

Administrative History of the Colorado River
(Updated from Stevens and Wegner 1995)

| YEAR | EVENT |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1902 | Reclamation Act creates the Bureau of Reclamation. |
| 1904 | Grand Canyon declared a National Game Reserve (T. Roosevelt). |
| 1916 | National Park Service Organic Act. |
| 1919 | Grand Canyon declared a national park, stipulating "reclamation projects" within park boundaries. |
| 1922 | The Colorado River Compact allocates the river's water between the upper (Wyoming, Colorado, Utah and New Mexico) and lower (Arizona, Nevada and California) basins. |
| 1920-25 | U.S. Geological Survey of potential dam sites. |
| 1945 | The Mexican Treaty guarantees 1.5 million acre feet of water to Mexico. |
| 1948 | The Upper Basin Compact allocates Colorado River water between the upper basin states. |
| 1956 | The Colorado River Storage Project (CRSP) Act is passed, authorizing construction of upper basin dams. |
| 1957-63 | Glen Canyon Dam construction, power production starts in 1964. |
| 1967 | Humpback chub and Colorado pikeminnow listed as endangered. |
| 1973 | The National Environmental Policy Act was passed. |
| 1976 | The NPS coordinates the first ecological inventory of the Grand Canyon |

(Carothers and Aitchison 1976), and the first sociological studies.

- 1976 Last Colorado Pikeminnow caught in Grand Canyon at Havasu Creek.
- 1978 FWS Jeopardy Opinion on the operation of Glen Canyon Dam.
- 1980 Lake Powell fills for the first time; bonytail chub listed as endangered.
- 1981-82 Rewind of Glen Canyon Dam turbines, Bureau of Reclamation states that there will be no significant effect on downstream river ecosystem.
- 1983 Secretary of the Interior James Watt orders Bureau of Reclamation Glen Canyon Environmental Studies (GCES) Program to study dam impacts; post-dam record 2,724 m³/s flow is released.
- 1983-86 Forty studies of dam effects conducted during exceptionally high inflow and corresponding downstream releases.
- 1987 National Academy of Sciences (NAS) review of GCES Phase I (NAS 1987).
- 1988 Cooperating agencies conclude that GCES Phase I (Bureau of Reclamation 1988) showed: (1) dam affects river ecosystem, but (2) more data needed on low and fluctuating flows to determine how to best manage the system.
- 1989 Secretary of the Interior Manuel Lujan orders an *ex post facto* EIS on dam operations; initiation of GCES Phase II to support EIS preparation.
- 1990-91 Test flows were used to determine effects of individual flow regimes (Patten 1991).
- 1991 Interim flows (low hourly change in flow) implemented on 1 August to protect river resources while EIS is prepared; interim flows monitoring implemented by Reclamation on 1 August and

- formalized in November 1991 Santa Fe "State of Knowledge" symposium (NAS 1991); razorback sucker listed as endangered.
- 1992 NAS "Delphi Process" symposium in Irvine, CA to plan long-term monitoring for the Colorado River corridor. Passage of the Grand Canyon Protection Act provides for a speedy resolution of the EIS and balancing environmental protection with economic benefits.
- 1994 FWS Biological Opinion concludes that Glen Canyon Dam still jeopardizes native fish.
- 1995 Final EIS submitted to Secretary of the Interior Bruce Babbitt, calling for
- (1) low flow fluctuations to preserve tributary derived bed sand,
 - (2) planned flooding to restore higher elevation sand bars,
 - (3) adaptive management based on
 - (4) long-term monitoring and cooperative, interagency discussion.
- 1996 A Beach Habitat Building Flow (BHBF, experimental flood) was conducted from Glen Canyon Dam from 26 March-2 April. The FWS Biological Opinion on the planned flood restricted take of Kanab ambersnail habitat to <10%, and stipulated that no additional planned high flows be conducted until at least one additional KAS population is discovered or established in Arizona. The Secretary's Record of Decision (ROD) is signed, formalizing the flow regime and adaptive management framework.
- 1997 GCES is replaced by the Grand Canyon Monitoring and Research Center. Flows (27,000 cfs) above the ROD occurred in February/March, and again in mid-summer. The Adaptive Management Work

Group (with the Technical Work Group) formally convened as a Federal Advisory Committee. An experimental Habitat Maintenance Flow was conducted in early November.

1998 BHBF flow triggering criteria formalized by AMWG; El Nino's predicted high snowpack failed to materialize; Lake Powell near full pool (3700') in July.

1999 Inflow and storage conditions in Lake Powell are insufficient to trigger a BHBF from January-June; Lake Powell near full pool (3700') in late June.