

## Jefferson County Water Quality Performance Measures 2014 Year-end Report

**MISSION:** The mission of the Water Quality Department is to protect public health by monitoring and responding to threats to water quality for protection of human health and wildlife habitat by using available local, state, and federal funding effectively and efficiently.

**This department implements the following strategic objectives for the 2014 Budget:**

- Addressing locally identified public environmental health issues.
- Protecting and ensuring adequate clean water supplies for citizens, the shellfish industry and wildlife.
- Protecting and enhancing natural resources.
- Operating within a business plan based on sustainable resources, measured performance, and outstanding customer service.

Goal	Objective	Task	Performance Measure	2011 Actual	2012 Actual	2013 Actual	2014 Planned	2014 Actual
<b>Goal 1:</b> Recreationalists at popular lakes such as Anderson Lake, Gibbs Lake and Lake Leland will be increasingly aware of toxic algae threats to human and animal health.	Monitor all lakes with public access from April through September for toxins.  Maintain and improve JCPH water quality webpage and other outreach activities.	Sample public access lakes for presence/absence of algae blooms and biotoxins.	# of lakes monitored for cyanobacteria	6	6	3	3	3
		Update website with pertinent information when found.	Pass/Fail	Pass	Pass	Pass	Pass	Pass
<b>Goal 2:</b> Better understand water quality trends for parameters such as fecal coliform, dissolved oxygen and temperature.	Use funds awarded by the state Centennial Clean Water Fund to carry out Clean Water projects.  Monitor stream flow data from high priority streams.	Sample existing water quality stations for fecal coliform, dissolved oxygen and temperature and conduct trend analysis.	# of marine water quality stations monitored	17	9	0	0	0
			# of water quality stations monitored: Chimacum Creek	0	28	0	0	0
		Sample freshwater discharges to beaches in wet season and dry season.	# of water quality stations monitored: Salmon & Snow Creeks	19	0	19	0	0
		Review data collected by other agencies.	# of water quality stations monitored: Hood Canal watershed	0	18	19	17	20
			Miles of shoreline surveyed for pollution	89	45	60	60	94
			# of stream gauges maintained	7	0	0	0	0

## Jefferson County Water Quality Performance Measures 2014 Year-end Report

Goal	Objective	Task	Performance Measure	2011 Actual	2012 Actual	2013 Actual	2014 Planned	2014 Actual
<b>Goal 3:</b> High priority sites for pollution identification and correction will be identified and corrected.	Condition, status and use of approximately 300 more septic systems will have been surveyed in project areas.	Conduct educational outreach to septic system owners in the form of sanitary surveys of septic systems.	# of sanitary surveys completed	418	414	506	300	390
	<b>Goal 3.5:</b> Land use and its effects on water quality in project areas will be better understood.	Investigate public complaints about water quality or septic systems within 72 hours.  Incorporate agricultural survey data from JCCD into sanitary survey process.	Update PIC protocol and sanitary survey form.	Pass/Fail	--	--	Pass	Pass
<b>Goal 4:</b> Improve Leland Creek habitat and water quality.	Initiate Leland Creek restoration actions.	Choose a site on Leland Creek to conduct restoration activities.	Pass / Fail	--	--	Pass	Pass	Pass
<b>Goal 5:</b> Residents in eastern Jefferson County will be more aware of project activities and actions they can take to protect water quality in their neighborhood.	Prepare reports on the status and trends of water quality in Jefferson County.	Send newsletters to project area residents.	# of newsletters mailed	6,000	12,250	1,300	1,000	500
	Maintain and improve JCPH water quality webpage and other outreach activities.	Distribute literature in person during fieldwork.	# water quality brochures distributed					500
		Post informational materials, water quality results and reports on website.	# of water quality reports posted on JCPH webpage	1	6	0	1	1
<b>Goal 6:</b> Recreationalists at Jefferson County marine beaches will be notified of the status of water quality in a timely and efficient manner.	Monitor water quality at public swimming beaches on a weekly basis during the swimming season to protect public health.  Continue public education on the importance of clean water in Jefferson County	Take water samples of marine beaches and test for water quality  Interact with the public and partners in order to efficiently deliver information	# of swimming beaches monitored	6	3	3	2	3

