Samish Bay

Annual Shellfish Growing Area Review

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Area: Samish Bay

Year Ending: December 31, 2024

Classification: Approved, Conditionally Approved, Prohibited

Activities in the Growing Area in 2024

The growing area was sampled five times in accordance with National Shellfish Sanitation Program (NSSP) Systematic Random Sampling (SRS) criteria. Four sampling events occurred during Open status. Sampling events that were cancelled due to weather or occurred during closures will be made up in 2025. The Conditionally Approved portion of Samish Bay was closed 16 times, including two closure extensions, for approximately 55 days due to Samish River flow exceeding closure criteria. Marine water samples continue to be collected at strategic locations in Samish Bay after closure events, when possible.

Skagit County continues its EPA National Estuary Program-funded pollution identification and correction activities in the Samish Bay watershed. The Skagit Conservation District and WSU Extension continued educational and best management practices assistance and outreach activities with agricultural landowners. Washington State Department of Agriculture (WSDA) and Washington State Department of Ecology (Ecology) received NEP funding for enhanced water compliance monitoring and referral and technical assistance. WSDA focused on dairies and Ecology addressed nonpoint pollution stemming from nondairy agriculture. The Clean Samish Initiative group continues pollution identification and correction work in the area.

Analytical Results of Water Samples

Table 1 summarizes the most recent 30 regulatory samples collected from each of the sampling stations. It includes data from two sampling events that occurred during closure events (due to Samish River condition). All stations meet NSSP criteria for an Approved classification. Although Conditionally Approved Station 322 has an unsorted estimated 90th percentile of 31.1 FC/100mL, it is not considered Threatened due to an estimated 90th percentile of 23.5 FC/100mL after sorting Samish River closure event data out of the 30-sample dataset.

Figure 1 shows a summary of fecal coliform (FC) loading and flow (cubic feet per second - cfs) data collected from the Samish River at Thomas Road during closure and closure extension events. Figure 1 only includes data from the single closest sampling event to the maximum (peak) flow associated with the initial growing area closure. Flows were recorded from the Samish River flow gauge (USGS 12201500). Flow increases at the time of sampling were calculated by subtracting flow before the river started rising from the flow at the time of sampling, regardless of rising or falling river conditions.

There were 16 river rises above Samish River flow closure criteria during 2024, plus two closure extensions due to increases in flow that met closure criteria during existing closures (4/28/24 and 11/17/24 events). Sample collection for the 2/25/24, 3/23/24, 8/24/24, 10/27/24, and 12/7/24 sampling events occurred 12 hours or more after peak flow (river crest on USGS hydrograph). As seen in Figure 1, the resulting loading rates for these five sampling events were under $4.74x10^{12}$ FC/day. All other samples for closure events were collected less than 12 hours from the peak flow and in most cases, less than 6 hours from the peak flow. All loading rates for these events exceeded $4.74x10^{12}$ FC/day.

The 12 confirmed (>$4.74x10^{12}$ FC/day) closures were an average of 3.4 times higher than the standard ($4.74x10^{12}$ FC/day).

The Department is currently evaluating the appropriateness of the 24-hour river rise closure criteria set by the 2017 Sanitary Survey addendum. Preliminary findings show that all closure criteria (Samish River cfs that closes a portion of Samish Bay) set in 2017 are still accurate.

