

Henderson Inlet

Annual Shellfish Growing Area Review



Prepared By: Scott Chernoff

Area: Henderson Inlet

Year Ending: December 31, 2023

Classification: Approved, Conditionally Approved, Prohibited

Activities in the Growing Area in 2023

The growing area was sampled a minimum of six times in accordance with the National Shellfish Sanitation Program (NSSP) Systematic Random Sampling criteria. The marine stations near the head of the Inlet were sampled 12 times. Ten of the samples were collected during the Open status. The Conditionally Approved area was closed five times for a total of 46 days due to rainfall (≥ 0.5 -inch in 24-hours). The entire growing area was closed once for a total of five days due to excessive rainfall.

Thurston County Public Health and Social Services Department continues to implement their enhanced on-site sewage system operation and maintenance program. In addition, Thurston County received EPA National Estuary Program funds to find and fix fecal pollution in the Dobbs, Fleming, Myers, and Sleepy Creek watersheds. The Henderson Inlet Shellfish Protection District continues to meet and investigate pollution sources.

Analytical Results of Water Samples

Table 1 summarizes the most recent 30 samples collected from each of the sampling stations. Four of these samples were taken when the Conditionally Approved area was in the Closed status. All marine water stations meet the NSSP standard for their respective classification. Table 2 shows the Conditionally Approved stations during Open Status (less than 0.5-inch of rainfall in 24 hours). After removing the Closed Status data, stations 187 and 189 in the Conditionally Approved area are Threatened with respective estimated 90th percentiles of 28.1 FC/100mL and 29.5 FC/100mL. Table 4 displays the last 30 individual sample results for stations 187 and 189 during Open Status.

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 classified appropriately. The Department should continue to collaborate with Thurston County and other Shellfish Protection District members to identify and correct sources of pollution in the Henderson Inlet watershed.

Management Plan Evaluation

1. Have all parties involved complied with the conditions of the management planYes
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 Henderson Inlet 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. 90 th Percentile (FC/100mL)	Meets Standard
190	Approved	7/6/2021 - 12/21/2023	1.7 - 49.0	4.9	19.4	Y
191	Approved	7/6/2021 - 12/21/2023	1.7 - 70.0	3.8	12.8	Y
192	Approved	2/28/2019 - 12/21/2023	1.7 - 17.0	2.8	7.5	Y
193	Approved	2/28/2019 - 12/21/2023	1.7 - 240.0	3.6	16.2	Y
194	Approved	7/6/2021 - 12/21/2023	1.7 - 49.0	3.1	9.8	Y
195	Approved	7/6/2021 - 12/21/2023	1.7 - 33.0	4.9	18.1	Y
196	Approved	7/6/2021 - 12/21/2023	1.7 - 23.0	3.4	9.8	Y
197	Approved	7/6/2021 - 12/21/2023	1.7 - 64.0	4.4	19.8	Y
198	Approved	7/6/2021 - 12/21/2023	1.7 - 17.0	3.0	8.3	Y
199	Approved	7/6/2021 - 12/21/2023	1.7 - 17.0	2.4	5.2	Y
200	Approved	7/6/2021 - 12/21/2023	1.7 - 22.0	3.7	12.1	Y
201	Approved	7/6/2021 - 12/21/2023	1.7 - 23.0	3.8	12.4	Y
202	Approved	2/28/2019 - 12/21/2023	1.7 - 79.0	4.0	15.9	Y
203	Approved	2/28/2019 - 12/21/2023	1.7 - 130.0	3.1	14.8	Y
204	Approved	2/28/2019 - 12/21/2023	1.7 - 33.0	2.7	9.0	Y
205	Approved	2/28/2019 - 12/21/2023	1.7 - 49.0	4.6	18.8	Y
206	Approved	2/28/2019 - 12/21/2023	1.7 - 33.0	2.3	5.7	Y
207	Approved	2/28/2019 - 12/21/2023	1.7 - 79.0	2.6	8.1	Y
208	Approved	2/28/2019 - 12/21/2023	1.7 - 79.0	3.0	10.7	Y
209	Approved	2/28/2019 - 12/21/2023	1.7 - 7.8	2.1	3.5	Y
698	Approved	2/28/2019 - 12/21/2023	1.7 - 14.0	2.2	4.4	Y
723	Approved	2/28/2019 - 12/21/2023	1.7 - 79.0	2.6	10.1	Y
724	Approved	2/28/2019 - 12/21/2023	1.7 - 220.0	2.7	10.8	Y
767	Approved	2/28/2019 - 12/21/2023	1.7 - 4.5	2.0	3.1	Y
825	Approved	2/28/2019 - 12/21/2023	1.7 - 14.0	2.3	4.9	Y
187	Conditionally Approved	7/6/2021 - 12/21/2023	1.7 - 170.0	6.9	46.1	N
189	Conditionally Approved	7/6/2021 - 12/21/2023	1.7 - 110.0	6.6	35.8	Y
185	Prohibited	7/6/2021 - 12/21/2023	1.7 - 170.0	15.2	85.2	N
186	Prohibited	7/6/2021 - 12/21/2023	1.7 - 110.0	9.7	53.7	N
188	Prohibited	7/6/2021 - 12/21/2023	1.7 - 130.0	10.4	66.5	N
212	Prohibited	7/6/2021 - 12/21/2023	1.7 - 79.0	7.1	38.4	Y

