

Jefferson County Public Health Performance Measures 2012 Year End Report WATER QUALITY DIVISION

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.

GOALS FOR FY 2012

1. 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.
2. Water quality trends for parameters such as fecal coliform, dissolved oxygen and temperature will be better understood in the Hood Canal Watershed, Mats Mats Bay and Northeast Jefferson County project areas.
3. Land use and its effects on water quality will be more completely surveyed in project areas.
4. Condition, status and use of approximately 500 more septic systems will have been surveyed in project areas.
5. Actions to restore Leland Creek will be initiated.
6. Residents in eastern Jefferson County will be more aware of project activities and actions they can take to protect water quality in their neighborhood.
7. Recreationalists at Jefferson County marine beaches will be notified of the status of water quality in a timely and efficient manner.
8. 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.
9. Water quantity and the interaction between surface and groundwater will be better understood in the Chimacum Creek Basin.

OBJECTIVES FOR FY 2012

1. Monitor all lakes with public access weekly from April through September for bluegreen algae toxins.
2. Maintain and improve JCPH Lake Status webpage and other outreach activities.
3. Use funds awarded by the state Centennial Clean Water Fund to carry out Clean Water projects in Hood Canal, Mats Mats Bay and Northeast Jefferson County.
4. 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.
5. Continue public education on the importance of clean water in Jefferson County focusing on actions citizens can take to keep our water clean and productive.
6. Prepare reports on the status and trends of water quality in Jefferson County.
7. Monitor water quality at public swimming beaches on a weekly basis during the swimming season to protect public health.
8. Continue to insure that the stream gauging network is maintained to accurately measure streamflow and water quality in critical streams such as Chimacum Creek, Salmon Creek and Snow Creek.
9. Obtain a groundwater computer model of the Chimacum Basin from the USGS with scenarios of water use impacts.

PERFORMANCE INDICATORS

	2006	2007	2008	2009	2010	2011	2012 Projected	2012 Final
Lakes monitored for cyanobacteria	9	9	9	4	3	5	4	4
Water quality stations monitored: Chimacum Creek	0	40	40	28	28	0	28	28
Water quality stations monitored: Salmon & Snow Creeks	0	17	0	19	19	19	0	17
Water quality stations monitored: Hood Canal watershed	0	0	0	0	0	17	17	17
Miles of shoreline surveyed for pollution	N/A	5	49	76	77	89	45	11
Marine water quality stations monitored	N/A	7	7	7	17	17	7	9
Sanitary surveys completed	N/A	N/A	N/A	259	241	350	500	553
Beaches monitored for shellfish safety	7	7	7	7	7	7	7	7
Swimming beaches monitored	0	2	3	4	3	6	6	3
Stream gauges maintained	8	8	9	8	8	7	7	0

This department implements the following strategic objectives for the 2012

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.

Study / Analysis

Achieving a stable funding level remains a priority for the division. County general fund was reduced by 37% which reduced the division's ability to utilize grant match funding. The division was able to meet grant deliverables in 2012. However, that may not be possible in future years given the funding level.

2011 lakes toxic algae grant funding was stretched to cover 2012 monitoring due to the lack of additional grant funds. JCPH was able to maintain critical monitoring for toxins, post signs and protect public health even with heavy blooms on 2 lakes. A grant application was submitted for 2013-15 funding.

JCPH worked with project partner Jefferson County Conservation District to achieve stream monitoring goals. Stream monitoring in the Chimacum Basin for water year 2011-12 was accomplished. The focus then shifted to Salmon and Snow Creeks in the Discovery Bay drainage for water year 2012-13. JCPH used JCCD data to begin a statistical analysis of long-term trends in Chimacum Creek. 12 out of 28 WQ stations on Chimacum Creek failed state standards for fecal coliform in 2011-12. Hood Canal stream monitoring was completed for phase 1 stations providing a baseline of data for sites that had not previously been monitored.

Shoreline survey goals were accomplished in Mats Mats Bay and Hood Canal. Hood Canal sampling documented new water quality concerns which were used to prioritize pollution control activities in those areas. Preparation of the Quality Assurance Project Plan (QAPP) for Northeast Jefferson has taken longer than anticipated and therefore shoreline surveys for that project have been postponed until Spring 2013.

Both the Mats Mats Bay and Hood Canal Shoreline water quality projects concluded in 2012. Sanitary survey targets were achieved in Mats Mats Bay and Hood Canal shoreline. While efforts were very successful at reducing pollution impacts to water quality, further opportunities for pollution reduction remain in Mats Mats Bay.

With the completion of Mats Mats Bay and Hood Canal Shoreline, staff resources were shifted to the Hood Canal Watershed project to begin surveys there. Larger numbers of suspect septic systems have been encountered so far in the Hood Canal watershed than in other project areas, indicating a need for sustained and concerted effort on the part of water quality staff.

State funding for shellfish safety and beach monitoring remained relatively stable. One of the largest Paralytic Shellfish Poisoning (PSP) outbreaks in recorded state history occurred in Discovery Bay. We were able to successfully demonstrate our education, outreach and infrastructure capabilities given our limited resources. JCPH was an active partner with state agencies and volunteers across the entire county during a year that had more extensive and long-lasting closures than is typical.

State funding was entirely cut for local support of stream gauge monitoring and JCPH discontinued assisting Ecology. However JCPH advocated for critical gauges to be operated where data supports our concerns about water quality and quantity, particularly in Chimacum Creek.

WQ staff convened a Clean Water District Advisory Council and held meetings throughout 2012. The Council was updated on Clean Water District funded projects, evaluated the activities conducted and made recommendations to the board of commissioners to increase funding.