

Jefferson County Clean Water District

ANNUAL REPORT



Figure 1. Quilcene Bay. Photo by Tim Weissman

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Reporting Period: January 1 - December 31, 2017

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 2017: 4

1 FUNDING

The Jefferson County Clean Water District (CWD) is funded by a \$20 per-parcel fee assessed by the Jefferson County Assessor. In calendar year 2017, Jefferson County collected \$399,770 from the CWD fee, which was used primarily as matching funds for Clean Water Project grants obtained by the Water Quality department of Jefferson County Public Health (JCPH). The Water Quality department 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 (Figure 2):

1. Hood Canal Priority Basins Project
2. Quilcene-Dabob Pollution Identification and Correction Project
3. Central Hood Canal Pollution Identification and Correction Project
4. Strait Priority Areas Project

Each of these projects was funded at 75% from Ecology's Centennial Clean Water program with a 25% match requirement provided by the CWD fee. The Hood Canal Priority Basins and Quilcene-Dabob PIC projects were conducted all year in 2017.

The other two projects began in March 2017. During 2017, the Hood Canal Priority Basins project received \$88,347 in state funding matched with \$27,742 in CWD funds and \$2,862 in Jefferson County Conservation District (JCCD) funds. The Quilcene-Dabob PIC project received \$155,837 in state funds matched with \$36,658 in CWD funds. The Central Hood Canal PIC project received \$16,514 in state funds matched with \$27,935 in CWD funds. The Strait Priority Areas project received \$31,049 in state funds matched with \$32,030 in CWD funds and \$1,933 in JCCD funds. Extra matching funds were banked for 2018 in the Central Hood Canal and Strait Priority Areas projects due to the timing of expenditures and fee allocations.

Program administration and management, public complaint

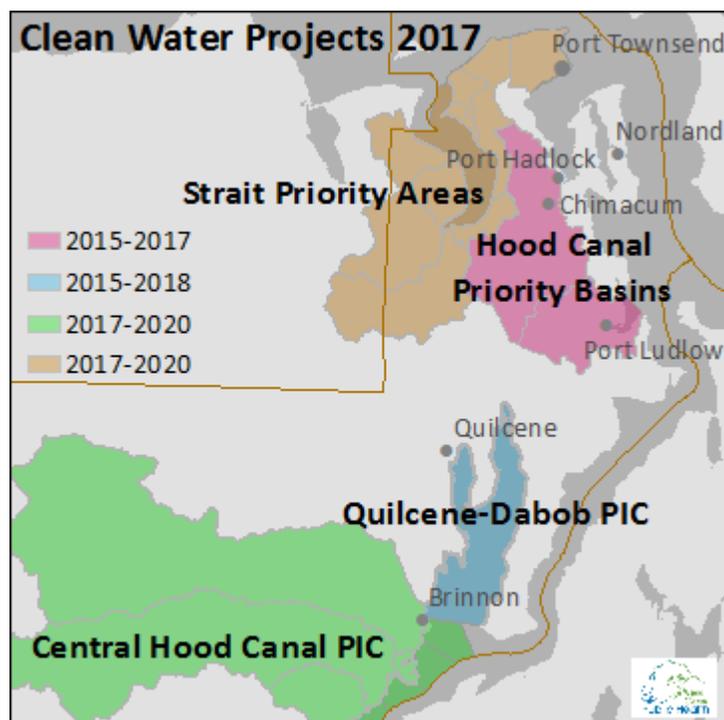


Figure 2. Water Quality Project Area Map, 2017

investigation, water quality hot spot response and PIC work outside of current project areas was funded by CWD funding. Temporary sanitation was provided at the Big Quilcene River during fishing season in 2017 to avoid emergency closures to shellfish beds.

2 PROGRAM STATUS UPDATE

The Hood Canal Priority Basins project was completed at the end of 2017 and the final report is available at <https://www.jeffersoncountypublichealth.org/DocumentCenter/View/4764/Hood-Canal-Priority-Basins---Final-Report>. Out of 31 stream monitoring stations in the Chimacum Creek basin, 15 failed state standards for fecal coliform in wet seasons and 21 failed in dry season. This was a slight improvement over the last monitoring period in 2012-13, but statistically significant improvements were only found at three stations. One station on Putaansuu Creek showed declining water quality. Hot spot Irondale Creek saw improving water quality in 2017. Stream monitoring in the Ludlow Creek basin showed generally good water quality, with 1 out of 20 stations failing the fecal coliform standard in wet season and 3 of 20 failing during dry season. Project partner JCCD conducted half of the stream monitoring in conjunction with JCPH. More than 300 septic system surveys were completed by JCPH and 12 failures were found. 8 failures were corrected during the project period, with enforcement continuing at the others. Surveys in Port Ludlow focused on identifying those homes not served by the Olympic Water and Sewer wastewater utility. Previously unknown sewer connections were found and county septic permit records were updated. A final public meeting was held in November 2017.

