

Jefferson County Clean Water District

ANNUAL REPORT



Figure 1. Recreational shellfish harvest, Quilcene. Photo by Alisa Hasbrouck

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Reporting Period: January 1 - December 31, 2016

Name of Shellfish Protection District: Jefferson County Clean Water District

Name of County: Jefferson

Primary Point of Contact: Michael Dawson, Water Quality Manager

Number of Meetings in 2016: 4

1 FUNDING

The Jefferson County Clean Water District (the “District”) is funded by a \$20 per-parcel fee assessed by the Jefferson County Assessor. In calendar year 2016, Jefferson County collected \$401,671.11 from the Clean Water District fee, which was used primarily as matching funds for Clean Water Project grants obtained by the Water Quality division (“Water Quality”) of Jefferson County Public Health. The Water Quality division of Jefferson County Public Health has continued to pursue the pollution identification and correction (PIC) strategies outlined in the 2012 Clean Water District Advisory Council recommendations. These include pursuing grant funding for Clean Water Projects. This strategy allows district funds to be leveraged with state funds for projects.

The following Clean Water Projects were active during this reporting period:

1. Hood Canal Clean Streams Initiative
2. Hood Canal Priority Basins Project
3. Quilcene-Dabob Pollution Identification and Correction Project

Each of these projects was funded at 75% from Ecology’s Centennial Clean Water program with a 25% match requirement provided by Clean Water District fee. In 2016, the Hood Canal Clean Streams project received \$96,130.82 in state funding matched with \$32,043.61 in District funds. Hood Canal Priority Basins received \$155,986 in state funds matched with \$51,995 in District funds and \$6,267.70 in Jefferson County Conservation District funds. The Quilcene-Dabob project received \$84,296.76 in state funds matched with \$28,098.92 in district funds.

Program administration and management, public complaint investigation, water quality hot spot response and PIC outside of current project areas was funded by District funding. Temporary sanitation was provided at the Big Quilcene River during fishing season in 2016 to avoid emergency closures to shellfish beds.

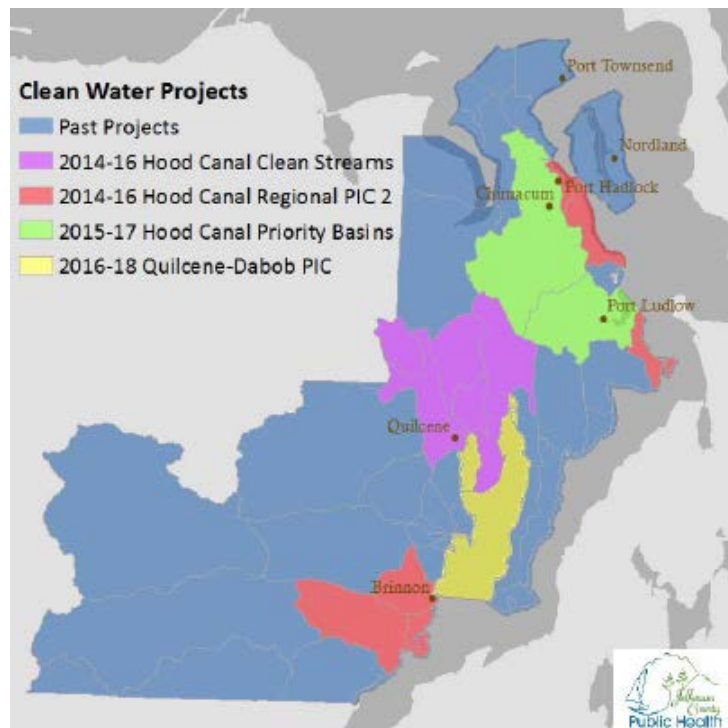


Figure 2. Water Quality Project Area Map, 2016

2 PROGRAM STATUS UPDATE

The Hood Canal Clean Streams Initiative project was completed at the end of 2016 and the final report is available at: <http://wa-jeffersoncounty.civicplus.com/Archive.aspx?AMID=59>. 10 out of 19 water quality monitoring stations on Leland Creek, Tarboo Creek, Donovan Creek, and Little Quilcene River failed state fecal coliform standards during the project period. Riparian restoration plantings of native trees and shrubs was accomplished along Leland and Tarboo Creeks with the long-term goal of improving buffer filtering of non-point source pollution once the vegetation matures.