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/ 100 mL with an estimated 90th percentile not greater than 43 organisms/ 100 mL. The above table shows bacteriological results in relation to program standards.

TABLE 2. Summary of Conditionally Approved Marine Water Data (SRS) in Open Status in the Henderson Inlet Growing Area

Sampling Event Type: Regulatory

Maximum Number of Samples: 30

Tides Included: All

Includes data for rainfall amounts: 0.00-0.49" on days 1 – 5 previous to the sampling event.

Station Number	Classification	Date Range	Range (FC/100mL)	Geomean (FC/100mL)	% of Samples >43 FC/100mL	Meets Standard
187	Conditionally Approved	12/3/2020 – 12/21/2023	1.7 – 170.0	5.3	28.1	Y
189	Conditionally Approved	12/3/2020 – 12/21/2023	1.7 – 110.0	6.0	29.5	Y

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms / 100 mL with not more than 10 percent greater than 43 organisms / 100 mL. The above table shows bacteriological results in relation to program standards.

TABLE 4. Marine Water Quality Summary for the Threatened Stations in Henderson Inlet

Station: 187

Classification: Conditionally Approved

Method: SRS

Includes data for rainfall amounts 0-0.49 on days 1-5 previous to the sampling event.

Total Samples: 30 Range (FC/100 mL): 1.7 – 170.0 GeoMean (FC/100 mL): 5.3				Date Range: 12/3/2020 – 12/21/2023 E90th (FC/100 mL): 28.1 Meets Standard: Y		
Sample Date	Event Type	Time	Tide	SWT	Salinity	Fecal Coliform
12/03/2020	Regulatory	11:17	Ebb	10	25	4.5
03/03/2021	Regulatory	11:03	Ebb	9	22	2.0
04/20/2021	Regulatory	11:07	Flood	15	19	1.7
05/17/2021	Regulatory	10:49	Ebb	15	24	7.8
07/06/2021	Regulatory	15:07	Flood	19	28	2.0
08/03/2021	Regulatory	13:45	Flood	21	26	2.0
10/05/2021	Regulatory	15:11	Flood	15	29	6.8
01/26/2022	Regulatory	10:45	Flood	8	22	49.0
02/22/2022	Regulatory	11:13	Ebb	7	24	2.0
03/24/2022	Regulatory	10:07	Flood	8	18	1.7
04/20/2022	Regulatory	10:55	Ebb	9	19	110.0
05/05/2022	Regulatory	09:39	Ebb	13	18	4.5
07/26/2022	Regulatory	16:08	Flood	21	27	2.0
08/22/2022	Regulatory	14:15	Flood	21	27	2.0
09/29/2022	Regulatory	09:44	Ebb	16	29	13.0
10/19/2022	Regulatory	12:49	Flood	14	29	1.7
11/17/2022	Regulatory	10:35	Flood	10	29	2.0
12/06/2022	Regulatory	12:47	Flood	9	27	7.8
01/10/2023	Regulatory	11:24	Ebb	8	20	22.0
02/13/2023	Regulatory	11:19	Ebb	8	26	2.0
03/08/2023	Regulatory	10:12	Ebb	8	25	4.5
03/28/2023	Regulatory	11:50	Ebb	9	19	4.5
04/27/2023	Regulatory	11:04	Flood	15	18	7.8
05/10/2023	Regulatory	10:13	Ebb	15	20	2.0
07/18/2023	Regulatory	08:41	Ebb	17	27	49.0
08/17/2023	Regulatory	08:00	Ebb	20	28	170.0
09/05/2023	Regulatory	11:29	Flood	17	29	7.8
10/10/2023	Regulatory	15:47	Flood	15	31	2.0
11/30/2023	Regulatory	09:34	Ebb	9	29	4.5
12/21/2023	Regulatory	11:38	Flood	11	28	2.0

