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Grand Canyon River Guides scoping comments on the development of alternatives for a Long Term Experimental Plan Environmental Impact Statement

Grand Canyon River Guides, Inc. (GCRG) founded in 1988, works to provide unified voice for commercial river guides and many other river runners in defense of the Colorado River corridor through Grand Canyon. Comprised of over 1,800 individuals, we are passionately dedicated to the conservation of this national icon. We are a non-profit 501(c)(3) educational and environmental organization whose goals are to:

*Protect Grand Canyon
Set the highest standards for the river profession
Celebrate the unique spirit of the river community
Provide the best possible river experience.*

With these goals in mind, and as a committed, long-term member of the Adaptive Management Work Group, Grand Canyon River Guides offers the following comments to the Environmental Impact Statement on the Long Term Experimental Plan for operations of Glen Canyon Dam and other associated management activities (LTEP).

General comments

- **The National Park Service (NPS) should serve as a joint lead agency for this EIS process.** The Grand Canyon Protection Act of 1992 (GCPA) and this EIS are focused on improving and protecting resources and values of Grand Canyon National Park and Glen Canyon National Recreation Area downstream of Glen Canyon Dam. Therefore, National Park Service involvement should be a central component of the LTEP EIS to comprehensively address park values and resource protection over the long term.
- **The LTEP should serve to re-focus the Adaptive Management Program (AMP) and Department of Interior on ecosystem resources, not program administration.**

GCRG deeply regrets the recent decision by the Secretary of the Interior to cancel a proposed Beach Habitat Building flow. In his memorandum of February 02, 2007, the Secretary's Designee outlined several reasons for cancellation of the BHBF. We were shocked to find that the justification for not implementing a BHBF only involved the need for further planning, compliance and review. No mention was made of the need to protect, mitigate adverse impacts to, and improve resources of the Colorado River in Grand Canyon. Monitoring and research has clearly demonstrated that Beach Habitat Building Flows are the only viable mechanism for conserving sediment in the system, and sediment conservation has been identified as a priority resource that has significantly declined. Clearly, this decision was based solely on administrative criteria, rather than critical resource conditions and needs. We wholeheartedly disagree with this decision, as well as the decision-making process. The LTEP EIS process should serve as a mechanism for re-focusing the decision-making process on responding adaptively to resource conditions based on what we already know, rather than being inhibited by program administration or political maneuvering. The bottom line is that sound science should always inform and direct policy decisions.

- **Funding mechanisms for the AMP should be reevaluated to ensure the effects of the LTEP are meeting the intent of the GCPA.** The level of funding available for monitoring, research and program administration has hindered the ability of the AMP to properly evaluate whether the effects of Glen Canyon Dam operations and other management activities are meeting the intent of the GCPA. The information needs, management objectives and goals of the AMP have been prioritized, based in part, on the amount of money available. Recent planning efforts for the proposed BHBF were guided by the amount of funds available in the Experimental Flow Fund. What happens to the program if there are insufficient funds in the Basin Fund to cover AMP expenditures? New funding mechanisms should be investigated that ensure sufficient funding to evaluate the effects of the preferred LTEP alternative on meeting the intent of the Grand Canyon Protection Act.
- **Investigate the structure and implementation of the adaptive management process.** The Glen Canyon Dam AMP is an experiment of national importance. Yet, there we lack a current assessment of the effectiveness of the program. How can the Glen Canyon Adaptive Management program be improved? Where has the program succeeded? Where has it failed (see BHBF comments above) and what are the impediments? How can the structure of the program be improved to better meet the AMWG charter and the mandates of the Grand Canyon Protection Act? The Department of Interior should initiate an assessment program, perhaps a panel of experts similar to the Protocol Evaluation process used by GCMRC, to ensure that the outcome of this EIS is implemented in the most effective way.

