



2013 Oakland Bay Progress Report

Supported by dedicated efforts from community members, local governments and agency staff, the overall health of Oakland Bay has improved since 2005.

Let's continue to make it a safe and healthy place to play, live, and work.



This annual report serves to update the community on the work being done to monitor and improve water quality in the Oakland Bay watershed.

Land Conservation and Restoration

In 2013, Capitol Land Trust and partners conserved the 145-acre North Fork Goldsborough Creek



North Fork Goldsborough Creek Preserve. Photo: Capitol Land Trust

Preserve, as part of the Goldsborough Creek Protection Initiative. The property consists of century-old conifers, shaded pools, winding riparian areas, and densely vegetated wetlands—forming the heart of one of the most productive salmon-producing systems remaining in southern Puget Sound: Goldsborough Creek. The north fork of Goldsborough Creek runs through the center of the property and provides excellent habitat for the fish and wildlife of Mason County, including steelhead, coho, Chinook and chum salmon. Project partners include Green Diamond Resource Company, Squaxin Island Tribe, Washington State Recreation & Conservation Office, the Salmon Recovery Funding Board, Lone Cedar 1 LLC, WRIA 14 Lead Entity, and Forterra.



Bayshore Preserve. Photo: Eric Erler

Capitol Land Trust and partners are also celebrating the conservation of 74 acres at the mouth of Johns Creek on Oakland Bay. The purchase of the Bayshore Preserve was completed in 2014, but much of the groundwork for the purchase was completed in 2013. The former Bayshore Golf Course property was identified as having among the highest habitat values in the South Puget Sound with more than 4,000 feet of marine shoreline and 27 acres of intact saltmarsh habitat. The majority of the structures have been removed from the site and future restoration work will include the removal of the 1,400-foot supratidal dike; ground grading, sloping, and excavation of blocked tidal channels; removal of invasive plants and plantings with native species.

The Bayshore project builds on the successful partnership between Capitol Land Trust, the Squaxin Island Tribe, WA State Dept. of Ecology, US Fish & Wildlife Service, the Salmon Recovery Funding Board, Taylor Shellfish Farms, Mason Conservation District, Mason County, The Trust for Public Land, and others that have already conserved more than 250 acres of Oakland Bay estuarine and coastal habitat on three sites in the immediate vicinity of the Johns Creek Estuary.

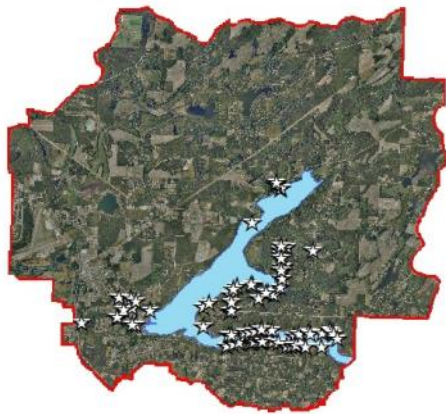


Bayshore Preserve. Photo: WA Dept. of Ecology

Water Quality Monitoring

Legend

- ☆ All 2013 sample sites
-  Oakland Bay Clean Water District
-  Oakland Bay and Hammersley Inlet



Oakland Bay's overall water quality fluctuates from year to year and season to season. On June 25, 2013 Washington State Department of Health (DOH) conducted a dye and drogue study in Chapman Cove to determine flow patterns and fecal coliform dilution rates in the marine water. The study determined that additional flow studies and new marine stations are needed to fully evaluate the potential to make any reduction in the size of the Conditionally Approved area in Chapman Cove. During 2013, DOH reported no change in the classification the shellfish growing areas in Oakland Bay.

Water quality monitoring in Oakland Bay is performed by Mason County Public Health (MCPH) and the Squaxin Island Tribe. The Oakland Bay On-Site Marine Recovery Area Quality Assurance Project Plan set a lower fecal coliform level to be applied to shoreline surveys than required by the Washington State Department of Ecology surface water quality standards. The lower level triggers

additional sampling and/or investigation when exceeded. High levels of these bacteria have been correlated with the presence of viruses or other pathogens that can affect human health. When areas of concern are found they are followed up with an owner approved survey to look for possible contaminate sources such as pet and livestock wastes or septic problems. Emphasis is placed on working with landowners to achieve solutions.

The goal of MCPH's sampling plan in Oakland Bay is to survey one third of the Oakland Bay Clean Water District shoreline each year and to sample all the culverts, bulkhead drains, natural drainages, and rapidly flowing seeps in the survey area. Each site is sampled at least twice: once in wet weather and once in dry weather. In 2013, 199 shoreline water samples were collected in the Hammersley Inlet section of the shoreline and 41 of these sites had high fecal coliform counts. There were 119 samples in upland investigations of the Oakland Bay shoreline area. Some sites in Shelton and in the north part of Oakland Bay had high fecal coliform counts. Additional investigation and/or enforcement is performed at sites that are not meeting water quality standards.

MCPH has also focused on sampling in Chapman Cove with the work under the current grant funding which began in October 2012. In March 2013, sampling results were assessed and sites with high results continued to be monitored, upland investigations performed, and additional sites added when warranted. Overall, there were 263 samples taken from 26 sites.

In 2013, the Squaxin Island Tribe collected 115 samples at ten sites throughout Oakland Bay through an ambient water quality monitoring program. The results of this sampling indicate that, with the exception of the Goldsborough Creek sites, there were less bacteria in 2013 than in the previous nine years.

