

ODOT/ODFW Pilot Program

# Southwest Oregon Culverts

U.S. Highway 101 / Oregon Highway 38



## What is the problem?

A culvert is an underground pipe or concrete tube that allows water to pass under a road. They are an essential part of our transportation system, since they keep water from running over the roadway and prevent erosion.

Many of the culverts along U.S. 101 and Oregon 38 in Coos and Douglas County are old and damaged. Some are rusted, blocked or leaking. In addition, many are barriers to fish reaching their natural habitat.

ODOT and the Oregon Department of Fish and Wildlife are working together on a pilot program that will repair or replace more than 150 culverts in this area between 2015 and 2018.

# Concrete culverts



## Blocked with debris



Many small culverts along the highway fill up with leaves and other debris. These culverts are monitored and cleaned out as needed.

But some problems are harder to see.

## Gaps in segments



Concrete culverts are often made up of several segments. Due to settling, these segments can move apart, creating gaps. Water leaking from the culvert can cause erosion in the surrounding areas.

## Debris falls into culvert



Also, dirt and rocks can fall into the culvert from these segment gaps, blocking water from passing through.

## Erosion above culverts



Small holes can be seen in the ground when sections of culverts open up and dirt filters through the gaps.

When this happens under the travel lanes, the road surface can be damaged.

## Erosion under road



Sometimes this erosion is difficult to see from the travel lanes.

# Steel culverts



## Damaged pipe ends



The segments of steel culverts usually do not separate but they can have other problems. The damaged ends of small pipes can block the flow of water.

The culvert pilot program will repair the ends of several dozen small culverts.

## Rusted bottoms



A more common problem with metal culverts is the bottoms can rust, which create other problems.

## Holes in the pipe



Water can be seen draining from a hole in a rusted out section of the culvert. This can cause erosion of the soils that support the highway at each end of the culvert.

## Erosion from rusted pipes



When this culvert was installed years ago, much of the exposed pipe was underground. Rust created a hole along the bottom of the culvert, and water eventually washed away most of the surrounding dirt.

# Large culverts and bridges



## Box culverts



Some large culverts are near the end of their design life, are damaged, and may also present a barrier to fish passage. These culverts will be replaced with larger culverts or with small bridges.

## Fish passage



Many culverts along Oregon 38 and U.S. 101 prevent fish, like this cutthroat trout, from passing upstream. As part of this project many of the culverts will be designed to improve fish passage.

## Replacing culvert at Charlotte Creek



In 2009, the culvert at Charlotte Creek was replaced with a new bridge. The staging plan allowed for construction of the bridge before the culvert was removed.

## New bridge



The current stream bed at Charlotte Creek allows easy fish passage under the new bridge.

Several box culverts on Oregon 38 and U.S. 101 will be replaced with small bridges as part of this pilot program.

# Construction



## Short-term lane closures



Most smaller culverts can be repaired or replaced in a couple of days. Motorists should expect intermittent lane closures and brief delays in these areas.

## Long-term lane closures



In areas where box culverts are replaced or bridges are constructed, lane restrictions will be in effect for several months.

Motorists should expect slightly longer delays in these areas.

Thank you.