The [Quilcene-Dabob](#) project continued through 2017 with shoreline, stream and marine monitoring being conducted. Shoreline high hits were investigated, although hot spots remained primarily in the medium and low priority categories. One hot spot in Tarboo Bay led to the discovery of a failed septic system, which was repaired. Subsequent testing after the repair showed improved water quality. Quilcene area streams with elevated fecal coliform, including Cemetary Drain and a tributary to Donovan Creek, were prioritized for further research. Targeted sanitary surveys were conducted in these areas and in shoreline hot spots. In the Donovan Creek drainage, one site with cattle pasture upstream of the hot spot was referred to JCCD, who began planning for an agricultural BMP implementation. Marine monitoring found generally good water quality in Tarboo Bay, Dabob Bay and Quilcene Bay. The Quilcene-Dabob project will be completed at the end of 2018.

The [Central Hood Canal PIC](#) project began in 2017 and a primary task involved preparing for an anticipated downgrade of the Duckabush portion of the Hood Canal #3 shellfish growing area in September. A [Closure Response Plan](#) was started in Fall 2017 and finalized in early 2018. A Quality Assurance Plan was finalized in November and water quality sampling commenced soon after. Regular stream monitoring started and shoreline sampling in Dosewallips area was begun. Septic system records were researched with the primary goal of preparing for surveys in the Duckabush neighborhood in 2018. An outreach plan was created and a public meeting held in Brinnon in August.

The Strait Priority Areas project began with a public meeting in September 2017. Water quality monitoring began in Fall 2017 in cooperation with JCCD. Stream monitoring was divided between JCPH and JCCD. JCPH also began shoreline monitoring in November. JCPH provided land records of properties assessed by the tax assessor as agricultural to JCCD for further research into potential sites for future agricultural BMP implementation.

In addition, the Water Quality department 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 Biotoxin Monitoring, the BEACH program, and National Estuary Program-funded projects in cooperation with the Jefferson County Environmental Health Onsite Septic division.

3 PROGRAM CHANGES/SUCCESSSES

Staffing changes in 2017 resulted in the hire and training of new environmental health specialists for the Water Quality department. To better align with EPA recommended criteria for water quality monitoring, the Water Quality department added enterococcus as a parameter to be analyzed during shoreline surveys at sites with brackish water, such as lagoon outlets. In 2017 the Water Quality department made some changes to internal PIC protocols to clarify and strengthen the septic system repair enforcement process. Among these were changes to the septic rating system used during Water Quality field surveys that aligned better with JCPH Onsite enforcement policies. A point system was created for the survey form that took into account commonly encountered scenarios in Jefferson County. A distinction was made between sites with a septic permit on file and those without, and separate criteria were identified for each. In addition, water quality criteria were added and actionable items, such as potential onsite septic code violations, were called-out to specific follow-up actions. In addition, the value of site sketches was recognized for older septic systems with no “as-built” drawings, and the Water Quality department started including a site sketch box on the homeowner mailer cards that are sent to sites where repeated attempts to contact the homeowner have been unsuccessful.

Continued implementation of a county-wide Enterprise Geographical Information System (GIS) resulted in improved ability to manage Water Quality department sampling location data. The county also improved parcel data and land records mapping, and JCPH helped review a new draft critical areas mapping application. JCPH Water Quality began to explore opportunities to upgrade other critical systems and partnered with the Onsite division and the Jefferson County Department of Community Development in evaluating permit database solutions to replace an aging database that is no longer supported. Water Quality began to explore options for completing septic surveys on mobile devices with integration between GIS and a new permit database, with a goal of increasing efficiency and increasing public access to records.

4 CHALLENGES/BARRIERS

The JCPH Water Quality department was impacted in 2017 by the state budget impasse that delayed funding on two planned Centennial projects for fiscal year 2018, the Northern Hood Canal PIC and Oak Bay-Mats Mats PIC projects. JCPH had to delay advertising and filling a vacant environmental health specialist position until more budget certainty was determined. Even after the state budget was resolved, the delay in hiring put limits on the amount of JCPH staff time available for project implementation. In response to these impacts, JCPH began to explore ideas for establishing a foundational water quality monitoring program that would be independent of the fluctuations of external funding and that would also potentially be more efficient than running several parallel projects with all of the associated reporting requirements for each. A draft Foundational Monitoring Plan was begun in 2017.

