Lostine River Poley-Allen Fish Passage

Atlas Tier 1, WLL-3 Subwatershed

IMPLEMENTER: Nez Perce Tribe

Location: Lostine River, near Lostine, Oregon Implementation: 2023; Contract #74017 REL 107

PROJECT BACKGROUND:

The Poley-Allen diversion channel-spanning concrete sill and rock weirs immediately downstream created a seasonal fish passage barrier for multiple life stages of ESA listed species.

ESA ESU or DPS: Snake River spring/summer Chinook salmon ESU, Lostine/Wallowa River spring Chinook salmon population. Snake River summer steelhead ESU, Wallowa River summer steelhead population.



Pre (above) and post (right) construction, looking west across concrete sill toward headgate. Red arrows indicate east abutment heights in relation to WSE, before and after.

IMPLEMENTATION ACTIONS:

- · Retrofit existing concrete sill creating low flow fish passage mid-channel
- Saw cut river right (east) concrete abutment to relieve velocities and engage floodplain at high flow
- Installed 210 LF of roughened channel improving passage for multiple fish species and life stages
- Installation of 21 LWM side channel structures to enhance seasonal fish habitat
- · 260 willow stake plantings to increase bank stability and riparian hardwoods

HABITAT RESPONSE: Improved access to nearly 10 miles of spawning and rearing habitat upstream, increased floodplain connectivity, increased riparian hardwoods, instream habitat, and large wood recruitment.

FISH RESPONSE: Improved migration, and access to holding, spawning, summer rearing, and winter rearing habitat for salmon and steelhead. Should improve population abundance and productivity.





Side channel large wood structures.



Before (above) and after (below) photos of Poley-Allen irrigation diversion, taken fall 2022 and fall 2023, respectively.







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