

**WASHINGTON STATE DEPARTMENT OF HEALTH  
OFFICE OF SHELLFISH AND WATER PROTECTION**

**ANNUAL GROWING AREA REVIEW**

**PREPARED BY:** Jerry Lukes, Environmental Specialist

**AREA:** Pacific Coast

**YEAR ENDING:** December 31, 2008

**CLASSIFICATION:** Approved, Prohibited

**ACTIVITIES IN THE GROWING AREA IN 2008:**

Samples were collected from the growing area 6 times during the year using the systematic random sampling method.

**ANALYTICAL RESULTS OF WATER SAMPLES:**

Table #1 summarizes the results of all samples collected from the area. This summary shows that all stations in the area pass the NSSP water quality standard. Sampling stations #11 and #196 are threatened due to elevated bacteria levels and stations #5, #6, and #197 are of concern. Individual sample results for stations #11 and #196 are shown in Tables #2 and #3 respectively.

**CHANGE IN ACTUAL POLLUTION SOURCES THAT IMPACT THE GROWING AREA:**

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

**CLASSIFICATION STATUS:**

- Well within the classification standards
- Meets standards but some concerns
- Meets standards but threatened with a downgrade in classification
- Fails to meet classification standards

**REMARKS AND RECOMMENDATIONS:**

Table #1 shows that all stations meet the NSSP water quality standards for approved classification and the area is correctly classified.

**Table 1**  
**Summary of Marine Water Data (SRS)**  
**Growing Area: Pacific Coast**  
**Classification: Approved, Prohibited**

**Fecal Coliform Organisms/100 ml**

<b>Station Number</b>	<b>Sample Date Range</b>	<b>Classification</b>	<b>Number of Samples</b>	<b>Range</b>	<b>Geometric Mean</b>	<b>Est. 90<sup>th</sup> Percentile</b>	<b>Meets Std.</b>
1	4/26/04 – 12/09/08	Approved	30	1.7 - 13.0	2.4	5	Yes
2	11/20/03 – 12/09/08	Approved	30	1.7 - 23.0	2.8	8	Yes
3	11/20/03 – 12/09/08	Approved	31	1.7 - 130.0	3.3	12	Yes
4	11/20/03 – 12/09/08	Approved	31	1.7 - 170.0	3.5	13	Yes
5	11/20/03 – 12/09/08	Approved	30	1.7 - 130.0	4	21	Yes
6	11/20/03 – 12/09/08	Approved	31	1.7 - 130.0	5.1	21	Yes
7	11/20/03 – 12/09/08	Approved	30	1.7 - 170.0	4.7	18	Yes
8	11/20/03 – 12/09/08	Approved	31	1.7 - 49.0	2.4	5	Yes
9	11/20/03 – 12/09/08	Approved	31	1.7 - 23.0	3.4	9	Yes
10	11/20/03 – 12/09/08	Approved	31	1.7 - 70.0	3.7	12	Yes
11	3/08/04 – 12/09/08	Approved	30	1.7 - 240.0	5.6	36	Yes
12	3/08/06 – 12/09/08	Prohibited	30	1.7 - 540.0	12.7	97	No
195	3/08/06 – 12/09/08	Approved	31	1.7 - 79.0	4.3	18	Yes
196	5/26/04 – 12/09/08	Approved	30	1.7 - 170.0	5.6	34	Yes
197	4/26/04 – 12/09/08	Approved	31	1.7 - 70.0	6.2	29	Yes
198	5/26/04 – 12/09/08	Approved	30	1.7 - 79.0	3	9	Yes

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100 ml and an estimate of the 90<sup>th</sup> percentile not greater than 43 organisms/100 ml. The above table shows bacteriological results in relation to program standards.

\*N/A – SRS criteria require a minimum of 30 samples for each station.

## TABLE 2

### SUMMARY OF SHELLFISH GROWING AREAS WATER QUALITY STUDY RESULTS

Growing Area: **PACIFIC COAST**

Sampling Station Number: **11**

Classification: **Approved**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
03/08/2004	09:11	Flood	7.8	9	8
05/10/2004	10:50	Ebb	1.7	14	26
07/12/2004	11:12	Ebb	1.7	15	32
09/22/2004	10:50	Ebb	4.5	16	21
11/09/2004	10:04	Flood	4.5	12	26
01/04/2005	10:07	Ebb	1.7	6	21
03/29/2005	09:47	Flood	2	9	12
05/16/2005	08:00	Ebb	4.5	14	24
07/12/2005	08:38	Ebb	23	16	24
09/07/2005	08:55	Ebb	23	13	32
11/14/2005	09:13	Flood	4.5	10	25
02/21/2006	09:19	Ebb	1.7	7	25
04/04/2006	09:15	Ebb	2	9	25
06/20/2006	09:17	Ebb	17	14	28
08/09/2006	09:23	Flood	17	11	32
10/05/2006	09:44	Flood	1.7	9	32
12/11/2006	11:40	Flood	70	9	22
01/08/2007	10:51	Flood	4.5	8	20
01/08/2007	11:03	Flood	7.8	7	0
03/13/2007	10:03	Ebb	1.7	8	25
05/21/2007	17:05	Flood	130	15	22
07/25/2007	12:09	Ebb	49	18	29
09/13/2007	11:27	Ebb	2	14	32
11/20/2007	10:05	Ebb	1.7	9	24
02/11/2008	10:20	Flood	7.8	7	21
04/10/2008	13:53	Flood	1.7	10	27
06/25/2008	10:10	Ebb	1.7	14	28
08/26/2008	09:25	Flood	240	14	27
10/09/2008	11:43	Ebb	2	12	24
12/09/2008	09:13	Ebb	1.7	9	26