5 POLLUTION CONTROL IMPLEMENTATION TABLE

SPD Information	Number	Outcomes	Comments
Miles of shoreline evaluated	102	697 fecal coliform, 63 E. coli and 3 enterococcus samples analyzed	Hood Canal Priority Basins; Port Ludlow Quilcene-Dabob PIC; entire project area Central Hood Canal PIC; Dosewallips Strait Priority Areas; Cape George, Beckett Point, Fairmount
Discharges/streams monitored	54 + Ludlow	528 fecal coliform samples analyzed	Monthly at all stations Weekly at Big Quilcene during fishing season
Sites with elevated bacteria or "hot spots"	18	Hood Canal Priority Basins, Port Ludlow – 3 Quilcene-Dabob – 15 (40 high hit investigations)	Conducted follow-up bracketed sampling to identify potential sources. Also targeted sanitary surveys in these areas. Irondale Creek improved; Quil-Dabob: 1 Toandos and 3 Tarboo hot spots improved.
Parcel/property evaluations	296	492 sites contacted	Hood Canal Priority Basins, Quilcene-Dabob PIC, Central Hood Canal, Strait Priority Areas
OSS in the Shellfish Protection District	~13,500	64 previously unknown OSS identified	Distributed copies of as-builts if available, homeowner class info, rebate info and Craft3 and USDA financial assistance
OSS with current inspection report	14.4%	1,758 O&M inspections completed (190 from homeowners), 249 follow-up letters sent	
O&M warning letters	1,842	O&M reminder letters mailed	
OSS dye tests	6	No dye found in surface water; could not confirm all connections to community system	Duckabush Park Association
Failed OSS	94	52 urgent repairs finalized 12 repair permits issued & pending	from % of failures identified by professionals (6% of 1,568); 19 found during sanitary surveys
Low interest OSS repair loans (Craft3 or other)			Numbers not yet reported to JCPH for 2017

SPD Information	Number	Outcomes	Comments
Farms with animals in the Shellfish Protection District			Ag survey planned by JCCD for 2018 in Strait Priority Basins project area
Surveillance flights	none		
Farms evaluated			Numbers not yet reported to JCPH for 2017
Agriculture BMPs installed			Numbers not yet reported to JCPH for 2017
Agriculture warning letters	none		
Utilized new source tracking technology	No		
Incentives/Rebates	10	1 st O&M inspection and/or riser installation	
Penalties	65	OSS failure/violation NOCVs	
Public Meetings	7	4 Clean Water District Advisory Council Hood Canal Priority Basins final meeting Central Hood Canal initial meeting Strait Priority Areas initial meeting	
Workshops	8	6 Homeowner Septic Classes 2 WSU Beach Naturalists/Watershed Stewards	553 authorized homeowner inspectors
Community Events	4	Information booths, interactive watershed model, water quality demonstrations	Digging for Dinner shellfish events (2) Port Townsend Wooden Boat Festival All County Picnic
Mailers/flyers/brochures	~600	Distributed during sanitary surveys, public meetings and events	
Did you conduct a social marketing survey?	No		
Newsletters sent	2	Mailed to project area residents	Additional Conservation District newsletters sent

SPD Information	Number	Outcomes	Comments
Letters of support/ recommendations to council/commission/grants received	0	Ecology FY18 grant funding delayed to 2018	Northern Hood Canal PIC Oak Bay – Mats Mats
Are there stormwater activities occurring?	Yes	Shared water quality data with MRC to help guide decisions about where to locate stormwater retrofit projects	
Riparian restoration	Yes	Conservation Futures open space protection; Duckabush & Big Quilcene Floodplain Acquisitions	
Septic and water quality complaints	68 Septic; 3 WQ	98 cases closed	
Reports	1	Hood Canal Priority Basins final report	
Data/Mapping	Yes	Land Records map app developed; WQ mapping on 5 iPads via Portal	Parcel data being converted to parcel fabric

6 ACRONYMS AND SPECIAL TERMS USED

CWD	(Jefferson County) Clean Water District
DOH	Washington State Department of Health
Ecology	Washington State Department of Ecology
EPA	Environmental Protection Agency
GIS	Geographic Information System
JCCD	Jefferson County Conservation District
JCPH	Jefferson County Public Health
MRC	(Jefferson County) Marine Resources Committee
O&M	Operations & Maintenance

OSS	Onsite Septic Systems
PIC	Pollution Identification and Correction
SPD	Shellfish Protection District
WSU	Washington State University (Jefferson County Extension)
WQ	Water Quality