Education and Outreach around Oakland Bay

In 2013, local organizations provided many opportunities for students, adults, and families to enjoy and learn about being a good steward on Oakland Bay. The Mason Education, Communication, and Outreach Network (ECO Net) serves as the coordinating and collaborative network of local environmental education, communication, and outreach efforts.

Youth audiences were engaged by ECO Net members from the Mason Conservation District, South Puget Sound Salmon Enhancement Group, Taylor Shellfish, WSU Extension, and Washington Sea Grant. Activities included classroom



presentations and field trip based

programs featuring beach walks, service projects, camp events, and Shelton High School career day. Engagement for adult audiences came through KMAS Radio Programs, Shoreline Forum, septic system workshops, shellfish seed sales, and Shore Stewards newsletters



Approximately 400 people attended Earth Day on Oakland Bay which was held at Oakland Bay Historical Park to celebrate the grand opening of the park. Highlights of the event included opportunities to learn the history of the park, native plant and bird walks, shellfish cooking demonstrations with Xinh Dwelley, live music, and a variety of educational displays and activities with local resource agencies and nonprofit groups. Additional family-friendly educational opportunities included the Mason Area Fair and OysterFest.

Stewardship Projects and Outreach Activities

Mason Conservation District (MCD) has been actively involved in working within the framework of the Mason County Pollution Inventory and Correction (PIC) program for mitigating water quality and fish habitat concerns in Mason County. MCD staff provide technical assistance with individual parcel owners, Conservation Farm Plan development, implementation of identified needed best management practices (BMPs), and farmland inventory development. The farmland inventory includes prioritization of drainage systems based on livestock access and proximity to surface water, livestock numbers, and site conditions to guide outreach and mitigation efforts.

In 2013, MCD identified and initiated cooperation with five landowners whose operations directly impact the Oakland Bay Watershed. Twenty-five BMPs will be implemented by the summer of 2015 on all of these parcels. These BMPs will specifically address agricultural water quality impacts and enhancement of streamside habitat/buffers along riparian and agricultural drainage systems. Mason County Public Health, Squaxin Island Tribe, and Mason Conservation District also developed plans to coordinate efforts with three identified landowners in the Chapman Cove drainage area.

Onsite Sewage System Maintenance, Operation, and Education Program

The focus on addressing onsite sewage issues continued in 2013 as failing septic systems are a major water quality concern in Oakland Bay. Improperly operating systems can lead to increased levels of bacteria and nitrogen in the water.



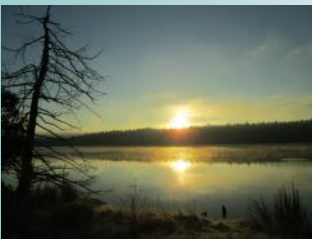
Thirty-nine residents participated in homeowner septic system workshops where they learned about how to properly manage and maintain their septic system, how to determine if their system is failing, and the resources available to help them. These programs were provided by WSU Mason County Extension in collaboration with Mason County Public Health. Additional outreach was provided regarding onsite sewage systems and shoreline issues at Earth Day on Oakland Bay, OysterFest, Mason Area Fair, and the KMAS Morning Show.

In 2013, Craft3, the County's non-profit lending partner made nine Clean Water Loans in Mason County for a total of \$158,957. These loans helped property owners repair or replace failing septic systems and led to the improved treatment of 1.2 million gallons of wastewater. To date, the program has made 73 loans in Mason County totaling \$1.6 million and leading to treatment of over 8.7 million gallons of wastewater. Sixty percent of these loans have helped low income families.

Wastewater and Stormwater Projects

The Shelton Wastewater Treatment Plant was awarded a 2013 Outstanding Wastewater Treatment Plant Award from the Washington State Department of Ecology. The plant underwent improvements to address aging infrastructure and population growth and the average 2013 discharge rates for suspended solids, total nitrogen, fecal coliform, and biological oxygen demand were all well below levels permitted by the Environmental Protection Agency. The new additions to the plant also allowed the production of 122.6 tons of Class A fertilizer for use by local farmers. The fertilizer is slow release and does not cause runoff to local waters.

The City of Shelton also addressed a stormwater issue on Canyon Creek that has caused flooding downtown. This project has benefits of flood prevention and attenuation as well as preventing runoff of water flooding over city streets and into Oakland Bay. An overflow system was constructed to sit outside the creek and when the water reaches a high enough level it flows into the overflow is diverted into a box culvert and an old pear orchard. The project was completed in the summer of 2013 and during the winter of 2013-14 there were three events in which water spilled down the overflow rather than causing flooding. The project is designed to handle a 25-year flood, but will not be able to prevent all flooding and stormwater issues from larger storms.



Partners Include: Mason County, Squaxin Island Tribe, WSU Mason County Extension, Washington Sea Grant, Mason Conservation District, Taylor Shellfish, WA State Departments of Ecology, Transportation, and Health, Pacific Coast Shellfish Growers Association, South Puget Sound Salmon Enhancement Group, Craft3, Simpson Lumber, City of Shelton, Port of Shelton, Capitol Land Trust, Green Diamond Resources Company, Seattle Shellfish, Puget Sound Partnership, volunteers, and watershed residents.

This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement PC-00J32601 to Washington Department of Health. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.