

# Grand Canyon Protection Act



- **SEC. 1802. PROTECTION OF GRAND CANYON NATIONAL PARK.**
- (a) In General. -- The Secretary shall operate Glen Canyon Dam in accordance with the additional criteria and operating plans specified in section 1804 and 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 natural and cultural resources and visitor use.*
- (b) Compliance With Existing Law. -- **The Secretary shall implement this section in a manner fully consistent with and subject to the Colorado River Compact, the Upper Colorado River Basin Compact, the Water Treaty of 1944 with Mexico, the decree of the Supreme Court in Arizona v. California, and the provisions of the Colorado River Storage Project Act of 1956 and the Colorado River Basin Project Act of 1968 that govern allocation, appropriation, development, and exportation of the waters of the Colorado River basin.**

# Role of the AMWG



- **GCPA directed the Secretary to “establish and implement long-term monitoring programs and activities that will ensure that Glen Canyon Dam is operated in a manner consistent with section 1802.”**
- **It goes on to say the monitoring programs and activities mentioned above must be established and implemented in consultation with you.**

# What was Congress concerned about?



The primary issue was sediment.

- **Senator John McCain – sponsor of the Senate Bill**

“First, let us address the beaches. The Glen Canyon environmental studies found that widely fluctuating water releases from the dam, primarily for the maximum generation of hydroelectric peaking power, are contributing to the irreversible erosion of river beaches. It is critical to recognize that river beaches are not merely convenient resting spots for river rafters, hikers, and Grand Canyon campers. The beaches are extremely valuable biological resources which support riparian vegetation and diverse forms of wildlife. They are precious and fragile ecosystems which are as vital a part of the canyon as a view from the South rim and just as deserving of protection.”

**Congressman George Miller – House sponsor**

- “In the name of more electric power production mindless and unnecessary damage is being inflicted every day on the resources of the Grand Canyon, one of the most precious park resources in the world.”
- “. . . the daily operation of Glen Canyon dam to produce hydroelectric power was wreaking havoc on the beaches and wildlife habitat at the bottom of Grand Canyon.”

# What was Congress concerned about?



## Honorable Stewart Udall

- “Have the Secretaries of the Interior in recent years misinterpreted the 1956 Act? This act talked about firm power. I happened to have been fortunate because I was deeply involved in the electric power business. The whole scene has changed from that period. Peaking power as it is used today was not a practice in the industry.”
- “I went through the river only once. I was Secretary of the interior, and I was looking at the problem of other dams. I went through in 1967. There were a lot of wonderful sand beaches there. That is where you camped out. It was part of the wonder of that canyon.”

## Western Area Power Administration

- “Although the proposed bill does not specifically mention it, the primary environmental issue in the Grand Canyon, and the one driving calls for interim operating criteria, is the perceived degradation of beaches, particularly in the upper reaches of the canyon.”
- “Despite much study, the beach aggradation and degradation process is still poorly understood and one of the primary goals of GCES Phase II is to expand our knowledge in this area.”

# What Testimony Did Congress Consider?



## River guides

- “With each day of clear water and fluctuating flows, with each flood release, the river loses a bit more of its resilience . . .
- “Sediments are the lifeblood of the river, the building blocks of all habitat.”

## Wildlife Federation

- “GCES Final Report identifies 5 ways that Glen Canyon Dam operations could be modified to protect or enhance environmental and recreational resources including: humpback chub, common native fisheries, trout, beaches/terrestrial vegetation/wildlife, and fishing/whitewater recreation.”

## Scientists

- “Now flows differ little seasonally but vary daily. Waters are clear. Fine sediments and the nutrients they carry flush from upstream to downstream leaving upstream areas with beds of cobble, gravel and bedrock. Algae flourish because they find solid substrata for attachment. Most native fishes specialized to deal with warm, silt-laden waters, as well as other warm water non-native species no longer inhabit the river.”

# What Testimony Did Congress Consider?



- The Affected States --Bill McDonald CO River Basin States' Governors Reps for CO River Reservoir Operations and the Upper CO River commission  
**“Monthly and annual reservoir operations at Glen Canyon Dam are of the most concern to the States’ Representatives and the Commission. Restrictions on within-the-month fluctuations for power releases are of concern only if those restrictions interfere with the volume of water to be released in any given month.”**
- Power customer reps – “It is the ability to produce peak period power that makes the resource valuable.”
- Public Power Assoc -- “Any change in the operations of Glen Canyon Dam must be grounded on a full and complete understanding of the environmental impacts of current operations, as well as the impact of any alternative.”
- Western -- “There are those that point to hourly and daily fluctuations in dam releases, caused by power generation following load fluctuations, as the cause of alleged beach loss. Answers to questions concerning the sediment transport system in the Grand Canyon are a primary goal of GCES Phase II.”

# What did the Committee report say?



- “The purpose and intent of section 3 is simple. This language is intended as a clear, concise directive to the Secretary on how to operate Glen Canyon Dam. The Secretary must operate the dam to protect the downstream resources within the context of the Secretary’s water compact responsibilities and other elements of the “Law of the River.” For the last fifteen years, the Secretary appears to have ignored the resource protection responsibilities in favor of maximizing production of peaking power. Section 3 is intended to provide clear direction to the Secretary as to what his responsibilities are.”
- **the Committee believes “minimum flows cannot be set so high, maximum flows cannot be set so low, and/or reservoir space cannot be vacated in such amounts or at such times that the monthly and annual volumes of water to be released for international treaty and interstate compact purposes are in any way altered, impaired, or adversely affected.**

# What does the science say?



- “According to recent data compiled by USGS and cooperating scientists, open sand area preferred by recreational campers has decreased by 55 percent since 1998, with an average rate of decline of about 15 percent per year (Kaplinski and others, 2005).”
- “Sandbars created by the 2004 beach/habitat-building flows (BHBF) test increased the windborne transport of sand toward some of the archaeological sites in Grand Canyon (Draut and Rubin, 2006). Increased sand carried by the wind from restored sandbars may reduce erosion and increase the preservation potential at some sites”.
- The current sediment deficit, in combination with the fluctuating flow regime, has led to the continued erosion of sandbars throughout Grand Canyon National Park (Melis 2007)

# What can we do within the 1995 EIS and 1996 ROD?



- Much of the science points to steadier flows as the answer to sediment retention.
- We are bound by the MLFF alternative selected in the ROD. It describes the upper release level of 25,000 cubic feet per second as “the maximum allowable release.”
- P. 28 of the 1995 EIS in description of MLFF “The limit on daily fluctuations often would be more restrictive than the minimum and maximum flow rates.”

# What can we do within the 1995 EIS and 1996 ROD?



## P. 34 of 1995 EIS

- “In carrying out such provisions [of GCPA], the Secretary or his designee would develop, as appropriate, modifications to operating criteria or other management actions in consultation with all interested parties and an Adaptive Management working Group (AMWG). The process would include coordination of formal consultation required in sections 1804(c) and 1805(c) of the GCPA concerning operating criteria for Glen Canyon Dam and long-term monitoring and research programs, respectively.

# What was the goal of this hydrograph?



Duane Shroufe AZ Game and Fish

- **“I believe the cure lies in continued involvement by resource management agencies in the review and update of operational criteria. Just as current operational criteria balance hydroelectric generation within the constraints of water storage and delivery imperatives; tomorrow’s criteria should include the factors of recreation, sediment preservation, and ecology in that same equation.”**