

B O N N E V I L L E P O W E R A D M I N I S T R A T I O N
Middle Upper Grande Ronde River (MUGRR) Phase 2/3 Fish Habitat Enhancement Project

IMPLEMENTERS: The Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Wallowa-Whitman National Forest (WWNF), La Grande Ranger District, Grande Ronde Model Watershed (GRMW), and Bonneville Power Administration (BPA) partnership completed construction on the Middle Upper Grande Ronde River Fish Habitat Enhancement Project Phase 2 and 3 in July 2023. **Implemented 2023; Contract 73982-167**

PROJECT LOCATION & HIGHLIGHTS: The project is located in the Upper Grande Ronde Watershed on the Wallowa-Whitman National Forest along a 6-mile reach between Rivermiles 135.7 to 140.5. The project is within the Grande Ronde River Atlas BSR UGR15. Project include installation of 43 large wood structures and 43 boulder complexes to restore habitat complexity and promote floodplain geomorphic process.

PROJECT BACKGROUND: Fish habitat suitability has been significantly affected and suppressed by physical alterations of the river and its associated floodplain (splash dam logging, mining, and road construction) that have contributed to severely degraded habitat conditions. Problems include homogenous, high energy, plane bed riffle-run channel types with a lack of large pool habitat, channel complexity, peripheral habitat bed armoring and alteration of sediment sorting and coarsening of streambed gravel, altered groundwater and hyporheic function, and degradation of riparian and wetland plant communities.

ESA ESU or DPS: Grande Ronde/Imnaha - Catherine Creek Spring/Summer Chinook, Upper Grande Ronde Steelhead.



GRMW Post Project Ortho Mosaic Aug 2023



Alluvial wood debris and complexity structures



Wood and Boulder Structures

Middle Upper Grande Ronde River (MUGRR) Fish Habitat Enhancement Project

PROJECT OBJECTIVES:

- Increase the quantity of suitable habitat for all life stages of spring Chinook salmon, summer steelhead, bull trout and other native fish (including pools, side channels, complexity, and physical and hydraulic diversity).
- Promote diverse geomorphic processes, features, and patterns of sediment movement, sorting and deposition in stream channels and floodplain.
- Promote physical, geomorphic, and ecologic conditions that buffer diurnal and seasonal water temperature fluctuations within the project area and allow access to cold water spring sources.
- Re-connect floodplain and side channels to provide off channel habitat and natural flooding,
- Promote riparian vegetation establishment to support overall bank stability, particularly in locations where habitat structures have been installed and along banks with increased hydraulic roughness that are susceptible to erosion from loss of root mass.

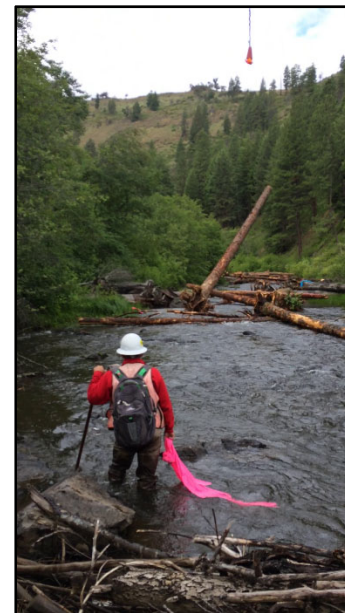
IMPLEMENTATION ACTIONS: The project included installation of 39 large wood structures and placement of an additional 574 wood pieces in complexes along the main Grande Ronde River channel, side channels and on the floodplain utilizing helicopter contractor.

HABITAT RESPONSE: Provide channel roughness, sediment storage and routing, pool formation and habitat complexity. Small wood assemblages were utilized in conjunction with large wood to provide floodplain roughness as well as racking and habitat complexity. Strategic small wood placement upstream of large wood structures was employed to promote natural racking on these large structures to provide additional cover, complexity, velocity refuges and deposition of sediments.

FISH RESPONSE: Targeting limiting factors such as temperature, in-stream habitat conditions, and sediment loads will achieve immediate benefits to salmon. Long term benefits will be realized through a focus on restoring fluvial habitat-forming processes, floodplain and groundwater hyporheic connectivity, riparian and wetland plant communities, and instream complexity and diversity commensurate with the reach's natural potential.



Helicopter placing large wood jam structures



Wood & Boulder Additions 2023



Middle Upper Grande Ronde Wood Boulder Additions 2023

