

Upper Grande Ronde – Bowman Off-site Water Development

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A. Introduction/Background Information:

1. History of the project.

The Bowman Off-Site Water Project is located in the Grande Ronde Sub-basin between RM 153.8 and 155.2. The project reach is located near the town of Starkey and is within the Grande Ronde recovery plan assessment unit UGR15 (Tier 1).

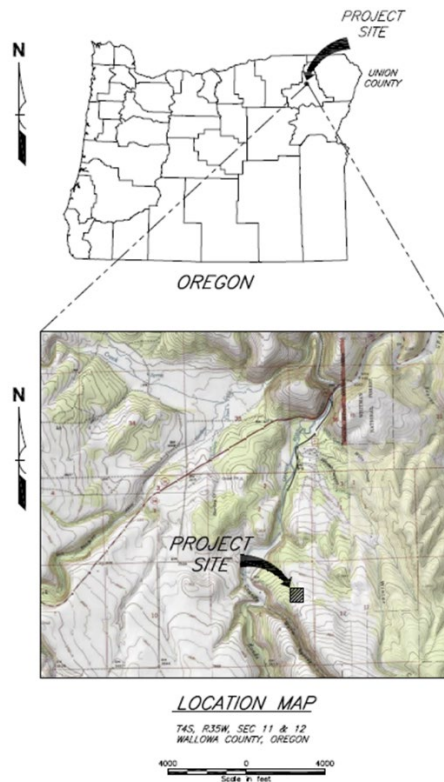
The project area is privately owned by the Bowman family, and is currently used for livestock grazing. This reach of the Upper Grande Ronde includes previous restoration actions completed by ODFW, which included the installation of a riparian exclusion fence, boulder, and LWD structure placements.

This implemented project will function as a component of a larger restoration effort, by establishing an off-site water resource for livestock in the upland areas where grazing is actively occurring. In turn this action will limit livestock access to the riparian area, providing valuable opportunity to continue developing the next phase of implementation of restoration activities within this reach of the Grande Ronde River.

Project components completed for this project included installation of a solar powered livestock watering system and pasture division fencing.

A portion of the funding for this project has been covered through a 50 percent cost share with the NRCS through the RCPP program. Project partners include: Oregon Dept of Fish & Wildlife, Grande Ronde Model Watershed, private landowners, and Bonneville Power Administration.

2. Project location map.



B. Discussion of Completed Work:

This straight forward project implemented the construction of a solar powered watering system for livestock off-site watering and installed a pasture division fence for better grazing management. The system is comprised of solar panels, a control module, a surface water pump, plumbing, a cistern, and troughs. A hired contractor installed the system during the spring and early summer of 2021. The major construction component was the installation of the buried water supply line that was over 0.6 miles long. A small gravity feed spring was further developed, and a pasture division fence was installed. The work completed was as designed and approved by the NRCS.

By providing an off-site water source for livestock, the landowners have agreed to allow for another larger scale habitat restoration project to proceed to the next phase. This project will ultimately have significant net benefits for salmon and steelhead by restoring dynamic channel geomorphology and habitat forming processes in this reach of the Upper Grande Ronde.

The completion of this project achieves the project objective of installing the off-site water system that provides water to the adjacent upland pastures associated with this reach of the Upper Grande Ronde. Completion of this project now allows us to complete the project goal of implementation of a larger riparian and stream restoration project within this reach of the Upper Grande Ronde River for the benefit of listed anadromous salmonids.

The larger restoration effort is currently in the design stage and is guided by the Upper Grande Ronde Atlas prioritization document, the Northwest Power and Conservation Council's (NPCC) 2014/2020 Columbian River Basin Fish and Wildlife Program, the Recovery Plan for Northeast Oregon Snake River Spring and Summer Chinook Salmon, and Snake River Steelhead Populations, and the Grande Ronde Subbasin plan. Riparian condition, water temperature, side channel and wetland conditions, and floodplain condition are identified as priority limiting factors that are critical to be addressed with the larger restoration project. Restoration actions for this project target critical salmonid life stages and limiting factors, and include: pool development, floodplain reconnection, side channel and off-channel habitat restoration, riparian fencing, LWD placement, and channel reconstruction.



Figures 1 and 2. The installed cistern, stock tanks, and the pasture division fence.



Figures 3 and 4. Another view of installed stock tanks and pasture division fence.

C. Lessons Learned & Adaptive Management

There were two primary lessons learned from this project. One of which was slightly anticipated. They were the environmental conditions present during construction and the cost/availability of project supplies. The environmental conditions were anticipated but still impacted the completion rate of the project. Implementation was regularly delayed as conditions were such that damage to ground and pasture would occur. The other and more challenging aspect was the inability for the contractor to procure the materials needed. This was a result of the current impacts of the pandemic on the supply chain. These lessons have been discussed with the Upper Grande Ronde Implementation Team partners and efforts to mitigate for them will be applied to future projects.

While just completed, the sponsors recognize the need for adaptive management as it relates to projects. As mentioned, as implementors we have related lessons learned from this project to our regional Implementation Team partners. It is anticipated that through operation of the livestock watering system, incidents and ideas will occur. These situations and the outcomes will be applied to the operation and maintenance of this system and shared with partners.

Looking forward, we anticipate operation of the system may present challenges. In particular making sure that those who may operate it have an understanding of how to do so. This is something that we are currently addressing with the landowners.