

Appendix I

Mid Coast Basin Report

1 Basin Description

The Mid-Coast Basin encompasses four subbasins on Oregon's central coast: the Alsea, Siletz-Yaquina, Siltcoos and Siuslaw. This area contains a wide variety of ecosystems and habitats, including high elevation Coast Range temperate forests, low elevation valleys, coastal wetlands, shallow lakes, estuaries and beaches. Major land uses in the basin include private and federal forests, livestock grazing in valley pastures, rural residential development, with urban development concentrated along the Highway 101 corridor. The rivers, lakes and estuaries of the Mid-Coast Basin are historically rich in native fish and wildlife. Salmonids, including the Oregon Coast Coho, are key fish species which are culturally and economically important in Oregon's coastal basins. Certain salmonid populations are threatened or at risk due to factors documented elsewhere. Water quality in the Mid-Coast Basin affects native fish, other aquatic life and the beneficial uses of drinking water and water recreation. A large amount of the basin is forests exhibiting a wide range of seral stages, from recent clear cut harvest to mature forests. Off-shore commercial fishing is an important economic activity and tourism is also a vibrant industry along the coastal strip.

Table I-1: 2011 Land use and land cover for each subbasin in the Mid Coast.

Subbasin	Watershed Area (km ²)	% Urban/Roads	% Forest	% Cultivated	% Range/Forest Disturbance	%Other
Alsea	1775477	6.0	79.3	0.9	12.1	1.7
Siletz-Yaquina	1948422	7.6	57.5	0.7	31.1	3.1
Siltcoos	336084	4.9	53.4	0.2	25.4	16.2
Siuslaw	1993411	5.4	72.1	1.4	19.6	1.5

