



GRAND CANYON RIVER GUIDES

TALKING POINTS FOR THE DEVELOPMENT OF THE LONG TERM EXPERIMENTAL AND MANAGEMENT PLAN

FOUNDATIONAL ELEMENTS:

- Define and ensure a *substantial* role for the Grand Canyon Monitoring and Research Center (GCMRC) within the LTEMP EIS process.
 - GCMRC's involvement is *critical* to draw on the body of knowledge that has been gained as the science arm of the Glen Canyon Dam Adaptive Management Program.
 - GCMRC's involvement is also necessary for the development and evaluation of scientifically credible, well-defined alternatives to best meet program and ecosystem goals.
- It is paramount that *all* LTEMP alternatives fully meet the intent of the 1992 Grand Canyon Protection Act, which specifically states, *"The Secretary shall operate Glen Canyon Dam...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 natural and cultural resources and visitor use."*
- Change the Purpose and Need for Action Statement for the LTEMP as follows:
 - Change the language of the Purpose statement to accurately reflect the language and intent of the Grand Canyon Protection Act.
 - Drop the reference to hydropower which is an ancillary benefit of the dam.
- Desired Future Conditions (DFCs) developed within the GCDAMP with DOI input and approval should be utilized in analyzing the impacts of LTEMP alternatives and applied as a benchmark for defining identified objectives that are scientifically measurable and attainable through dam operations during the life of the Plan. Related considerations include:

- The Core Monitoring Program under development by the Grand Canyon Monitoring & Research Center will help track progress towards those desired outcomes.
- The DFCs must not be static, but rather they must be continually refined as new knowledge is gained, unacceptable impacts are discerned, and subject to a determination of whether the specific DFCs are achievable.
- The LTEMP must be based on an *adaptive ecosystem management* approach.
 - This is a dynamic and complex system. Our learning and adapting/building on what we know must continue indefinitely.
- Clearly define agency responsibilities, improve communication, create mechanisms for productive information sharing, and eliminate project redundancies between Grand Canyon National Park and the Grand Canyon Monitoring & Research Center.
- Ensure that the 11 affiliated tribes who live in and around the Grand Canyon and the Colorado River have a substantive role in LTEMP development which continues throughout the LTEMP process, and the life of the plan. The LTEMP must find a way to successfully incorporate tribal values and knowledge into decision making – a distinct failure of the Adaptive Management Program to date.
 - Towards that end, science must not be the only lens through which we view the Colorado River ecosystem (CRE), its resources, and associated values. Respectful and thorough tribal consultation must occur at each stage and those cultural and spiritual connections must be woven into the LTEMP and incorporated more effectively into the Glen Canyon Dam Adaptive Management Program. The tribes view *all* canyon resources as culturally significant.
 - Funding for monitoring and management of cultural resource should be restored. In order to comply with the Grand Canyon Protection Act, federal laws, statutes and executive orders, the importance of protecting and preserving these fragile, non-renewable resources and Traditional Cultural Properties for the benefit of future generations must not be minimized.
- Look to other dam managed rivers, examine their challenges and successes in restoring natural patterns and processes while a dam is still in place and utilize that expertise to inform and strengthen the LTEMP process.
- Improve the structure and functionality of the Glen Canyon Dam Adaptive Management Program in order to meet GCDAMP mission and goals. Simply

put, we would like to see a much more balanced GCDAMP stakeholder group that has the ability and willingness to act adaptively on what is learned.

RESOURCE ISSUES:

- Maintain or improve the quality of recreational resource for users of the Colorado River, for generations to come.
 - Consider carrying capacity and campability -- design flows and flow experiments that will ensure sufficient number, size and distribution of camping beaches to accommodate the level of use delineated by the Colorado River Management Plan and minimize crowding and congestion.
- Focus on benefiting, protecting and preserving *all* of the downstream resources (such as camping beaches, cultural sites, etc...) and their associated values-- the LTEMP should go beyond a focus on mass sediment balance and fish.
 - River users care about ALL that makes Grand Canyon unique, including cultural resources, tribal perspectives and the rich cultural heritage of the Colorado River.
 - Reaching a certain metric for mass sediment balance is not sufficient – The LTEMP needs to focus on whether the sediment adequately protects and preserves the *individual resources* along the Colorado River.
 - The Endangered Species Act specifies that it is not just the fish that require protection, but also their *habitat*.
- Examine the role of time and climate change in the system.
 - Can we build up a Humpback chub population (above survival levels) during drought low flow warm water years sufficient to mitigate impacts from years with high snow levels in the Rockies and high release/cold water flows from Glen Canyon Dam?

FLOW SUGGESTIONS:

- Beach Habitat Building Flows should be a *well-defined, key component* of LTEMP alternatives.
 - Finalize the High Flow Experimental Protocol Environmental Assessment and incorporate it into the design of all LTEMP alternatives.
- Design intervening flows (flows immediately after, and between high flow experiments) that maximize sediment retention.
 - Address the preservation of sand deposits by designing post-High Flow Experiment hydrographs that optimize ecosystem goals (i.e. sediment retention) to the greatest extent possible.

- Include an LTEMP alternative to test steady flows.
 - Consider an alternative that includes a seasonally adjusted steady flow alternative that includes sediment triggered Beach Habitat Building Flows, and based on the closest approximation of the pre-dam hydrograph.
 - We need a scientifically credible, well-designed steady flow experiment of sufficient longevity to produce a biological signal (more than two months in the fall) that is followed by a full synthesis of impacts to biological, physical, social, economic and cultural resources.

- Consider a minimum flow of no less than 8,000 cfs to ensure navigability and safety for all boaters.

- Test the “best case scenario” presented in the article, *“Is there enough sand? Evaluating the fate of Grand Canyon sandbars”* as proposed by USGS scientists
 - Design an alternative based on the best chance of viability for rebuilding and maintaining sandbars.