Station: 189

Classification: Conditionally Approved

Method: SRS

Includes data for rainfall amounts 0-0.49 on days 1-5 previous to the sampling event.

Total Samples: 30				Date Range: 12/3/2020 – 12/21/2023		
Range (FC/100 mL): 1.7 – 110.0				E90th (FC/100 mL): 29.5		
GeoMean (FC/100 mL): 6.0				Meets Standard: Y		
Sample Date	Event Type	Time	Tide	SWT	Salinity	Fecal Coliform
12/03/2020	Regulatory	11:13	Ebb	10	24	13.0
03/03/2021	Regulatory	11:16	Ebb	9	23	6.1
04/20/2021	Regulatory	11:24	Flood	16	24	1.7
05/17/2021	Regulatory	10:34	Ebb	16	24	17.0
07/06/2021	Regulatory	15:25	Flood	18	29	4.0
08/03/2021	Regulatory	13:28	Flood	21	26	2.0
10/05/2021	Regulatory	15:05	Flood	15	29	2.0
01/26/2022	Regulatory	11:04	Flood	8	22	1.7
02/22/2022	Regulatory	11:04	Ebb	6	25	1.7
03/24/2022	Regulatory	10:25	Flood	9	25	2.0
04/20/2022	Regulatory	11:11	Ebb	9	18	49.0
05/05/2022	Regulatory	09:55	Ebb	12	7	11.0
07/26/2022	Regulatory	15:48	Flood	20	28	1.7
08/22/2022	Regulatory	14:31	Flood	21	27	2.0
09/29/2022	Regulatory	09:24	Flood	16	28	11.0
10/19/2022	Regulatory	13:05	Flood	15	29	1.7
11/17/2022	Regulatory	10:20	Flood	10	28	1.7
12/06/2022	Regulatory	13:04	Flood	8	23	33.0
01/10/2023	Regulatory	11:08	Ebb	8	23	33.0
02/13/2023	Regulatory	11:02	Ebb	8	25	4.5
03/08/2023	Regulatory	09:58	Ebb	8	25	4.0
03/28/2023	Regulatory	11:35	Ebb	10	24	4.0
04/27/2023	Regulatory	10:49	Flood	14	25	2.0
05/10/2023	Regulatory	09:59	Ebb	14	27	4.5
07/18/2023	Regulatory	08:28	Ebb	17	22	46.0
08/17/2023	Regulatory	08:09	Ebb	20	24	110.0
09/05/2023	Regulatory	11:19	Flood	17	29	13.0
10/10/2023	Regulatory	15:55	Flood	16	31	22.0
11/30/2023	Regulatory	09:26	Ebb	10	29	7.8
12/21/2023	Regulatory	11:29	Flood	11	28	2.0