Monitoring in the Ludlow Creek basin began under the Hood Canal Priority Basins project in October 2016 and continues through September 2017. Chimacum basin monitoring was completed by JCPH and Jefferson County Conservation District staff and results were compared to previous years. A 68% failure rate of the fecal coliform standard during dry season was an improvement over previous rates that had been as high as 96% in 2008, but there is still a need to reduce bacteria levels and long-term trend monitoring does not show a conclusive trend. 197 septic systems were surveyed in the Chimacum basin with an emphasis on the Irondale neighborhood, where water quality in Irondale Creek improved. Septic surveys continue through 2017 in the Ludlow Creek basin.

The Quilcene-Dabob project was initiated at the beginning of 2016 and shoreline, stream and marine monitoring commenced along with targeted septic system surveys. Initial hot spot analysis revealed failing septic systems and correction activities were implemented. A boat was purchased to access shoreline areas that lack upland access and to conduct marine monitoring in sensitive shellfish areas. The project continues through 2018.

Planning was undertaken in 2016 to address early warnings from Washington State Department of Health about declining water quality in the Hood Canal #3 shellfish growing area, as well as one area of concern in Discovery Bay, by applying for Centennial funding for two new projects that began in 2017. The Central Hood Canal PIC project was conceived to address the Duckabush, Dosewallips and Pleasant Harbor areas of Hood Canal #3 with water quality monitoring and PIC work and provide an anticipated Closure Response Plan in the case of a shellfish downgrade. The Strait Priority Areas project was submitted to address the Discovery Bay area as well as continue the PIC work begun in Port Townsend under the Northeast Jefferson Project in 2015. In addition, the Water Quality division was engaged in other projects that did not receive Clean Water District funding such as the Hood Canal Regional PIC project, Lakes Cyanobacteria Monitoring, Shellfish Biotxin Monitoring, the BEACH program, and National Estuary Program-funded projects in cooperation with the Jefferson County Environmental Health Onsite Septic division (the "Onsite" division).

3 PROGRAM CHANGES/SUCCESSSES

The Water Quality division initiated the process of upgrading the county-wide geographical information system (GIS) to a modern Enterprise system with grant support. In spring 2016, Water Quality deployed iPads running ESRI Collector software to enable field data collection directly to GIS. Water Quality's participation in the Hood Canal Regional PIC project allowed for additional methods of source tracking. Water Quality collaborated with the Port Gamble S'Klallam Tribe to deploy a 24-hour autosampler to monitor E. coli in Irondale Creek, a confirmed bacterial hot spot, and also perform continuous monitoring for optical brighteners and tryptophan (a possible E. coli surrogate). E. coli levels peaked at night and in early morning hours during the time of monitoring, indicating the potential for undercounts using traditional daytime sampling schedules.

The Water Quality division began to increase staffing and plan new projects to fulfill Clean Water District goals set in the 2016 Prioritized Work Plan. More time is needed to train two environmental health specialists hired in 2016, and to get projects established through available grant funding cycles. Water Quality continues to integrate operations closely with the Onsite division. Onsite septic enforcement activity is anticipated to increase over the next year due to the Operations and Monitoring (O&M) inspection program expansion that began in July 2016. The previously established Marine Recovery Area is being used to prioritize O&M inspection notification letters that began to be sent in 2016. Water Quality assisted the Onsite division in developing a notice-to-title process for long-term enforcement actions to help compliance continuity in the event of property transfers.

4 CHALLENGES/BARRIERS

Water Quality and Onsite sought funding for critical database upgrades to help interdepartmental and interagency permit coordination, but has not been successful so far in obtaining financial assistance. The Water Quality division has been impacted in 2017 by the state budget impasse that is withholding funding on two planned Centennial projects for fiscal year 2018. A county-approved environmental health specialist position is on hold until there is more certainty about the state budget. Planned database development and further GIS upgrades are also in jeopardy and contingency planning will need to occur to determine alternative funding sources.

