



MASON COUNTY
Public Health & Human Services

2024 Water Quality Report

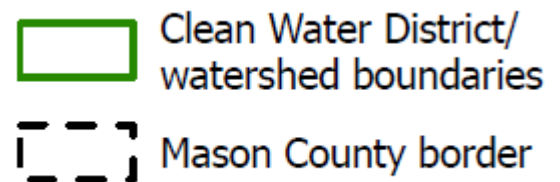
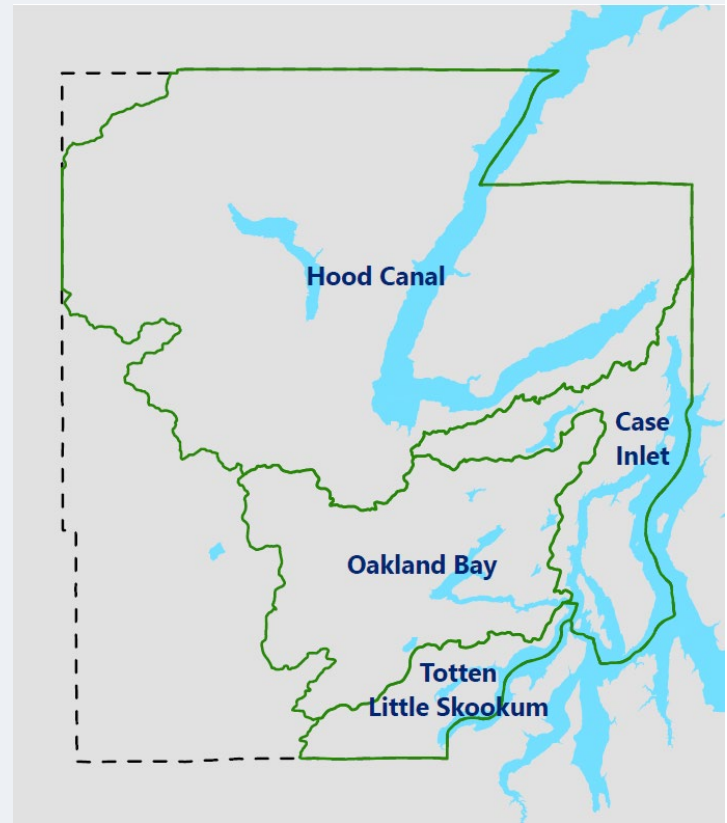
*July 2023-June 2024
Mason County Clean Water District*

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Health*

Overview

The Mason County Clean Water District (CWD), established in 2021, is a shellfish protection district defined by the boundaries of the Hood Canal, Oakland Bay, Case Inlet, and Totten/Little Skookum watersheds in Mason County. With guidance from the CWD Advisory Committee, Mason County Environmental Health staff carry out a variety of tasks throughout the year in order to monitor and improve water quality within the district, including:

- Year-round ambient monitoring of 33 rivers and streams
- Shoreline surveys in sensitive shellfish growing areas, including Oakland Bay and Annas Bay
- Door-to-door water quality surveys of properties with unmaintained or deficient onsite septic systems located near surface water
- Quarterly CWD Advisory Committee meetings, and other collaboration with our local water quality partners
- Many smaller, investigative sampling projects scattered throughout the year









Ambient Monitoring Program

Mason County Environmental Health staff collect monthly coliform bacteria samples from 33 different rivers and streams located throughout the county. Over the next few years, we hope to generate a robust set of water quality data that can be used to identify seasonal trends and catch bacteria hotspots as they appear.

Ambient Monitoring Results

Many of the streams with lower grades flow through/out of some of the most populous parts of the county. Sources of coliform bacteria pollution in these areas include improperly maintained septic systems, pet/livestock waste, and untreated stormwater runoff from impervious surfaces. Through this ambient monitoring program, we are able to detect, track down, and address many of these pollution sources as they arise.

