CLALLAM PIC UPDATE:
December 2020

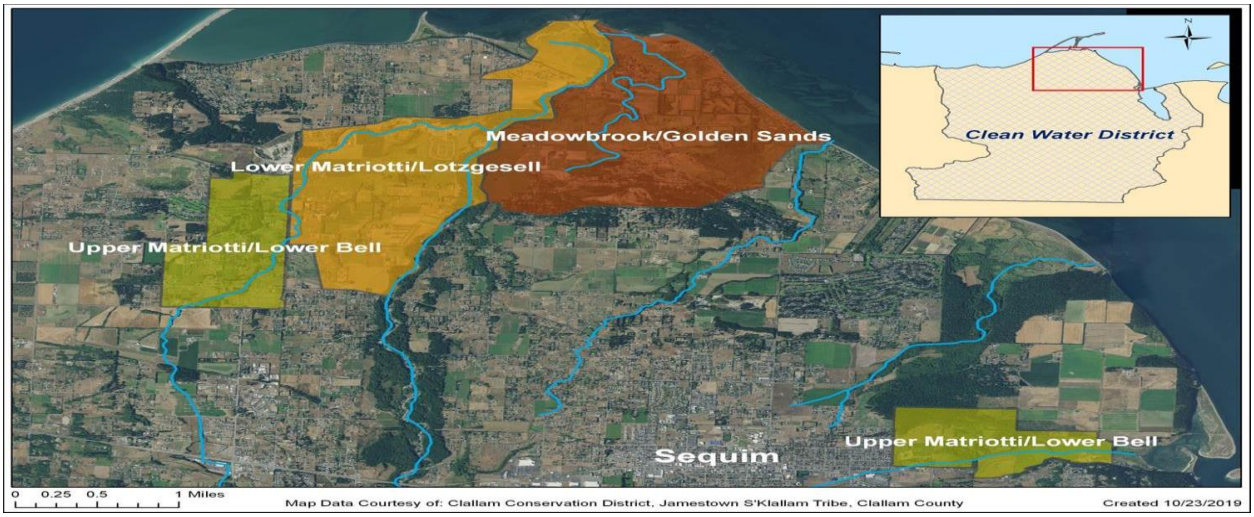
What's new?

Happy holidays! This Pollution Identification and Correction (PIC) newsletter update is long overdue! There have been multiple changes since March 2019's update.

Work funded by the National Estuary Program continued through 2019 in Lower Matriotti and Lotzgesell Creeks. This funding ended on November 30, 2019. Beginning December 1, 2019, primary work was redirected to a new focus area in Upper Matriotti Creek and Bell Creek with funding from the Washington State Department of Ecology.

The PIC Project Partners were also able to secure funding that will largely support the critical onsite septic system (OSS) cost-share program developed and implemented by the Clallam Conservation District. This funding is from the National Estuary Program. The Conservation District's cost-share program is a very valuable tool for completing corrections where landowners lack the means for funding projects on their own.

Dec. 2020 Update Topics



PIC focus areas 2015-2022 (Brown: 2015-2017; Orange: 2017-2019; Yellow: 2019-2022)

COVID-19 Impacts

COVID-19 has impacted this project in variety of ways:

Open House:

PIC Open Houses provide a valuable opportunity to get updates on local stream health trends, shellfish growing area status, activities in current and past PIC focus areas, and resources available to improve and protect water quality. PIC Project partners aim to host two Open Houses a year. The first Open House of 2020 was to be held March 31st. However, due to COVID-19, the Open House was and is postponed until further notice.

In lieu of 2020's Open Houses, Clallam County Environmental Health (CCEH) has mailed multiple letters to project-area homeowners in an effort to keep them up-to-date with current water quality issues and PIC project work.

Water Quality Monitoring:

Volunteers with Clallam County's Streamkeepers citizen scientists program typically conduct the Clean Water District's Baseline Trends water quality monitoring program. Streamkeepers in-person volunteer activities came to a halt after the March sampling event. Since April, the Streamkeepers Coordinator and CCEH staff assumed sampling while implementing COVID-19 safety precautions.