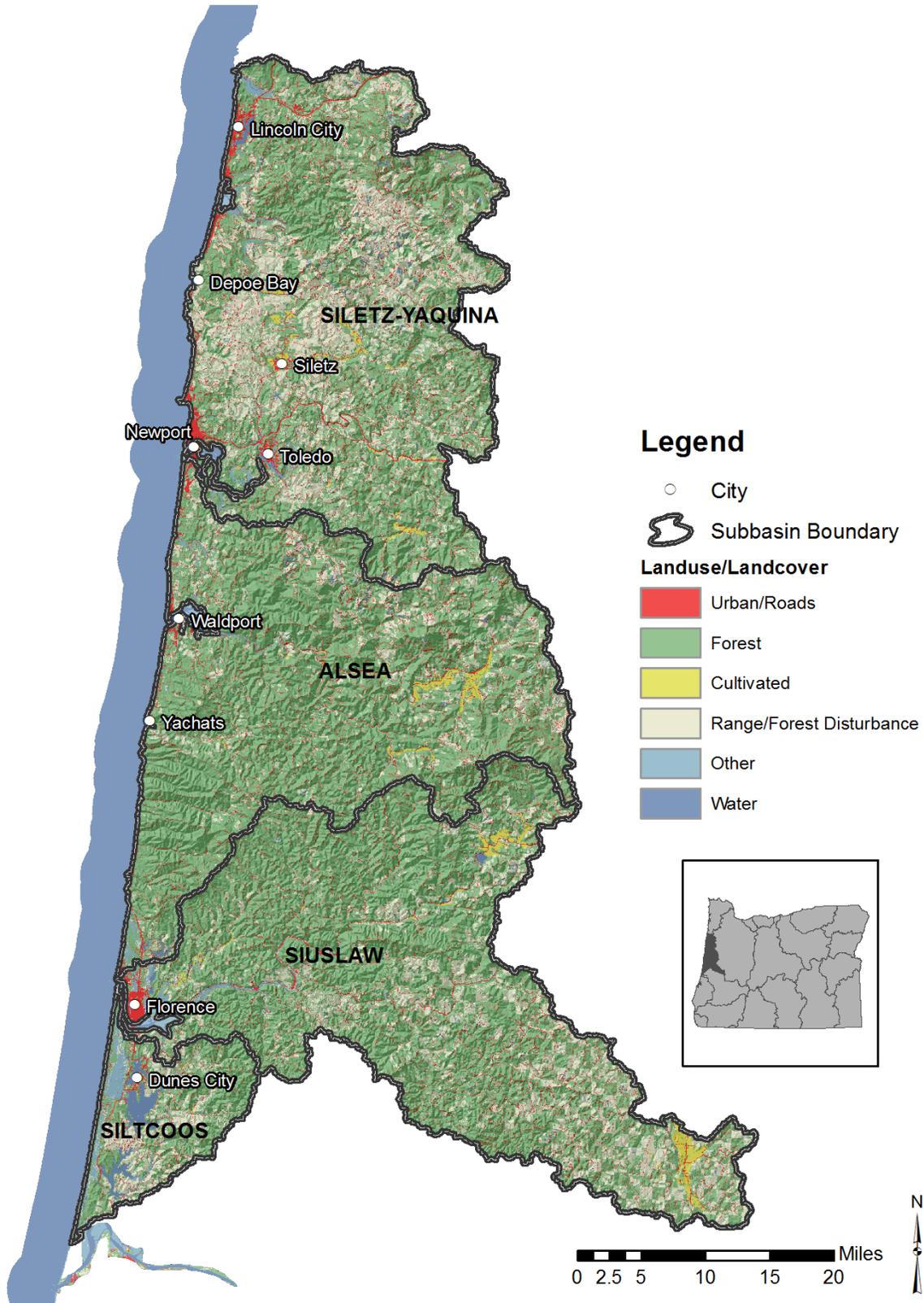


Figure I-1: Landuse in the the Mid Coast administrative basin.

1.1 Basin Contacts

Table I-2: Oregon DEQ basin contact.

Administrative Area	DEQ Basin Coordinator
Mid Coast	David Waltz: 541-687-7345: waltz.david@deq.state.or.us

2 Water Quality Impairments and TMDLs

2.1 Water Quality Impaired Stream Segments

Under section 303(d) of the Clean Water Act, states, territories and authorized tribes must submit lists of impaired waters. Impaired waters are those that do not attain water quality standards or support all designated uses. The law requires that states establish priority rankings for waters on the lists and develop Total Maximum Daily Loads (TMDLs) for these waters. Table I-3 identifies the number of Mid Coast Basin waterbody segments impaired by parameter from the 2012 Integrated Report and the number of segments with approved TMDLs. Sources: [ODEQ](#), [USEPA](#)

Table I-3: Number of impaired stream segments with and without a TMDL as identified in Oregon's 2012 Integrated Report and Assessment database

Parameter	Segments without a TMDL	Segments with a TMDL
Aquatic Weeds Or Algae	10	0
Biological Criteria	26	0
Chlorophyll a	4	0
Dissolved Oxygen	26	0
E. Coli	14	0
Enterococcus	6	0
Fecal Coliform	14	1
pH	4	0
Phosphorus	0	3
Sedimentation	7	0
Temperature	88	0
Turbidity	1	0

2.2 Total Maximum Daily Load Watershed Plans

The federal Clean Water Act requires that water pollutant reduction plans, called Total Maximum Daily Loads (TMDLs), be developed for water bodies that are listed in Category 5 of the Integrated Report (303(d) List). TMDLs describe the maximum amount of pollutants that can enter the river or stream and still meet water quality standards.

TMDLs take into account the pollution from major sources including discharges from industry and sewage treatment facilities, runoff from farms, forests and urban areas, and natural sources. TMDLs include a margin of safety to account for uncertainty, and may include a reserve capacity that allows for future discharges to a river or stream. DEQ typically develops TMDLs on a watershed, subbasin, or basin level and occasionally at the reach level depending on the type and extent of impairments.

