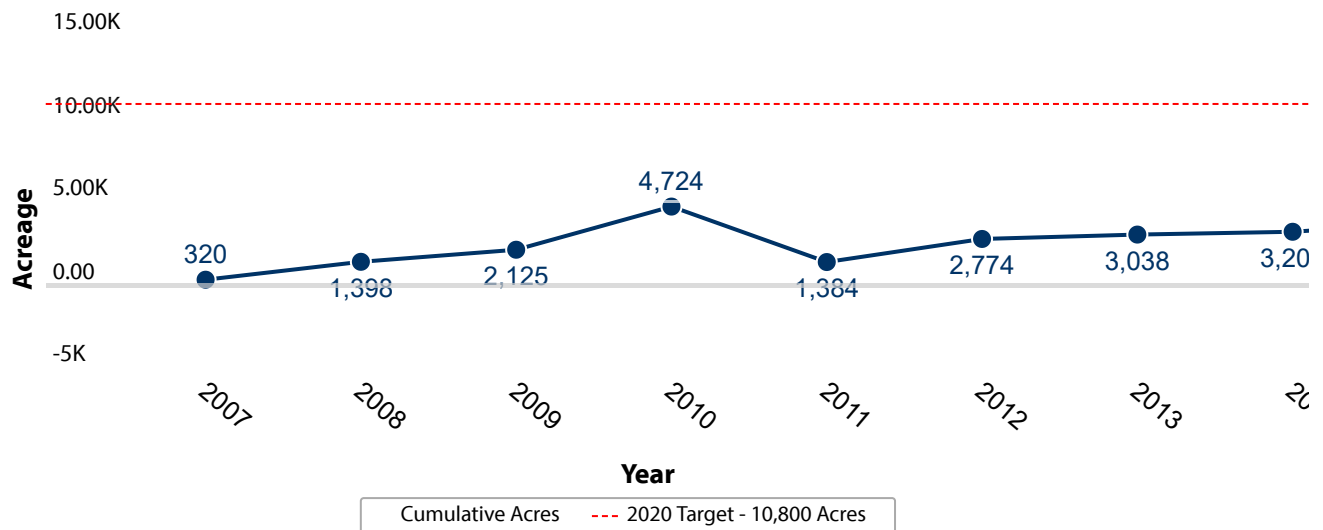
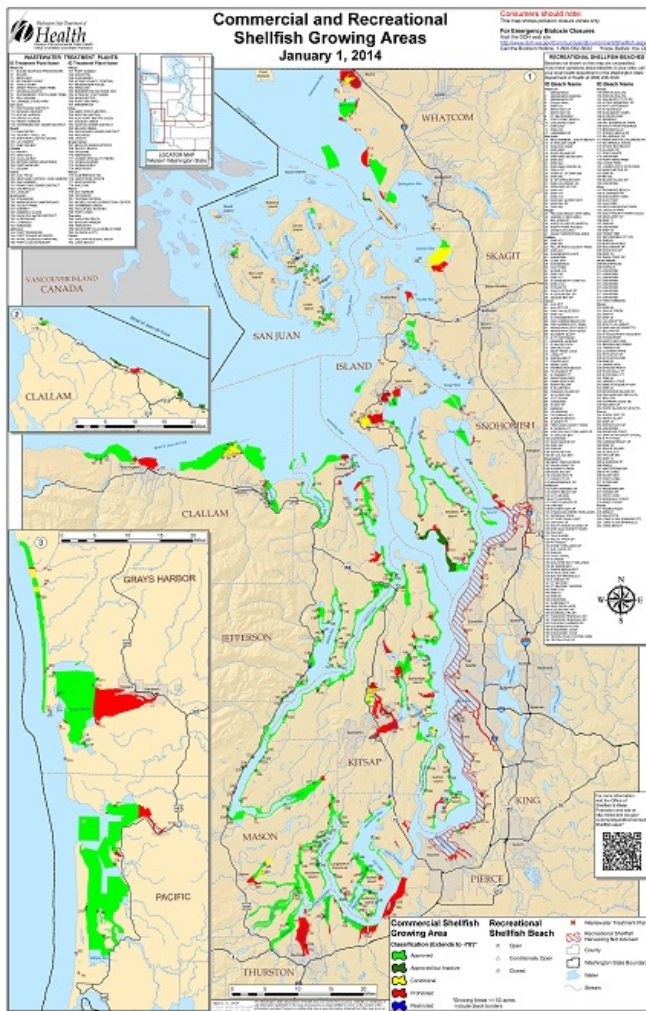




2.1 Increase improved shellfish classification acreage in Puget Sound from net increase of 3,038 acres from 2007-13 to net increase of 8,614 acres by 2016

Where We Started:





The Washington State Department of Health regularly monitors water quality and shoreline pollution sources and uses strict standards to assure that shellfish are safe to eat.

