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Abstract

Storage Dam Fish Passage Feasibility Study

R Dennis Hudson

Bureau of Reclamation

(208) 378-5250

rhudson@pn.usbr.gov

Reclamation is leading a cooperative investigation with the Yakama Nation, state and Federal agencies, and others, to study the feasibility of providing fish passage at the five large storage dams of the Yakima Project. These dams -- Bumping Lake, Kachess, Keechelus, Cle Elum, and Tieton -- were never equipped with fish passage facilities. Four of the five reservoirs were originally natural lakes and historically supported Native American fisheries for sockeye salmon and other anadromous and resident fish.

Implementation of passage features at the dams has the potential to increase populations of upper basin steelhead, coho salmon, and Chinook salmon; restore life history and genetic diversity of salmon; reintroduce sockeye salmon to the watershed; and reconnect isolated populations of bull trout.

In fiscal year 2004, following completion of a preliminary Assessment Report in 2003, Reclamation began detailed studies to evaluate the feasibility of providing passage at the dams. Current feasibility grade investigations are focusing on the engineering, operational, and biological parameters needed to provide fish passage at Cle Elum and Bumping Lake Dams. The feasibility report on Cle Elum and Bumping Lake dams is scheduled for completion in 2008.

Reclamation completed construction of temporary downstream passage features at Cle Elum Dam in the spring of 2005. These interim passage features will test the ability of juvenile salmon to find and voluntarily move out of the reservoir. PIT-tagged fish will be monitored as they exit the reservoir, migrate downstream, and return as adults. Results of these interim passage experiments over a period of 5 to 8 years will be used as one indicator of the feasibility of reintroducing anadromous fish species above the dam and reservoir.

FY 2006 feasibility activities include:

- Development of fishery benefits associated with passage at dams
- Completion of limnology reports

- Revision and completion of coho and sockeye salmon production potential models
- Preparation of feasibility level designs and cost estimates for permanent passage facilities at Cle Elum and Bumping Lake dams
- Continuation of experiments at Cle Elum Dam interim passage facilities.