The Water Quality Management Plan (WQMP) is the framework for TMDL implementation that is issued by Oregon along with the TMDL (Oregon Administrative Rules 340-042-0040(1)). The TMDL and WQMP serve as a multi-sector plan and provides the blueprint for TMDL related implementation activities. Table I-4 lists the TMDLs that have been approved in the Mid Coast Basin.

Table I-4: Approved TMDLs in the Mid Coast Basin and the impairments addressed by those TMDLs.

TMDL Document Name	Impairments Addressed
Clear Lake TMDL	Protection of high quality water, public water supply source

3 Implementation Highlights

3.1 Section 319 Grants

Federal Section 319(h) funds are provided annually through the EPA to states for the development and implementation of each state’s Nonpoint Source Management Program. In Oregon a portion of 319 grant funding is “passed through” to support community or partner projects that address Oregon’s nonpoint source program priorities. Generally, DEQ requires grantees to report annually on the progress made implementing their grant project. This section highlights those outputs and accomplishments reported to DEQ in 2017. Note this section does not identify or include projects proposed and awarded a grant in 2017. Outputs and accomplishments for those projects will be reported to DEQ in future years once they have been implemented. For a listing of projects proposed and awarded a grant in 2017 see Section 3.6.2 of the main report.

In 2017, there were two 319 projects active that reported project outputs and accomplishments to DEQ. Combined the projects have a total grant budget of \$37,484. Table I-5 describes the projects and the reported outputs.

Table I-5: Project outputs reported in 2017 for Section 319 pass through grants.

Project Name	Grantee	Project Description	Reported Outputs
Siuslaw Riparian Restoration and Continuous WQ Monitoring-Phase II	Siuslaw Watershed Council	Assess water quality status of the Siuslaw River in the 303d listed section, focused on dissolved oxygen & temperature; identify and implement riparian improvements on private land	Deployed CDO & Temp monitoring devices in multiple locations ; downloaded summer dataset for DO-Temp; installed livestock exclusion fencing and riparian planting on agricultural property in Lake Creek

Project Name	Grantee	Project Description	Reported Outputs
Siletz Watershed Monitoring and Assessment Project 2017	Lincoln Soil and Water Conservation District	Assess water quality status of the Siletz River in the 303d listed section, focused on dissolved oxygen, temperature, TSS, turbidity and nutrient levels	Deployed CDO monitoring devices in 9 locations; downloaded partial summer dataset for DO-Temp



Figure I-2: Local partners Paul Robertson and Audrey Sweet auditing a continuous DO device and collecting field data in the Siletz River (summer 2017).

3.2 Clean Water State Revolving Fund (CWSRF)

The Clean Water State Revolving Fund loan program provides below market rate loans to public agencies for the planning, design and construction of various projects that prevent or mitigate water pollution. Eligible agencies include federally recognized Indian tribal governments, cities, counties, sanitary districts, soil and water conservation districts, irrigation districts, various special districts and intergovernmental entities. DEQ partners with Oregon communities to implement projects that attain and maintain water quality standards, and are necessary to protect beneficial uses. This section highlights the ongoing projects and the outputs and accomplishments reported to DEQ in 2017.

In 2017 there was one nonpoint source related Clean Water State Revolving Fund project active that reported project outputs and accomplishments to DEQ. Combined the projects have a total budget of \$4,128,454. Table I-6 describes the project and the reported outputs.

Table I-6: Nonpoint source related Clean Water State Revolving Fund project outputs reported in 2017.

Project Name	Grantee	Project Description	Reported Outputs
Bay-Moore Sewer Upgrades	City of Newport	Newport has a sponsorship option project which addressed stormwater issues such as upgrades to the storm sewer in the Bay-Moore basin, installation of a bio-retention facility at Sam Moore Creek and the design of a fish passage at the Big Creek reservoirs.	The Bay Moore project is 98% complete. Yet to be complete are the bioremediation facility at Sam Moore Creek and the fish passage mitigation at the Big Creek Reservoirs.

