

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

ANNUAL GROWING AREA REVIEW

PREPARED BY: Mark Toy, Environmental Engineer

AREA: Grays Harbor

YEAR ENDING: December 31, 2011

CLASSIFICATION: Approved, Unclassified, Prohibited

ACTIVITIES IN THE GROWING AREA IN 2011:

All parts of Grays Harbor shellfish growing area were sampled at least six times following NSSP SRS criteria. There were three classification changes to the growing area.

1. A portion of the North Bay at the mouth of Campbell Slough near Station 210 was changed from *Unclassified* to *Approved*.
2. The formerly *Closed* area at the outlet of Winter Creek (near Station 22) was changed to *Open* status.
3. The *Closed* area at the outlet to Redman Slough was changed to *Unclassified* and expanded closer to Station 194 because of unknown water quality. This area is too shallow to allow for marine sampling stations and there are no harvest sites in the area.

There were three emergency closures of the growing area. Chehalis River flooding in January closed the central and south bay portions for 8 days. Upsets at the Cosmo Specialty Fiber plant in Cosmopolis caused two closures of the central bay in August and November.

ANALYTICAL RESULTS OF WATER SAMPLES:

Table 1 summarizes a minimum of the most recent 30 samples collected from all of the marine water stations. All Approved stations pass the water quality standard, although Station 36 is listed as Concerned, and Station 210 is listed as Threatened due to elevated bacteria levels.

CHANGE IN ACTUAL POLLUTION SOURCES THAT IMPACT THE GROWING AREA:

Cosmo Specialty Fibers (CSF) is the new owner of the former Weyerhaeuser pulp mill facility in Cosmopolis. CSF started operations in May 2011. The central bay is closed for a week when the effluent from the pulp mill has greater than 113,000 fecal coliform /100 ml. In August the central bay was closed for 15 days because CSF exceeded the 113,000 level six separate days. In November, the central bay was closed for 11 days due to 2 fecal coliform exceedances. The Governor's office convened a meeting of CSF, Ecology, Health and shellfish growers to start work towards a solution to address shellfish closures of the central bay.

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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:

The area meets water quality criteria for the current classifications. Based on marine water quality at Station 210 and the fecal coliform exceedances at CSF, the growing area is "Threatened" with a downgrade in classification.

