



STREAM & RIPARIAN HABITAT RESTORATION AT CONFLUENCE FARMS ON FERGUSON CREEKS

PROJECT BACKGROUND & DESCRIPTION

Over 2.3 miles of Ferguson & South Fork Ferguson Creeks pass through Confluence Farms west of Junction City. The headwaters of these streams are important spawning and rearing grounds for cutthroat trout and other native fish. The large property size and proximity of this site to several other Council projects made this a high priority for creating an extended corridor of improved fish & wildlife habitat.

The Council improved habitat by placing large wood in the stream, part of a broader effort to increase the frequency of log jams in four contiguous stream miles. Log jams create pools by slowing down and varying stream flow, allowing the build up of gravel, which creates important habitat for fish and the aquatic insects they eat. To improve streamside habitat, the Council replaced invasive weeds with native trees and shrubs planted during the winters of 2012 and 2013.

During spring and summer flows, a rock crossing installed on South Fork Ferguson Creek blocked upstream fish passage because the stream would percolate below quarry rock used for the crossing and flow sub-surface. LTWC used funds from an OWEB small grant to re-build the crossing at the proper elevation so water would continue to flow over the crossing, even during low stream flows.

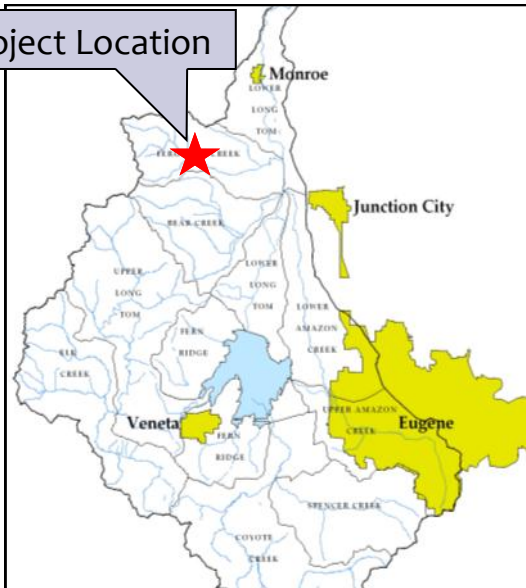


Before the Project: The riparian area along both creeks was dominated by invasive species like thistle and blackberry.



After the Project: Invasive weeds were removed and native trees and shrubs were planted in their place.

Project Location



PROJECT FUNDING & PARTNERS

Total Project Cost: \$91,125

Funding & Partners

Trey & Tammie Hagen (landowners)
Oregon Watershed Enhancement Board (OWEB)
Finley National Wildlife Refuge (USFWS)
Eugene District Bureau of Land Management (BLM)



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Fish Passage Enhancement: During low flows, water would percolate beneath the rocks of this crossing and prevent fish from swimming upstream.



Log Placement: An excavator places a log in the stream. These large conifer logs will help create deep pools and a more sinuous stream channel.

RESTORATION TECHNIQUES

Enhanced Stream Habitat

- Installed 110 pieces of large wood, donated by Finley Wildlife Refuge, throughout 1.6 stream miles.
- Log jams were created from 3-7 logs each and 30 of the logs had rootwads attached.
- Log jams were wedged against existing trees or partially buried into the bank to help make them more stable.

Enhanced Fish Passage

- Excavated existing rocky crossing to a slightly lower elevation than the adjacent natural streambed. Filled back in with existing 6" quarry rock, along with some new smaller rock.
- Crossing was sloped down toward stream center to provide a low-flow channel for fish.

Improved Streamside Habitat

- Removed thistle, blackberry, and other weeds.
- Planted a mix of nearly 29,000 native trees and shrubs, including about 400 oaks, on 20 acres.
- Maintenance work will include weed control and mowing between rows of plants and will continue until the plants are free to grow.

ENVIRONMENTAL & ECONOMIC BENEFITS

- Logs placed in the stream increase the depth and frequency of pools trout use for habitat.
- Logs also increase retention of sediment and organic matter that creates habitat for insects and fish. As the logs decompose they provide food for aquatic insects, which are the primary food source for cutthroat trout.
- Riparian plantings will increase shade in the long-term, leading to cooler water temperatures. These trees & shrubs also provide better bank stability and create forage and cover for native wildlife.
- Re-grading the rocky crossing allows native fish year-round access to spawning and rearing habitat of Ferguson Creek basin headwaters.
- Contractors from the local area were used for all phases of the project. This contributes to the local economy.

PROJECT EFFECTIVENESS MONITORING

- All components of the project will be monitored to determine the effectiveness of our restoration techniques.

The Long Tom Watershed Council thanks our partners and funders!