



Prospectus of Proposed Project Opportunity

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Opportunity Title

Lostine Wetland and Side Channel Project

Opportunity Lead

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Landowners

Woody and Meghan Wolfe
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Phone: 541-263-0802
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Contacted: Yes

Supportive: Yes. The landowner is completely supportive of all aspects of the project.

Contribution: Prior to project design the landowner entered into two separate permanent conservation easements totaling over 450 acres. They have also agreed to allow the removal of infrastructure that exists adjacent to the project, during construction. On a water conservation front, the landowner has entered into a long-term late irrigation season water lease agreement with the Fresh Water Trust and was one of the first in the Wallowa Valley to convert his irrigation delivery from flood to

pivot, leaving much needed water in-river during spring/summer Chinook spawning.

River

Name: Lostine River
Mile: RM0 - RM0.75
Tributary: Wallowa River

Restoration Atlas

BSR: WLU-1
Tier: Tier 1
Initial Score:
Proposed Score: 40

Restoration Activities

1. Protect Land and Water (Easement, Acquisition, Management)
2. Channel Reconstruction
3. Pool Development
4. Riffle Construction
7. Levee Modification: Removal, Setback, Breach
8. Remove - Relocate Floodplain Infrastructure
9. Restoration of Floodplain Topography and Vegetation
11. Perennial Side Channel
12. Secondary (non-perennial) Channel
13. Floodplain Pond - Wetland
14. Alcove
15. Hyporheic Off-Channel Habitat (Groundwater)
18. Riparian Buffer Strip, Planting
20. Remove non-native plants
27. LWD Placement
28. Modification or Removal of Bank Armoring
31. Improve Thermal Refugia (spring reconnect, other)

Species Affected

Focal: Snake River Spring Chinook Salmon, Snake River Summer Steelhead, bull trout, lamprey, and Coho Salmon.
Other: Columbia spotted frog, Western curlew.

Description

This proposed project is located on a private ranch adjacent to the Lostine River, approximately 3 miles east of the town of Wallowa, Wallowa County, Oregon. The property is currently under two separate permanent easements totaling over 450 acres encompassing the mainstem Lostine River, adjacent

floodplain and riparian forest, and agricultural land. The Nez Perce Tribe successfully secured and utilized technical assistance funds to design a project seeking to restore stream and floodplain connectivity, complexity and function as well as create and enhance emergent wetland within the project area.

The previous landowner kept much of the floodplain and riparian forest largely intact. Dis-connected side channels and meander scrolls exist throughout the proposed project area illuminating the historic Lostine River channel, side channel and wetland network, which have been protected from livestock grazing. The current landowner maintains a long term commitment to restoration, protection and enhancement of resources.

The NEOR Recovery Plan, the Grande Ronde Subbasin Plan (GRSBP), the Wallowa Atlas restoration prioritization process (Wallowa Atlas), and the Wallowa County Salmon Habitat Recovery Plan (WCSHRP) all identify this reach of the Lostine River as deficient in habitat quantity and quality, water quality, stream complexity, and floodplain connectivity. The primary goal of this project is to promote natural river and floodplain conditions by removing levees; reconnecting floodplain channels; and enhancing floodplain wetlands. When complete, key site features that will improve habitat and water quality will include increased pool abundance; increased low-velocity off-channel alcoves and side channels; increased Large Woody Material (LWM) for mainstem habitat complexity; and a diverse mosaic of floodplain wetlands. Species which will benefit include ESA listed spring/summer Chinook salmon, steelhead, bull Trout, Columbia Spotted Frog and others.

With the collaboration of the landowner, the Wallowa Land Trust, the Oregon Department of Fish and Wildlife, the Grande Ronde Model Watershed, and the Nez Perce Tribe (sponsor), this project seeks implementation funds for 2021 construction.

Objectives

The following objectives will be achieved during the 2021 in-water work window, unless otherwise stated:

- Improve stream structure and channel complexity to increase juvenile salmonid rearing habitat through the addition of 3 alcoves (527 CY of excavation), 5 large and 9 small apex jams and 2 flow deflection jams in the mainstem, and 29 vertical post arrays and 14 pieces of habitat wood.
- Construct preferential flow paths to encourage floodplain interaction and connection through activation of 5 pilot channels, increasing flow entering the floodplain from 4 to 82 cfs, and floodplain inundation by 24% at the 1-year recurrence discharge.
- Improve riparian vegetation species composition and distribution by planting 530 drummond willow (*Salix exigua*) cuttings and 325 Nebraska sedge (*Carex nebrascensis*) plugs within the wetland zone, 530 coyote willow (*Salix drummandiana*) cuttings in the lower riparian transition zone and 100 black cottonwood (*Polulus trichocarpa*) cuttings in the upper riparian transition zone, in addition to seeding 1.6 acres of wetland and 2.4 acres of upland within the project area during plant dormancy in the fall of 2021.
- Breach levees in key locations at pilot channel inlets and outlets for a total

of 576 CY of levee excavation/removal.

- Create and enhance wetlands in the floodplain by increasing floodplain inundation from 41 to 51 acres at the 1-year recurrence discharge.

- Minimize disturbance through “light-touch” construction methods to maintain existing mature on-site vegetation, with the exception of juniper trees which, if removed will be used as LWM roughness features throughout floodplain channels.

Major Risks

With much of the project area adjacent to the stream channel intact, the greatest concern is minimizing site impacts, particularly where there are intact wetlands or other associated western curlew or Columbia spotted frog habitat. Levee breaching and stream access will be minimal and strategic. Reed Canary Grass (RCG) is prevalent throughout the floodplain, particularly in areas where the overstory canopy is limited. Owing to the RCG density throughout portions of the project area, revegetation success in wetland and riparian planting zones could be complicated by RCG recolonization. Therefore, seeding and planting should occur in late fall months at the onset of dormancy. In areas where RCG is currently prevalent, sod should be scalped and hauled off site or to an upland area prior to seeding and planting.

Permits and Consultation

ESA Section 7 USFWS: Applicable

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COE or DSL Permit: Applicable

Cultural Resources Section 106: Applicable

DEQ 401 Water Quality Permit: Applicable

Project Schedule

Year: 2021

Monitoring: The Wallowa Land Trust monitors the entire 450 acres under easement annually conducting plant, amphibian and bird surveys. In addition to these surveys the Tribe and project partners will be provided access for a minimum of ten years to assess project effectiveness through aerial drone imagery and LiDAR, habitat, snorkeling and spawning ground surveys.

Project Relations

Multi-phase Effort: No

Preliminary Cost Estimate

Total: 410,023
BPA Funding: 300,000
OWEB Funding:

Design Funding

Design Funds Requested: No