CCEH staff, with assistance from Jamestown S'Klallam Tribe, conducts the targeted (segmented) sampling in the focus area. Segmented sampling has been delayed overall due to staffing issues. However, periodic work during the spring and summer of 2020 was able to identify pollution hotspots. Hotspots and the data are discussed below.

Pollution Identification:

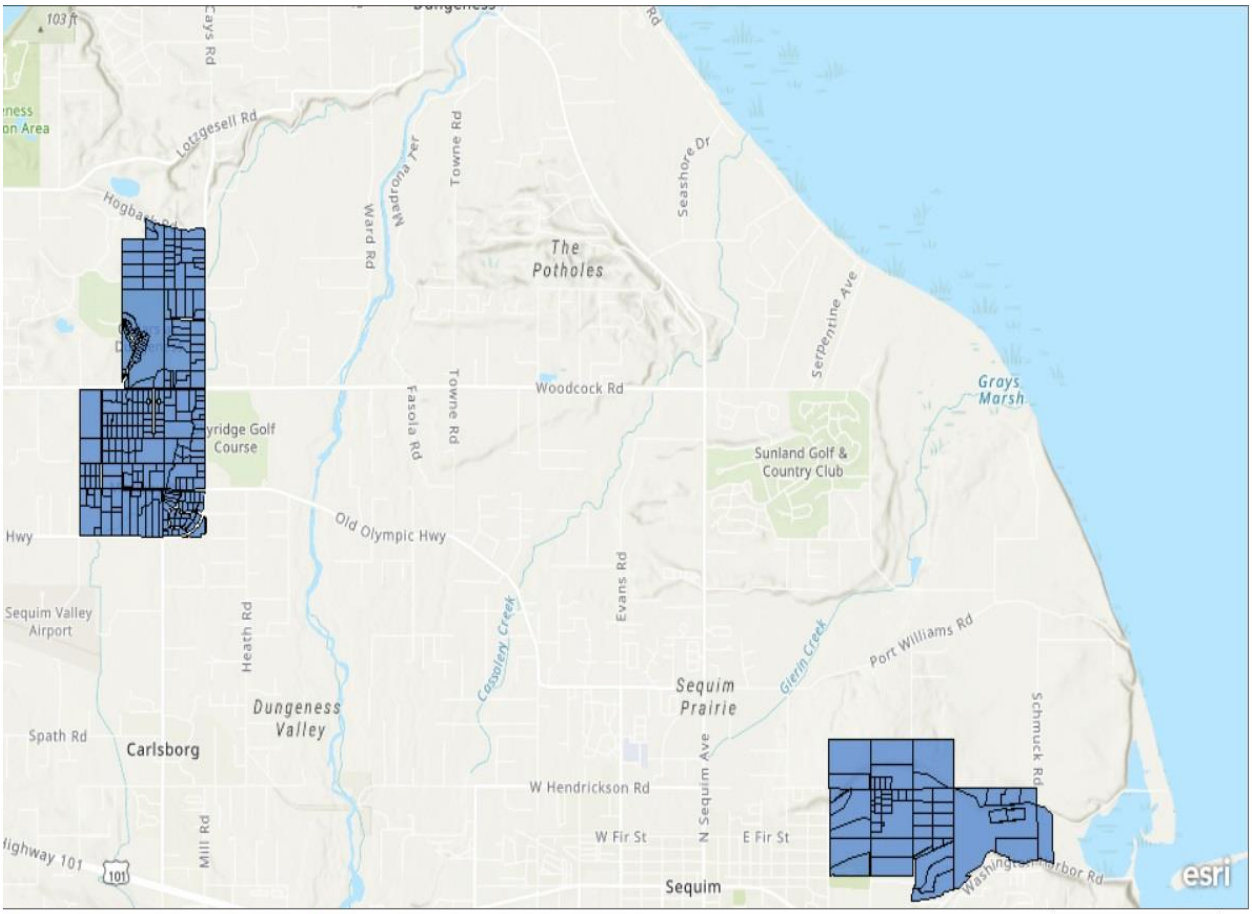
Customarily, targeted investigations begin at the parcel level and closest to the defined hotspots once they are identified. In an effort to avoid in-person contact, CCEH sent PIC area homeowners a letter with data and an investigation strategy that included COVID-19 safety measures. The letter included a permission slip homeowners could send back that would allow PIC staff to schedule an appointment and granted pre-arranged access to properties.

