



November 2019

Sequim-Dungeness Clean Water District (CWD) Pollution Identification & Correction (PIC), Trends and Project Monitoring/ FINAL REPORT

Overview

Clallam County's PIC Project is a collaborative effort between multiple stakeholders that occurs in the Clean Water District (CWD) of Clallam County. First implemented in 2015, it is an effort to recover approximately 1,600 acres of commercial shellfish growing beds in Dungeness and Sequim Bays.

The overall goal of the "Phase 2" project was to continue efforts to upgrade the shellfish growing beds by improving freshwater quality in the waterways draining into them.

Background and Approach

The CWD drains into the marine waters of the Strait of Juan de Fuca, including Dungeness and Sequim Bays. The Bays have traditionally been rich in littleneck clams. From 2000-2003, Washington Department of Health (DOH) closed 1550 acres near the mouth of the Dungeness River to shellfish harvest due to high levels of fecal coliform (FC).

Three main goals guided this PIC Project. 1) The goal of the Trends Monitoring Program is to collect bacteria and nutrient data for the purpose of assessing water quality trends at the mouths of all significant waterways throughout the CWD. This helps determine where to focus targeted investigations. 2) Next, targeted sampling aims to identify the sources of bacterial pollution in prioritized sub-watersheds. 3) Finally, pollution correction efforts ideally remove sources of pollution discovered through 1 and 2, above.

Clallam County Environmental Health (CCEH) is the project lead and coordinates with various project partners, mentioned below, through workgroup meetings, sampling events, and outreach events.

Evaluation

Streamkeepers of Clallam County and CCEH conducted monthly and quarterly stream sampling to collect trends data throughout the project. Data demonstrated corrective work may be improving water quality in some project streams but may be declining in others.

CCEH and Jamestown S'Klallam Tribe (JS'KT) conducted investigative work on the lower Matriotti and upper Meadowbrook Creek waterways. Six medium-priority and four low-priority hotspots were identified.

In an effort to build support and educate local homeowners, CCEH presented the project to Sequim Science Cafe, League of Women Voters, and Clallam County's Board of Health and Health and Human



Services.

CCEH referred multiple properties to the CCEH onsite septic (OSS) program regarding septic systems of concern and Clallam Conservation District (CCD) regarding best management practices (BMPs) for mitigating livestock impact on surface waters. CCEH OSS referred some septic systems of concern to CCD for consideration of cost-share funding.

Conclusions

Baseline trends data demonstrated water quality may be improving in Golden Sands Slough following the repair of a failing OSS, which was completed through a cost-sharing project between CCD, CCEH, and homeowners.

CCEH conducted property surveys after identifying the hotspots in July 2018 to determine a potential source for elevated FC levels. Trends monitoring in September 2018 revealed significantly lower levels of FC without any corrections having occurred. We hypothesized that the low flow and warm weather conditions likely contributed to elevated levels.

In October 2018 the DOH upgraded approximately 90 acres of shellfish growing area from “prohibited” to “approved” in Sequim Bay. An additional upgrade is forecasted for 2020.

A substantial challenge has been improving impacted riparian buffers on private property. Consequently, CCEH will coordinate efforts in during “Phase 3” with Clallam County Department of Community Development (DCD), described below.

Recommendations and next steps

Collaborating with stakeholders is critical to the project’s success. Without these partnerships, the correction work and water quality improvements would not be possible. CCEH and our project partners will continue work repairing failing OSS, restoring damaged riparian buffers, and educating livestock and pet owners on BMPs. These key issues are fundamental to improving water quality in the Dungeness Watershed and will be employed as follows:

- CCEH will coordinate with DCD to educate landowners regarding important ecological functions of riparian critical areas as they pertain to water quality and to enforce local ordinances as necessary.
- CCEH will be partnering with the EPA and Washington State Department of Ecology (Ecology) to conduct microbial source tracking sampling at sites that include bacteria “hotspot” discovered through PIC Segmented Sampling that remain in spite of non-point source pollution control efforts.
- CCEH will work with Ecology to continue PIC within a new focus area of the CWD for a “Phase 3” project, which was selected using baseline trends monitoring data from the current PIC Project.