Harvest areas are "classified" based on water quality conditions in the area. Classifications include:

- 144,554 acres "**Approved**" (green on map) – Open to harvest.
- 10,655 acres "**Conditionally Approved**" (yellow on map) – Open to harvest except during specific pollution events.
- 35,783 acres "**Prohibited**" (red on map) – Closed to harvest.

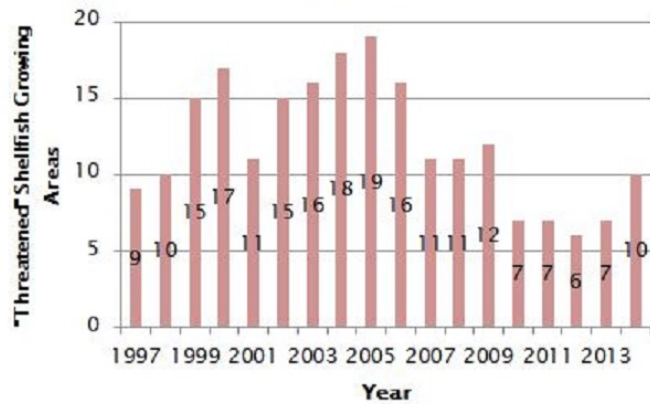
How are we Doing:

- There has been an improving water quality trend in shellfish harvesting since the late-1990s, including a net improvement of 3,038 acres since 2007.
- No other state has accomplished this level of restoration in shellfish beds.
- The number of areas "threatened" with a classification downgrade due to water quality has declined since 2005 due to pollution correction activities by many partners; however, we are currently seeking an increase in "threatened" shellfish growing areas in Puget Sound.

"Threatened" Shellfish Growing Areas

- Each year, we evaluate water quality and potential pollution sources in every growing area.
- Growing areas are listed as "Threatened" with a downgrade if any sampling station has an estimated 90th percentile of 30–43 fc/100 ml (above 43 fc/100 ml fails).
- We coordinate investigations with local health jurisdictions, Tribes, state agencies, shellfish growers, and other stakeholders.

"Threatened" Shellfish Harvesting Areas (Puget Sound)

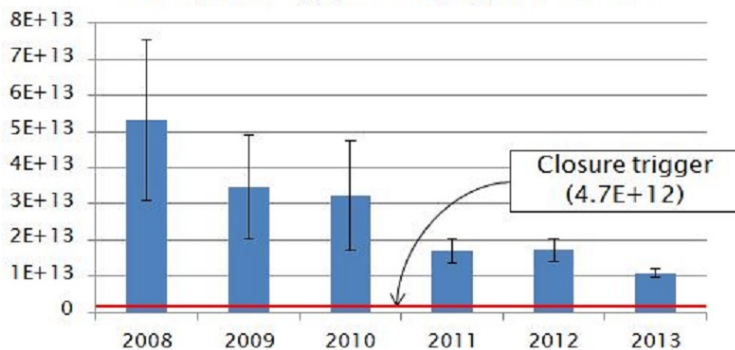


1997–2013 Early Warning System

- Activity developed to give pollution control regulators advanced notice of water quality problems.
- 49 of 92 Puget Sound growing areas have been on the "Threatened" list.
- In 2011 about 4,000 acres were downgraded in Samish Bay due to water quality issues. While water quality has improved, we are still not meeting the standard that will upgrade the classification of the area. Water quality improvement in Samish Bay is a high priority for the state. If Samish Bay is not reopened, the state will not meet its 2016 target.

Samish Bay

Samish River at Thomas Road
Average Loading (colonies/day) for Closures



- 4,000 acres within Samish Bay were downgraded from Approved to Conditionally Approved in April 2011.
- The closures are based on high bacteria levels in the Samish River.
- The area is closure initially based on increased flow in the river.
- Closures are confirmed when bacteria levels, in the river, exceed 4.7-trillion fecal coliform per day.
- Water quality in the area is improving; however, it is not meeting our standard.

