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CONSERVATION EFFECTIVENESS PARTNERSHIP PULLING TOGETHER TO IMPROVE NATURAL RESOURCE INVESTMENTS IN OREGON

Dive In! Tillamook's Wilson River Remains Clean Enough for Swimming

Tillamook, Ore.—Water in the Wilson River continues to meet state water quality standards so that everyone can enjoy swimming or wading thanks to water quality improvement efforts and monitoring measures by cooperating public natural resource agencies, nonprofits and landowners.

The Wilson River is the largest watershed feeding Tillamook Bay, a major water body on Oregon's northern coast. While the upper portion of the river is flanked by forestland, the lower 8.5 miles flows through dairy land and is affected by development pressures from the City of Tillamook.

THE PROBLEM

In 1997, the lower 8.5-mile segment of the Wilson River had dangerously high bacteria levels, which moved the state's Department of Environmental Quality (DEQ) to place the river on the 303(d) list of impaired waterways. That listing meant that recreational use was not advised.

Oregon's recreational use water quality standard has two requirements: first, that for 30 days water does not show a median of 126 or more *E. coli* organisms per 100 milliliters (ml) of water and second, that no single sample exceed 406 *E. coli* organisms per 100 ml. Twenty years ago, the Wilson River exceeded those limits.

COLLABORATION AMONG AGRICULTURAL LANDOWNERS AND AGENCIES

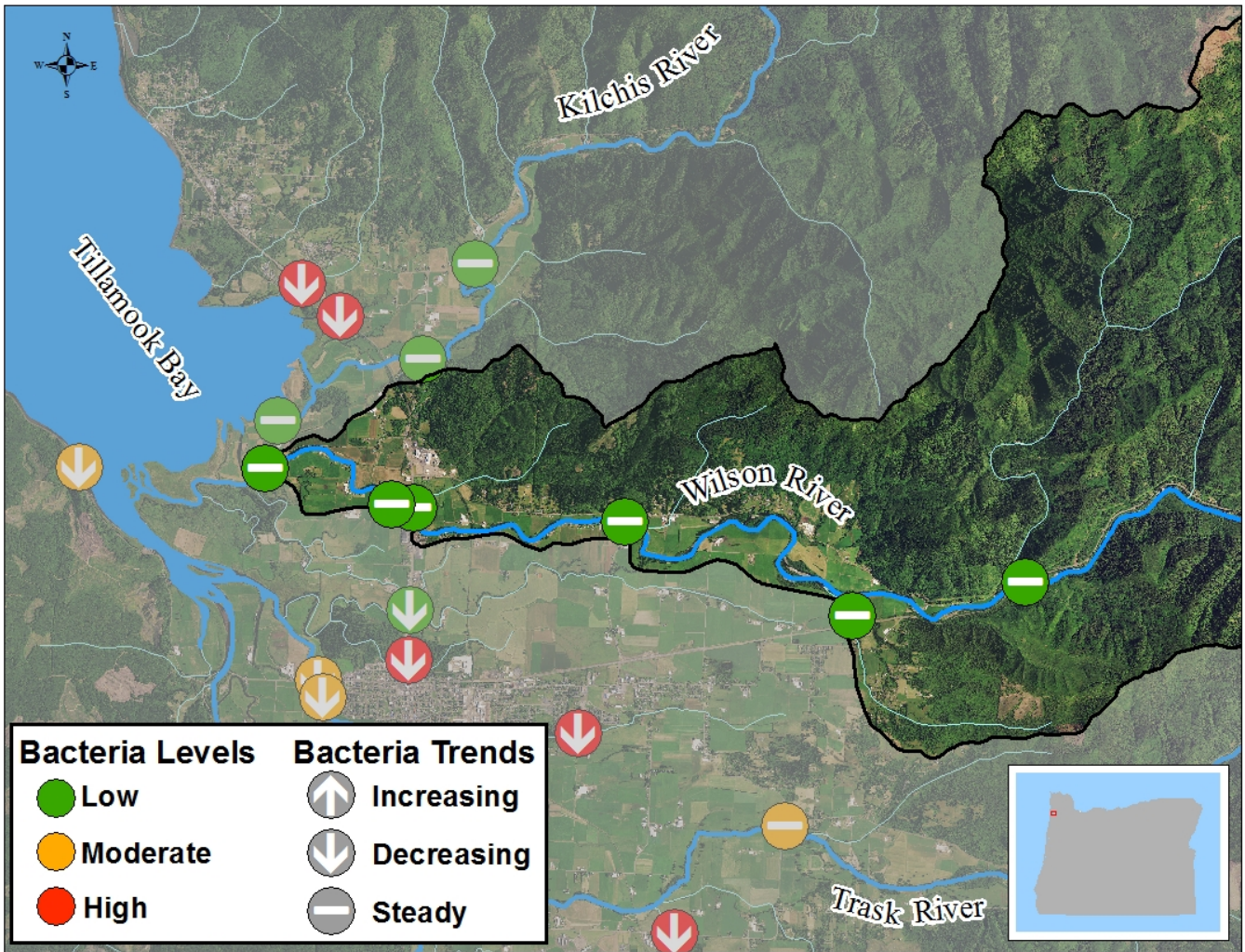
Work began toward finding a solution to Wilson River's water woes by local citizens, dairy farms, nonprofits and natural resource agencies including the Tillamook Estuary Partnership (TEP), Oregon Watershed Enhancement Board (OWEB),