3.3 Source Water Protection Grants

The Oregon Health Authority regulates drinking water under state law and the Safe Drinking Water Act and works cooperatively with DEQ on source water protection efforts. Using the Drinking Water Revolving Loan Fund, OHA funds Source Water Protection Grants (up to \$30,000 per public water system) for source water protection activities, monitoring, and planning in Drinking Water Source Areas. In addition, loans are available for improving drinking water treatment, source water protection activities, or land acquisition in source areas. Oregon’s Infrastructure Finance Authority is responsible for administering these projects. The loan fund set-asides also fund five Drinking Water Protection positions at DEQ that provide technical assistance to public water systems and communities while they develop and implement strategies that reduce the risk within the delineated source water areas. This section highlights the ongoing projects and the outputs and accomplishments reported to DEQ in 2017.

In 2017 there were two nonpoint source related Safe Drinking Water State Revolving Fund projects active that reported project outputs and accomplishments to DEQ. Combined the projects have a total budget of \$72,222. Table I-7 describes the projects and the reported outputs.

Table I-7: Nonpoint source Safe Drinking Water State Revolving Fund projects and outputs for 2017.

Project Name	Grantee	Project Description	Reported Outputs
Schooner Creek Road Assessment and Engineering Design for restoration to reduce sediment delivery	Lincoln City Water District/Salmon Drift Creek Watershed Council	Prioritize roadway turbidity reduction work and design engineering solutions. The Salmon Drift Creek Watershed Council is partnering with Lincoln City to assess road conditions in the Schooner Creek watershed and prioritize road segments for rehabilitation. By targeting those road sections that are most unstable and prone to failure, local partners will be able to focus investments on those projects that will best improve infiltration and reduce sediment delivery to the creek. Project includes \$30,000 funding from DW SPF to Lincoln City and \$19,989 from USFS to SDCWC	Work completed in 2017: Agreement between Lincoln City and Oregon’s Business Oregon (IFA) was executed in November 2017. Grantee coordinated with partners: Lincoln City, Lincoln County, Salmon Drift Watershed Council, and US Forest Service to plan initial project meeting. Work completed in 2018: Initial project meeting in January; City is planning to release RFP for engineering consultant.
Turbidity-Sediment Monitoring and Erosion Control Projects for Source Protection and Planning in the Siletz Sub-basin - Phase II	City of Newport and Toledo Water Utilities	Water quality monitoring, landowner outreach to design and implement voluntary projects for bank stability, coordinate with Mid-Coast place based planning effort.	Water systems using the Siletz River as a drinking water source initiated water quality monitoring, landowner outreach to design and implement voluntary projects for bank stability, and coordinated with Mid-Coast place based planning effort.



Figure I-3: Schooner Creek sediment sources

3.4 Drinking Water Provider Partnership Grants

Oregon DEQ participates in the Drinking Water Providers Partnership (DWPP) with USDA Forest Service Region 6, EPA Region 10, the U.S. Bureau of Land Management OR/WA Office, the Washington Department of Health, Geos Institute and WildEarth Guardians. Together, these partners coordinate a competitive grant solicitation and award program for environmental conservation and restoration projects in municipal watersheds across the Northwest. The Drinking Water Providers Partnership made the first of the annual awards in 2016 and most projects have a focus on nonpoint sources of pollution. The goal of the Partnership and the funding is to develop and support local partnerships to restore and protect the health of watersheds which communities depend upon for drinking water while also benefiting aquatic and riparian ecosystems, including the native fish that inhabit them. This section highlights the ongoing projects and the outputs and accomplishments reported to the DWPP in 2017.

In 2017 there were four Drinking Water Providers Partnership projects active that reported project outputs and accomplishments to the DWPP. Combined the projects have a total budget of \$151,245. Table I-8 describes the projects and the reported outputs.

