



Final Grant Report

January 29, 2021

Summary

OEC greatly appreciated your generous grant of \$40,000 in November 2019 in support of our Rural Partnership Initiative's work to help conserve water and protect threatened species of fish and frogs by working collaborating with the irrigation districts in Central Oregon. Via this grant, OEC partnered with the Swalley Irrigation District (SID), which diverts water from the Deschutes River near Bend, Oregon and transports it via 28 miles of canals to 668 SID members that are irrigating 4,333 acres just north of the city.

Background

Throughout much of the Western U.S., irrigation districts, including SID, deliver water in unlined canals and ditches that leak at prolific rates. These leaks, combined with evaporation, can result in up to 80% of the water being lost before reaching its destination. Because water flows first to those with older water rights, this means that in-stream flows needed for fish, frogs, and other aquatic life are often the first to experience the adverse impact of low stream flows when water shortages arise. In semi-arid Central Oregon, species of fish and frogs are endangered by these low flows. In addition, water quality is a concern because irrigation canals require regular applications of herbicides to control aquatic vegetation that can clog pumps, screens, and filters.

A simple but powerful solution to these challenges is replacing unlined canals with underground, pressurized pipes.

Use of Grant Funds

The grant for this project directly paid for the final phase of work (completed in March 2020) on a three-mile segment of an irrigation canal in the Swalley Irrigation District (SID). Generous grants from the Oregon Watershed Enhancement Board and the USDA Natural Resources and Conservation Service had supported the earlier piping work, and grant funding provided "capstone" funding for site restoration to complete the project, including:

- Installation of 30 14-foot access gates along the irrigation pipeline right-of-way. This allows district piping maintenance activities and water use monitoring, as well as insuring security and privacy for the landowners across whose land the pipeline runs.

- Replacement of fencing along the right-of-way
- Restoration of vegetation to its natural state before the canals were built.

Because irrigation canals and their underground replacements typically run across privately owned land, site restoration work is critical to upholding legal commitments to landowners adjacent to the irrigation easement—commitments to protect the safety, privacy, security of those landowners. Restoring vegetation is also vital for ecological and aesthetic reasons. Upholding these commitments builds trust and the basis for successful collaboration with other landowners in the District—both private and federal-- which is essential to the success of future piping projects.

Measuring or Assessing Project/Program Success

In our proposal, OEC defined the following as measures of project success:

- SID is regularly monitoring irrigation water diversions via the canal through newly installed meters and head gates to ensure water conservation goals are achieved.
- Number of piping projects in Central Oregon and statewide that are positioned for completion within 1-3 years.
- Reduced likelihood of litigation.

Impacts and Outcomes

- Return of 1.2 million gallons of water per day (1.824 CFS) to the Middle Deschutes River as in-stream flows. Because of the early priority date of SID water right, no other water user can remove that water from the river, which is thus permanently protected for endangered fish and frogs.
- With greater water pressure from pipes (vs. canals), Rogers Lateral landowners can install high-efficiency irrigation systems with no need for electrical pumps, further reducing water and energy use.
- Reduction or elimination of many maintenance costs, including use of aquatic herbicides and debris removal.
- Improved relationships among irrigation districts, landowners, conservationists, and recreationalists invite further collaboration. For example, the relationships developed with SID through this project created the foundation for our current Tyler Trust grant to pilot the use of electric vehicles for pipeline monitoring and maintenance.
- State funding for one additional piping project secured even after economic downturn because of COVID.
- No additional litigation.

Next Steps in the Deschutes Basin

OEC will continue to:

- Solicit input from stakeholders, irrigation districts, and other nonprofits to identify additional irrigation modernization opportunities.
- Collaborate with irrigation districts, government agencies, and independent funders to secure funding for future projects.
- Engage with SID and the Tumalo Irrigation District and deepen our relationships via implementation of the Trust's current grant
- Serve on the Deschutes Basin Water Collaborative, contributing our expertise to long-term water planning in the basin
- Demonstrate commitment to rural partnerships with the intent of increasing trust and opportunities for future project collaboration.

Acknowledgement

OEC is grateful for your contribution to the completion of the Rogers Lateral Piping Project. We look forward to continuing our work in the Deschutes Basin and hope for your continued support of those efforts.