

[U.S. Department of the Interior](#)

Office of the Secretary

Paul Bledsoe (202) 208-4662

Barry Wirth (801) 524-6477

For Immediate Release: October 9, 1996

**BABBITT SIGNS PERMANENT COLORADO RIVER
PROTECTION;
RELEASES SCIENTIFIC REPORT ON GRAND CANYON
FLOOD**

**Revised Glen Canyon Dam Operations Will Permanently Protect
River;
Satellite Broadcast, Footage and Photos of River Changes Available**

Secretary of the Interior Bruce Babbitt today signed a historic measure in Phoenix to change operation of Glen Canyon Dam to protect the Colorado River flowing through the Grand Canyon. In addition, Babbitt released a scientific analysis of the experimental flood of March which showed that the flood has been successful in restoring key aspects of the river as it flows through the canyon.

"In signing this document, we begin a new chapter in the fabled history of the Grand Canyon and Glen Canyon Dam," Babbitt said. "We have now provided protection to the Colorado River by setting revised Glen Canyon Dam operations. This marks a sea-change in the way we view the operation of large dams. We have shown they can be operated for environmental purposes as well as water capture and power generation.

"Ninety years ago, Theodore Roosevelt provided protection for the Grand Canyon. But 60 years after that, Glen Canyon Dam was built, with detrimental environmental consequences for the river and canyon we are only now beginning to understand. Today, we begin a new era of river protection in which science can help minimize the environmental repercussions of large dams," Babbitt said.

"We also have the first detailed scientific analysis of the controlled flood. The results show significant improvement in the size and number of the river's beaches, creation of backwater habitat for endangered species, and no adverse impact to the trout fishery, Indian cultural sites, and other resources," Babbitt said. "The wealth of knowledge we have gained from this experiment will continue to be examined, and the final results, due by the end of the year, will guide us in our determinations to use releases from dams to enhance the natural environment of other sites. Clearly, this has been an amazing experiment."

Until today, each Secretary of the Interior had broad authority and discretion to change Glen Canyon Dam operation. The Record of Decision regarding Glen Canyon Dam signed by Babbitt today establishes dam operation criteria that protect the Colorado River and Grand Canyon consistent with the 1992 Grand Canyon Protection Act and in accordance with the preferred alternative of the 1995 Environmental Impact Statement.

Secretary Babbitt noted that prior to the construction of Glen Canyon Dam, the Colorado River was a sediment-laden, seasonally variable river which fluctuated according to the seasons, rainfall, and inflows from side canyons. However, the construction of the dam altered the natural dynamics of the Colorado River, with resulting impacts to Glen and Grand canyons. In 1982, as these impacts became suspected, Glen Canyon Environmental Statement program was set up to gauge the changes to the river and canyon caused by the dam. In 1988, the GCES determined that the dam was causing significant impacts, and in 1989 an Environmental Impact Study was ordered. From 1990 to 1991, various flows were tested to determine their impact on the downstream environment as well as costs of hydroelectric power foregone. In November 1991, interim operations of the dam were put into effect which limited maximum and minimum flows and daily flow fluctuations to protect downstream resources.

The Grand Canyon Protection Act, passed by Congress in October of 1992, directed the Secretary of the Interior "to 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 Recreational Area were established . . ." A draft EIS was filed with the Environmental Protection Agency in 1994, which evaluated nine alternatives and presented a preferred alternative for operation of Glen Canyon Dam. Seven public hearings were held in four Western states and Washington, D.C. More than 33,000 card and letters were received as public comment. In 1995, the final EIS was filed with EPA, again recommending a changed operation of the dam.

"This is a decision based on the science, allowing us to protect the river and still operate very efficient hydroelectric power generation and water capture," Babbitt said.

The flood experiment of March 1996 which Secretary Babbitt started was conducted in accordance with the EIS process. Following four initial days of steady flows at 8,000 cubic feet per second, the flows on March 26, 1996, were increased to 45,000 cfs for a seven-day period to test the ability of a managed high flow, or flood, to rebuild critical beaches along the Colorado River and restore backwater habitats critical to endangered fish. The flows also fit within the intent of the Grand Canyon Protection Act of 1992, which provides for operation of Glen Canyon Dam for environmental purposes in Glen and Grand canyons in addition to traditional water and power generation benefits.

