

Project Completion Report for OWEB Grant 223-4018-23002

Final Completion Summary

The Drews Valley Fish Passage Project is located approximately 21 miles west of Lakeview in Lake County. The project was developed in 2020 with support from an Oregon Watershed Enhancement Board Technical Assistance grant. The primary goal of the project was to restore fish passage at the lower irrigation diversion, improving upstream migration and population resiliency for native fish species while maintaining irrigation operations that support the wet meadow habitats throughout Drews Valley.

Drews Creek supports eight native fish species, four of which are listed as Species of Concern by the U.S. Fish and Wildlife Service: Goose Lake sucker, Goose Lake redband trout, Goose Lake lamprey, and Pit roach. Due to the vulnerability of this closed-basin watershed, three species are also included on the Oregon Department of Fish and Wildlife Sensitive Species List: Goose Lake sucker, Goose Lake redband trout, and Pit sculpin. Additional native fish species within the system include Pit-Klamath lamprey, speckled dace, and Goose Lake tui chub.

Through additional funding support from the Desert Fish Habitat Partnership and Natural Resources Conservation Service, the Lake County Umbrella Watershed Council contracted a local construction company to implement the project. Construction activities included removal of the existing concrete weir and installation of a new irrigation diversion structure featuring a fish ladder along the west side of the creek. The upgraded diversion continues to support irrigation operations and wet meadow habitat in Drews Valley while also providing improved upstream fish passage during critical migration periods. The project also complements an existing fish screen previously installed by the Oregon Department of Fish and Wildlife.

Project partners included Drews Valley Ranch, the Oregon Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, the Desert Fish Habitat Partnership, NRCS, and Anderson Engineering and Surveying.

Background

Irrigation practices that historically altered the characteristics of the Goose Lake Watershed took place as early as 1911 when Drews Reservoir began storing water. Drews Reservoir has a capacity is 63,568ac-ft at full pool. Drews Dam has disconnected Goose Lake to the upper most reaches of Drews Creek and its tributaries for more than century. Native species that reside in Goose Lake, still reside in the upper watershed above Drews Reservoir. Historic photos do show native Redband working their way up the dam spillway during early spring migration.

Land was developed for agriculture production which led to alterations in the course and character of the streams. As the streams were altered, irrigation diversion structures were installed to divert creek water and irrigate fields. The resulting impact has negatively impacted instream fish habitat and migration of native fish species throughout the area.

Work Done

An Oregon Department of Fish and Wildlife-authorized fish ladder was constructed along the west side of the irrigation diversion weir. The fish ladder measures 3 feet wide by 20 feet long and was constructed from 1/4-inch steel. The ladder includes five chutes, each containing a 6-by-6-inch orifice. Between each chute, a resting pool was created using 3-inch-minus rock placed level and flush with the orifices to improve fish movement and passage efficiency.

A new 30-foot concrete diversion weir was also constructed at the site. The structure includes five 6-foot stanchions designed to accommodate stop logs used to divert water during the irrigation season. The new diversion was sized to match the natural width of the stream, addressing issues associated with the original undersized diversion, which had caused erosional downcutting along the streambanks. The upgraded structure also incorporates concrete wing walls to protect the banks during high flows, reduce erosion, and improve long-term structural stability. In addition, the diversion integrates the existing fish screen return pipe and includes a trash rack at the diversion outlet where water is screened before entering the irrigation system.

Through additional funding support from the Natural Resources Conservation Service, engineers with Ducks Unlimited surveyed the upper diversion weir located approximately 1.5 miles upstream of the project site. The Oregon Department of Fish and Wildlife had previously addressed fish passage concerns at this upper diversion during the implementation of four fish screens and two additional fish passage improvements on the property (see OWEB Project #212-4039 – Drews Creek Fish Passage/Screening). Improvements included installation of eight rock weirs downstream of the diversion structure, additional stop-log guides, and structural upgrades to the diversion itself. These earlier efforts primarily focused on improving fish passage outside of the irrigation season when stop logs were not in place. If the landowner chooses to pursue future improvements, the recent survey work will help support project design and future funding opportunities to expand fish passage accessibility during a greater portion of the irrigation season.

Changes from Proposed

Initial cost estimates developed in 2021 required multiple updates throughout the duration of the project to account for rising inflation and increasing construction costs. As expenses continued to climb, the Lake County Umbrella Watershed Council worked diligently to secure additional funding support to keep the project moving forward.

