CASE STUDY

## Gales Creek Stream Enhancement at B Street Trail



Tree for All engages communities large and small in conservation projects throughout the Tualatin River Watershed in Oregon.

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## A Popular Trail, a Healthy Creek

**GALES CREEK** is one of the Tualatin River's major tributaries, and Forest Grove's B Street Trail is a popular place for people to access Gales Creek. Erosion can be a significant problem at this location. Establishing native riparian forest habitat can be challenging. In the summer of 2019, Tree for All partners launched a two-to-three-year enhancement project just upstream of the B St Trail Bridge that will improve creek stability, water quality and fish and wildlife habitat. The project is designed to reconnect the creek and the floodplain without increasing flood risk for the adjacent demonstration farm.



# The Sitesize3 acresFIRST PLANTING2008 (entire Natural Area)<br/>2019 (current project)STREAM<br/>LENGTH175 feetPLANT<br/>COMMUNITIESRiparian Forest



Habitat Connectivity



Recreation & Human Health



Community Involvement



Protects Water Quality

# The Challenge

When the project began, this small site was home to many challenging features, including two earthen berms and the remnants of a railroad trestle.

The berms, built long ago for flood control, didn't protect the adjacent road or farm from flooding in high water events. They did, however, disconnect the creek from its floodplain, reducing water quality and increasing high-water impacts downstream. The remnant trestle increased erosion in the creek. In many spots, the creek banks were very steep, with little vegetation to stabilize the banks or cool the water. All stream enhancement activity in this area needs to avoid increasing the flood risk for the infrastructure that flanks the site: A popular trail with a pedestrian bridge; a major road; and a teaching farm operated by Pacific University as a demonstration site for sustainability initiatives.



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This project will create habitat that helps to regulate temperature, sediments and nutrients on Gales Creek.





# **The Transformation**

This site is part of the larger Gales Forest Grove Natural Area, where Tree for All partners have been active for more than a decade. In 2019, Metro, Clean Water Services and the City of Forest Grove came together to execute a two-year project to improve water quality, creek stability, fish and wildlife habitat, plant communities and recreational opportunities along this reach of Gales Creek, just off the B St Trail.

### PHASE 1 August 22-October 15, 2019

Contractors removed the remnant railroad trestle, rebuilt the creek bank to slope more gently and connect with the floodplain, and placed large wood (habitat logs) along the channel and below the creek's high water line. This phase, which enhanced a total of 1.5 acres, wrapped up with the planting of thousands of native plants, which will help stabilize the creek, shade the water, create wildlife habitat and revegetate an old, unintended trail.

### PHASE 2 2020

Phase 2, 2020: Phase 2 tackles the remaining 1.5 acres of the immediate project area. On the south side of the creek, a Clean Water Services' Field Operations crew restored connection to the floodplain by removing about 80 feet of non-functional berm. During very high water events (typically 2-3 days per year), this floodplain reconnection is expected to result in two changes:

- · Water will move more slowly in the creek, decreasing erosion; and
- Water will move through the full floodplain, improving ecological function in that area by providing native plants and wildlife the environment that suits them.

Seven large wood structures have been added to the site. Berm material was moved from an ineffective berm to reinforce a berm that helps protect Pacific University's teaching farm. Planting will follow this winter.

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Read the <u>Forest Grove News-Times</u> article about the project (8/19/19).

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Together, the two phases of work here create habitat that will help to regulate temperature, sediments, and nutrients on Gales Creek, home to the most important winter steelhead population in the Tualatin Valley. And thanks to the growing network of trails, thousands of visitors will have an opportunity to experience the benefits of ecological enhancement, within easy reach of downtown Forest Grove and Pacific University.

Partners will continue to monitor and manage the plants, streambanks, habitat logs and other elements of the project for at least 20 years. The area is permanently protected as a public natural area. The Gales Forest Grove Natural Area will become an even more valuable handson learning site for local students, from pre-K through graduate school, for years to come. The area is permanently protected as a public natural area.



### **Key Partners**





