Executive Summary:

In 2006, the Washington state Department of Health (DOH) downgraded shellfish harvesting in Oakland Bay. While water quality fluctuates year to year, we have seen an overall improvement in the bay since the Clean Water District began its efforts. The upper end of Oakland Bay, which was previously restricted, is currently open for harvest in the fall, winter, and spring. Chapman Cove has been removed from the DOH Threatened List. Efforts continue in looking at dioxin sources to the bay, focusing on the streams that feed it. Results of these efforts are expected during the fall of 2012.

A consortium of organizations continue to work together providing on the ground stewardship and restoration projects, educational programs for youth and adults, monitoring, and septic loan programs, as well as focused research activities looking at contaminants threatening Oakland Bay.

The City of Shelton has initiated work to better control stormwater in the Canyon Creek drainage; is nearing completion of the upgrade to its main sewage treatment plant; and has completed its satellite wastewater plant.

Learn more: www.co.mason.wa.us/oakland_bay/
Water Quality Monitoring

While we have seen improvements over time in Oakland Bay’s health, water quality does fluctuate from year to year. Currently, the upper end of Oakland Bay is open for harvest in the fall, winter and spring, and Chapman Cove has been removed from the Washington State Department of Health’s (DOH) threatened list. The upper end of Oakland Bay remains closed for shellfish harvesting during the summer months. DOH marine data showed slight declines in water quality in 2011 as compared to 2007, 2008 and 2009.

One third of the marine shoreline in the Oakland Bay Clean Water District is sampled each year. In 2011, Mason County Public Health and Human Services collected and tested 370 water samples from the upper end of the bay, the Chapman Cove area, and from upland waterways with poor water quality. All sample locations were visited at least twice and a sample was collected if water was present. Sampling locations are noted on the map below.

Water pollution standards are set by the Washington State Department of Ecology (DOE) and the Washington State Department of Health for fecal coliform bacteria numbers, since they indicate the presence of fecal matter. High levels of these bacteria have been correlated with the presence of viruses or other pathogens that can affect human health. The monitoring program set an even lower fecal coliform level that is applied to shoreline water quality monitoring surveys, which triggers additional sampling and/or investigation when exceeded.

Education & Outreach around Oakland Bay

In 2011, more than 2,200 youth were involved in educational programs such as Kids Day at OysterFest, KWICK (Kids with Conservation Knowledge), beach walks, special camps and events at Panhandle Lake 4-H camp, classroom, and field trip based programs provided by WSU Extension, Washington Sea Grant, Mason Conservation District, South Puget Sound Salmon Enhancement Group, and Taylor Shellfish. A range of adult audiences were also reached with programs on septic system maintenance, lawn care, beach walks, rain gardens, and stream projects, as well as weekly radio programs recorded by local natural resource professionals on the KMAS Environmentally Sound program. These programs and other relevant information are archived on the KMAS website’s environmental page. Twenty real estate professionals participated in a water quality training program that focused on rural development and provided them with 15 clock hours toward professional license recertification.

More than 75 people attended the 2011 Earth Day on Oakland Bay event which included a beach walk, birding activities, plant walk and an introduction to recreational shellfish harvesting with 17 agencies and businesses participating. Over 125 people participated in the 2011 Sea Stars Beach Walk on the 4th of July at Walker County Park.
Contaminant Update

In 2008, the Washington State Department of Ecology (DOE) studied chemical levels in Oakland Bay sediments and found dioxin levels above normal for Puget Sound. The Washington State Department of Health studied shellfish from Oakland Bay and concluded the health risk from eating shellfish produced there is very low. They also concluded that the risk is extremely low if coming into direct contact with sediments. Therefore, people do not need to limit the amount of shellfish they eat nor reduce their contact with sediments.

Dioxins are chemicals produced when things are burned: waste incineration, other industrial burning, natural forest fires, fireplaces, woodstoves, barbeques, burn barrels (which are illegal in Washington) and sometimes during chemical or paper manufacturing. When released, dioxins move into soil and sediments and break down slowly. Generally lower levels are found in air or water. They can accumulate in our bodies and increase our risk of cancer over the long term.

In late 2011 DOE sampled sediment from streams leading into Oakland Bay and from an ash-like fill material near Oakland Bay to evaluate possible upstream sources of dioxin to the bay. The results of the study are expected to be released during the fall of 2012.

For more information on the sediment investigation:
http://www.ecy.wa.gov/programs/tcp/sites_brochure/oaklandBay/oaklandBay_hp.htm

Onsite Sewage System Maintenance, Operation and Education Program Update

Failing septic systems are a major source of concern regarding water contamination. During 2011, 216 area residents participated in workshops and “Septic Socials” where they learned how to properly manage and maintain their septic system, as well as how to determine if their system is failing. These programs were provided by WSU Mason County Extension in collaboration with Mason County Health and Human Services, and Washington Sea Grant. During 2011, 775 residents reported providing maintenance activities, such as septic system pumping, in the watershed. Additional outreach regarding onsite sewage systems and shoreline issues was provided at Earthday, Oysterfest, and the Mason Area Fair. WSU Extension and the Mason County websites were updated with current onsite sewage system maintenance information and publications. The Craft3 septic loan program provided two loans totaling $66,665 in the watershed during 2011. Through a grant funded program thirteen $200 septic system improvement rebates were also provided.
Stewardship Projects and Outreach Activities

- 12 Farms developed conservation plans through the Mason Conservation District. Highlights are represented through best management farm practices and other information below.
- 20 Best Management Practices were implemented including: conservation cover, tree and shrub establishment, wetland wildlife habitat management, livestock use exclusion, forest site preparation, tree/ shrub establishment, riparian forest buffer, and mulching.
- 1.5 acres of riparian buffers were planted along streams in the watershed (which includes 1,175 linear feet and over 2,400 native plants).
- 43 watershed residents (22 stormwater management related, and 21 related to conservation planning) were provided technical assistance.
- 8 new farmer/ gardener partnerships were created in the Mason Manure Exchange Program bringing the total to 32 Mason County residents.
- 20 students participated in the Youth Fisheries Academy on Oakland Bay created by a partnership between the WSU 4-H Forestry Leadership Program and US Fish & Wildlife.
- 4 rain gardens were installed in the watershed creating 16,000 square feet for stormwater percolation.
- The 4-H Forestry Leadership Program and Mason County Parks expanded and improved the trail system at Oakland Bay Park.
- 2 Beach cleanups were provided by shellfish growers.

Land Conservation and Restoration

In 2011, Capitol Land Trust and partner organizations (including the Mason Conservation District and the Department of Ecology) began restoring riparian habitat along Deer and Cranberry Creeks at the Twin River Ranch conservation property located at the head of Oakland Bay.

Volunteers and staff removed more than 3 acres of invasive species and planted eight acres of habitat along both salmon bearing creeks. Once restored, healthy riparian vegetation will improve water quality in Oakland Bay by lowering stream temperatures, trapping sediment, and filtering pollutants out of the water.

Partners Include: Mason County, Squaxin Island Tribe, WSU Mason County Extension, Washington Sea Grant, Mason Conservation District, Taylor Shellfish, WA 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, Capital Land Trust, Green Diamond Resources Company, Seattle Shellfish, Puget Sound Partnership, volunteers, and watershed residents.

2011 OAKLAND BAY PROGRESS REPORT

Learn more: www.co.mason.wa.us/oakland_bay/