



## Chewuch Diversion Dam fish passage renovation

### Background

The Chewuch River is a historically important spring chinook salmon and summer steelhead spawning stream. These anadromous fish migrate up the Chewuch as adults to reach spawning habitat above the Chewuch Diversion Dam and as smolts, they must pass back through the diversion dam on their downstream journey to the ocean.

The Chewuch River presently provides spawning and rearing habitat for Upper Columbia spring chinook, summer steelhead and bull trout. These species are listed as “threatened” or “endangered” under the Endangered Species Act. The draft Methow subbasin plan prepared for the Northwest Power and Conservation Council places highest priority on conservation of ESA-listed species. Artificial barriers to fish passage such as diversion dams for irrigation are identified as a major limiting habitat condition in the Methow plan. The proposed Chewuch Diversion Dam renovation project aims to address this limiting habitat condition for fish passage in the Chewuch River.

The present concrete diversion dam is deteriorating as it is undermined and battered by boulders during high flows. Although there is fish passage engineered into the existing structure, it does not meet current Washington Department of Fish and Wildlife standards for upstream passage and downstream fish movement over the dam is very restricted when low flow “flashboards” are in place in late summer. This diversion dam is also used to divert water for the Douglas County PUD fish acclimation facility located near the Chewuch Canal Company’s fish screen. If the dam fails, the acclimation facility will have no source of water. There is currently no headgate at the diversion. This exposes the first 300 feet of the canal before the fish screen and the

Douglas County fish acclimation ponds to erosion and failure during high flows. In addition, both facilities have sediment accumulation problems associated with the inability to control inflow during high sediment transport periods. Finally, because the irrigators cannot turn off the intake in the fall and because there are no adult passage barriers preventing access to the canal, it is being used as spawning habitat by spring chinook. As the canal freezes these redds are generally exposed.

### Purpose of Chewuch diversion dam passage renovation

This project would rebuild the present fish passage structure to current standards and renovate the dam and associated ditch headworks. These actions will eliminate the redd-stranding that now occurs: 1) by constructing an adult fish barrier at the intake structure; 2) by constructing a rock “roughened channel” fishway that mimics natural drops in the river to provide passage; 3) by constructing a head-gate that will protect the intake canal from sediment and high flow failure; and 4) by modifying the existing concrete dam to repair damage to the structure from high flows.

### Cost

- Total estimated project cost: \$393,000
- BPA cost: \$122,000
- Construction funding partners: State of Washington Salmon Recovery Funding Board, Douglas County PUD
- Project sponsor: Chewuch Basin Council