Developing Alternatives

- **Alternatives should be developed that meet the intention of the Grand Canyon Protection Act.** The GCPA stipulates that the protection of downstream environmental,

cultural and recreation values have precedent over power generation as long as operations do not interfere with the allocation of water governed by the Law of the River. In Section VII (Basis of Decision) the 1996 Record of Decision for the Glen Canyon Dam EIS states, *“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.”* GCRG suggests a similar approach for the LTEP.

- **All LTEP alternatives must be scientifically credible and defensible with well-defined scientific hypotheses.** The Adaptive Management Program, and therefore the LTEP, must provide a scientifically credible framework to continually refine, and if necessary re-operate Glen Canyon Dam so as to meet the primary intent of the GCPA, to develop a systematic and improved understanding of the dam’s effects on downstream resources.
- **The LTEP should be based on an adaptive ecosystem management approach.** Adaptive management should build upon knowledge previously gained through extensive monitoring, modeling, and research that adheres with Principle 4 of the AMP Strategic Plan.
- **Alternatives should be in compliance with the Endangered Species Act.** The ESA focuses on preserving and restoring native species in the context of their critical habitat, which in this case, is inextricably affected by a dam-altered system.
- **Alternatives should be in compliance with all existing federal laws in regards to protection of cultural resources and Traditional Cultural Properties, including, but not limited to the National Historic Preservation Act and all associated laws and statutes.** It is imperative that the LTEP achieve AMP objectives for these fragile and non-renewable resources to protect National Register listed or eligible historic properties downstream of Glen Canyon Dam.
- **LTEP alternatives should comply with the Cultural Programmatic Agreement for the AMP as well as the Natural/Cultural and Visitor Use Monitoring Plans currently being developed by Grand Canyon National Park.** Mechanisms should be developed for information sharing to eliminate redundancy while ensuring that all program goals and requirements are being met.
- **A complete range (full spectrum) of scientifically defensible alternatives should be developed, including, but not limited to, the following:**

1) Seasonally Adjusted Steady Flows. At the close of the Glen Canyon Dam EIS, Grand Canyon River Guides did not support the preferred alternative (MLFF) as we were unconvinced that it would best conserve terrestrial riparian habitat in the canyon, especially in regards to crucial sediment needs. We did support a rigorous test of the SASF alternative to determine whether releases that closely mimic pre-dam flows would

better restore the endangered species and severely eroded beaches. The single test of SASF in the summer of 2000, although informative, was insufficient to determine its effects on the ecosystem. Further testing of this concept is necessary to assess system response and to test the RPA of the U.S. Fish and Wildlife Service.

2) Equalized monthly volumes. GCMRC has shown that variation in monthly release volumes strongly affects sediment erosion and deposition. Yet, we still do not know which monthly volume under ROD releases is optimum for sediment sustainability. This is a testable question that should be pursued in the LTEP in order to determine the most effective annual release patterns.

3) Option “B” from the AMP experimental flow plan. Option B has been vetted by the Science Planning Group and is supported by both Grand Canyon Trust and Grand Canyon River Guides. It adequately tests the SASF hypothesis in a progressive way, which should lead to an understanding of the optimum balance between ecosystem sustainability and hydropower generation.

4) Modified Low Fluctuating Flows The Glen Canyon Dam Record of Decision in 1996 stipulated MLFF flows as the preferred alternative for accomplishing ecosystem goals. Consequently, MLFF should serve as the “base” or “no action” alternative against which all other alternatives can be compared.

