Prospectus of Proposed Project Opportunity

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Opportunity Title

Rockin' 11 Wallowa River Restoration Project

Opportunity Lead

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Technical Contact

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Landowners

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Contacted: Yes
Supportive: Yes
Contribution:

River

Name: Wallowa River
Mile: 30.5 - 31.2
Tributary: Grande Ronde River

Restoration Atlas

BSR: WMS-1
Tier: Tier 1
Initial Score: 78
Proposed Score:

Restoration Activities

1. Protect Land and Water (Easement, Acquisition, Management)
2. Channel Reconstruction
3. Pool Development
4. Riffle Construction
5. Meander (Oxbow) Re-connect - Reconstruction
7. Levee Modification: Removal, Setback, Breach
8. Remove - Relocate Floodplain Infrastructure
9. Restoration of Floodplain Topography and Vegetation
10. Floodplain Construction
11. Perennial Side Channel
12. Secondary (non-perennial) Channel
13. Floodplain Pond - Wetland
14. Alcove
15. Hyporheic Off-Channel Habitat (Groundwater)
16. Beaver Restoration Management
17. Riparian Fencing
18. Riparian Buffer Strip, Planting
26. Boulder Placement
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, and Pacific lamprey.
Other: Recently introduced coho salmon, mountain whitefish, potentially sockeye salmon if reintroduced, and numerous other aquatic and terrestrial species.

Description

The Rockin’ Eleven Restoration Project is in an ATLAS Tier 1, highest priority geography on the mainstem Wallowa River. The project is located on the Rockin’ 11 ranch, which spans 0.7 miles of the Wallowa River near the town of Lostine. The ranch is directly downstream of the Wilson-Haun property, where a floodplain reconnection project occurred in 2022, and two properties downstream of ODFW’s 2021 McDaniel Restoration Project. The project team includes the GRMW Wallowa IT Team, Bureau of Reclamation, Rio, Interfluve, BPA, Trout Unlimited, and the landowners.

The project reach has been altered by historic land use practices including channel straightening, levee construction, and bank armoring (riprap). These actions transformed the channel into a single-thread, simplified channel with a homogeneous streambed, little to no off-mainstem channel habitat and few pools. Land-clearing and domestic livestock grazing removed much of the riparian vegetation in the floodplain. The riparian vegetation communities consist of some cottonwoods and willows alongside juniper, and nonnative reed canary grass. Parts of the historic floodplain are now occupied by ranching and irrigation infrastructure, including two points of diversion and irrigation ditches that supply downstream irrigators, a ranch bridge across the mainstem river, several buildings, hay and pastureland, and a 6-acre Confined Animal Feeding Operation (CAFO).

There are significant opportunities to reconnect historic floodplain and off-channel habitats, improve channel complexity, and improve ecological form and function for the benefit of native fish and wildlife. The landowner has noticed a decline in fishing quality over the years and would like to see the river habitat enhanced while maintaining the land for the family cattle business. The project is an opportunity to expand on the habitat restoration that has occurred upstream and build a larger reach of connected, high-quality habitat.

The big picture goals of the project include:
• Improve natural riverine and floodplain processes (geomorphic process and floodplain
function) within the constraints of land use and existing infrastructure (diversions, fish
screens, others).
• Improve habitat quality and quantity for juvenile and adult salmonids, bull trout and Pacific
Lamprey, and other native aquatic species during primary use periods.
• Improve fishing quality for the landowner, his family, and guests.
• Improve riparian habitat and ecological form and function for all species of native flora and
fauna that use this river valley bottom corridor.
• Reduce Risks to Wallowa River water quality by relocating the CAFO in a manner acceptable to
the landowner. *Potential future action dependent on landowner direction.
• Do not increase risk to infrastructure or neighboring landowners.

The project team is drafting a design (currently at 15%) that uses a combination of treatments to reach these goals. These include removal and setback of an existing earthen levee to reconnect a large floodplain area on river right while protecting the downstream property from flooding, and the relocation of an irrigation ditch and POD that currently occupy the floodplain right area. The project team plans to regrade artificially high areas of floodplain to create a complex side channel network, floodplain ponds, alcoves, along with gravel bar augmentation and/or channel fill to encourage dynamism in select locations. The project will include low-tech structure placements in floodplain habitats. Numerous large woody debris structures will be placed throughout the main channel and side channel

networks to create pool habitats and complexity, and the project area will be planted with riparian vegetation.