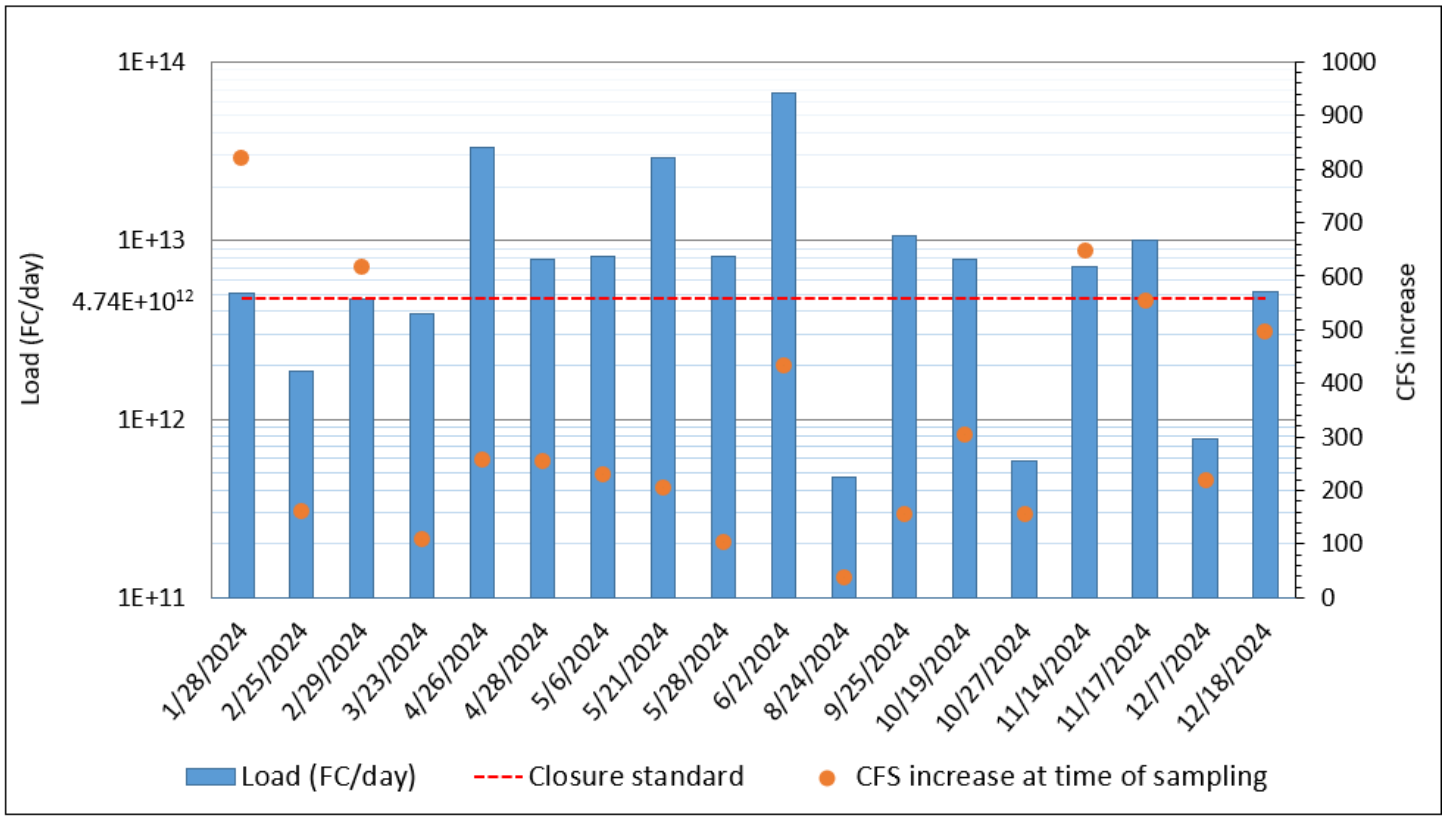

FIGURE 1. Samish River closure event FC loading and flow (CFS) increases at time of sampling.

Change in Actual Pollution Sources that Impact the Growing Area

We currently have no information indicating the area has any new sources of pollution.

Classification Status

- ☒ Well within the classification standards
- ☐ Meets standards, but threatened with downgrade in classification
- ☐ Fails to meet current classification standards

Remarks and Recommendations

The area is correctly classified. The Department should continue to evaluate Samish River data and the 24-hour river rise needed to trigger a conditional area closure. Samish River samples should be collected just before or at the peak of the USGS hydrograph, when bacterial loading is at its highest.

Management Plan Evaluation

1. Have all parties involved complied with the conditions of the management plan ..... Yes
2. Has reporting been adequate to manage the conditional area ..... Yes
3. Does the area consistently meet approved area criteria when it is open for harvest ..... Yes
4. Has a field inspection of critical pollution sources been conducted ..... Yes

TABLE 1. Summary of Marine Water Data (SRS) for the Samish Bay Growing Area

Sampling Event Type: Regulatory

Maximum Number of Samples: 30

Tides Included: All

Station Number	Classification	Date Range	Range (FC/100mL)	Geomean (FC/100mL)	Est. 90th Percentile (FC/100mL)	Meets Standard
76	Approved	1/16/2020 - 10/22/2024	1.7 - 27.0	2.3	5.0	Y
77	Approved	1/16/2020 - 10/22/2024	1.7 - 13.0	2.5	5.5	Y
84	Approved	11/21/2019 - 10/22/2024	1.7 - 14.0	2.5	5.8	Y
273	Approved	1/16/2020 - 10/22/2024	1.7 - 9.3	2.2	4.1	Y
358	Approved	1/16/2020 - 10/22/2024	1.7 - 4.5	1.9	2.4	Y
363	Approved	1/16/2020 - 10/22/2024	1.7 - 13.0	2.0	3.4	Y
71	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 11.0	2.1	4.1	Y
78	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 49.0	2.8	8.3	Y
79	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 70.0	2.5	8.6	Y
80	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 49.0	3.1	10.3	Y
81	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 49.0	4.8	21.0	Y
82	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 130.0	4.5	19.4	Y
85	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 130.0	2.7	9.6	Y
86	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 9.3	2.0	3.6	Y
87	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 49.0	2.9	8.6	Y
90	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 49.0	3.7	16.8	Y
91	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 23.0	3.5	11.8	Y
92	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 13.0	2.1	3.7	Y
94	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 49.0	4.7	22.6	Y
322	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 130.0	5.5	31.1	Y
361	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 23.0	2.3	5.3	Y
362	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 9.3	2.1	4.1	Y
364	Conditionally Approved	1/16/2020 - 10/22/2024	1.7 - 13.0	2.2	4.4	Y
83	Prohibited	1/16/2020 - 10/22/2024	1.7 - 70.0	5.8	27.0	Y
88	Prohibited	1/16/2020 - 10/22/2024	1.7 - 49.0	4.4	16.2	Y
89	Prohibited	3/5/2020 - 10/22/2024	1.7 - 49.0	4.2	16.5	Y
311	Unclassified	1/16/2020 - 10/22/2024	1.7 - 33.0	2.0	4.3	Y

The criteria for Approved shellfish growing waters are a fecal coliform geometric mean not greater than 14 organisms/ 100 mL and an estimated 90th percentile not greater than 43 organisms/ 100 mL. The above table shows bacteriological results in relation to program standards.

MAP 1. Samish Bay Growing Area