



Tualatin River Watershed Council  
West Fork Dairy Creek Restoration Project Completion Report  
OWEB Grant 207-306

## I. Narrative Description of the Project.

### Background on the problem which generated the project.

In 2004, Oregon Parks and Recreation Department staff (OPRD) met with the Tualatin River Watershed Council (the Council) to work together to identify key watershed issues and limiting conditions and address these issues and limiting conditions within the L.L. 'Stub' Stewart State Park property which was being developed by OPRD. The 1,654-acre park includes the headwater and main stem of West Fork Dairy Creek and three tributaries, Brooke Creek, Williams Creek and Logging Creek. Using its Dairy-McKay Watershed Assessment (1999), the partners focused on these identified key watershed issues found on the park property:

- erosion control and water quality issues, due to sediment delivery into streams from stream crossings;
- aquatic species and habitat issues, due to degradation of habitat and water quality;
- stream channel issues, due to lack of large wood debris in streams that limit pool development; and
- migration barriers, due to fish passage barriers at stream crossings.

During summer 2005, the Council and community volunteers and OPRD staff performed a culvert inventory and survey of all (over 30) culverts for fish passage barriers located within the park. With assistance from the Oregon Department of Fish and Wildlife (ODFW) stream restoration biologist, three culverts on the main stem and a tributary of West Fork Dairy Creek were prioritized for evaluation.

In February 2006, the Council obtained an OWEB technical assistance grant for analysis, design, plans and specifications to replace one culvert, remove two culverts, and perform a stream survey on the stream reaches below and above the culverts (a 2.7 mile stream reach) that resulted in prioritization of stream reaches for and design of enhancement activities. This technical assistance work was completed in August 2006 and based on this work, the Council decided on removal of two obsolete culverts and road fills located on publicly owned property and placement of large wood within a 1.10 mile reach of West Fork Dairy Creek located on both publicly and privately owned properties. This decision was informed by an Oregon Department of Fish and Wildlife survey in

West Fork Dairy Creek and a tributary stream to confirm fish distribution in the proposed project stream reaches.

Work performed placed in a larger watershed context.

Erosion control and water quality issues are caused by the limiting condition of sediment delivery from stream crossings. The cause of this limiting condition is past road building practices that installed undersized and inadequate culverts at stream crossings. During high water events, high volumes of sediment are washed into streams. Stream reaches in this portion of the Dairy-McKay sub-basin provide spawning and rearing habitat for native cutthroat trout, federally listed winter steelhead trout, Pacific lamprey and brook lamprey.

Stream habitat has been degraded due to the limiting condition of lack of large wood debris within streams. The causes of this limiting condition include past timber harvesting practices that removed older larger conifers from the riparian corridor, the inability of younger riparian tree stands to provide the desired level of wood in streams, and past practices of removing large wood from streams.

Fish passage and migration issues are due to the limiting condition of undersized and inadequately placed culverts at stream crossings. The cause of this limiting condition is past road building practices.

The partners decided to address these issues by focusing on fish migration passage barriers and sediment delivery sources in the park and stream channel enhancement in the park and privately owned properties.

Description and explanation of proposal and any changes

Two culverts and a berm road contributed sediment to West Fork Dairy Creek; one culvert was a blockage to fish passage. West Fork Dairy Creek lacks the desired levels of large wood which provides habitat for native cutthroat trout and federally listed winter steelhead trout. The solution was to remove the two obsolete culverts and approximately 5.064 cubic yards of road fill materials located on the park property and add large wood (208 logs) to stream reaches on publicly and privately owned properties totaling 1.10 miles.

Changes: a) Originally the road fill was to be transported to a site located further into the park. The decision was made to place the fill in two areas near where it was being removed.

b) Initially the plan was to place 218 logs in the 1.08 miles of stream using helicopter; we placed 200 logs based on the advice of our project manager who thought we'd achieved the objective with 200 logs.

Description of efforts taken to promote the project

OPRD, ODFW and the Council worked together on a press release for the project. ODFW distributed a press release one week prior to the log placement by helicopter to its media contacts (i.e., television, radio, newspapers). Following the log placement

activities, ODFW sent out a press release with report and a picture that was published in *The Hillsboro Argus*. Oregon Department of Transportation also notified its local media contacts about the helicopter log placement.

The Council coordinator contacted *The Oregonian* (Westside) *The Hillsboro Argus*, and *The Forest Grove News-Times* to be present at the park property for the helicopter log placement. *The Forest Grove News-Times* sent a reporter and photographer and published a story in the newspaper several weeks following the event. The Association of Northwest Steelheaders (Tualatin Valley chapter) included the ODFW press release and *Forest Grove News-Time* story in its local chapter newspaper, on its website and in the statewide spring quarterly newsletter. The Council website features a project webpage and the newspaper story and press release are included in the webpage. The *Forest Grove News-Time* story is included on the Network of Oregon Watershed Council website.

OPRD is in the process of developing two signs that will tell the project story to be placed at the project locations. The signs will be placed in the fall 2008.

#### Lessons learned from the project

- 1) Submit county required permits as soon as possible, since these have a longer review time and may require different details than the state and federal required permits.
- 2) Placement of logs by helicopter in a narrow stream channel with dense alder stands is safer for a helicopter contractor during late autumn when the leaves are off the trees. The helicopter crew can see the ground crews and better coordinate the log placement.
- 3) Hire contracted crews for replanting of steep riparian and the fill area sites rather than using community volunteers for replanting efforts.
- 4) Cultivate press and political connections continuously for project and partner recognition.
- 5) Learn early about contracting and BOLI procedures when the project will be over \$50,000 on publicly owned partner property.
- 6) The Bureau of Labor and Industries staff is extremely helpful.
- 7) Working with contractors who know the BOLI procedures makes the process much easier.
- 8) Making contacts in order to obtain logs for the project is vital.
- 9) Personnel changes within partners and consultants occur and can slow a project's implementation.
- 10) It is hard to get good pre-project pictures of culverts in stream channels with dense canopies and vegetation; taking pre-project pictures during winter and early spring seasons of these areas provide better contrast pictures.
- 11) High water flow events and landslides change stream channels so these events can make comparing pre-project and post-project photo-point pictures more difficult.

#### Recommendations for more effective implementation of similar projects

- 1) Meet early in the project with partner's contracting staff and learn their requirements.
- 2) Find a mechanism and relationships that will guarantee logs for the project.
- 3) Obtain a better understanding of the requirement of county permits.

## **II. Documentation that the project complies with the Oregon Aquatic Habitat Restoration and Enhancement Guide.**

The necessary and required permits for the West Fork Dairy Creek Restoration Project were obtained from Oregon Division of State Lands, U.S. Army Corps of Engineers, and Washington County and copies of these permits were sent to OWEB. The fish salvage for the culvert and fill removal was performed by Oregon Department of Fish and Wildlife personnel with assistance from the Council coordinator. The project contractor followed best management practices for erosion control with oversight from ODFW, OPRD and Council consultant and personnel. The log placement activities performed by helicopter followed Federal Aviation Administration guidelines, Columbia Helicopter safety requirements and Oregon Department of Transportation traffic control procedures for stream areas adjacent to Highway 47. The Oregon Aquatic Habitat Restoration and Enhancement Guide was used to identify issues and approaches for the project's development, implementation, maintenance and monitoring activities.