

## Road maintenance activities contribute to fish recovery

Commitment and teamwork have helped the Pierce County Road Operations Division become a leader in developing road maintenance procedures that comply with the Endangered Species Act (ESA).

In 1999, Chinook Salmon and Bull Trout in the Puget Sound region were both listed as threatened species under the ESA. As a result, Pierce County Road Operations teamed with other agencies throughout Western Washington to develop guidelines for road maintenance that contribute to the recovery of listed fish species.



Pierce County Road Operations maintains more than 1,550 miles of roads and shoulders in compliance with the Endangered Species Act.

## Water information flows through computer library

Because Pierce County is rich with water sources—and thus, potential fish habitats—Road Operations needed a way to monitor its many activities for ESA compliance.

The solution: A comprehensive GIS database of every drainage feature, wetland, stream and priority wildlife habitat in Pierce County.

Using Global Positioning Technology (GPS), photos, and information from other government agencies, GIS technicians created a spatial database of creeks, wetlands, storm drains and more. This database allows maintenance crews to identify sensitive areas before any work is

performed. This ensures proper planning and appropriate selection of Best Management Practices.

Maintenance scheduling and site monitoring also are handled more efficiently because of the vast information library.

## Regional program nets efficiency

The program's road maintenance guidelines were developed in cooperation with the National Marine Fisheries Service and U.S. Fish and Wildlife Service.

By agreeing to follow a program of 10 Best Management Practices – such as monitoring, reporting and training – eight counties and 25 cities were granted an umbrella coverage for maintenance activities covered in the guidelines. Working under this umbrella coverage, local entities save time and resources because they don't have to file separate permits for individual projects and are protected from lawsuits.

Road operations departments from around the Puget Sound region meet monthly to discuss their successes and continually look for more environmentally friendly and cost-effective Best Management Practices. Adhering to the ESA requires more checklists, analysis and planning than in the past—all without any additional budget dollars.

## Fish sticks mark sensitive areas

Crews are putting the GIS database details to work. One example is the "fish sticks," green stakes along Pierce County roadsides



Creeks, wetlands, storm drains and more are important factors in road maintenance activities.

that identify sensitive areas where listed fish species may be found.

Fish sticks are placed approximately 300 feet on either side of a sensitive area, alerting road crews and residents that extra care is needed when working there. Environmental staff preview projects within the fish sticks to ensure the work doesn't harm critical habitats and that it meets local, state and federal environmental regulations.



The locations of sensitive habitats are known before any work is scheduled.

## Messy ditches help fish hide, thrive

Until recently, the only purpose for ditches was to carry away excess surface water to prevent flooding. Now the ecological benefits are becoming apparent.

While a vegetated ditch may look messy and unkempt, in reality it is providing shade, cover and food for many species of fish and wildlife, including Bull Trout and Chinook Salmon in some locations. Vegetated ditch lines also act as biological filters, removing much of the chemicals and sediments from roadside runoff.

In the past, ditch maintenance would often involve "cleaning," essentially removing all existing roadside and ditch line vegetation.



Well-maintained surfaces provide safer driving conditions and extend the life of the road.

## Treatment varies for road ailments

Pierce County road maintenance crews continually look for new products and methods that preserve roadways and are more convenient for the public. For example, crews sampled new chip-sealing oil designed to dry faster and help rocks adhere better. Results were inconclusive; other product trials and research continue.

Meanwhile, Pierce County extends the life of its roads with remedies such as hot pour crack sealing, asphalt concrete patching and base stabilization.

## On the road and to the rescue

Providing safer driving surfaces requires road maintenance crews to handle an assortment of duties, including:

- Responding promptly when potholes are reported
- Cleaning roadway drains and culverts
- Sweeping and removing roadway debris
- Removing game animals from roadway
- Providing after-hours response to County road-related emergencies

## For more information

Please contact the Pierce County Road Operations Division for more information about pavement management and surface treatment.

General information: 253-798-7364

To report potholes: 253-798-7364  
Monday-Friday, 8 a.m. to 4 p.m.

To report County road-related emergencies after hours: 253-798-3842

[www.piercecountywa.org](http://www.piercecountywa.org)

This brochure is a joint production of the Pierce County Road Operations Division and Pierce County Environmental Services.

# Long Live the Roads

Surface treatments ensure safety, durability