Scientists conducting the flood experiment expected the high flows to redeposit sediment from the bottom of the river on the banks above the normal high water mark which has been limited to 20,000 cfs since August 1991, thus rebuilding the beaches. These beaches are vital to the establishment of native vegetation, which increases insect populations which in turn provides a strong food base for native fish and birds species. Increased beaches provide for greater recreational value and protection of the cultural resources. Also, it was hoped that the flows would serve to scour the backwaters that have silted in and restore critical habitat for the humpback chub, an endangered fish, and native fish species.

Secretary Babbitt today released a summary of 34 separate draft scientific studies analyzing the flood. Among the primary conclusions:

- * Sand bar volumes along the river in the Grand Canyon increased by an average of 53%. However, it was noted that the actual area of the beaches increased by only 5 to 7 percent.
- *The flood created 82 new sand campsites along the river and destroyed 3. Campsites have been defined as areas which can accommodate up to 20 people.
- * Erosion of sand deposited by the flood is already occurring. The natural erosion process appears to take place at a rate of approximately 7% per year. Seasonal flooding used to rebuild natural beaches, but now periodic controlled flooding may be necessary to retain their viability.
- * Fully four-fifths of the sand deposition took place in the first 48 hours. This finding could suggest future shorter high flows may be sufficient for ecological restoration, lowering costs in foregone power generation.
- * Several major rapids on the river, including Lava Falls and Badger Rapids, were carved and widened by the flood. This is what the river used to do naturally. For example, Lava Falls has become increasingly constricted, but was widened as a result debris flow from flood.
- * New backwater habitats for endangered fish species were created, increasing by about 20% however, due to large summer water releases, about 20,000 cfs during the summer as a result of a high snowpack runoff, these new areas were often not usable by native and endangered fish species.
- * No decreases in non-native fish species, in particular those in the trout fishery, were caused by the flood.
- * No negative impacts were observed on endangered bird species, including the Southwestern willow flycatcher and the peregrine falcon.
- * Nutrients in the form of organic matter were flushed into the river, causing a surge of productivity vital to native fish, plant species, and aquatic insects. For example, native willows have shown growth increases this past summer.
- * Native American cultural artifacts and sites in the canyon were not harmed; the National Park Service reports that some sites are actually better protected today by deposition of sand.

"This entire effort proves the value of a cooperative, integrative approach to dealing with complex environmental problems," Babbitt said. "The inclusion of all stakeholders has resulted in a process and document which will serve to guide future operations of the dam and become a template for other river systems. All of these groups deserve our thanks. Today we have established a bold and innovative example of how science and management should be linked together to provide options for the future."

Those involved in the Glen Canyon effort include the Bureau of Reclamation, U.S. Fish & Wildlife Service, U.S. Geological Survey, National Park Service, Bureau of Indian Affairs, Western Area Power Administration, Arizona Game and Fish Department, Hopi Tribe, Hualapai Tribe, Navajo Nation, Pueblo of Zuni, San Juan Southern Paiute Tribe, Southern Paiute Consortium, American Rivers, America Outdoors, Arizona Flycasters, Environmental Defense Fund, Grand Canyon River Guides, Grand Canyon Trust, Sierra Club Southwest Office, Trout Unlimited, the Colorado River Energy Distributors Association and the many power users it represents, Upper Colorado River Commission, and the Seven Colorado River Basin States of Wyoming, Utah, Colorado, New Mexico, Nevada, Arizona, and California. --DOI--

You can get to the [DOI home page](#) from here.
You can also view the [index of press releases](#).

U.S. Department of the Interior, Washington, DC, USA

URL <http://www.ios.doi.gov/news/pr92m.html>

Contact: [@usgs.gov](#)

Last Modification: 10-21-96@8:35am(GL)