TABLE 1

**Summary of Marine Water Data (SRS)
Growing Area: Grays Harbor
Classification: Approved, Unclassified, Prohibited**

Fecal Coliform Organisms/100 ml

Station	Sample Date Range	Classification	Number of Samples	Range	Geometric Mean	Est. 90th Percentile	Meets Std.
13	10/13/08 - 11/28/11	Approved	30	1.7 - 33.0	3.8	12	Yes
16	06/03/08 - 11/28/11	Approved	30	1.7 - 23.0	3.3	11	Yes
18	06/03/07 - 11/28/11	Approved	31	1.7 - 17.0	2.4	6	Yes
19	10/09/07 - 11/28/11	Approved	30	1.7 - 33.0	2.1	4	Yes
22	10/13/08 - 11/28/11	Approved	30	1.7 - 33.0	2.5	6	Yes
23	10/13/08 - 11/28/11	Approved	30	1.7 - 33.0	2.2	4	Yes
24	06/04/09 - 12/19/11	Approved	30	1.7 - 23.0	2.5	6	Yes
25	06/04/09 - 12/19/11	Approved	30	1.7 - 23.0	2.9	8	Yes
26	06/04/09 - 12/19/11	Approved	30	1.7 - 33.0	3.5	10	Yes
27	06/04/09 - 12/19/11	Approved	30	1.7 - 79.0	4.8	18	Yes
28	06/03/08 - 11/28/11	Approved	30	1.7 - 33.0	2.7	7	Yes
29	06/03/08 - 11/28/11	Approved	30	1.7 - 49.0	2.9	10	Yes
30	07/06/09 - 12/19/11	Approved	30	1.7 - 23.0	2.6	6	Yes
31	10/13/08 - 11/28/11	Approved	30	1.7 - 17.0	2.3	5	Yes
32	10/09/07 - 11/28/11	Approved	30	1.7 - 17.0	2.0	3	Yes
33	11/24/08 - 11/28/11	Approved	30	1.7 - 23.0	3.0	8	Yes
34	06/04/09 - 12/19/11	Approved	30	1.7 - 49.0	4.5	16	Yes
35	06/04/09 - 12/19/11	Approved	30	1.7 - 79.0	4.9	19	Yes
36	06/04/09 - 12/19/11	Approved	30	1.7 - 46.0	7.6	27	Yes
38	08/13/08 - 11/28/11	Approved	30	1.7 - 23	2.2	4	Yes
188	09/15/08 - 11/28/11	Approved	30	1.7 - 13.0	2.3	5	Yes
191	09/11/07 - 11/28/11	Approved	30	1.7 - 17.0	2.2	4	Yes
192	06/03/07 - 11/28/11	Approved	30	1.7 - 7.8	2.4	4	Yes
193	11/07/07 - 11/28/11	Approved	30	1.7 - 13.0	2.4	4	Yes
194	09/15/08 - 11/28/11	Approved	30	1.7 - 110.0	3.0	11	Yes
199	06/03/08 - 11/28/11	Approved	30	1.7 - 33.0	3.8	12	Yes
202	03/01/07 - 11/28/11	Approved	30	1.7 - 17.0	2.3	5	Yes
37	06/04/09 - 12/19/11	Unclassified	30	1.7 - 110.0	7.6	27	Yes
209	03/05/08 - 11/28/11	Unclassified	26	1.7 - 13.0	2.4	5	*N/A
210	09/17/09 - 12/19/11	Approved	30	1.7 - 110.0	7.3	33	Yes
211	11/04/09 - 12/19/11	Unclassified	25	1.7 - 70.0	8.2	25	*N/A
215	06/30/10 - 12/19/11	Unclassified	24	1.7 - 130.0	8.7	44	*N/A

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100 ml and an estimate of the 90th 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.

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

Growing Area: **GRAYS HARBOR**
Sampling Station Number: **210**
Classification: **Approved**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
09/17/2009	09:30	Flood	110	18	16
01/07/2010	12:30	Ebb	4	6	4
02/25/2010	09:30	Flood	2	9	5
03/04/2010	15:00	Flood	2	11	5
03/18/2010	13:30	Flood	2	10	15
04/08/2010	11:20	Ebb	13	8	0
04/26/2010	09:30	Flood	33	11	12
05/13/2010	10:31	Flood	6.8	14	5
06/01/2010	14:30	Flood	33	12	1
06/10/2010	13:55	Ebb	23	12	2
06/30/2010	11:26	Flood	33	17	5
07/14/2010	13:10	Flood	7.8	22	16
08/04/2010	10:02	Ebb	11		10
08/23/2010	11:27	Flood	7.8	18	31
09/29/2010	11:45	Flood	23	14	2
10/20/2010	10:55	Flood	1.7		18
11/18/2010	12:00	Flood	13		5
12/15/2010	14:30	Ebb	7.8	9	0
12/28/2010	08:15	Ebb	4		4
01/13/2011	09:20	Ebb	11		0
02/02/2011	13:44	Ebb	2	3	7
02/17/2011	13:00	Ebb	2		0
03/01/2011	09:45	Flood	2		0
04/04/2011	15:40	Ebb	4.5	10	0
05/03/2011	13:17	Flood	1.7	10	13
07/28/2011	14:06	Ebb	7.8	19	26
09/12/2011	10:00	Flood	23	16	19
10/11/2011	14:15	Ebb	46	13	9
11/28/2011	10:30	Flood	4.5	7	0
12/19/2011	13:55	Ebb	1.7	7	3

Number of Samples: 30
Geometric Mean: 7.3

Range: 1.7 - 110
Estimated 90th Percentile: 33

† All samples have been verified.

Map 1: Grays Harbor Growing Area