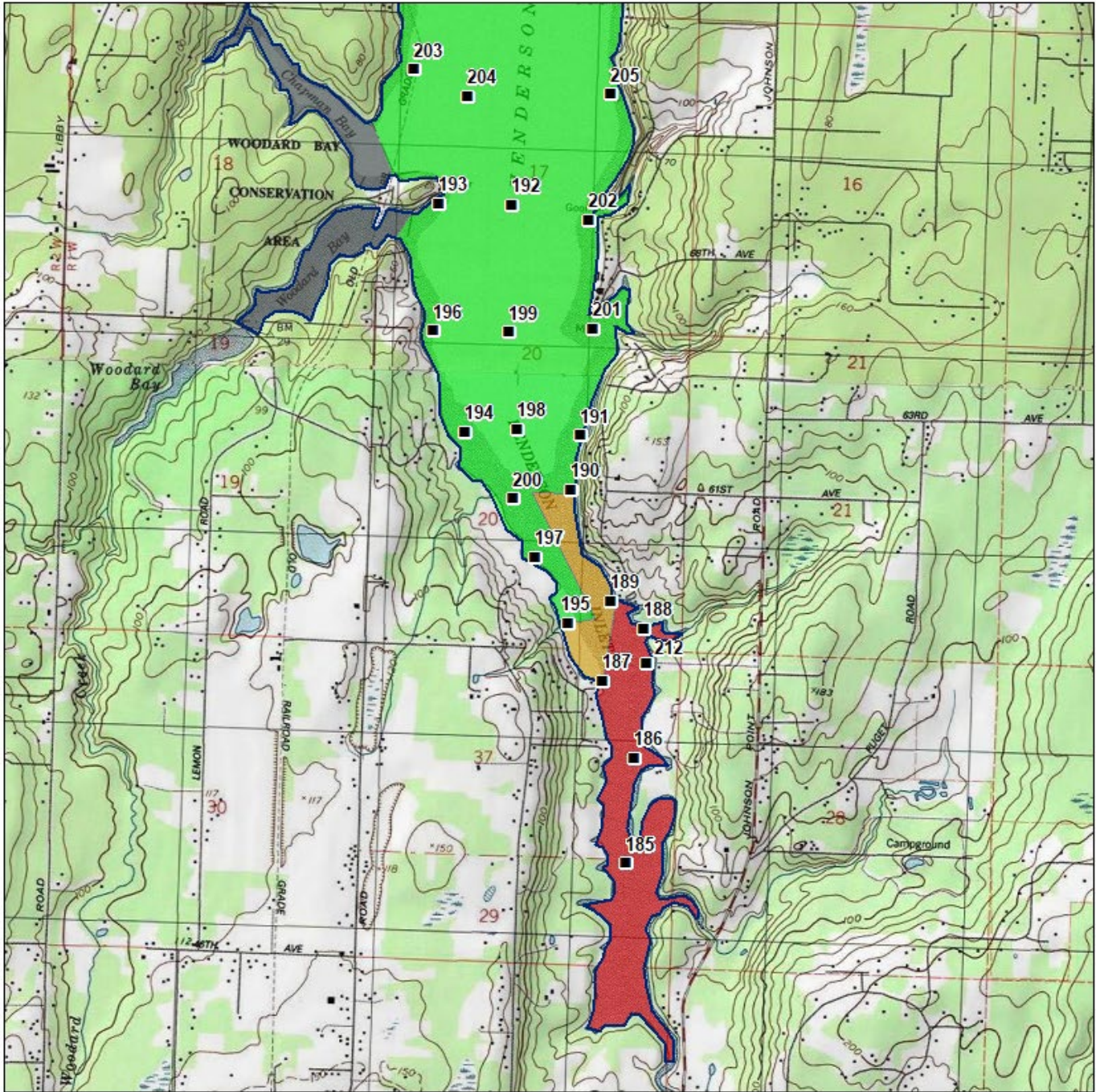
MAP 2. Henderson Inlet Growing Area (2 of 2)

Henderson Inlet (2 of 2)

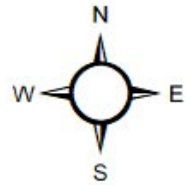


Date Updated: 8/4/2022

0 0.75 1.5 Miles



Classification	Sampling Stations
■ Approved	■
■ Conditional	
■ Prohibited	
■ Restricted	
■ Unclassified	



* Some sampling stations are highlighted with grey box for ease of reading.