Appendices – List of Figures

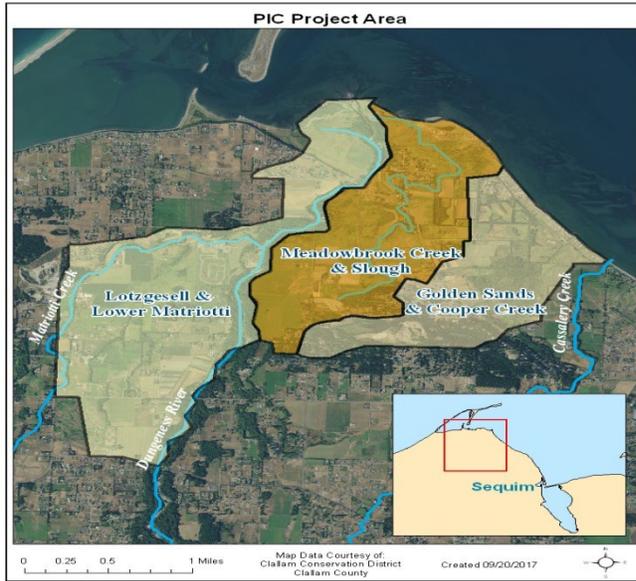


Figure 1: PIC Project Areas



Figure 2: Baseline trends sampling sites

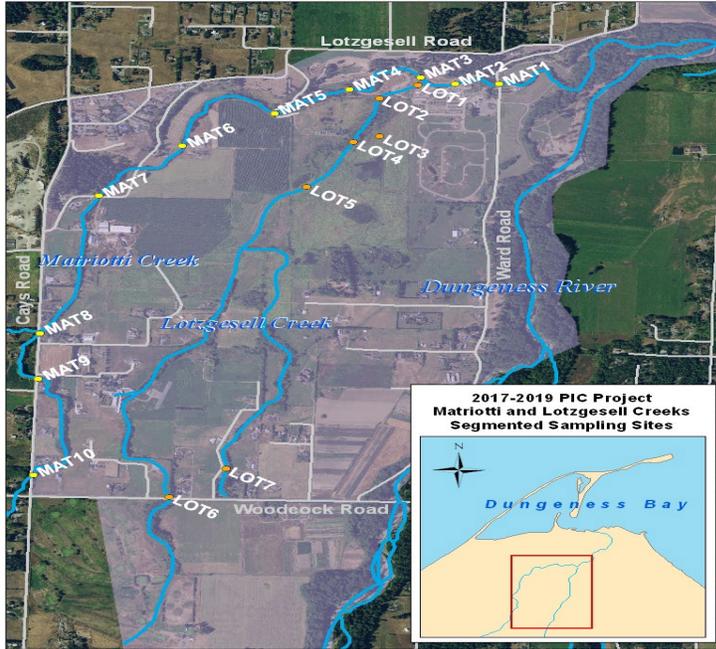


Figure 3: Segmented sampling sites

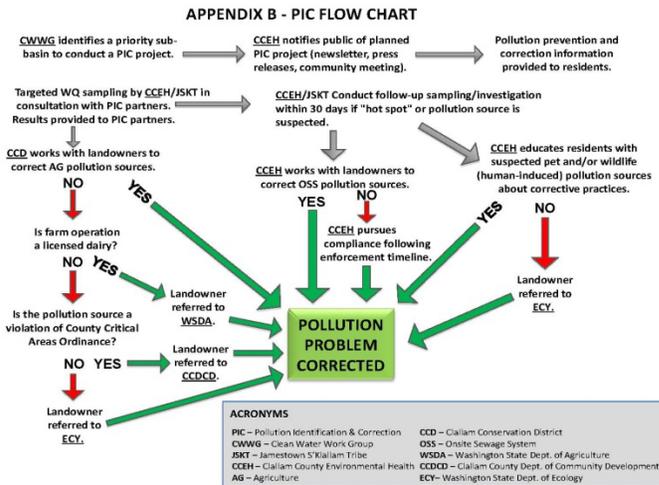


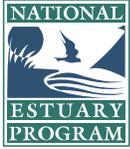
Figure 4: PIC Flowchart

For more information:

<http://www.clallam.net/HHS/EnvironmentalHealth/PICProject.html>

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