Number of Samples: 30

Geometric Mean: 5.6

Range: 1.7 - 240

Estimated 90th Percentile: 36

**TABLE 3**

**SUMMARY OF SHELLFISH GROWING AREAS  
WATER QUALITY STUDY RESULTS**

Growing Area: **PACIFIC COAST**

Sampling Station Number: **196**

Classification: **Approved**

<b>Sample Date</b>	<b>Sample Time</b>	<b>Tide</b>	<b>Fcoli/100ml</b>	<b>Temperature</b>	<b>Salinity</b>
05/26/2004	08:20	Ebb	33	14	26
06/09/2004	10:10	Ebb	1.7	15	28
06/24/2004	10:10	Ebb	2	14	32
07/12/2004	10:57	Ebb	1.7	16	32
09/22/2004	10:35	Ebb	4.5	16	28
11/09/2004	09:50	Flood	1.8	13	25
01/04/2005	09:43	Ebb	1.7	7	26
03/29/2005	09:30	Flood	1.7	9	21
05/16/2005	07:41	Ebb	17	14	24
07/12/2005	08:10	Ebb	33	16	22
09/07/2005	08:33	Ebb	1.7	14	32
11/14/2005	08:54	Flood	4.5	10	25
02/21/2006	08:54	Ebb	1.7	8	28
04/04/2006	08:58	Ebb	1.7	9	25
06/20/2006	09:02	Ebb	1.7	14	30
08/09/2006	08:55	Flood	4.5	11	32
10/05/2006	09:08	Flood	11	9	32
12/11/2006	11:20	Ebb	170	9	12
01/08/2007	10:29	Flood	17	7	11
03/13/2007	09:51	Ebb	4.5	8	20
05/21/2007	10:45	Ebb	170	13	27
07/25/2007	11:40	Ebb	7.8	18	31
09/13/2007	11:07	Ebb	2	14	32
11/20/2007	09:45	Ebb	13	9	28
02/11/2008	09:59	Flood	14	7	14
04/10/2008	13:36	Flood	2	9	1
06/25/2008	09:50	Ebb	1.7	11	32
08/26/2008	09:05	Flood	49	14	26
10/09/2008	11:26	Ebb	4.5	12	30
12/09/2008	08:58	Flood	1.7	10	28

**Number of Samples: 30**

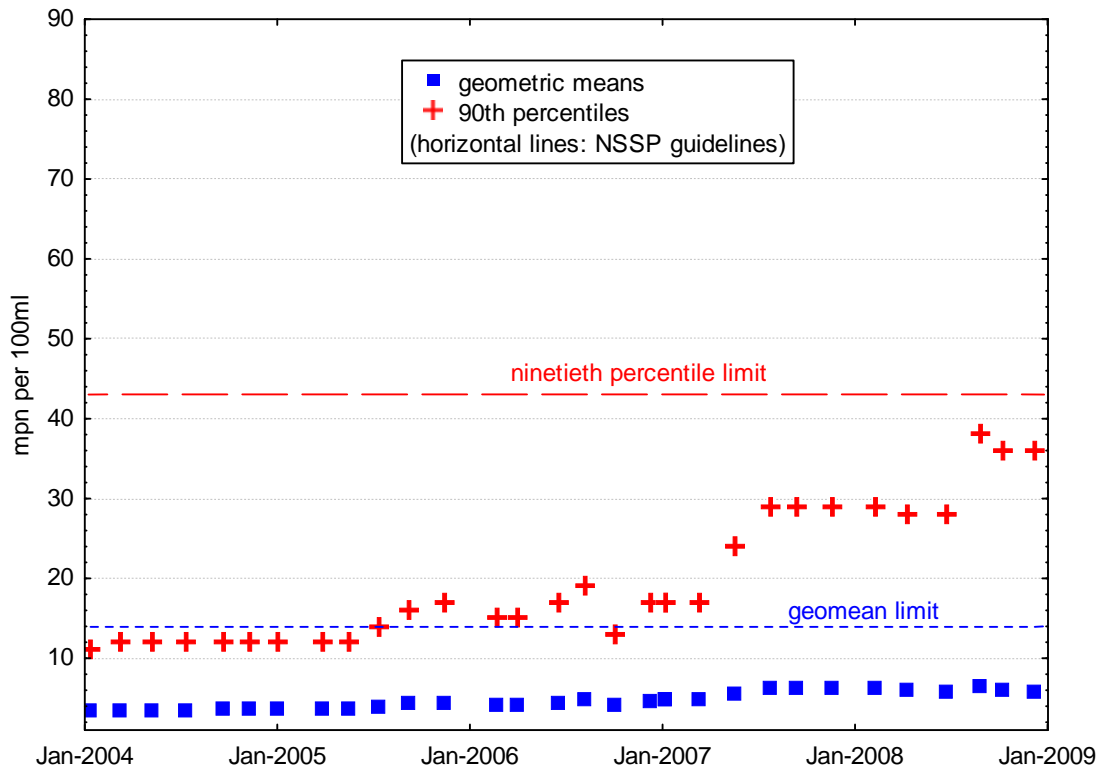
**Geometric Mean: 5.6**

**Range: 1.7 - 170**

**Estimated 90th Percentile: 34**



Station 11 Pacific Coast



Station 196 Pacific Coast