The project team has discussed the possibility of removing or relocating the CAFO and restoring the existing CAFO footprint to a connected floodplain. The landowner would like to remove the CAFO, however he is unable to do so at this time due to its economic importance for his cattle operation. While removal is off the table for now, it has been included in the designs and could be pursued in a future phase if a financial mechanism can be found to make up for the expected loss in earnings. The project team is working with the Wallowa Land Trust and the landowner to consider a conservation easement on the project to protect the land from future development and provide a market-based mechanism for the landowner to re-evaluate the feedlot removal.

Objectives

** The project team plans to fine-tune the project objectives into SMART objectives as the design process develops.

Goal 1: Improve natural riverine and floodplain processes (geomorphic process and floodplain
function) within the constraints of land use and existing infrastructure (diversions, fish
screens, others).
Objectives:
• Increase frequency and duration of hydrologic connectivity with floodplain.
• Increase native riparian species extent and diversity, including shade over the existing channel
to reduce thermal loading from the sun.
• Reduce invasive species extent.
• Increase extent of floodplain wetland habitats.
• Increase hydraulic complexity (depths and velocities) to encourage sediment sorting.

Goal 2: Improve habitat quality and quantity for juvenile and adult salmonids, and other native fish
species during primary use periods.
Objectives:
• Increase large pool frequency and depth, including pools with habitat complexity and overhead
cover.
• Increase large wood density consistent with reference conditions from reference reaches or the
literature.
• Increase habitat unit frequency and diversity.
• Increase quality and quantity of frequently connected floodplain habitats that are accessible to
fish.
• Increase quality and quantity of instream habitats.

Goal 3: Improve fishing quality as desired by the landowner.
Objectives:
• Increase holding habitat for adult trout (includes objectives from Goal 2 above).

*Goal 4: Reduce risks to Wallowa River water quality by relocating the CAFO in a manner acceptable
to the landowner. *Potential future action dependent on landowner direction.
Objectives:
• Remove and remediate the CAFO located in the Wallowa River floodplain.
• Keep or improve landowner's ability to utilize property for successful cattle operation by
replacing the CAFO with a suitable replacement.
• Reduce risk of interaction between the CAFO and Wallowa River.

Goal 5: Do not increase risk to infrastructure or neighboring landowners.
Objectives:
• Maintain function of existing diversion ditches.
• Do not increase flood risk to neighboring parcels and exiting infrastructure in the project area.

Major Risks

There is infrastructure in the project area that must be considered. Two POD's and irrigation ditches are active, so the design needs to ensure that they continue to provide uninterrupted water delivery to users downstream. To accomplish this, the areas around the PODs will be designed for stability, and the RR POD will be relocated slightly upstream out of the floodplain planned for reconnection. The landowner's house and several outbuildings are located on historic floodplain on RL upstream of the proposed floodplain reconnection. While they have not flooded since the landowner has lived there (1970's to present), hydraulic modeling will be used to ensure that the flood risk in this area is not increased. The downstream landowner has property in low-lying floodplain areas, so the design must ensure that all water is funneled back into the main channel before crossing the property boundary. The project may reduce the risks to this landowner, by replacing a potentially undersized earthen levee with a larger setback berm that prevents floodwaters from following low topography on river right into the property. The CAFO is a contamination risk to the river through potential runoff or levee failure. The project will seek to remove the CAFO from the floodplain and remediate contaminated soils if a method can be found to replace its financial benefits for the ranch.

Permits and Consultation

ESA Section 7 USFWS: Applicable
ESA Section 7 NMFS: Applicable
COE or DSL Permit: Applicable
Cultural Resources Section 106: Applicable
DEQ 401 Water Quality Permit: Applicable

Project Schedule

Year: 2026

Monitoring: The project team will coordinate with GRMW for pre and post project drone monitoring. Ground-based photo points and regular field visits will be used to document the evolution of the project.

Project Relations

Multi-phase Effort: Yes
Phase Description: Phase 1 (2026) will involve all work downstream of the access bridge (lower half of the project reach). Phase 2 (2027) will involve removal of the CAFO and all work upstream of the bridge.* *The Phase 2 plans are contingent on finding a solution that allows CAFO removal. The implementation schedule will change if this is not possible.
Could Phase 1 be a Stand Alone Project: True
Would the project lose value if future phases don’t happen: The project reach in phase 1 (downstream of the access bridge) is a distinct reach from the potential phase 2 reach (the feedlot reach above the bridge). Phase 1 could be completed as a separate project if phase 2 does not happen. Potential removal of the feedlot in phase 2 would significantly boost the restoration value of this project. However, it would not diminish the restoration benefits of phase 1 if it does not happen.

Preliminary Cost Estimate

Total: $1,300,000
BPA Funding: $1,300,000
OWEB Funding:

Design Funding

Design Funds Requested: No