIS. The NPS recommends that any effects be managed through the previously established recovery implementation programs for the Colorado and the San Juan rivers.

3: It is recognized that different percentiles could be used for presenting the information in Section3.9.6. However, Reclamation believes that using median elevations, while not showing all circumstances, appropriately presents the differences between the alternatives and baseline conditions.

4: Differences between baseline conditions and alternatives at the 3626 ft. level are typically less than five percent. Subsequent to publishing the DEIS, Reclamation received additional information regarding threshold elevations from NPS and the Navajo Nation. The FEIS discusses this information in Section 3.9.2.2.2.1, and presents analyses for threshold elevations of 3626 feet and 3677 feet msl.

5: As discussed in the EIS in Sections 1.4.2 (Glen Canyon Dam Operations) and 3.2.2 (Adaptive Management Program Influence on Glen Canyon Dam Releases), the Adaptive Management Program would continue to address resources within the river corridor below Glen Canyon Dam. Two types of flows are of particular concern to the Adaptive Management Program: BHBFs and low steady summer flows. Sections 3.6.2 and 3.6.3 analyze the potential effects of interim surplus criteria on the frequencies of these two flow regimes. No additional analysis of the potential effects on resources within this segment of the river corridor is necessary because, as discussed, the Adaptive Management Program would continue to address these resources consistent with the Operation of Glen Canyon Dam ROD. Because flows below Hoover Dam are associated with water deliveries based on depletion schedules provided by the Lower Division states, modeling conducted for the EIS (which includes depletion schedules) produces forecasts of specific monthly flow volumes. In contrast, releases from Glen Canyon Dam are not made to meet water delivery schedules and are, instead, subject to the requirements of the Operation of Glen Canyon Dam ROD and the Adaptive Management Program. As such, it is not possible to provide the same level of modeling projections for Glen Canyon Dam releases.

6: Information regarding potential effects on river flows and special status species below Glen Canyon Dam, within Grand Canyon and Glen Canyon, is in Section 3.8 of the FEIS.

7: A continous plot of the probability of BHBFs has been added to Section 3.6.2.

8: The Department of the Interior agrees with this comment and the concept that it is important to conduct additional research to better understand and optimize the effects of BHBFs. The Glen Canyon Dam Adaptive Managment Program (AMP) was established as a Federal Advisory Committee to assist the Secretary of the Interior in implementing the Grand Canyon Protection Act of ctobger 30, 1992, which is embodied in Public Law 102-575. The Grand Canyon Protection Act directs the Secretary, among others, to operate Glen Canyon Dam in accordance with the additional criteria and operating plans specified in section 1804 of the Act and to exercise other authorities under existing law in such a manner as to protect, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established, including but not limited to the natural and cultural resources and visitor use. Section VI of the October 8, 1996 Record of Decision on the Operations of Glen Canyon Dam Final EIS commits the Department to the implementation of BHBFs, the scheduling, duration, and flow magnitude of which will be recommended by the Adaptive Managment Work Group and scheduled through the Annual Operating Plan process. Reclamation agrees that the AMP is the proper forum in which to explore experimental fows so that in the future, when hydrologic conditions allow such BHBFs as management actions, they can be performed for the greatest benefit of the resources. In advance of the Record of Decision, the Department can report that efforts to expedite consideration and development of the parameters and criteria for future test flows, including BHBFs, are underway through a recently formed subgroup of the AMP's Technical Work Group. Reclamation intends to continue to pursue BHBFs through the AMP. We welcome the continued participation and input of the National Park Service in this effort.

9: Revisions have been made to Section 3.8.2.2.3. Note that potential effects to special-status fish species were analyzed with respect to operations at both Glen Canyon Dam and Hoover Dam. The section also notes that previously established recovery programs are to remain in place. No specific threshold elevations at Lake Powell pertaining to special-status fish species are known to have been developed. Revisions to the description of designated critical habitat were also made within the section.

10 Cultural resources – The DEIS states that the proposed action is an undertaking but has no potential to affect cultural resources since any within the area of potential affect have been already severely affected by ongoing operations. The DEIS then suggests that certain resources might retain qualities making them eligible for inclusion on the National Register of Historic Places (NRHP) and potentially affected by the action. In fact, this is the case for Lake Powell where three cultural sites (Rock Creek, Dan Canyon burial, and Good Hope Bay) have been discovered since 1983 that are above 3,670 feet msl that have either been excavated or were found eligible for listing on the NRHP. In each case, the sites were originally buried and were then exposed due to the inundation and retreat of lake water. It is highly likely that additional sites such as these would be found once a comprehensive or stratified survey was completed.