After further delays, property surveys were able to begin at the start of October. Parcels were prioritized based on sampling data, and the homeowners that sent back permission slips had their parcels surveyed first. However, it soon became necessary to revert to the original door-to-door method in order to contact homeowners along the creek. This method was quickly halted soon after implementing due to the reinstatement of stay-at-home orders in November to help minimize the spread of COVID-19.

New PIC Project Focus Area

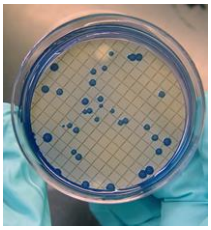
Pollution identification is performed on two scales: (1) through the monitoring of long-term water quality trends at the mouths of water bodies throughout the CWD, and (2) water quality sampling and other investigations in target sub-basins in order to identify the actual sources of contamination. Work in a PIC project focus area typically covers a two-year period, with the first year focusing on pollution source identification and the second year on corrective activities.

PIC project focus areas, or targeted sub-basins, are the focus of water quality correction activities, including segmented water quality sampling and parcel assessments, to identify and correct pollution sources. (However, this does not prevent pollution correction activities from occurring in areas outside of designated PIC project areas.) The results of the long-term water quality trends monitoring programs help determine where to focus source identification activities. Upper Matriotti and Bell Creeks were selected for targeted investigation based on 2019 trends monitoring data. A map of the current focus area is below.



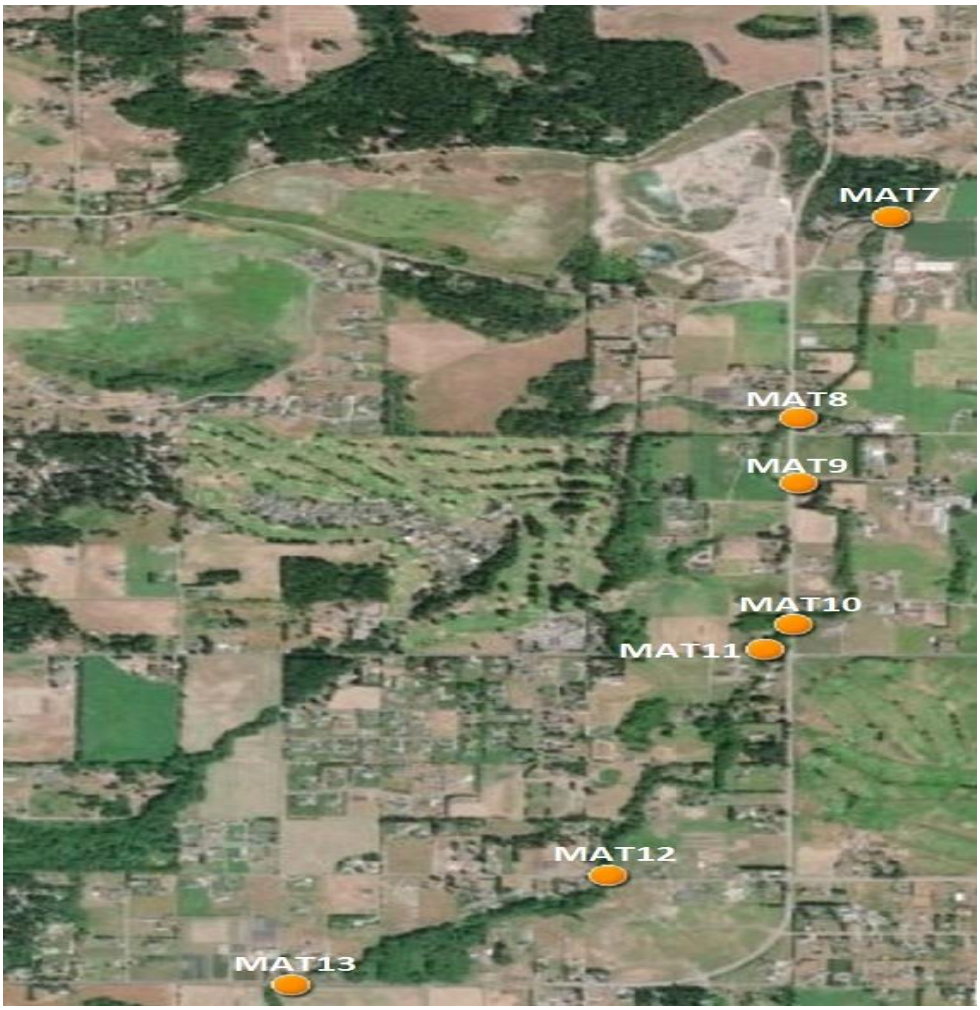
Parcel layer for the Upper Matriotti and Bell Creek PIC Focus Area (2020-2022)