Grade	Geomean	and	90th percentile
	< 20		< 140
	< 30		< 170
	< 40		< 200
	< 100		< 350
	< 200		< 500
	≥ 200		≥ 500

Grades green through orange meet state standards for coliform bacteria. Grades of red or brown fail to meet state standards and need improvement.

[Click here to view a map with up-to-date graphs of month-to-month water quality data.](#)

[Click here to view PDFs of raw ambient monitoring data, including data on temperature, pH, dissolved oxygen, and turbidity.](#)



Shoreline Surveys

Three shoreline surveys were conducted in the 2023 wet season, and two shoreline surveys were conducted in the 2024 dry season. During a shoreline survey, county staff walks along a section of shoreline at low tide, locating and sampling every significant source of freshwater runoff found flowing onto the shore. This process is one of the most thorough and effective ways of detecting and correcting potential bacteria hotspots in sensitive areas. Presently, our shoreline survey efforts are focused on commercial shellfish growing areas that have been downgraded by the Washington State Department of Health, like those found in Oakland Bay, Annas Bay and North Bay. Going forward, we hope to continue to conduct both a wet season and a dry season survey of Oakland and Annas Bays each year.

Oakland Bay Shoreline Survey

While the area of Oakland Bay shown here is crucial to both commercial and recreational shellfish harvesters, it is also highly susceptible to coliform bacteria pollution from a variety of sources, including improperly maintained septic systems, livestock, and pet waste.

During October 2023 and June 2024, ~3.5 miles of shoreline was surveyed along Oakland Bay, and 26 different drainages were identified and sampled. Across all samples, only two hotspots were identified, which were located on the north shore of Oakland Bay. The map to the right shows the areas of shoreline that were surveyed.



Annas Bay Shoreline Survey

Annas Bay, like Oakland Bay, serves as an important growing area for commercial shellfish harvesters, but is also susceptible to coliform bacteria pollution from contaminated freshwater drainages.

In October 2023 and in June 2024, ~4.5 miles of shoreline was surveyed along the eastern shore of Annas Bay, and 20 drainages were identified and sampled. An additional 9 drainages were located and sampled along ~1.5 miles of the southern shore of the Skokomish River.

Two hotspots were identified during this survey, but a variety of potential pollution sources were monitored in this area throughout the year, including livestock and deficient septic systems.



North Bay Shoreline Survey

Due to its history and recent water quality concerns Mason County Staff conducted a shoreline survey for North Bay in February 2024. North Bay is located at the north end of Case Inlet in southern Puget Sound. Most of the development within the watershed is along the marine shoreline and in the watersheds of Sherwood and Coulter Creeks. The town of Allyn is located on North Bay's west shoreline and is a home for many commercial and residential properties most of which are connected to public sewer.

In February 2024, ~0.8 miles of shoreline was surveyed along the western shore of North Bay within the Allyn city limits, and 9 drainages were identified and sampled.

Eight hotspots were identified, and our staff continues to sample those drainages in coordination with DOH Marine Sampling events of North Bay. In addition, we are currently anticipating a grant that will provide us with funding to evaluate the current sewer system and plan for infrastructure improvements.



