



DEPARTMENT OF
ECOLOGY
State of Washington

Water Quality Combined Funding Program 2013-2015 Biennium Outcomes Report

Water Quality Program Mission

The mission of the Ecology **Water Quality Program** is to protect and restore Washington's waters to sustain healthy watersheds and communities.

The **Water Quality Combined Funding Program** supports this mission by providing grant and loan dollars directly to local communities to implement high-priority water quality projects.

Why is this work important?

Water quality has impacts on agriculture, fishing and shellfishing, recreation and water supplies. Pollution from wastewater, stormwater, and nonpoint sources degrades water quality, threatening our economy and public health. Environmental regulations

protect the natural resources these industries rely on.

Our financial assistance program supports “best management practices” and helps communities achieve and maintain compliance with water quality standards. This work ensures that state waters support our economy and protected beneficial uses.



Port Angeles Harbor is now protected from combined sewer overflows. Photo credit: City of Port Angeles

Washingtonians need clean water for:

- Fishing and shellfishing
- Salmon and wildlife habitat
- Drinking water
- Agriculture and livestock
- Commerce and navigation
- Boating, kayaking, canoeing, swimming, sightseeing

Marine and fresh waters are protected for these uses by the Federal Clean Water Act and Chapter 173-201A WAC.

Washington's Water-Dependent Economy

Industries	Dollars	Jobs
<i>Agriculture and Food Industry</i>	\$49 Billion	160,000
<i>Maritime</i>	\$30 Billion	146,000
<i>Outdoor Recreation</i>	\$21.6 Billion	199,000

Data source: Washington Dept. of Commerce

How do we help communities?

Aging Infrastructure

Many communities are grappling with aging infrastructures vulnerable to failure and increasing costs for operation and maintenance. These communities use WQCFP funds to leverage local infrastructure dollars and other funding sources to build projects with multiple benefits.

Coordination

Our Water Quality Program leads the development of the Ecology Cultural Resources Programmatic Agreement, which will expedite the cultural resource and environmental review process for small projects. Ecology coordinates with other interagency groups such as the Infrastructure Coordinating Council (IACC) and Cultural Resource Exchange Workgroup to improve consistency, align efforts and help communities secure funding.

Help for Hardship Communities

Communities with qualifying hardships may receive a combination of subsidies including forgivable principal loans, grants, and reduced interest rates on loans.

Water Quality Combined Funding Program Overview



New odor control at a wastewater facility.
Photo credit: LOTT Clean Water Alliance.



Before



After

The City of Kettle Falls used WQCFP loan and grant combination to replace their lagoon system with a new treatment plant.

This has addressed a known threat to the community's drinking water sources.

2013-2015 Biennium Overview

What have we accomplished?

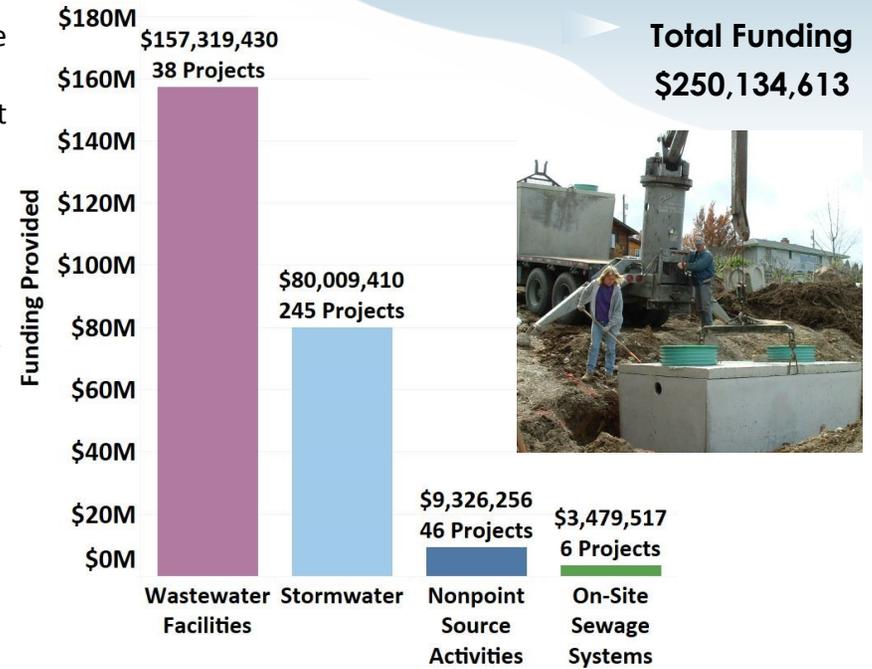
335* Projects by **186 recipient communities** in **41 watersheds**.

