

Glen Canyon Dam Long-Term Experimental Plan EIS – Matrix of Alternatives

September 7, 2007

Alternatives	No Action Alternative	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Elements					
Water Temperature	Dependent on reservoir elevation and release volume.	Dependent on reservoir elevation and release volume.	Construction of 2-unit selective withdrawal structure (SWS), with ability to release cold water.	Construction of 2-unit SWS, with ability to release cold water.	Construction of 2-unit SWS, with ability to release cold water.
Flows	Modified low fluctuating flow (MLFF) (1996 EIS Record of Decision).	Increase in fluctuations and ramp rates in most months, MLFF otherwise.	Increased fluctuations and hourly downramp rates in winter, ecologically stable flows in September to October; August stable flows if triggered by potential negative humpback chub (HBC) population trends and Little Colorado River inputs. MLFF in other months.	Stable releases July - October until desired future conditions for HBC are met, unless there is a large increase in warm water non-native fish. MLFF in other months.	Seasonally adjusted steady flows.
Sediment Conservation	High flow releases and restricted fluctuations in accordance with 1997 Glen Canyon Dam Operating Criteria.	High flow tests (including powerplant capacity tests) following tributary sediment inputs to answer specific scientific questions.	Annual high flow tests in years in which tributary sediment inputs exceed sediment trigger.	Annual high flow tests in years in which tributary sediment inputs exceed sediment trigger.	Implement sediment augmentation. Annual high flow tests.
Other Actions Requiring NEPA Compliance	Experimental tributary HBC translocation, tamarisk removal and rehabilitation, HBC refuges.	Mainstem and tributary non-native fish control; tributary translocation of HBC; HBC refuge planning and operational establishment efforts; vegetation removal.	Mainstem and tributary non-native fish control; tributary translocation of HBC; HBC refuge planning and operational establishment efforts; vegetation removal.	Mainstem and tributary non-native fish control; tributary translocation of HBC; HBC refuge planning and operational establishment efforts; vegetation removal.	Mainstem and tributary non-native fish control; tributary translocation of HBC; HBC refuge planning and operational establishment efforts; vegetation removal.
Experimental Design	Monitoring and assessment; descriptive surveys; before and after comparisons.	Monitoring and assessment; descriptive surveys; before and after comparisons.	Monitoring and assessment; descriptive surveys; planned contrasting treatments.	Monitoring and assessment; descriptive surveys; triggered contrasting treatments; before and after comparisons.	Monitoring and assessment; descriptive surveys; before and after comparisons.

This table represents the Department's current assessment of the range of alternatives to be analyzed in the EIS. Refinement and potential modification of the information presented in this description will occur as Reclamation prepares a Draft EIS, which is anticipated to be published in early 2008.