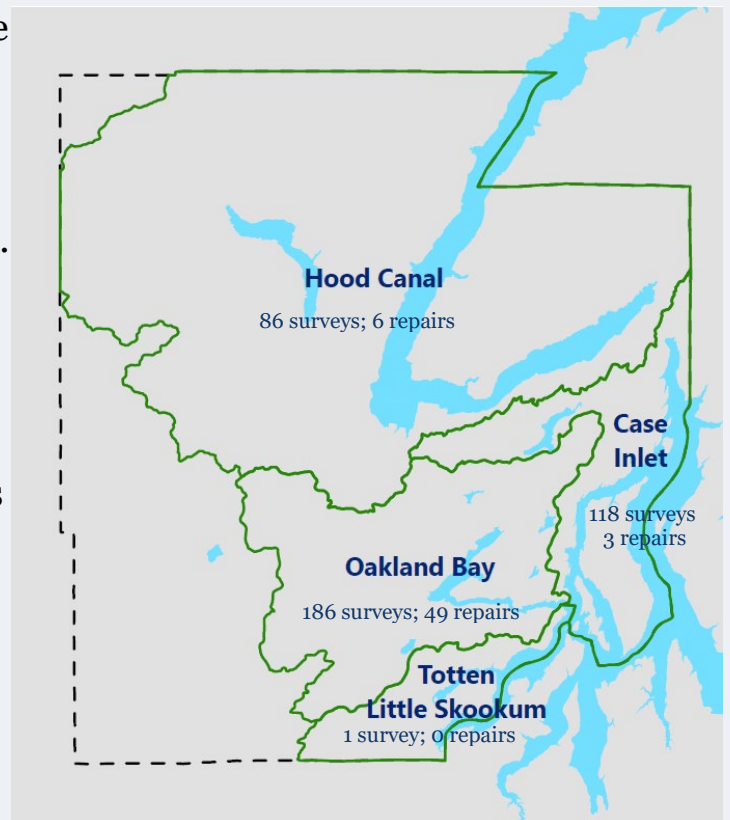
Septic System and Water Quality Surveys

Throughout the year, county staff visit dozens of properties located all over the CWD to assess potential water quality risk factors and offer guidance to homeowners. Properties located near surface water that have unmaintained, deficient, or failing septic systems make up the vast majority of properties surveyed. Properties with livestock, pets, and other coliform bacteria sources are also often assessed.

Onsite Septic System (OSS) Surveys

Mason County is home to over 26,000 onsite septic systems, many of which are located near surface water. From July 2023 through June 2024, county staff visited and assessed a total of 391 properties with deficient septic systems located near streams and shorelines. Property owners were educated about the risk their systems pose to surface water quality and were encouraged to get their systems inspected and repaired. Of the 391 properties surveyed, 58 property owners followed up later to report that their systems had been repaired.

This map shows a breakdown of the number of properties surveyed and the resulting number of OSS repairs made in each watershed within the district.