11 Certain cultural resources not discussed in the DEIS but likely still in existence and potentially greatly affected by future operations are the buried and surface cultural resources located between the normal and the maximum water surface elevations of the respective reservoirs. Within this elevation band, inundation has occurred only minimally (only twice at Lake Powell and only to the 3,708 feet msl elevation). For example, on Lake Powell, the Crumbling Kiva site is found at elevation 3,710 feel msl. Continuing reservoir operations described within the DEIS could potentially affect this site and any others within this elevation band on either of the reservoirs. Without an adequate survey, it is impossible to determine the extent of the impact.

12 Given this rationale, it would be appropriate for the NPS and Reclamation to determine a suitable course of action to identify and protect any remaining cultural resources that may be affected by the proposed action and continuing operations.

13 Lake water quality – The water quality of Lake Mead is generally described in the DEIS. Lake levels and overall volume (through the various alternatives) are recognized as a critical factor in predicting overall water quality. Specifically, the DEIS states that "contaminant dilution and lake water quality are directly proportional to lake volume" and that a reduction in volume would "likely have deleterious effect on lake water quality and, potentially, on water quality withdrawn by SNWA." A general summary of the chemical and pollutant characteristics of the lake is provided but no specific projections are given on how these values would change with the various surplus alternatives. Changes to water quality are implied through very broad summaries of elevation, volume, and surface area changes over the 50-year analysis period (Table 3.5-6). This summary tends to minimize the potential effects by first utilizing median inflow projections and then averaging the change in water level between three analysis periods. Given that the limnology and water quality of Lake Mead are generally known, predictions about changes could be developed and appropriately included in the FEIS.

14 In addition, water withdrawals from Lake Mead would approach 60 feet from surface elevation even utilizing the median inflow projections. This potential is even greater if the 10th percentile inflow projects are utilized. In both cases water release temperatures could increase and potentially affect the aquatic ecology downstream. A discussion of these potential impacts should be included in the FEIS.

10: Reclamation's understanding was that most, if not all, historic properties located within the area of fluctuations of the reservoir had lost sufficient integrity that they would no longer be capable of conveying their historic significance. This comment provides important information that this is not the case for all historic properties.

11: Reclamation agrees that the inventory and identification of cultural resources that was conducted prior to the completion of the reservoirs is inadequate by today's historic preservation standards. However, prior to completing the reservoirs, the National Park Service was in compliance with the Historic Sites Act of 1935; they did complete the surveys, investigations and researches of historic and archaeological sites, buildings, and objects for the purpose of determining which possessed exceptional value for commemorating or illustrating the history of the U.S. Furthermore, the NPS did comply with the Reservoir Salvage Act of 1960 with respect to Lake Powell. Archeological data affected by construction of Glen Canyon Dam were preserved to the standards of the time. Reclamation continues to ensure that these data are preserved and accessible to the public based on the Historic Sites Act and Reservoir Salvage Act.

12: For purposes of the undertaking defined as the adoption of specific interim surplus criteria and the subject of this EIS, the projected or predicated effects appear to be encompassed within normal operations. Normal or on-going operations are not the subject of this EIS, therefore, any effects or the resolution of effects of existing operations are beyond the scope of this EIS. Reclamation is, of course, eager to comply with the National Historic Preservation Act and its implementing regulations. Reclamation agrees with the NPS that it has Section 110 responsibilities with respect to on-going operations.

13: The water quality analysis in the EIS appropriately identifies the potential effects of the interim surplus criteria. Potential effects are discussed in terms of the general effects of changing reservoir elevations because specific elevations and periods that such elevations would occur are unknown and cannot be predicted. Use of the median elevations projected by system modeling to discuss differences between the alternatives and baseline conditions does not minimize these potential effects, and instead presents a reasonable means of comparison of potential future outcomes.

14: Potential effects on sport fisheries of increased temperature of water releases from Hoover Dam have been included in Section 3.7.3 of the FEIS.