Table I-8: Drinking Water Providers Partnership projects and outputs for 2017

Project Name	Grantee	Project Description	Reported Outputs
Schooner Creek Sediment Reduction	Salmon Drift Creek Watershed Council	The partners are assessing road conditions in the Schooner Creek watershed and prioritizing road segments for rehabilitation. By targeting those road sections that are most unstable and prone to failure, local partners will be able to focus investments on those projects that will best improve infiltration and reduce sediment delivery to the creek.	Salmon Drift Creek Watershed Council signed contract in July 2017 with USFS for consultation, design and implementation of project work. Began initial project planning with partners.
Fiddle & Billy Moore Creeks Riparian Enhancement	Siuslaw SWCD	This project protects and improves the water delivered to the South Coast Water District and improves salmon habitat by planting riparian areas, excluding livestock, placing large wood in the stream channel and floodplain, and replacing undersized culverts.	2016: Partners completed bridge designs; in-stream placement of large wood; culvert removal and bridge installation; site preparation for riparian restoration. 2017: Partners completed riparian plantings; exclusion fence installation; post project monitoring; riparian plantings maintenance.
Grant Creek Stream & Wetland Restoration	Siuslaw SWCD	The intent of this project is to improve the water quality of the South Coast Water District and the aquatic habitat of Grant Creek through the placement of large wood in the channel and floodplain, riparian planting, and the replacement of an undersized culvert with a bridge.	In 2016: The partners completed placement of logs; replacement of undersized culvert with a bridge. The restoration planting process was started in 2016 and was completed in 2017.
Bear Creek Habitat Enhancement Phase 1	Siuslaw Soil & Water Conservation District (SWCD)	The Siuslaw Soil and Water Conservation District is partnering with the South Coast Water District to replace an impassable culvert with a clear span bridge, place large wood in the stream channel, and enhance sensitive riparian areas by fencing out livestock and planting native trees and shrubs.	Siuslaw SWCD completed work on culvert replacement, placement of large wood, fencing, and revegetation efforts.



Figure I-4: New Bridge Crossing - Grant Creek Restoration Project in Siuslaw Watershed

3.5 OWEB Grant Funded Projects

The Oregon Watershed Enhancement Board (OWEB) is a state agency that provides grants to help Oregonians take care of local streams, rivers, wetlands, and natural areas. These grant projects often address nonpoint sources of pollution and are thus included in this report.

Based on the most recent data available in OWEB's Oregon Watershed Restoration Inventory (OWRI) database, there were 12 OWEB funded projects completed in 2016 with a total cash and inkind budget of \$516,428. The bar graph in Figure I-5 shows the total cash and inkind budget for the different project types in each Mid Coast subbasin. Table I-9 describes the projects and the reported outputs.

Learn more about OWEB grant programs at <https://www.oregon.gov/OWEB/grants/Pages/grant-programs.aspx>.