Segmented Sampling, Hotspots, and Parcel Surveys



Fecal coliform is used as an indicator of water quality. Testing is a quick, inexpensive and a widely-accepted means to determine if pathogens from human and/or animal waste may be present in the water. The increased prevalence of FC is correlated with an increased risk of illness in both humans and marine life.

Project partners selected segmented sampling sites in the new focus area in the spring of 2020. These sites, found in the map below, are visited frequently to measure fecal coliform (FC) bacteria and in turn, can help identify contamination sources. In July of 2020, 12 "hotspots" were identified at many of these sites. Of the 12 hotspots identified, 1 was categorized as low priority, while the remaining 11 were categorized as medium priority. Data can be found in the tables below.



Upper Matriotti segmented sampling sites

Bell Creek segmented sampling sites

Date/Site	2/25/2020	3/2/2020	4/8/2020	5/12/2020	5/27/2020	6/2/2020	6/15/2020	6/16/2020	6/24/2020	7/1/2020	7/7/2020	Geo Mean	Comments
BC_confluence	220		78		172	124			110			132.1	
BC2					576	160			178			254.1	
BC3	444	84	60		464	328			102			180.6	
BC3a		88	100		308	192			172			155.0	
BC3b		126	64		438	128			188			153.4	
MAT7								204	296	264		251.7	
MAT8								304	324	368		330.9	
MAT9								286	378	292		316.0	
MAT10	372				182	758		232	580	178		327.3	
MAT11									386	220	604	371.5	6/16/2020 qualifer = N
MAT12								142	158		28	85.6	
Cassalery Creek				216	136	124	210					166.3	5/12 and 6/15 were tren

Segmented sampling data February-July 2020; Units are fecal coliform colony-forming units (CFU) per 100 mL sample.

High Priority	Medium Priority	Low Priority
> 400 FC/100 mL	100 to 399 FC/100 mL	50 to 99 FC/100 mL

Hotspot priority classification: Priority is based on a geometric mean between 50-400+ CFU/100mL.

Hotspot designation does not necessarily mean a major water quality problem exists: it means PIC Partners need to follow the PIC Plan and conduct surveys of surrounding parcels. Parcel surveys usually involve walking stream banks to look for obvious sources of bacterial pollution and noting streamside vegetation or lack thereof. Staff walks septic drain fields to check for signs of ponding, looks for pet waste, and asks about animal-keeping practices. Parcel surveys also serve as a way to connect with homeowners and offer educational material regarding water quality and best management practices.

PIC Partners are attempting to contact homeowners to schedule and conduct site visits in order to rule out potential sources of bacteria. Properties that are 1) along the creek, 2) near hotspots, and 3) do not have current OSS reports were prioritized for initial investigations through site visits and "parcel surveys." As stated above, property surveys came to a halt in November as a COVID-19 safety precaution due to the need to go door-to-door to contact homeowners.

Below is the most recent segmented sampling data. While November's data may seem like an improvement over past months, PIC Partners need to stick to the PIC Plan and continue visiting the remaining parcels for PIC surveys. Also, fecal coliform concentrations tend to decrease during the rainy season. A saying in the water quality world states that "the solution to pollution is dilution." While humorous and seemingly true, the real solution is to discover and correct the source of fecal pollution. Project partners strive to meet water quality standards and decrease overall fecal coliform loading into the watershed.