All funded projects work toward the common goal of improved water quality. The work to achieve this goal varies from infrastructure improvements to education and outreach. The following pages provide further detail for the four main project types: wastewater facilities, stormwater, nonpoint source activities, and on-site sewage systems (OSS).

Project Outcomes

Project implementation stimulates our economy by providing work for engineers, contractors, local government officials, non-profit organization employees and small businesses. Outcomes are evaluated on a project-by-project basis and each project addresses one or more water quality improvement categories.

* Projects with closeout dates between July 1, 2013—June 30, 2015.



Ellensburg Decant facility helps keep pollution out of stormwater.

Water Quality Improvement Category	Description	# of Projects
Pollutant Load Reduction	Improved or increased treatment and removal of pollutants.	287
Capacity	Increased volume of water collected and/or treated by facilities.	236
Repairs and Upgrades	Existing infrastructure need repairs and upgrades to continue protecting and improving water quality.	188
Plans and Designs	Effective projects begin with careful planning and design.	188
Regulatory Compliance	Permits and TMDLs specify pollutant limits from point and nonpoint sources.	143
Behavior Change	Pollution sources are often directly linked to choices people make, from car maintenance to farm practices.	72

Biennium Projects: Wastewater

Why are wastewater treatment facilities important?

Properly treated wastewater is our first line of defense to protect public health and clean water. Untreated sewage spreads a number of deadly diseases (including cholera and typhoid), makes our waters unsuitable for recreation, and harms aquatic life. Many of the 300 wastewater treatment and collection facilities in Washington State have deteriorated with age and require further improvement, repair, or replacement to maintain their useful life. As water quality data improves, new technologies are developed to achieve higher quality treatment.



Project funding by facility type and project step. Planning and design are important steps to achieving successful, cost-effective projects.



What have we accomplished?

Removing Pollutants: 10 Projects

Wastewater treatment plants break down organic matter, remove toxic substances, and disinfect for harmful bacteria, viruses, and other pathogens. Funded projects are improving and maintaining water treatment by repairing and upgrading treatment facilities to increase capacity, reduce permit violations and address specific pollutants.

Reducing Combined Sewer Overflows: 8 Projects

Combined sewers in older communities were designed to convey both sewage and stormwater to the wastewater treatment plant. Extreme storm events can exceed sewer capacity, causing overflow from manholes or controlled discharge points into waterways or streets, creating public health hazards.

One community had over **36 million gallons** of CSOs prior to this project. Since completion, **0 gallons** have been discharged into their harbor.

Repairing and Expanding Sewer Connections: 16 Projects

Ecology provides funding for repairs, upgrades, and new construction of collection systems to accommodate growing populations and deteriorating infrastructure. In some cases failing (or overly dense) septic systems are being eliminated and replaced by new sewer collection systems.

Producing and Using Reclaimed Water: 4 Projects

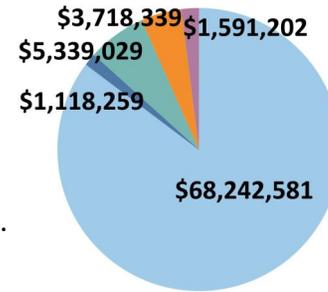
Communities are proactively producing and distributing water that has undergone highly advanced treatment to ensure a safe and sustainable water source for irrigation, groundwater recharge and other uses. Funded projects include treatment plant upgrades and construction of distribution infrastructure.

Biennium Projects: Stormwater

Why is stormwater a problem?

