

Jefferson County Clean Water District

ANNUAL REPORT



Figure 1. Bywater Bay. Photo by Michael Dawson

August 13, 2020

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Reporting Period: January 1 - December 31, 2019

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 2019: 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 2019, the Water Quality division of Jefferson County Public Health (JCPH) received \$422,282 from the CWD fee, which was used primarily as matching funds for Clean Water Projects. The Water Quality division 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. Quilcene-Dabob Pollution Identification and Correction Project
2. Central Hood Canal Pollution Identification and Correction Project
3. Strait Priority Areas Project
4. Northern Hood Canal Pollution Identification and Correction Project
5. Oak Bay – Mats Mats 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 the CWD fee. The Central Hood Canal and Strait Priority Areas projects were conducted all year. The Northern Hood Canal and Oak Bay – Mats Mats PIC projects began in March of 2019, and the Quilcene-Dabob PIC project ended the same month. During the year, the Quilcene-Dabob PIC project received \$128,647 in state funding matched with \$35,869 in CWD funds. The Central Hood Canal PIC project received \$114,742 in state funds matched with \$32,521 in CWD funds. The Strait Priority Areas project received \$145,050 in state funds matched with \$34,178 in CWD funds and \$7,406 in Jefferson County Conservation District (JCCD) funds. The Northern Hood Canal PIC project received \$59,281 in state funding matched with \$19,760 in CWD funds. The Oak Bay – Mats Mats PIC project received \$60,339 in state funding matched with \$20,113 in CWD funds.

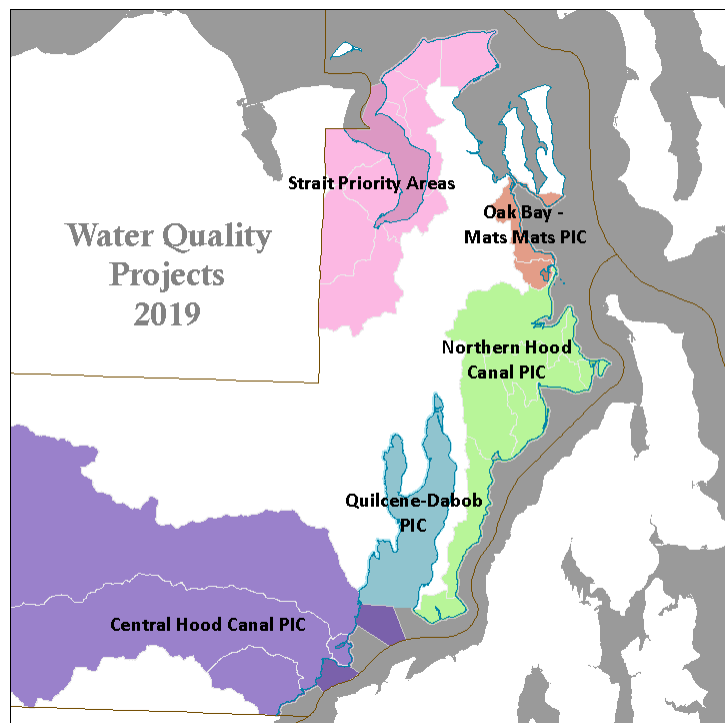


Figure 2. Water Quality Project Area Map, 2019

Program administration and management, public complaint investigation, water quality hot spot response and PIC work outside of current project areas was covered with CWD funding. Temporary sanitation was provided at the Big Quilcene River during fishing season in 2019 to avoid emergency closures to shellfish beds.

2 PROGRAM STATUS/CHANGES

The [Quilcene-Dabob PIC](#) project was completed in March of 2019. A final public meeting was held by project lead Tim Weissman at the Quilcene Community Center in March. Four stream stations, which had previously failed state standards for bacteria, were found during this project to be meeting the standard. However, statistical analysis of the stream stations for which three years of data existed found that the improving trends were not significant. Marine stations all met state bacteria standards. 50 miles of shoreline surveys in wet season and dry season were completed. 11 shoreline bacterial hot spots were found and two remained unresolved at project end. 185 septic system surveys were completed and 34 septic repairs were accomplished.