Final construction bids exceeded the available budget, requiring project partners to make several design modifications to reduce costs while maintaining overall project functionality. These adjustments included reducing the size of the concrete wing walls and removing the railing from the pedestrian walkway across the diversion structure.

Public Awareness or Education

The Drews Valley Fish Passage Project was featured in our 2025 Annual Report and highlighted on our social media platforms throughout project completion to showcase the collaborative efforts, construction progress, and benefits to native fish populations and local agricultural operations.

Lessons Learned

Overall, the project was successfully implemented and achieved its primary objectives. One key takeaway from the experience is the importance of incorporating contingency funding into future project budgets to better account for unpredictable inflation rates and escalating construction costs that may occur between project development and implementation phases.

Aquatic Habitat

For a fish passage or screening project in Oregon to comply (per the Guide and related ODFW / state regulations), the following requirements were met:

1. Notification to ODFW and a passage plan was submitted to ODFW for approval.
2. ODFW Fish Passage Authorization was provided after review of the fish passage design plan.
3. ODFW Fish Screening Program designed, fabricated, and installed the fish screen and therefore the screen met ODFW screening requirements.
4. Post-Project Reporting / Inventory - The project will be reported to the Oregon Watershed Enhancement Board (OWEB) via the Oregon Watershed Restoration Inventory (OWRI). This helps track habitat restoration and enhancement across the state.
4. Relevant Permits and Compliance were secure prior to construction including Fill and Removal permits from DSL and USACE.

Special Conditions

Conditions of the Agreement were met and include:

1. First Payment: Map

OWEB will not release any funds for a Project site until Grantee has submitted to the Board's Project Manager a map

that shows where the photo points have been established. Baseline criteria for the map include 8 1/2 x 11 size and .pdf

format. Minimum background layers include recent aerial imagery, Project boundary, streams, and roads/highways.

2. First Payment: Photo Points

OWEB will not release any funds for a Project site until Grantee has submitted to the Board's Project Manager pre-

Project photos at photo points established to track visual change(s) resulting from restoration Project.

Grantee should

carefully consider photo point locations to ensure photos clearly show the same sites and perspective in future photos

to meet reporting requirements (see Exhibits C and D) and demonstrate that completed restoration meets the scope of work described in the grant application.

3. Reporting: Progress Report

Grantee will submit to the Board's Project Manager progress report(s) that may be a brief paragraph, sent by email,

using the heading "Progress Report" with the project number. The progress report should describe Project

implementation status towards achieving the scope of work described in the Grant Application, detailing actions

completed to date and providing an anticipated timeline for remaining Project components. See page one for

reporting schedules.

Funding Sources

Source	Identifier	Cash	InKind Type	Inkind
Desert Fish Habitat Partnership		\$50,000.00		\$0.00
Natural Resources Conservation Service		\$43,225.50		\$0.00
Oregon Department of Fish and Wildlife		\$0.00	Labor	\$3,500.00
OWEB	223-4018-23002	\$263,335.00		\$0.00

Totals

OWEB Amount	Non OWEB Cash	Inkind Total	Non OWEB Amount	OWEB Match	Total Project Cost
\$263,335.00	\$93,225.50	\$3,500.00	\$96,725.50	37.0%	\$360,060.50

Uploaded Files

Image Type	File Name	Description
Photo (other)	Drews Creek Fish Passage_Construction Photos 2025.pdf	Construction Photos
Photo Point	Post-Project 5.jpg	Post-Project Photo 5
Photo Point	Post-Project 4.jpg	Post Project Photo 4
Photo Point	Pre-Project 3.jpg	Pre-Project Photo 3 Standing on West Side of Creek
Photo Point	Post-Project 3.jpg	Post Project Photo Point 3 Standing West Side of Creek
Photo Point	Post-Project 2.jpg	Post Project Photo Point 2 Standing on East Side of Creek Looking Across Walkway
Photo Point	Pre-Project 2.jpg	Pre Project Photo 2 Standing on East Side of Creek Looking Across Diversion Walkway
Photo Point	Post-Project 1.jpg	Post Project Photo Point 1 Standing on East Side of Creek
Photo Point	Pre-Project 1.jpg	Pre Project Photo 1 Standing on East Side of Creek
Grazing Management Plan	Grazing Management Tool Drews Valley Ranch.pdf	Grazing Management Plan
Project Designs	Upper Drews Creek Fish Passage Design 4.25.2023.pdf	Project Design
First Payment Checklist	First Payment Check List 223-4018.pdf	First Payment Request Checklist
Exhibit B	23002_Conditions.pdf	Exhibit_B