5 POLLUTION CONTROL IMPLEMENTATION TABLE

SPD Information	Number	Outcomes	Comments
Miles of shoreline evaluated	34	196 E. coli & 185 fecal coliform samples analyzed	Hood Canal Regional PIC Quilcene-Dabob PIC
Discharges/streams monitored	71	Through Sept: Chimacum Creek watershed-31 Oct- Dec: Ludlow Creek watershed-21 Oct- Dec: Quilcene area -19	Monthly at all stations Weekly at Big Quilcene during fishing season
Sites with elevated bacteria or “hot spots”	35	Hood Canal Regional PIC – 1 Quilcene-Dabob - 14 Chimacum – 20 stations failed FC standard	Conducted follow-up bracketed sampling to identify potential sources. Also targeted sanitary surveys in these areas. Irondale Creek improved
Parcel/property evaluations	348	727 sites contacted	Hood Canal Regional PIC, Hood Canal Priority Basins, Quilcene-Dabob PIC
OSS in the Shellfish Protection District	~13,500; 10,312 permits	76 previously unknown OSS identified from sanitary surveys and/or pump reports	Distributed copies of as-builts during sanitary surveys;
OSS with current inspection report	14%	1,971 O&M inspections completed in 2016	
O&M warning letters	2,375	O&M reminder letters mailed	
OSS dye tests	2	Confirmed using charcoal packs and spectrometry	Repairs in progress
Failed OSS	100	56 urgent and 3 minor repairs finalized 27 repair permits issued & pending	
Low interest OSS repair loans (Craft3 or other)	4	2015 Craft3 data; unknown number of USDA repairs	

SPD Information	Number	Outcomes	Comments
Farms with animals in the Shellfish Protection District		3 surveyed in Chimacum basin	
Surveillance flights	none		
Farms evaluated		unknown number of JCCD farm plans completed	
Agriculture BMPs installed	3	Chimacum basin; also 2 CREP projects	4 additional in process
Agriculture warning letters	none		
Utilized new source tracking technology	Yes	24-hr E. coli autosampler; continuous optical brightener & tryptophan – Irondale Creek	With Port Gamble S’Klallam Tribe
Incentives/Rebates	Yes	1 st O&M inspection Risers Distributed low flow shower heads, leak detectors, etc. during sanitary surveys	
Penalties	78	75 OSS failure/violation NOCVs 1 OSS failure/violation Tickets 1 Abatement Order 1 Notice to Title	
Public Meetings	7	4 Clean Water District Advisory Council Hood Canal Clean Streams final meeting Hood Canal Priority Basins initial meeting Quilcene-Dabob initial meeting	
Workshops	13	3 Homeowner Septic Classes 2 WSU Beach Naturalists/Watershed Stewards 8 Conservation District workshops	Homeowner O&M inspection training online July 2016 at http://www.jeffersoncountypublichealth.org/665/Resources-for-Homeowners

SPD Information	Number	Outcomes	Comments
Community Events	3	Information booths and interactive watershed model	Diggin' for Dinner shellfish event (x2) Wooden Boat Festival WSU Beach Naturalists/Watershed Stewards classes
Mailers/flyers/brochures	~900	Distributed during sanitary surveys and meetings	
Did you conduct a social marketing survey?	No		Currently reviewing social marketing campaign in Mason County (Hood Canal Regional PIC) with plans to incorporate ideas into local projects
Newsletters sent	2	Mailed to project area residents	Additional Conservation District newsletters sent
Letters of support/ recommendations to council/commission/grants received	2	Received Ecology FY17 grant funding	Strait Priority Areas Central Hood Canal PIC
Are there stormwater activities occurring?	Yes	Shared bacteria data with Jefferson County Marine Resources Committee to help guide decisions about where to locate stormwater retrofit projects	www.nwstraits.org/media/2092/jef-2016-bioretenion_assessment.pdf
Riparian restoration	Yes	Tarboo Creek – 3,000 trees Leland Creek – 2 acres	Hood Canal Clean Streams
Septic and water quality complaints	162	154 septic, 8 water quality; 77 cases closed	Includes tracking cases for septic enforcement; Responded to 2 sewage spills in Pt Ludlow
Reports	2	Northeast Jefferson final report Chimacum Comprehensive WQ Report	http://wa-jeffersoncounty.civicplus.com/ArchiveCenter/ViewFile/Item/746 http://wa-jeffersoncounty.civicplus.com/ArchiveCenter/ViewFile/Item/742
Data/Mapping		Obtained grant support to upgrade county GIS 5 iPads deployed w/Collector app for WQ data	Plan to create public mapping apps/portal for water quality data in 2017

6 ACRONYMS AND SPECIAL TERMS USED

BEACH	Beach Environmental Assessment, Communication, and Health
DOH	Washington State Department of Health
Ecology	Washington State Department of Ecology
GIS	Geographic Information System
JCPH	Jefferson County Public Health
O&M	Operations & Maintenance
OSS	Onsite Septic Systems
PIC	Pollution Identification and Correction
SPD	Shellfish Protection District
WQ	Water Quality