



South Fork Ferguson Creek Stream & Riparian Enhancement at Neumeister's

Project Background

This project was a result of the Long Tom Watershed Council's Sub-watershed Enhancement Program, which brings neighboring landowners together to discuss water quality, habitat conditions, and possible restoration projects in their creek basin. The Ferguson and Bear Creek Sub-watersheds are the only streams that fluvial cutthroat trout, migrating up from the Willamette River, can utilize for spawning in the Long Tom Watershed, because fish passage to the upper two-thirds of the watershed is blocked by Fern Ridge Dam. These sub-watersheds also provide important rearing and spawning habitat for resident cutthroat trout and a host of other native aquatic fauna.



Pre-project: August 2004, Terrace B before excavation. The channel here had steep, eroding banks & very little stream-floodplain interaction.



Post-implementation: October 2005- Terrace B has been excavated and planted with native shrubs.

Channel incision is a common condition of streams on the valley floor throughout the Willamette Basin. In most cases, its root cause was channel straightening by residents in the early to mid-1900's. **This has led to** loss of stream - flood plain interaction, stream bed and bank erosion, loss of instream complexity and habitat, and degraded water quality. The section of South Fork Ferguson Creek where this project took place had a 6-foot elevation difference between the top of the bank and edge of water. Very little off-channel habitat existed, which was a detriment to juvenile cutthroat trout during high flow.



South Fork Ferguson Creek Restoration Project

Project Goals and Objectives

This site had the potential to provide better off-channel winter rearing habitat for juvenile cutthroat trout, cooler summer water temperatures and reduced erosion. Project objectives include:

- ◆ Reduce bank erosion, stream incision, and downstream sedimentation.
- ◆ Reduce stream velocity and provide low velocity areas within channel during high flow events.
- ◆ Increase stream shading and recruitment potential of wood into the stream.



An excavator was used to create terraces at seven sites on

Restoration Techniques

The following activities were implemented to achieve the goals of the project:

- ◆ Excavated seven 30-foot by 20-foot streamside terraces.
- ◆ Seeded the new terraces, covered them with erosion control fabric, and planted them with willow cuttings and native shrubs.
- ◆ Planted a variety of native trees and shrubs along a 1,300-foot section of stream.
- ◆ Moved the existing fence 30-50 feet further back from the stream to create a larger zone free of livestock.



During high flows, such as this event in January 2006, Terrace B provides great off-channel habitat for juvenile cutthroat trout.

Project Benefits

The streamside terraces have created low velocity areas where sediment is deposited. They also provide ideal habitat for juvenile fish during high flow events. Riparian plantings will provide increased shade, and in the long-term, become a source of large wood in the stream. These trees and shrubs will also add roughness to the channel bank, reduce bank erosion, and provide cover for juvenile fish during high flows.

The project provided both economic and ecological benefits to the landowners, who raise and market their organic lamb. The market for naturally raised livestock **responds positively to landowners' protection of the ecological functions and values of their land.** It will assist **both the landowner's marketing and economic vitality** and simultaneously improve riparian and instream habitat.

Project Funding & Partners

Project Cost: \$ 10,269

Funding:

OWEB: \$ 6,014

Local & Federal Match: \$ 4,255

Partners

Oregon Watershed Enhancement Board (OWEB)

John Neumeister & Gwen Meyer, *landowners*

Gary Galovich, *Oregon Dept. of Fish & Wildlife*

Individual volunteers

The Long Tom Watershed Council thanks our partners and funders!