## Jefferson County Water Quality Performance Measures 2014 Year-end Report

Goal	Objective	Task	Performance Measure	2011 Actual	2012 Actual	2013 Actual	2014 Planned	2014 Actual
	focusing on actions citizens can take to keep our water clean and productive.	Issue press releases when relevant information needs to quickly disseminated.						
<b>Goal 7:</b> The public will stay informed about the safety of recreational shellfish beaches relative to biotoxin threats and will be educated on emerging threats such as Diarrhetic Shellfish Poisoning.	Organize a volunteer network of shellfish samplers to monitor for shellfish biotoxins in a timely and cost effective manner. Coordinate with Washington Department of Health to communicate risks from the recreational harvest of shellfish to the public.  Maintain and improve JCPH water quality webpage and other outreach activities.	Take shellfish samples from marine beaches and test for biotoxins.  Interact with the public and partners in order to efficiently deliver information.  Issue press releases and post signs when relevant information needs to quickly disseminated.  Update website with pertinent information when found.	# of beaches monitored for shellfish safety	7	7	7	7	7
<b>Goal 8:</b> Stormwater inputs into Port Townsend Bay will be better known.	Monitor stormwater discharges to Port Townsend Bay for pathogens.	Conduct Pollution Identification and Control activities in program areas.	# of shoreline stormwater outfalls screened for pollution	0	0	6	6	43
<b>Goal 9:</b> Clean Water District activities will be evaluated for effectiveness and recommendations for future work will be made.	Clean Water District Advisory Council meetings will be held and evaluation and recommendations submitted to the Board of County Commissioners.  Use funds awarded by the state Centennial Clean Water Fund to carry out Clean Water projects.	Facilitate Clean Water District Advisory Council Meetings.	# of Clean Water District Advisory Council meetings held	0	4	1	2	3

# Jefferson County Water Quality Performance Measures 2014 Year-end Report

## STUDY/ANALYSIS

2014 was somewhat of a watershed year for the department as a stable funding source was secured for departmental operations and projects from a parcel fee. Significant time was spent on this activity by both program staff as well as management in 2014. This stable funding will allow for long-term strategic planning as well as an expansion of activities throughout the Clean Water District rather than segment by segment operations.

Water Quality work was primarily focused on Clean Water Projects in 2014. Clean Water Projects are funded using Clean Water District funds as match to Ecology Centennial Clean Water grant funds. This allows Clean Water District funds to be leveraged at a 1 to 3 ratio with state funds, allowing projects a much greater scope of work. The Hood Canal Watershed Clean Water Project was completed at the end of 2014. All grant deliverables were met or surpassed, although more staff time was needed in the final quarter than had been anticipated. This slowed work somewhat on the Northeast Jefferson Clean Water Project temporarily, but most tasks are nearing completion on that project. The Northeast Jefferson project will finish at the end of 2015. Work began on the Hood Canal Clean Streams project with water quality monitoring and riparian restoration plantings.

The Water Quality team engaged the Jefferson County Conservation District in several projects through the Hood Canal Watershed grant: The final phase of stream monitoring in the Hood Canal area was completed in 2014; An agricultural survey was completed with farms prioritized for pollution reduction work; One agricultural best management practice implementation project was installed in Quilcene resulting in 2,000 feet of stream protections.

The Jefferson County Lakes Toxic Cyanobacteria project completed all monitoring and sampling goals in 2014. Anderson Lake closed for most of the season due to high toxin levels. No illnesses were reported and the public seems to have become more aware of the potential risks. The Seattle Times did an in-depth article on the dangers of cyanobacteria in Washington lakes including Anderson Lake. The project ends in 2015.

Phase 1 of the Hood Canal Regional Pollution Identification and Correction project was completed in 2014. This is a joint effort of the Hood Canal Coordinating Council, and the Kitsap County, Jefferson County and Mason County health departments to create a regional framework for similar pollution control projects. Phase 1 was a planning phase that resulted in 9 reports posted on the Hood Canal Coordinating Council website at: [hccc.wa.gov/AquaticRehabilitation/Regional+PIC](http://hccc.wa.gov/AquaticRehabilitation/Regional+PIC) The Phase 2 Implementation Project began at the end of 2014, but most of the work will be completed in 2015.

The Recreational Shellfish Biotxin Monitoring project exceeded its budget during the summer of 2014 due to the number and frequency of harmful algae blooms encountered in Jefferson County. Luckily, the Washington State Department of Health was able to find additional funding to cover the rest of the year. 2014 saw record levels of biotoxins in Quilcene and Dabob Bays, where the toxins had never been found before. A large outreach and education effort was made by Jefferson County Public Health, and no biotoxin-related illnesses were reported from Jefferson County. The Water Quality intern used her previous experience with shellfish resource management to add more organizational tools and outreach events to program.

The BEACH monitoring project has been funded by the state at a minimal level in the last few years, however Jefferson County Public Health was able to monitor 3 beaches by adjusting the monitoring schedule to sample lower-risk beaches every other week.

## Jefferson County Water Quality Performance Measures 2014 Year-end Report

The Clean Water District Advisory Council met and began work on a comprehensive Water Quality Monitoring Plan for the county, to be finished in 2015. Other projects that were begun in 2014 include the development of a water quality database, planning for needed GIS updates and a prioritized water quality work plan, all to be completed in 2015.

