

Wilson-Haun Wallowa River Project Completion Report 2024

1992-026-01

Report covers work performed under BPA Contract # 90071

Report was completed under BPA Contract # 90071

Report covers work performed from May 2022 – April 2024

Levi Old, Trout Unlimited (TU), Baker City, OR

Report Created: April, 2024

"This report was funded by the Bonneville Power Administration (BPA), U.S. Department of Energy, as part of BPA's program to protect, mitigate, and enhance fish and wildlife affected by the development and operation of hydroelectric facilities on the Columbia River and its tributaries. The views in this report are the author's and do not necessarily represent the views of BPA."



Wilson-Haun Wallowa River Project

2022-24 Implementation



INTRODUCTION

The Wilson-Haun Wallowa River Project takes place in a high priority salmon and steelhead stream in the Grande Ronde Basin. The restoration effort occurred on the mainstem Wallowa River (RM 31.1-31.7). This reach includes critical spawning and rearing habitat for ESA Threatened Snake River Steelhead (*Oncorhynchus mykiss*), ESA-Threatened Bull trout (*Salvelinus confluentus*), and ESA-Threatened Snake River spring Chinook (*Oncorhynchus tshawytscha*).

The river's floodplain habitats were not in proper functioning geophysical and ecological condition (hydrologic, geomorphic, and vegetative composition), due to historic anthropogenic influences including beaver trapping, overgrazing, logging (floodplain clearing and headwater), dams, altered vegetative regime, and dewatering for irrigation. The overall project goal is to set the system on a trajectory towards achieving proper geophysical and ecological form and function, and thereby improve spawning and rearing habitat for several listed fish populations, and ecosystem function for other focal aquatic and terrestrial species.

The project team worked with Wolfe Water Resources and other partners to develop the project design and with BCI contracting as the main heavy equipment contractor. The team also worked with numerous other contractors for the fencing, low-tech restoration work, weed spraying, and planting. The project used a mix of conventional and new restoration approaches backed by scientific and expert knowledge. This included floodplain grading, channel fill, large wood placement, low-tech process-based restoration, riparian planting, fencing, and other techniques.

Trout Unlimited (TU) in partnership with the Grande Ronde Model Watershed Council (GRMW), the landowners, funders, the design firm, and local partners (Nez Perce, ODFW) implemented this project under this contract with Bonneville Power Administration.

This BPA construction funding supported the project team in treating 0.6 miles of stream and approximately 48 floodplain acres. The work included numerous actions such as creating 4.5 miles of additional side channel habitat via pilot channels, channel design and channel fill; enhancing approximately 40 pools, placing 220 boulders, building 84 log jams and another 115 habitat features (low tech and other structures), installing 45 individual log structures, treating 2 riparian miles with native vegetation, and .9 miles of riparian fencing.

The project was a collaborative effort between Trout Unlimited (TU), Grande Ronde Model Watershed Council, Wolf Water Resources, BPA, and other funding partners.



PROJECT LOCATION & PRIORITY

The Wallowa River (HUC12 - 170601050302) is a major tributary to the Grande Ronde River. The Wilson Haun floodplain reconnection project is located on the mainstem Wallowa River on a private ranch shortly outside of the town of Lostine, OR.

The Wilson-Haun project area is designated as a Tier 1 (highest) priority for restoration by the Upper Grande Ronde Restoration Prioritization ATLAS. The ATLAS tool is a geospatial restoration prioritization plan developed in coordination with BPA by local fish biologists, researchers, engineers, hydrologists, practitioners, and stakeholders.

PROJECT PURPOSE - GOALS AND OBJECTIVES

The overall project goal is to set the system on a trajectory towards achieving proper geophysical and ecological form and function, and thereby improve spawning and rearing habitat for several listed fish populations, and ecosystem function for other focal aquatic and terrestrial species.

The project team used the following broad objectives are based on biological limiting factors:

- *Floodplain connectivity*: Maximize floodplain engagement and improve floodplain form and function while avoiding risks to people/infrastructure.
- *Instream complexity*: Reestablish a channel-floodplain system with greater complexity, reduced stream power, and active natural processes that promote dynamic habitat formation.

- *Riparian vegetation:*
 - Preserve existing natural vegetation communities to maintain shading, aesthetics, seed sources, future wood recruitment, wetland habitats, and wildlife habitat.
 - Reestablish processes (connectivity and dynamism) that support the recruitment and growth of young willow and cottonwood. Increased floodplain inundation and shading will also reduce invasive reed canary grass monocultures.
- *Wetlands:* Increase floodplain activation and river processes to expand wetlands and promote healthy vegetation communities.

PROJECT OUTCOMES

Installed 84 log jams, 220 boulders, numerous pieces of floodplain wood beaver dam analogues and post-assisted log structures.

Planted riparian shrubs and trees and seeded for rehab and riparian plant community recovery across 2 miles of riparian lands, and approximately 48 acres of floodplain habitat.

Built .9 miles of riparian fencing to keep domestic livestock and deter deer from the floodplain.

Connected 48 acres of wetland habitat and 4.5 miles of side-channel habitat much of which is inundated at baseflows.

HABITAT RESPONSE: Improved aquatic connectivity for all species at all life stages, improved floodplain connectivity, increased floodplain acreage connected at baseflows, increased native vegetation, increased large wood recruitment, improved floodplain beaver habitat, and significantly enhanced habitat complexity.

FISH RESPONSE: Improved aquatic connectivity for anadromous and resident fish populations at all life stages; improved habitat complexity for shade, pool habitat, cover, and spawning habitat; and improved rearing habitat. Long term goal of improved riparian shrub cover for shade, insect habitat and other positive fish benefits. Fish have been observed using and spawning in many of the newly formed off-channel habitat that did not exist before the project took place.

PROJECT PHOTO GALLERY



Photo: This photo demonstrates the inundation at baseflows and the multi-threaded nature of the Wilson-Haun Project.



Photo: These photos show the construction operators hard at work in the 2023 construction season.



Photo: This photo shows the newly formed wetland habitat post project.