In an undisturbed watershed, much of the rain and snowmelt is captured by vegetation and filtered by the soil. Roads, driveways and rooftops alter the watershed by preventing the water from getting into the ground. This causes several problems:

- Stormwater picks up pollutants as it travels over hard surfaces.
- Small streams can be damaged by the rapid delivery of large volumes of water.
- If too much water enters the sanitary sewers, it may overwhelm the treatment plant, and a cause sewage overflow (CSO).



- Capital Grants
- Centennial Grants
- Capacity Grants
- CWSRF Loans
- GROSS Grants

Total Funding
\$80,009,410

The Stormwater Financial Assistance Program includes several funding sources.

What have we accomplished?

A total of 245 stormwater projects closed this biennium.

Local communities are putting Ecology grant and loan dollars to work by implementing projects for three types of stormwater management:

Source control: 28 Projects

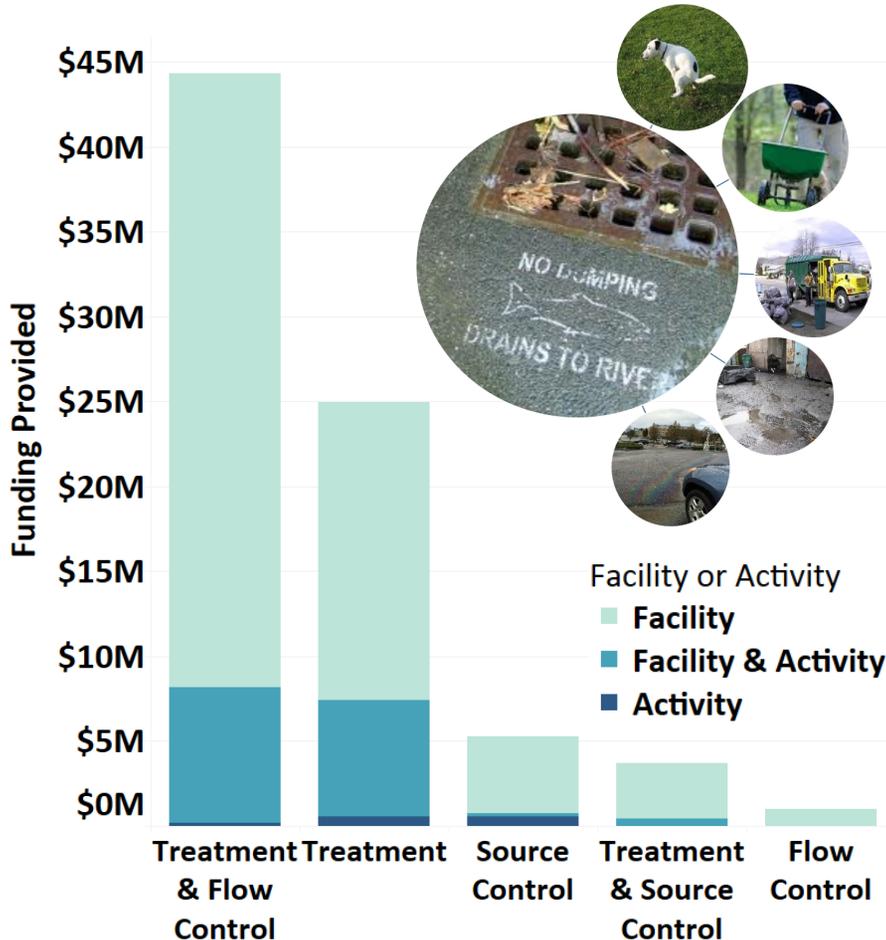
Pollution sources can be reduced to minimize pollutants getting picked up by stormwater. Examples include street sweeping, outreach to polluters, and building facilities to properly store materials.

Flow control: 155 Projects

These projects prevent erosion and flooding during storms by capturing, and then slowly releasing the water. Slowing water also allows debris and sediment and any attached pollutants to settle out.