The [Central Hood Canal PIC](#) project continued in 2019 focusing primarily on the Hood Canal #3 Duckabush downgrade, following the 2018 [Closure Response Plan](#). Marine, stream and shoreline monitoring was conducted. Six hot spots were confirmed and investigated. Septic system surveys were targeted around hot spots, and in the Duckabush River floodplain. Dye tests were conducted at several sites. Ten repairs were completed and several sites had decommissioning of pit privies and graywater discharges. 44 septic violation cases were pursued. Project lead Anna Bachmann left county employment and was replaced by Tim Weissman and Jacquelyn Stenman.

In 2019, stream, marine and shoreline monitoring was conducted in the [Strait Priority Areas](#) project. Stream monitoring was divided between JCPH and JCCD. Stream samples were analyzed by EPA for microbial source tracking. Low bacteria counts hindered performance at many sites. Problem area Zerr Drain showed avian indicators that were believed to be wild waterfowl. JCCD began to implement agricultural BMPs at Uncas Valley ditch, which was a bacterial hot spot with cattle being the suspected source. Raw data from a Mussel Watch cage deployment in Discovery Bay were obtained, however an interpretive report on the data from WDFW has not yet been made available. Bacterial hot spots were found in Port Townsend stormwater and the results were presented to the city.

Stream monitoring and shoreline surveys commenced in the Northern half of the Northern Hood Canal PIC project area. Hot spots were investigated and all of the streams had high hits, but did pass revised state E. coli standards.

Marine, stream and shoreline monitoring began in the Oak Bay – Mats Mats PIC project. Two Mussel Watch cages were deployed in Oak Bay and Mats Mats Bay and results are anticipated in 2020.

Environmental Health Specialist Anna Bachmann left employment with the county in 2019. The position remained vacant, with approval for refilling the position expected in 2020.

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, the Anderson Lake Management Plan project, Shellfish Biotxin Monitoring, the BEACH program, and WA Department of Health-funded projects in cooperation with the Jefferson County Environmental Health On-site Septic division.

3 PROGRAM SUCCESSES

Marine water quality results from DOH monitoring improved in the Hood Canal #3 and Discovery Bay growing areas in 2019, however Discovery Bay remained on the Early Warning List. Total acreage of approved shellfish growing areas in the CWD was maintained in 2019. Thirteen growing areas totaling more than 18,000 approved acres in Jefferson County remain in excellent condition. A review of the new Kalaloch growing area evaluation was done by JCPH, but since it is on federal lands and is outside of the Clean Water District, no JCPH activities are anticipated regarding this area. Progress was made on many failed or concerning septic sites in the Duckabush River area that may result in future water quality improvements in Hood Canal #3. Work continued under the Central Hood Canal project with the goal of being able to recommend reclassifying the conditionally approved area at the mouth of the Duckabush.

Improvements to the JCPH Water Quality database by the GIS consultant ProWest allowed for staff to start entering E. coli results and run reports. A results summary was added to the Water Quality map pop-up windows for each sampling site through a connection between the GIS and database. More testing and database/GIS improvements are planned for 2020.

JCPH was successful in obtaining Centennial Clean Water funding through Ecology for the Foundational Monitoring project, with contracting expected in 2020. Jefferson County was awarded funding through a DOH/Puget Sound Partnership initiative for a septic repair cost-share program. The JCPH Onsite Septic program began setting up the cost-share terms in anticipation of offering repair funding assistance in 2020.

4 CHALLENGES/BARRIERS

Economic barriers to the ability to afford septic repairs in low-income areas of the county remain a major challenge to achieving solutions to water quality problems. JCPH found that, in some cases, a wide variety of assistance to homeowners is needed to accomplish a septic repair. In addition to the costs of septic repairs, homeowners often need help with understanding details of financial terms and conditions and may need extra time and help with tasks required. Corollary issues such as critical home repairs, lack of reliable transportation, and social problems often need help and assistance at the same time to be able to get progress on the septic issues. JCPH has found that working with social assistance groups, the sheriff's department and others has been helpful, but it always seems that there are major gaps in the assistance available. It is hoped that the Onsite Spetic Cost-Share program can have some positive effect towards these problems. JCPH also met with the Port Townsend Police Navigator Judson Haynes, to discuss how his approach to intervention in situations that involve both law enforcement and social issues, might be emulated in Jefferson County.

The Water Quality program staffing level was short one position for the second half of 2019, leading to some project delays. An anticipated streamlining of the county contract review and approval process by county administration was not accomplished in 2019. This also has caused project delays.