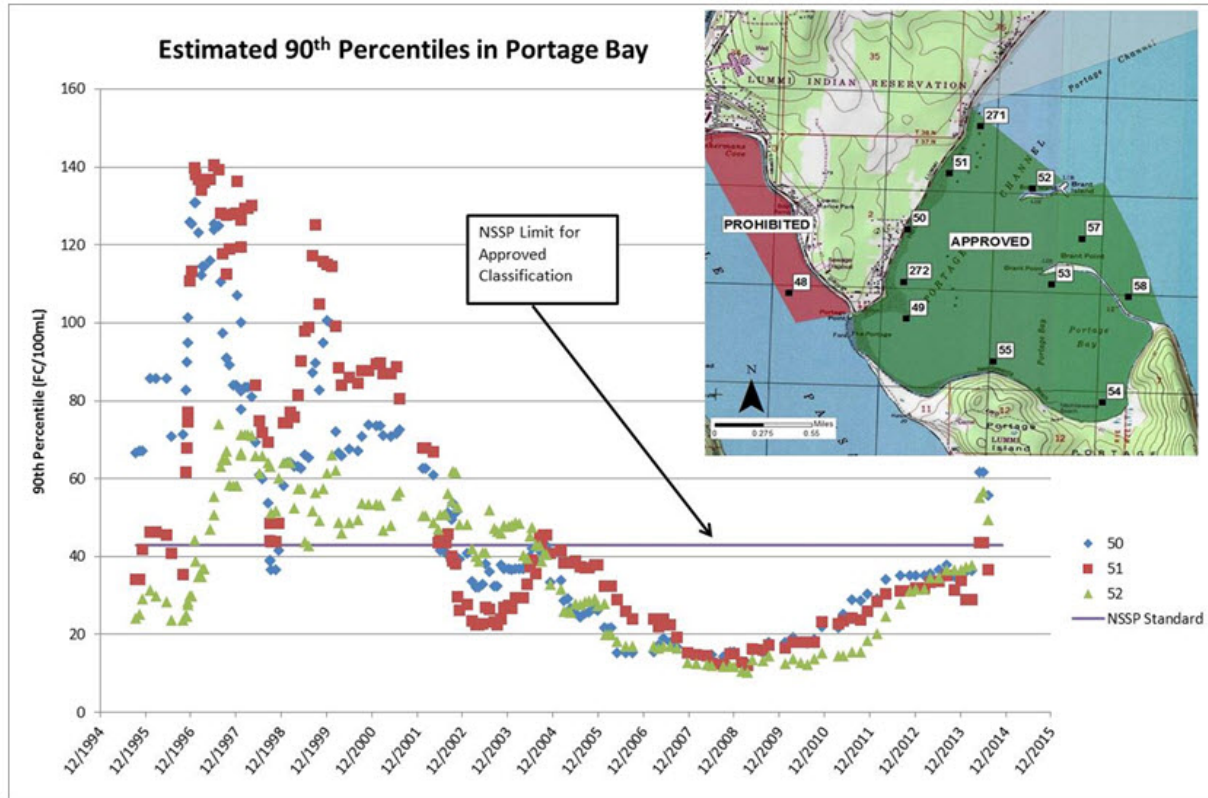
Actions

- Since 2009, there have been approximately 175 site visits to area farms by Skagit County and the Washington departments of Ecology and Agriculture. Over 100 BMPs have been installed, ranging from structural practices to riparian planting.
- Skagit County has defined the area as a Marine Recovery Area, 45% of on-site sewage systems have up-to-date inspections, approximately 100 on-site sewage system repairs completed.

- Marine water quality in Whatcom County's Portage Bay Shellfish Growing Area is not meeting the standard. Between 200 and 1,000 acres will be downgraded at the end of 2014.

Portage Bay Water Quality

July 30, 2014



Available Cow Dairy Manure



1

What are we Working on:

- We are investing in our local communities. Since 2012 we have awarded over \$14 million in federal funds (National Estuary Program) for agricultural best management practices, pollution identification and correction programs, and on-site sewage system maintenance and operations programs.

Funds Awarded to Local Communities

(from EPA Pathogens Grant)

	Onsite Sewage System (OSS) Awards	Pollution Identification and Correction Awards	Agriculture Best Management Practices (BMPs) Fund
Awarded	\$4.1 million	\$4.7 million	\$1.7 million
To be awarded in 2014	\$1.5 million	\$2.5 million	
Objective	Support local work to prevent and fix OSS failures	Build local capacity to find and fix correctable pathogen and nutrient problems (failing OSS, livestock waste, sewer)	Install BMPs to prevent water pollution; support Ecology and WSDA farm inspectors for evaluation, technical assistance, correction, and enforcement

- We are preventing shellfish bed downgrades. We evaluate all commercial shellfish growing areas each year, identify the areas that are "threatened" with closure due to pollution, and implement coordinated projects with our partners to correct pollution problems.
- We are using technology to become more transparent with our data so others can evaluate current water quality conditions and respond appropriately. Visit: <https://fortress.wa.gov/doh/eh/maps/OSWPViewer/index.html>

Biggest Challenges Remaining:

- Insufficient farm waste management in some counties.
- Lack of sustainable local nonpoint pollution programs.
- Difficulty managing on-site sewage system management and repair programs.
- Lack of political support for program implementation
- Inconsistent property owner cooperation.
- Wastewater treatment plant outfalls to Puget Sound.
- Limited control of boaters' waste.