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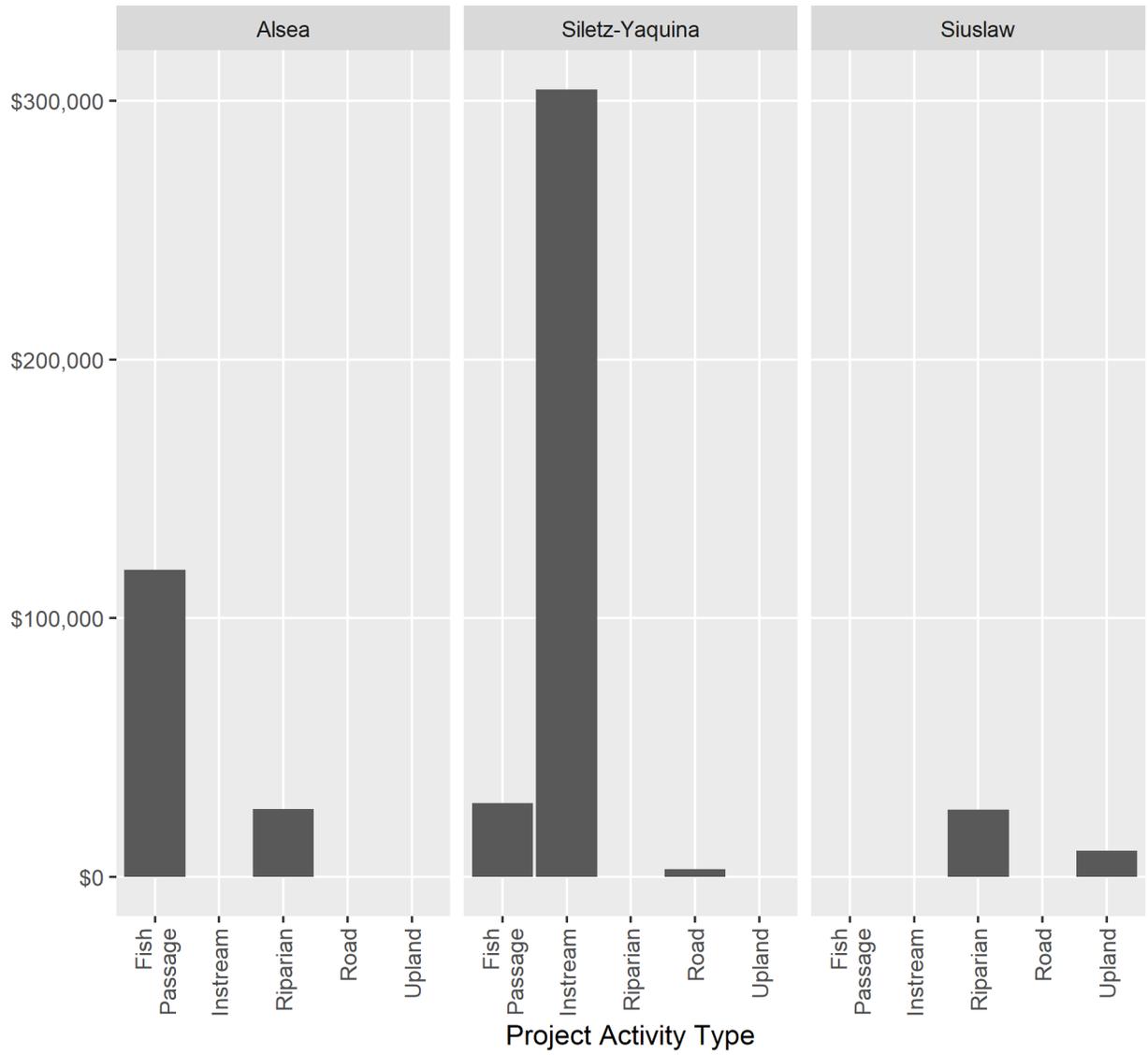


Figure I-5: Cash and inkind dollars spent in each subbasin for different project types completed in 2016, the most recent year data is available in OWEB's OWRI database.

Table I-9: OWEB grant funded projects completed in 2016, the most recent year data is available in the OWEB OWRI database.

Subbasin	Project Name	Project Type	Project Description	Participants	Reported Outputs
Alsea	Benner Creek Project	Fish Passage	Culverts/structures/fords replaced with bridges	Alsea Bay Protection Fund, Alsea Watershed Council, BLM, ODF, ODFW, OWEB, Private Landowners, Siletz Tribe Charitable Foundation Grant, USFS	1 mile of fish habitat made accessible due to road/stream crossing improvements (e.g. improvement or removal of culverts and other structures), 1 road/stream crossing improved for fish passage, 1 mile of habitat opened-previously inaccessible for juveniles, accessible for adults
Alsea	Yachats River Riparian Restoration Project	Riparian	Riparian treated for non-native or noxious plant species; Riparian trees planted: conifer; Riparian shrubs or herbaceous vegetation planted/reseeded	Cascade Pacific RC&D, Lincoln SWCD, OWEB, Tillamook Estuaries Partnership, USFS	0.7 linear stream miles treated (riparian activities), 6 acres treated (riparian activities)