5 POLLUTION CONTROL IMPLEMENTATION TABLE

SPD Information	Number	Outcomes	Comments
Miles of shoreline evaluated	85	Wet and dry season monitoring E. coli and Enterococcus	Central Hood Canal: 15 miles Strait Priority Areas: 35 miles Northern Hood Canal: 20 miles Oak Bay – Mats Mats: 15 miles
Discharges/streams monitored	42	Monthly monitoring Fecal coliform and E. coli	Central Hood Canal: 14 stations Strait Priority Areas: 18 stations Northern Hood Canal: 5 stations Oak Bay – Mats Mats: 5 stations
Marine stations monitored	18	Bi-monthly monitoring Enterococcus	Oak Bay – Mats Mats: 18 stations
Sites with elevated bacteria or “hot spots”	41	Confirmed hot spots > 320 E. coli geomean or > 110 entero investigated	Strait Priority Areas: 12 Northern Hood Canal: 17 Oak Bay – Mats Mats: 12
Parcel/property evaluations	220	Distributed copies of as-builts if available, homeowner class info, rebate info, and Craft3 and USDA financial assistance	Quilcene-Dabob, Central Hood Canal, Strait Priority Areas, Northern Hood Canal, & Oak Bay – Mats Mats
OSS in the Shellfish Protection District	~13,500	67 previously unknown OSS identified	On-site Septic program
OSS with current inspection report	15.6%	2,500 O&M inspections completed (264 from homeowners)	On-site Septic program
O&M warning letters	1771	O&M reminder letters mailed	On-site Septic program
OSS dye tests	5		Central Hood Canal
Failed OSS	44	59 urgent repairs finaled 10 urgent repair permits issued & pending	10 identified from property evaluations

SPD Information	Number	Outcomes	Comments
Low interest OSS repair loans (Craft3 or other)	6	Approved & partially or fully funded	Craft3 low-interest loans
Farms with animals in the Shellfish Protection District	NA		
Surveillance flights	None		
Farms evaluated	NA		
Agriculture BMPs installed	1	Uncas Valley ditch cattle exclusion fencing	Jefferson County Conservation District/Strait Priority Areas
Agriculture warning letters	None		
Utilized new source tracking technology	Yes	EPA MST utilizing new reference library	Strait Priority Areas
Incentives/Rebates	35 \$6,450	1 st O&M inspection and/or riser installation rebates to homeowners	Hood Canal Regional PIC On-site Septic program
Penalties	NA	OSS failure/violation NOCVs sent	Quilcene-Dabob PIC, Central Hood Canal PIC, Strait Priority Areas, and On-site Septic program
Public Meetings	6		Clean Water District Advisory Council 4 Clean Water Projects meetings 2
Workshops	6	123 participants completed Septic 201	Homeowner Septic Classes (On-site program)
Community Events	2	Information booths, interactive watershed model, water quality demonstrations & presentations	Digging for Dinner shellfish events (w/MRC, WDFW) Port Townsend Wooden Boat Festival (w/WDFW, DOH)
Mailers/flyers/brochures	5	Hot spot factsheets to project area residents	Central Hood Canal Northern Hood Canal Oak Bay – Mats Mats
Did you conduct a social marketing survey?	No		
Newsletters sent	2	Mailed to project area residents	Additional JCCD newsletters sent

SPD Information	Number	Outcomes	Comments
Letters of support/ recommendations to council/commission/grants received	1	Centennial Fiscal Year 20 offer	Foundational Monitoring project
Are there stormwater activities occurring?	Yes	Shared water quality data with City of PT	Strait Priority Areas, downtown Port Townsend shoreline monitoring
Riparian restoration	Yes	Duckabush & Big Quilcene Floodplain Acquisitions, riparian planting	Conservation Futures & Natural Resources program
Septic and water quality complaints	57	67 cases closed	
Reports	2	Posted on JCPH website	
Data/Mapping	Yes	WQDB/GIS connection	

6 ACRONYMS AND SPECIAL TERMS USED

CWD	(Jefferson County) Clean Water District	WQ	Water Quality
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	(Septic) Operations & Maintenance		
OSS	On-site Septic Systems		
PIC	Pollution Identification and Correction		
SPD	Shellfish Protection District		
WDFW	Washington Department of Fish and Wildlife		
WSU	Washington State University (Jefferson County Extension)		