Project	PIC NTA 0319/ DOE PIC 2020
Report to:	Heather Watts
Lab Method	SM9222D
Meter/Probe/Sensor	

Clallam County Environmental Health Lab
223 E. 4th St.
Port Angeles, WA 98362
(360) 417-2334

Bottle #	Site	Date/Time	Lab ID number 092-	Fecal Coliform CFU/100ml	Temp. deg. C	Salinity PSU (ppt)	comments
23	MAT 7	11/9/20 10:00	05456	22			
88	MAT 8	10:13	05457	92			
104	MAT 9	10:15	05458	130/130			
100	MAT 10	10:19	05459	178			
64	MAT 11	10:22	05460	188			
61	MAT 12	10:30	05461	60			
135	MAT 13	10:57	05462	32			
89	2176 Wadcak	10:40	05463	24/26			

Samples Relinquished by: Andy Gosnell
Date & Time: 11:21 11/9/20
Samples received chilled? (Yes) No

Samples Received by: Shiwaldup
Date & Time: 11/9/20 11:21
Date Reported 11/10/20 13:55 Initials EW

November 2020 segmented sampling data, Upper Matriotti Creek

Clean Water District

Details about the Clean Water District were included in the last newsletter, but it seemed useful to include again since it has been so long since there has been a newsletter update.

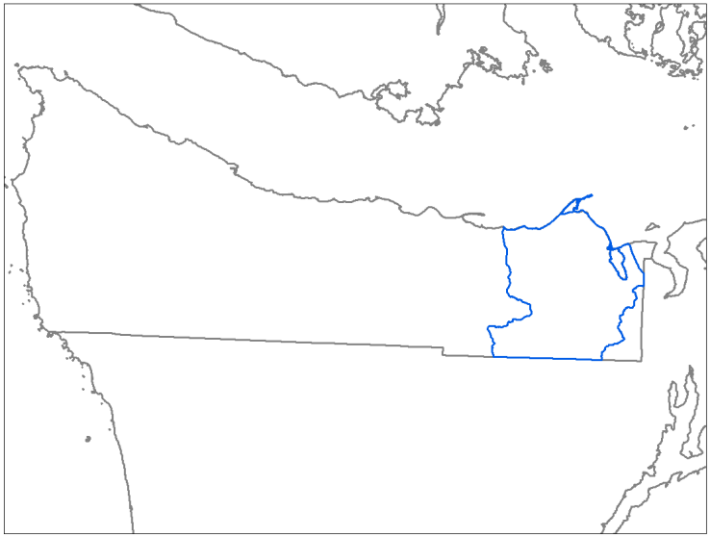
The full name of PIC is actually Pollution Identification and Correction Plan for the Sequim Bay-Dungeness Watershed Clean Water District (whew). So, what is the Clean Water District anyway?

The "District" was created in 2000 to address water quality issues and shellfish growing area downgrades in the eastern part of Clallam County (maps below). Creation of the district was triggered by the downgrade in commercial shellfish growing in Dungeness Bay, and it is state law to establish a shellfish protection district when this happens. The name "Clean Water District" was chosen by local stakeholders, who made the area the same as the Dungeness River Management Team's area to be more comprehensive than just the Dungeness Bay watershed. This boundary was also selected because of the complications presented by the irrigation network.