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Subbasin	Project Name	Project Type	Project Description	Participants	Reported Outputs
Siletz-Yaquina	Bryant Creek Culvert Replacement	Fish Passage, Road	Culverts/structures/fords replaced with open bottom arch culverts; Structures replaced to meet 50+ year flow requirements	Starker Forests, Inc.	1 road/stream crossing improved for fish passage, 0.5 miles of habitat opened- previously inaccessible for both adults and juveniles, 0.5 miles of fish habitat made accessible due to road/stream crossing improvements (e.g. improvement or removal of culverts and other structures), 2 stream crossings improved for peak flow passage
Siletz-Yaquina	Salmon River Fish Carcass Placement (Re: 2006/2007 MOA Between ODF&W & ODEQ) - 2016	Instream	Salmon carcasses placed	Miami Corporation	8 miles of stream treated (instream activities)
Siletz-Yaquina	Schooner Creek Watershed Restoration	Instream	Large wood placed; Road obliterated, decommissioned, or vacated	ODFW, OWEB, Salmon Drift Creek Watershed Council, USFS	24 habitat structures placed in channel, 24 pools expected to be created by channel structure placement treatments, 2 miles of stream treated (instream activities)

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Subbasin	Project Name	Project Type	Project Description	Participants	Reported Outputs
Siletz-Yaquina	Upper SF Siletz Stream Enhancement - Callahan Creek	Instream	Large wood placed	Hancock Forest Management, ODFW, Oregon Wildlife Heritage Foundation, OWEB, Starker Forests, Inc.	8 pools expected to be created by channel structure placement treatments, 0.2 miles of stream treated (instream activities), 8 habitat structures placed in channel
Siletz-Yaquina	Upper SF Siletz Stream Enhancement - Mainstem	Instream	Large wood placed	Hancock Forest Management, ODFW, Oregon Wildlife Heritage Foundation, OWEB, Starker Forests, Inc.	0.5 miles of stream treated (instream activities), 14 habitat structures placed in channel, 14 pools expected to be created by channel structure placement treatments
Siletz-Yaquina	Upper SF Siletz Stream Enhancement - McFall Creek	Instream	Large wood placed	Hancock Forest Management, ODFW, Oregon Wildlife Heritage Foundation, OWEB, Starker Forests, Inc.	0.1 miles of stream treated (instream activities), 3 pools expected to be created by channel structure placement treatments, 3 habitat structures placed in channel
Siletz-Yaquina	Upper SF Siletz Stream Enhancement - Sand Creek	Instream	Large wood placed	Hancock Forest Management, ODFW, Oregon Wildlife Heritage Foundation, OWEB, Starker Forests, Inc.	0.8 miles of stream treated (instream activities), 15 habitat structures placed in channel, 15 pools expected to be created by channel structure placement treatments

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Subbasin	Project Name	Project Type	Project Description	Participants	Reported Outputs
Siletz-Yaquina	Mill Cr. (Siletz) Watershed Restoration	Instream, Fish Passage	Large wood placed; Debris jam removed	MidCoast Watersheds Council, ODFW, OWEB, Plum Creek Timber, Weyerhaeuser Company	6.8 miles of stream treated (instream activities), 200 pools expected to be created by channel structure placement treatments, 57 habitat structures placed in channel, 0.3 miles of habitat opened-previously inaccessible for both adults and juveniles, 1 non-road crossing barriers improved for fish passage, 0.3 miles of fish habitat made accessible by the removal of barriers other than at road/stream crossings
Siuslaw	Siuslaw Riparian Restoration and Water Quality Monitoring Project	Riparian	Riparian treated for non-native or noxious plant species; Riparian trees planted: conifer and hardwood; Riparian shrubs or herbaceous vegetation planted/reseeded	Private Landowners, Siuslaw Watershed Council	0.61 linear stream miles treated (riparian activities), 2.93 acres treated (riparian activities)
Siuslaw	Jensen Swamp Creek Ranch	Upland	Livestock manure management	NRCS, OWEB, Private Landowners, Siuslaw SWCD	0.27 acres treated (upland activities)