Oregon State University, USDA Natural Resources Conservation Service (NRCS), USDA Farm Service Agency, DEQ, Oregon Department of Agriculture (ODA), Tillamook Bay Watershed Council, and the Tillamook Soil and Water Conservation District, which leveraged their investments in multiple conservation projects intended to improve the watershed's health. TEP and the Tillamook County Creamery Association (TCCA) continue to collect water quality data to monitor and measure the results of conservation efforts.

MULTI-PRONGED EFFORT

Partners have spent millions of dollars to restore and protect Tillamook Bay and its watershed, including the Kilchis, Trask, Tillamook, Miami, and Wilson Rivers. Projects funded in the Wilson River by the State of Oregon, including OWEB and DEQ grants, include over 20 riparian enhancements on private lands. These projects, implemented by local partners address planting trees and shrubs, livestock fencing, and invasive species removal. There has also been wetland restoration on the lower river and improvements to TCCA wastewater treatment system that also discharges to the river through a wetland and small tributary.

Farmers invested in additional infrastructure to properly store and handle animal waste, and developed nutrient management plans to guide operations. Following these plans reduces the potential for runoff to streams while still utilizing the valuable nutrient contents as fertilizer to grow forage.



SCIENTIFIC MONITORING SHOWS SUCCESS

Scientific monitoring gives water quality managers a starting point and a progressive measurement of success or failure in water quality improvement efforts. In the Wilson River, monitoring of pollutants began in 1997. At that time, *E. coli* organisms were present at nearly triple the levels considered safe for swimming and wading. Through collaborative efforts and a data-driven approach, monitoring demonstrates over two decades of improvements.

Standardized equipment was used to measure water quality in the Wilson River over the long term. Six bacteria monitoring stations set up along the 8.5 mile stretch of Wilson River monitored the presence of *E. coli*. Data collected from those sites from 1997 through 2016 showed that bacteria levels have steadily declined since 1997 and now consistently meet the recreational use water quality standard.

Data are collected monthly by Tillamook County Creamery Association, and results are provided to the [Tillamook Estuary Partnership](#) and DEQ for analysis.

Monitoring has been in place long enough now for scientists to see patterns of improvement at the Wilson River. They predict with confidence that today's improved conditions will continue over the next two or three decades as landowners maintain their conservation efforts. And that can only be good news for the Wilson River and to those who depend on and enjoy using it.

MEASURING CONSERVATION IMPACT

The [Conservation Effectiveness Partnership \(CEP\)](#) is a collaboration of natural resource agencies including Oregon Watershed Enhancement Board, Oregon Departments of Environmental Quality and Agriculture, and the USDA Natural Resources Conservation Service. In addition, the Oregon Department of Fish and Wildlife provides guidance about fish habitat. CEP works together to understand, optimize and communicate the benefit of conservation investments throughout Oregon.