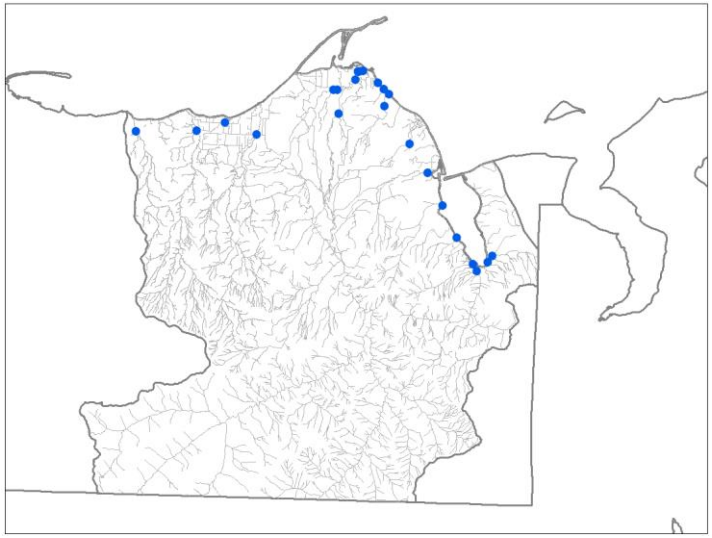
Various groups work collaboratively to address water quality issues within the Clean Water District, and PIC is just one of these projects. Through PIC, the Baseline Trends Monitoring team keeps tabs on all the District streams that discharge into marine waters. Baseline Trends information helps guide selection of PIC focus areas. Within a focus area, segmented sampling helps figure out which sections of stream could use improvement and PIC surveys help determine how activities on nearby parcels might impact in-stream water quality. The segmented sampling locations are in the maps above.

A VERY dedicated team of Streamkeepers volunteers continues regular Baseline Trends Monitoring throughout the entire Sequim Bay-Dungeness Clean Water District. Their dedication has not wavered through staffing changes in 2019 and 2020, nor has it wavered through COVID-19. It has been inspiring to see this group of people care so much about improving the world around them, even through the most challenging of times.

Clallam County and Clean Water District (CWD)



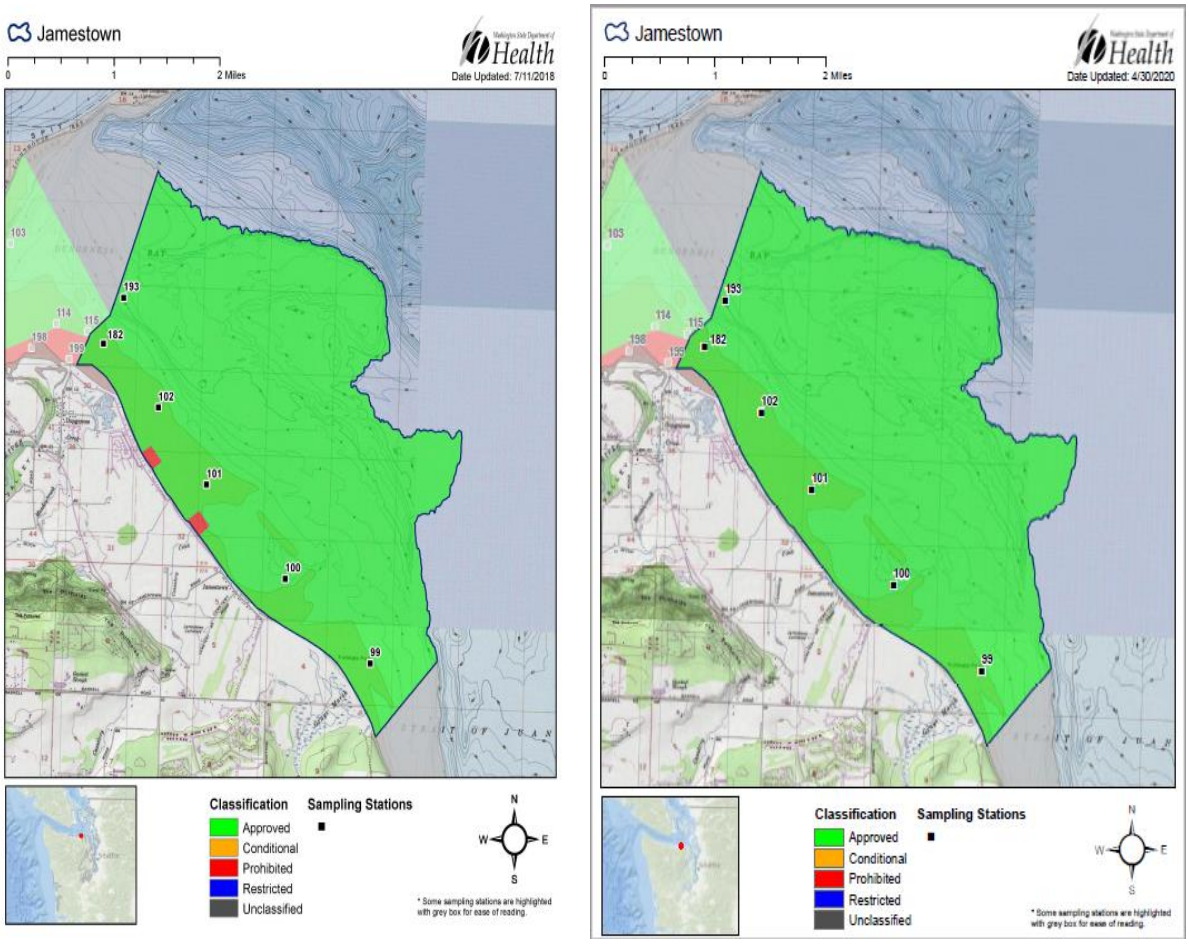
CWD and Baseline Trends Monitoring Sites