Treatment: 219 Projects

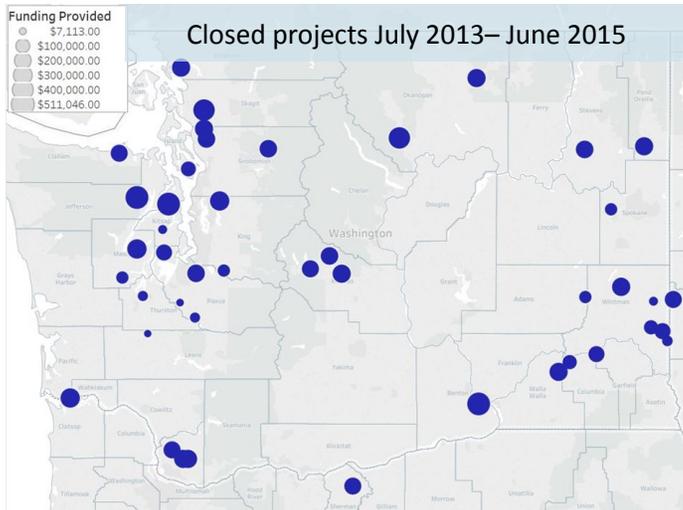
Treatment facilities filter out pollution with a combination of selected sand, gravel, compost, and vegetation. These projects may also include effectiveness monitoring and education.



Point Defiance treatment facility.

Why is nonpoint pollution a problem?

Nonpoint pollution comes from sources all over our landscape including agriculture, construction sites, lawns, logging activities, paved roads and parking lots. Rain and snowmelt wash toxic chemicals, nutrients and bacteria into rivers, streams, lakes, and underground aquifers. Vegetation removal next to streams leads to higher water temperatures and erosion of sediment, which can threaten habitat for salmon and other aquatic life.



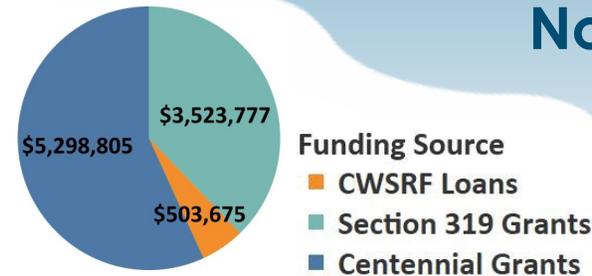
What have we accomplished?

46 nonpoint projects closed this biennium.

Monitoring shows water quality improvements after project implementation. One example is the Sinclair Inlet Fecal Coliform Pollution Reduction Project. Communities are identifying pollution “hot spots” and engaging with landowners to implement cost-effective solutions.

Nonpoint projects are unique because they involve a watershed-based approach to pollution prevention, which requires a combination of different types of work.

Biennium Projects: Nonpoint



Total Funding
\$9,326,257

Type of Work	Number of Projects
Agricultural BMPs	31
Riparian Restoration	36
Education and Outreach	33
Groundwater Planning and Protection	10
Pollution Surveys, Assessments and Planning	11
Water Quality Monitoring	24



Palouse River riparian restoration prevents stream channel erosion, provides filtration of pollutants and improves salmon habitat.

- **Agricultural Best Management Practices (BMPs)** involve erosion prevention, livestock waste management and direct seed to protect streams from sediment, fertilizers, fecal bacteria and other farm related pollution.
- **Vegetated riparian buffers** stabilize streambanks, provide wildlife habitat, and filter runoff before it enters streams.
- **Education and outreach** involves the community in their watershed, and encourages land stewardship and behaviors that prevent pollution from cars, lawns, pets and other sources.
- **Surveys and assessments**, such as the Pollution Identification and Correction (PIC) process, allow communities to strategically identify, map, prioritize and correct pollutant sources for maximum impact in local waterbodies.
- **Monitoring** provides the data for water quality assessments to observe changes over time.

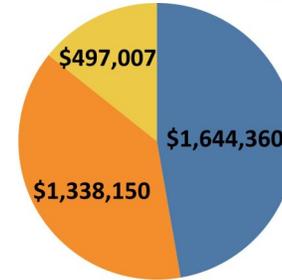
Biennium Projects: On-site Sewage Systems

Why are on-site sewage systems important?

