

Glen Canyon Dam – Adoption of an Experimental Protocol for High-Flow Releases through 2020



CURRENT STATUS: The Bureau of Reclamation has completed all environmental compliance requirements associated with adoption of an experimental High Flow Protocol for releases from Glen Canyon Dam from 2012 through 2020.

BACKGROUND: In December 2009, Secretary of the Interior Ken Salazar announced that the Department of the Interior would undertake an important experimental initiative to improve the management of Glen Canyon Dam and the Colorado River as it flows through Grand Canyon National Park. The Secretary identified the initiative as the development of a protocol for conducting additional high-flow experiments at the dam, building on knowledge accrued during previous high-flow experiments conducted in 1996, 2004, and 2008.

The primary purpose of the protocol is to learn, through adaptive management, how to better conserve the limited sand supply to the Colorado River below Glen Canyon Dam, while also ensuring that no significant impacts occur to other resources affected by the high releases. Sediment is a primary component of the Colorado River ecosystem, and determining how sand conservation can be achieved has been identified as a high priority by the Glen Canyon Dam Adaptive Management Work Group stakeholders.

The High Flow Protocol includes triggers for high-flow releases that consider tributary sand inputs as well as magnitude, duration, frequency, and timing considerations based on the previous high-flow experiment results. The exact number of high flow experiments that will occur is dependent on physical conditions in Glen and Grand Canyons; the Protocol calls for Reclamation to conduct a high-flow test whenever the trigger conditions are met if sediment can be conserved and other resources are not unduly impacted. The high flow releases will occur in March-April or October-November, will range from 31,500-45,000 cubic feet per second, and will last for 1-96 hours. The protocol is the next step in determining the extent to which multiple high flows conducted under conditions of sand enrichment result in cumulative net increases in sandbar number and size.

The Department developed the protocol through a public process to comply with the National Environmental Policy Act, and completed efforts under the Endangered Species Act and National Historic Preservation Act. The development and implementation of the protocol is a component of Department's compliance with the requirements and obligations established by the Grand Canyon Protection Act of 1992.