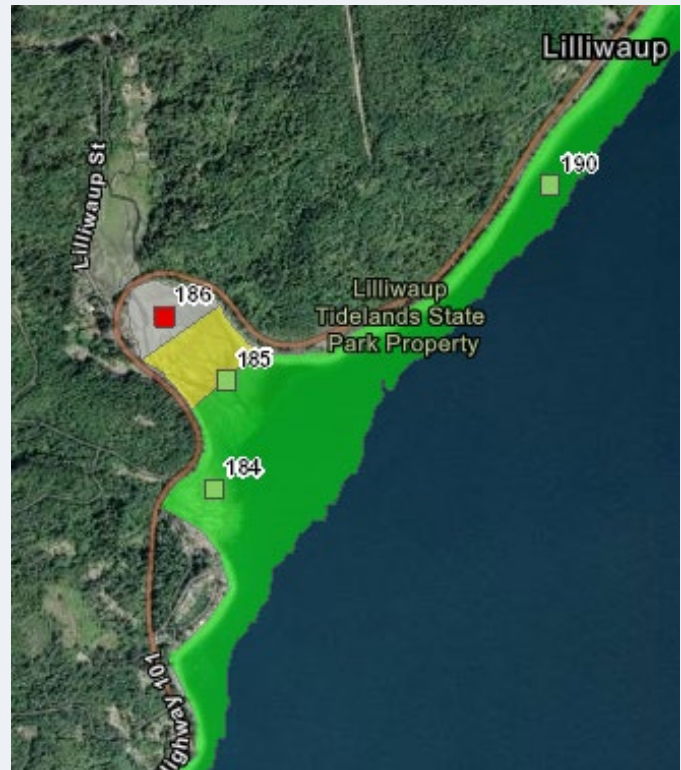


Shellfish Growing Areas Updates

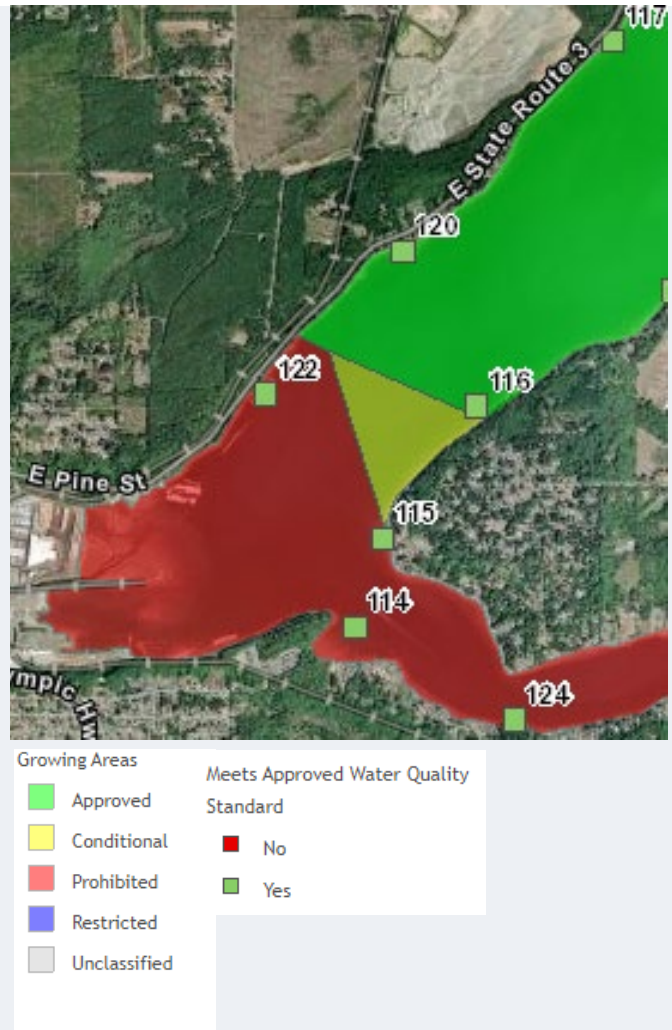
The goal of the Mason County Clean Water District is to ensure clean water resources, and to address non-point pollution sources affecting shellfish harvest areas. In the past year the district has seen classification changes in 3 growing areas within the Clean Water District.

On September 14, 2023, the Washington State Department of Health (DOH) downgraded the classification of 30.7 acres of the Hood Canal 6 Shellfish Growing Area near the mouth of the Tahuya River from Approved to Prohibited. This classification change was made in response to DOH marine monitoring station 217 failing to meet the National Shellfish Sanitation Program (NSSP) water quality standards for Approved classification.

On September 14, 2023, DOH downgraded the classification of 14.1 acres of Hood Canal 5 shellfish growing area near the mouth of Lilliwaup Creek from Approved to Conditionally Approved. The classification change was made in response to DOH marine monitoring station 186 failing to meet the NSSP water quality standards for Approved Classification.



In February 2024 DOH upgraded the classification of 73 acres of Oakland Bay shellfish growing area north of the City of Shelton Wastewater Treatment Plant from Restricted to Conditionally Approved. The classification change was made due to improvement at the plant and increased holding capacity.



Other Projects

County staff carried out a variety of brief water quality projects during the 2023/2024 water year, including:

- Freshwater sampling events synchronized with DOH marine water sampling days.
- Investigative sampling of high-risk drainages near shellfish harvest downgrade areas.
- Bracket sampling to track down septic system failures and other sources of coliform bacteria pollution.
- Outreach efforts in Tahuya and Lilliwaup Watersheds as part of Closure Response Plan implementation to upgrade those shellfish growing areas.