Functioning on-site sewage systems (OSS) treat most health or environmental threats posed by household sewage and wastewater, but they need proper care and regular maintenance. OSS are installed for individual or small groups of homes and businesses where sewer connection is unavailable.

Factors leading to OSS failure and pollution include age, inadequate maintenance, improper installation, shallow ground water, insufficient drain fields and inadequate setbacks from surface waters. Failing OSS are a significant source of fecal coliform, and are particularly problematic around Puget Sound. Contaminated drinking water from wells and shellfish bed closures are two issues closely linked to this pollution source.

OSS repairs and replacements can be an unexpected financial burden on homeowners, sometimes costing more than \$20,000.



Total Funding
\$3,479,517

Funding Source

- CWSRF Loans
- CWSRF Forgivable Principle Loans
- Centennial Grants

What have we accomplished?

Ecology funding addresses OSS in multiple ways: through OSS specific programs, as a component of nonpoint projects and wastewater collection system expansions. **Overall, 604 OSS were repaired, replaced or converted to sewer connections.**

In this biennium, 6 closed projects supported OSS programs in Thurston, Skagit, Island, and Pierce counties (see above pie chart for total funding). The counties have developed on-going programs to identify polluted areas, take corrective actions, and perform effectiveness monitoring. For example, Thurston County implemented a groundwater modeling program to evaluate land use and OSS impacts on the Scatter Creek Aquifer.

Local OSS programs include:

Financial assistance

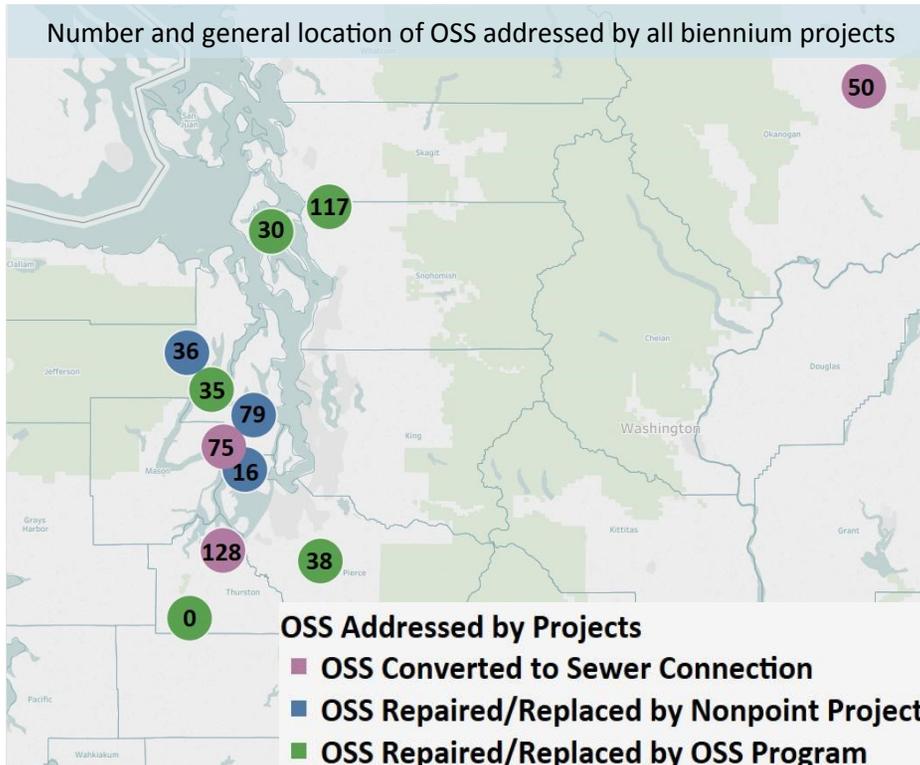
Grants and loans help homeowners to repair or replace failing OSS.

Assessments

Water quality sampling, surveys, and groundwater models help identify pollution sources and solutions.

Outreach

Workshops and educational materials help homeowners maintain their systems.