- **Sediment-triggered and well-defined Beach Habitat Building Flows should be a common element to all alternatives with specified frequency based on the best scientific data.** Presently, this is the only dam-operated means to achieve the most important AMP goals. Sediment scientists working on this question have recommended that sediment-triggered BHBF’s should be conducted whenever the trigger is met in order to determine if episodic high releases can provide long-term sustainability of sediment in the system, and can deposit the sediment where it is most essential for various ecosystem needs.
- **A range of BHBF should be clearly defined that include alternative timing, magnitudes, and durations.** The LTEP should build in some flexibility by testing varying BHBF scenarios rather than being limited to the 41 – 45,000 cfs floods conducted to date. For example if hydrology permits, the LTEP should allow for exceeding those parameters. Although sediment is a profoundly important resource in and of itself, it is also the lynchpin for the health and sustainability of multiple downstream resources. The timing of a BHBF should therefore be carefully evaluated with an eye to maximizing all resource benefits: natural, cultural, and recreational.
- **The Selective Withdrawal Structure (Temperature Control Device) should be actively pursued as a common element to all alternatives, providing temperature control flexibility and improved water quality.** This structural modification will give the dam much more flexibility in its ability to respond to changing ecosystem concerns in future years, as we learn more about the effects of temperature and water quality from a dynamically-changing reservoir on the downstream environment.

- **The LTEP should include a range of options to accommodate minimum, average, and high volume release patterns from Glen Canyon Dam.** Although we are presently in a drought, that could well change during the anticipated duration of the LTEP. The LTEP alternatives should include contingencies for a variety of hydrologic basin conditions.
- **Alternatives should be integrated with the EIS on drought shortage criteria.** LTEP alternatives need to consider the possible constraints of lower monthly or annual release volumes that may result from newly developed criteria for the operation of reservoirs under conditions of long term drought.

Evaluating Alternatives

- **Alternatives should be evaluated on the basis of environmental, social (cultural, recreational), and economic criteria.**
- **Environmental evaluation should be based on an ecosystem approach.**
- **Social impacts should be assessed through a Social Impact Assessment process (SIA).** Social Impact Assessments are a common element of the EIS process (USDI, 2002). Application of the SIA process will directly address recommendations from two National Resource Council (NRC) reviews and ensure that the social and cultural concerns will be included in the decision making process (NRC, 1987, 1999).
- **Economic analyses should incorporate recreational, local and regional economies, non-market values, and hydropower.** Currently hydropower revenues are the only economic evaluation conducted within the AMP. The economic evaluation of dam operations and management actions must be broadened to include the economics impacts of the LTEP on recreation, local and regional economies, and non-market values in order to establish a full evaluative framework. This was also a recommendation from both NRC reviews of the program (NRC, 1987, 1999).

Summary

Grand Canyon River Guides appreciates the opportunity to provide input for this public process as the breadth, quality, and scientific integrity of the Long Term Experimental Plan alternatives will guide dam management for years to come, and could potentially lead to a new ROD and dam re-operation. This LTEP should therefore serve as the catalyst for refocusing the AMP on an adaptive ecosystem management approach that seeks 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 natural and cultural resources and visitor use.” (Grand Canyon Protection Act, Section 1802a, 1992)

Indeed, there are many opportunities presented by the LTEP: to evaluate the effectiveness of the AMP, to craft scientifically credible and defensible alternatives that comply with all existing laws and policies, and to institute rigorous and well-rounded evaluation criteria, while vigilantly adhering to the preservation of park resources and values.

Ultimately, the goal of this Long Term Experimental Plan should be to advance us further along the science-based learning curve towards long term sustainability for the cultural, natural, and recreational resources of the Colorado River corridor downstream of Glen Canyon Dam.

Respectfully,

Grand Canyon River Guides, Inc.

Attachments

Social Impact Assessment Guidelines

References

National Research Council, Commission of Geosciences, Environment, and Resources, Water Science and Technology Board, Committee to Review the Glen Canyon Environmental Studies. 1987, *River and Dam Management: A Review of the Bureau of Reclamation's Glen Canyon Environmental Studies*. Washington DC: National Academy Press.

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US Bureau of Reclamation (USDI) (2002), *Social Analysis Manual Volume I: Manager's Guide to Using Social Analysis; Volume II Social Analyst's Guide to Doing Social Analysis* (Resource Management and Planning Group. Technical Service Center, Denver Federal Center D-8580, Bldg. 67. Denver, CO 80225-0007).