Sheep Creek Large Woody Debris and Planting Project

Final Completion Report

May 2013 – April 2015

Project No. 1992-026-01

Contract No. 60702

Completed by: Joe Platz

United States Forest Service

Wallowa-Whitman National Forest

La Grande Ranger District

La Grande, OR

April 2015

La Grande Ranger District 2015

2015

Partners

- Bonneville Power Administration
- Grande Ronde Model Watershed
- Bureau of Land Management

Total Budget-$237,098

The objective is to improve spring/summer chinook habitat, summer steelhead habitat and migratory habitat for bull trout, specifically through improving or increasing the following habitat elements.

- Improve riparian & wetland diversity, vigor and function
- Improve floodplain function
- Increase quantity and quality of pools within Sheep Creek
- Increase fish cover
- Increase habitat complexity
- Increase forage availability
- Increase residual pool depth

Sheep Creek Large Wood and Riparian Planting Restoration Project

The Sheep Creek Large Wood and Riparian Planting Restoration Project is located on Sheep Creek, a tributary to the Grande Ronde River. The project is located within Upper Grande Ronde River Watershed (1706010401) and Sheep Creek Subwatershed Sheep Creek (170601040105).

Construction of large woody debris/boulder structures is a vital prescription for improving fish habitat and stream health.

Sheep Creek is spawning and rearing habitat for Snake River Basin summer steelhead, Snake River Basin spring chinook salmon, and redband trout. The summer steelhead and spring/summer chinook are federally listed under ESA as threatened species.

Historic timber harvest and roading removed larger conifers from the valley bottom, reducing the future recruitment of large wood to the stream. Historic grazing caused impacts to the riparian area.

In the late 1980's the Wallowa-Whitman cooperated with Bonneville Power Administration to place sill log structures and exclude livestock from Sheep Creek.

Sheep Creek Large Wood and Riparian Planting Restoration Project

Excavators were used for building structures from large woody debris.

Details

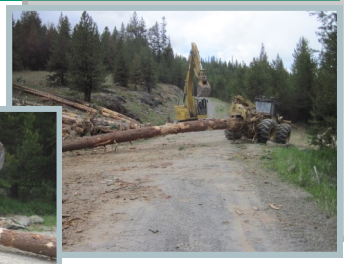
- Large wood structure complexes constructed at 27 sites(200 large wood pieces) within 2.5 miles of stream
- 3 miles of stream planted with 5,000 deciduous seedlings, 2,000 conifer seedlings and 5000 cuttings
- 15 acres grass/forb seed
- 1,000 small exclosures constructed to protect plantings
- 29 old log sills removed/modified

Funding

- BPA — $186,402
- USFS— $35,696
- BLM — $15,000

TOTAL– $237,098

The Sheep Creek Restoration Project encompassed 3.0 miles of chinook salmon and steelhead habitat on the LaGrande Ranger District of the Wallowa-Whitman National Forest and Bureau of Land Management. Past restoration efforts undertaken in the late 1980's included installation of log sills. Livestock grazing was also addressed with past restoration efforts, resulting in livestock exclusion from Sheep Creek.



Collecting rootwads for structure construction.

Actions executed in this project included constructing large wood structures at 27 sites, removing and/or modifying 29 log sills, 3 miles of riparian planting, constructing 1,000 small exclosures to protect seedlings, and seeding of disturbed areas with native grass/forb seed mix.

Structures under construction (above and right).

Logs were drilled at intersections and pinned with rebar.

Photo Points on Sheep Creek

Structure #21

Before

After

Structure #28

Root wads in the channel provide fish refuge, promote pool development by hydraulic scouring , and stimulate habitat complexity.

Before

After

Sheep Creek Plant Survival

- Deciduous seeldings: 94%
- Deciduous cuttings: 94%
- Conifer seedlings" 76%

Right: USFS and Sun Rise Reforestation placing ground cover mats.

Contractors

* Hanging Rock Construction and Excavation, Inc.
* Work Horse Inc.
* The Plant Works LLC
* Sun Rise Reforestation, Inc.

Above: Willow *cutting survival*

Left: Deciduous seedling survival in small exclosure

SHEEP CREEK LARGE WOOD & RIPARIAN PLANTING PROJECT