Staff turnover in water quality was high in 2014 and is anticipated to also be high in 2015. This presents challenges in terms of time needed to replace staff and train new hires, but also presents an opportunity to recruit individuals with new skills and abilities.

### Hood Canal Watershed Septic System Sanitary Survey Results

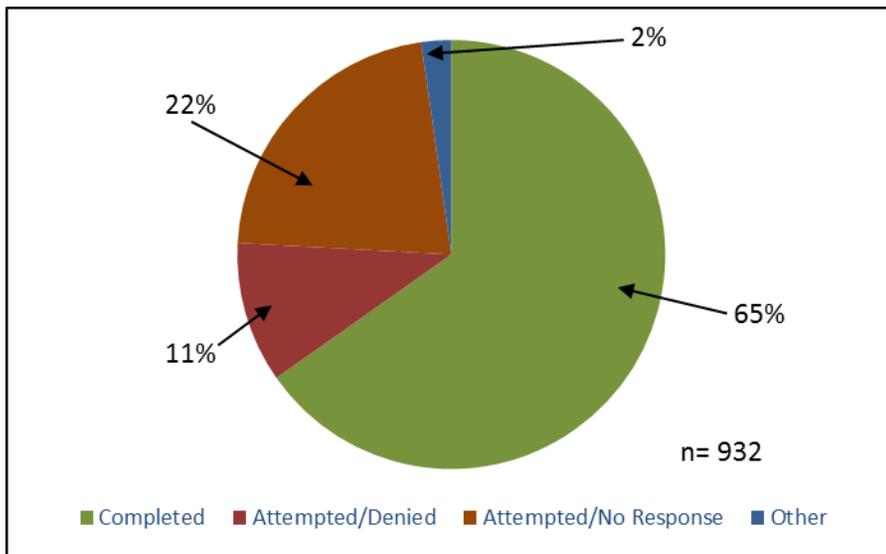


Figure 1, Survey Status; Number and Percent Completed

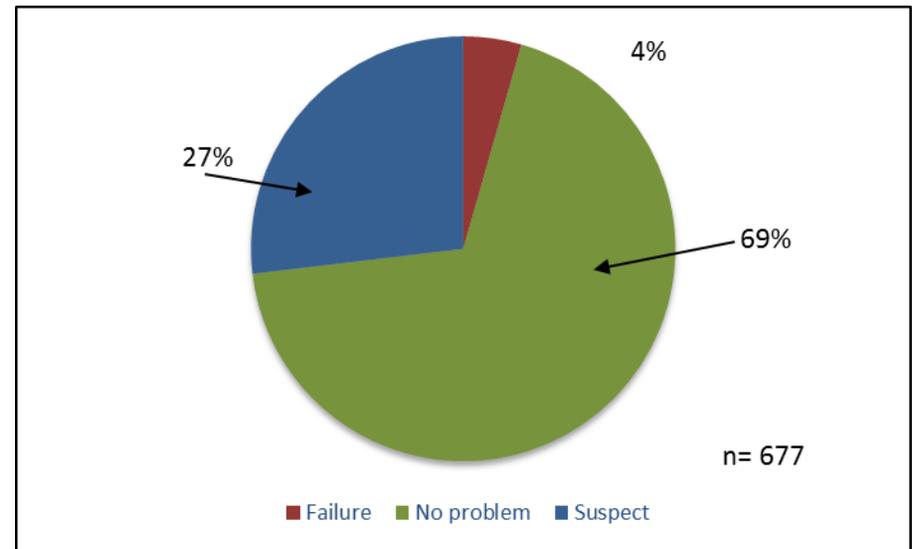


Figure 2, Survey Results

## Jefferson County Water Quality Performance Measures 2014 Year-end Report

### PROGRAM STATISTICS

	2006	2007	2008	2009	2010	2011	2012	2013	2014 Planned	2014 Actual
Lakes monitored for cyanobacteria	9	9	9	4	3	5	4	3	3	3
Water quality stations monitored: Chimacum Creek	0	40	40	28	28	0	28	0	0	0
Water quality stations monitored: Salmon & Snow Creeks	0	17	0	19	19	19	17	19	0	0
Water quality stations monitored: Hood Canal watershed	0	0	0	0	0	17	17	19	17	20
Miles of shoreline surveyed for pollution	N/A	5	49	76	77	89	11	60	60	94
Marine water quality stations monitored	N/A	7	7	7	17	17	9	0	0	0
Sanitary surveys completed	N/A	N/A	N/A	259	241	350	553	506	300	390
Beaches monitored for shellfish safety	7	7	7	7	7	7	7	7	7	7
Swimming beaches monitored	0	2	3	4	3	6	3	3	2	3
Stream gauges maintained	8	8	9	8	8	7	0	0	0	0
Clean Water District Advisory Council meetings held	0	0	0	0	0	0	4	1	2	3