Shellfish Growing Area Upgrades 2020

The March 2019 newsletter highlighted 2018's upgrades near Washington Harbor and just outside John Wayne Marina (both in Sequim Bay). This July, twenty-three acres at the mouths of Golden Sand Slough and Cassalery Creek in the Jamestown Growing Area were upgraded from "prohibited" to "approved" due to good marine water quality.*

These upgrades are a testament to the efficacy of the PIC Project – notably, the impact the work in Golden Sands had on the most recent upgrade. In 2015 CCEH received phone calls from concerned neighbors in the Golden Sands area regarding sewage being discharged into Golden Sands Slough. Water sampling yeilded very high levels of fecal coliform. PIC Partners concentrated work in the area to resolve septic issues on several properties. Three properties had repairs completed, with the last one completed in 2019. Current data indicate bacteria levels are low again. This helped improve marine water quality and led to the upgrades.



Jamestown Growing area classifications 2019 (left) and 2020 (right)

Onsite Septic System Inspection Rebates

PIC work has confirmed that issues with wastewater treatment are a leading cause of water quality impairment. Septic systems need regular checking and maintenance to avoid costly repairs, just like your car or your house. The Washington State 2005 on-site septic system regulations (WAC 246-272A) state that septic system owners shall "assure a complete evaluation of the system components to determine functionality, maintenance needs, and compliance with regulations and any permits." State regulations require that homeowners inspect and maintain their septic system to ensure it is functioning properly.

Clallam County Environmental Health offers homeowners the opportunity to apply for a rebate/incentive to get either part or all of their inspection or locate costs covered. This program is funded through a National Estuary Program Shellfish grant, has finite funds, and adheres to a defined protocol that prioritizes applicant's parcels. The open period was recently extended from October 31, 2020 until March 31, 2021. You can find more information at http://www.clallam.net/HHS/EnvironmentalHealth/onsite.html. Homeowners are encouraged to schedule and complete their inspections while these funds are available. They will not be avaiaible again until 2022.

Resources:

- Washington Shellfish Safety Map: www.doh.wa.gov/shellfishsafety
- Washington Department of Fish and Wildlife Shellfish Information: https://wdfw.wa.gov/fishing/shellfish/
- Streamkeepers of Clallam County: http://www.clallam.net/SK/
- Clallam Conservation District Onsite Cost-Share Program: https://clallamcd.org/financial-assistance
- Keep an eye out for CCEH's OSS ads in Sound Publishing publications!

**Note to readers: It is not necessarily safe or approved to collect and eat shellfish around growing areas even if the growing area is classified as "approved." Washington Department of Fish and Wildlife and the Department of Health classify recreational shellfish harvests in other ways. Always check the Washington Shellfish Safety Map online (link below) or call the biotoxin hotline at 1-800-562-5632 for closures. Visit WDFW online (link below) or call the Shellfishing Regulation Hotline at 866-880-5431 for recreational shellfish harvest information.*

DEPARTMENT OF ECOLOGY
State of Washington

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