

ADAPTIVE MANAGEMENT PROGRAM

Using Science to Manage River Resources in Grand Canyon



Adaptive Management Program Origins

The construction and operation of Glen Canyon Dam fundamentally altered the Colorado River ecosystem. Given the importance of Colorado River water to the states and economies of the Southwest, it is not surprising that there has been and remains considerable controversy over how to share this major river. As we begin the 21st century, challenges abound over how best to manage this resource for the benefit of agricultural, municipal, industrial, tribal, environmental and recreational interests alike.

The Grand Canyon Protection Act of 1992 directed the Secretary of the Interior to manage Glen Canyon Dam in such a way 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.” The act provided direction for the Glen Canyon Dam Environmental Impact Statement, in that all dam operations would need to be analyzed with those goals in mind.

After nearly five years of study - and more than 40 different projects undertaken by more than 15 different agencies - the record of decision for the Glen Canyon Dam EIS was signed in 1996. The Decision specified operating parameters for Glen Canyon Dam and mandated that *adaptive management* of the resources in Grand Canyon be undertaken. The act stipulated that a close watch be maintained on the effects of Glen Canyon dam operations and ordered that future modifications of those operations and management actions be considered to protect and enhance the Colorado River ecosystems.

As part of this process, Interior Secretary Babbitt created a federal advisory committee composed of the numerous interests who share in the management of the river. These interests sit at what is called the Adaptive Management Work Group (AMWG). This group recommends dam operations and management actions to the Secretary of the Interior based on a wide variety of public and technical resources.

Law of the River

The following is a profile of some of the various federal and state laws, compacts, treaties and administrative actions that are generally referred to as the “Law of the River” and control river operations and the rights to the use of the Colorado River.

- **Colorado River Compact of 1922** - Apportions the Upper and Lower Basins with the right to develop and use 7.5 million acre-feet (maf) of river water annually. The compact reserved water for future upper basin development and allowed planning and development in the lower basin to proceed.
- **Boulder Canyon Project Act of 1928** - This act authorized the construction of Hoover Dam and other irrigation facilities in the Lower Basin. Apportioned the Lower basin’s 7.5 maf among the states of Arizona (2.8 maf), California (4.4 maf) and Nevada (0.3 maf).
- **Mexican Water Treaty of 1944** - Committed 1.5 maf of the river’s annual flow to Mexico.

- **Upper Colorado River Basin Compact of 1948** - Apportions the Upper Basin's 7.5 maf among Colorado (51.75 percent), New Mexico (11.25 percent), Utah (23 percent), and Wyoming (14 percent); the portion of Arizona that lies within the Upper Colorado Basin was also apportioned 50,000 acre-feet annually.
- **Colorado River Storage Project of 1956** - Provides a comprehensive Upper Basin-wide water resource development plan and authorized the construction of Glen Canyon, Flaming Gorge, Navajo and Curecanti dams for river regulation and power production and other purposes.
- **Arizona v. California 1964** - Supreme Court decree in Arizona v. California is officially handed down allotting 2.8 million acre-feet of mainstream Colorado River water to Arizona annually, clearing the way for eventual construction of the Central Arizona Project.
- **The Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs of 1970** - Provides for the coordinated operation of reservoirs in the Uper and Lower Basins and set conditions for water releases from Lake Powell and Lake Mead.
- **Grand Canyon Protection Act of 1992** - Directs the Secretary of the Interior to manage Glen Canyon Dam in such a way 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."