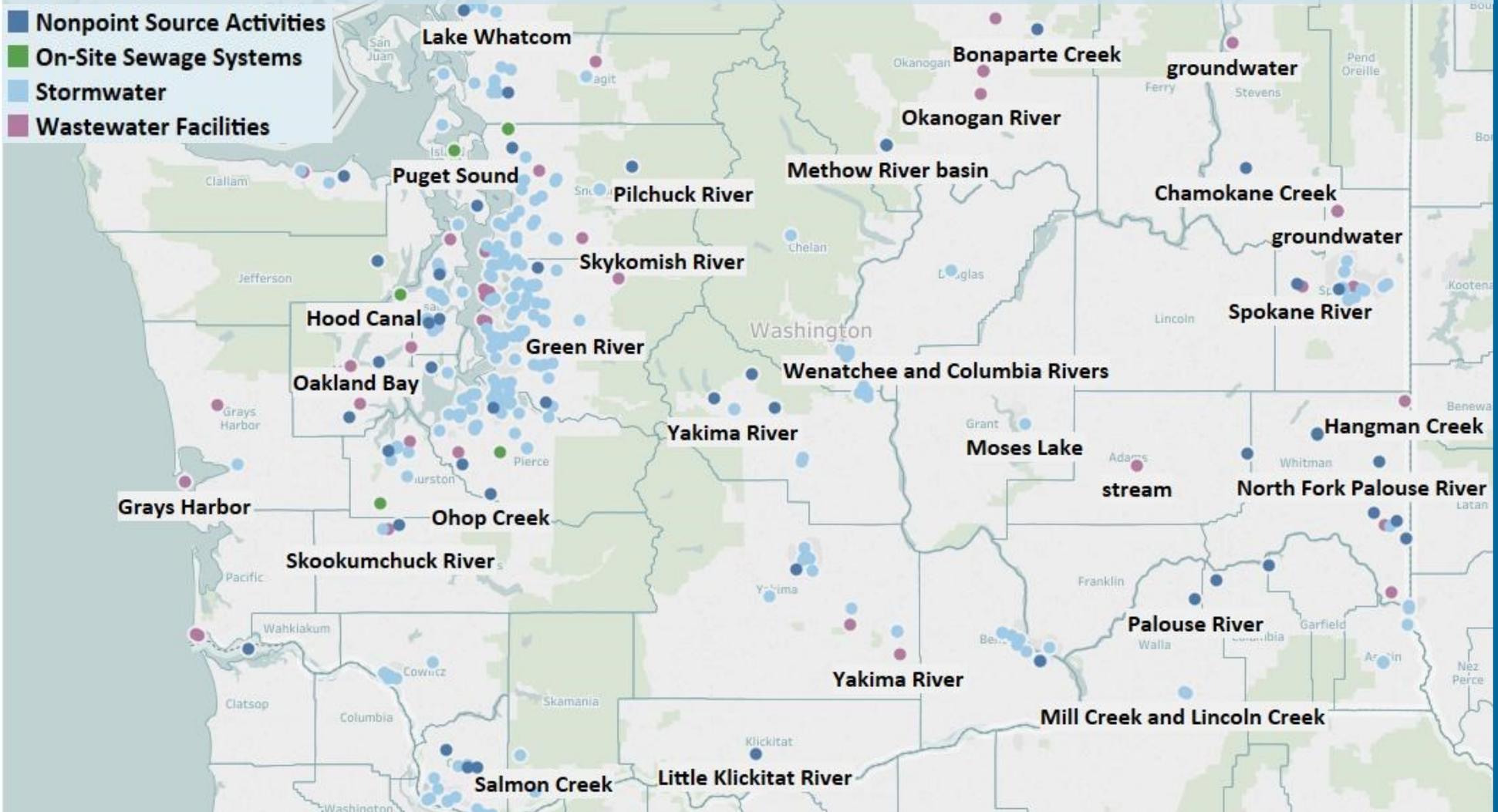


Funded Projects: Completed

July 1, 2013—June 30, 2015

335 Projects addressing pollution in waterbodies around the state.

- Nonpoint Source Activities
- On-Site Sewage Systems
- Stormwater
- Wastewater Facilities



For more information please contact:

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