

**Washington State Department of Health
Office of Environmental Health and Safety**

Annual Growing Area Review

PREPARED BY: Trevor Swanson
AREA: Nemah River
YEAR ENDING: December 31, 2015
CLASSIFICATION: Approved, Unclassified

Activities in the Growing Area in 2015

All stations except Station 142 were sampled six times in accordance with National Shellfish Sanitation Program (NSSP) Systematic Random Sampling criteria. A bottle broke during the March sampling event that rendered the sample unusable. No additional activities have been documented in the growing area.

Analytical Results of Water Samples

Table 1 summarizes results of the most recent 30 samples collected from each of the sampling stations. All stations in the Approved area meet NSSP water quality standards. Station 145 is categorized as Concerned and stations 139, 144, and 203 are categorized as Threatened in the program's Early Warning System. Tables 2, 3, and 4 show individual results for Stations 139, 144 and 203.

Change in Actual Pollution Sources that Impact the Growing Area

There is no information indicating the area has any new sources of pollution.

Classification Status

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

Remarks and Recommendations

The area is correctly classified.

TABLE 1

**Summary of Marine Water Data (SRS)
Growing Area: Nemah River**

Sampling Event Type: Regulatory
Maximum Number of Samples: 30

Tides Included: ALL

Station Number	Classification	Date Range	Range (FC/100 mL)	Geometric Mean (FC/100 mL)	Estimated 90 th (FC/100 mL)	Meets Standard
139	Approved	2/2/2011 - 12/9/2015	1.7 - 920.0	5.0	34.9	Y
140	Approved	2/2/2011 - 12/9/2015	1.7 - 33.0	2.6	7.8	Y
141	Approved	2/2/2011 - 12/9/2015	1.7 - 13.0	2.2	4.1	Y
142	Approved	12/21/2010 - 12/9/2015	1.7 - 26.0	2.1	4.6	Y
143	Approved	2/2/2011 - 12/9/2015	1.7 - 14.0	2.0	3.7	Y
144	Approved	2/2/2011 - 12/9/2015	1.7 - 350.0	5.2	36.4	Y
145	Approved	12/21/2010 - 12/9/2015	1.7 - 220.0	3.9	22.7	Y
146	Approved	2/2/2011 - 12/9/2015	1.7 - 49.0	2.6	7.8	Y
203	Approved	12/21/2010 - 12/9/2015	1.7 - 350.0	5.4	36.3	Y
206	Unclassified	6/24/2010 - 9/10/2015	1.7 - 350.0	6.3	40.3	Y
214	Unclassified	10/12/2011 - 12/9/2015	1.7 - 240.0	8.4	44.8	N

The above table shows bacteriological results in relation to NSSP criteria. NSSP standards 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/100mL.

TABLE 2

**Marine Water Quality Summary
Growing Area: Nemah River
Station 139**

Classification: Approved
Meets Standard: Y

Total Samples: 30

Sample Date	Event Type	Time	Tide	Surface Water Temperature	Salinity (ppt)	Fecal Coliform (FC/100 mL)
02/02/2011	Regulatory	10:33	Flood	8	12	1.7
04/14/2011	Regulatory	10:26	Flood	12	12	4.0
06/15/2011	Regulatory	12:06	Flood	16	15	33.0
08/24/2011	Regulatory	10:22	Flood	19	20	6.8
10/12/2011	Regulatory	10:49	Flood	15	22	23.0
12/13/2011	Regulatory	10:55	Flood	5	21	2.0
01/12/2012	Regulatory	11:31	Flood	6	16	2.0
03/06/2012	Regulatory	11:18	Flood	8	12	1.7
05/03/2012	Regulatory	11:33	Flood	12	10	1.7
07/31/2012	Regulatory	10:50	Flood	19	22	2.0
09/27/2012	Regulatory	10:20	Flood	16	25	1.7
10/31/2012	Regulatory	11:33	Flood	12	6	920.0
01/30/2013	Regulatory	11:35	Flood	7	2	49.0
03/12/2013	Regulatory	11:20	Flood	9	18	1.7
05/09/2013	Regulatory	11:45	Flood	15	24	4.0
08/20/2013	Regulatory	11:52	Flood	19	30	4.0
10/03/2013	Regulatory	10:46	Flood	14	20	7.8
01/16/2014	Regulatory	11:02	Flood	8	20	1.7
02/11/2014	Regulatory	11:19	Flood	5	22	1.7
04/10/2014	Regulatory	10:48	Flood	12	15	1.7
06/25/2014	Regulatory	11:32	Flood	18	25	33.0
08/26/2014	Regulatory	12:20	Flood	21	29	2.0
10/08/2014	Regulatory	11:30	Flood	18	28	7.8
12/03/2014	Regulatory	10:39	Flood	8	20	1.7
01/22/2015	Regulatory	10:54	Flood	9	10	4.5
03/04/2015	Regulatory	10:40	Flood	10	18	1.7
05/14/2015	Regulatory	10:52	Flood	14	25	6.8
07/28/2015	Regulatory	10:54	Flood	20	30	2.0
09/10/2015	Regulatory	10:53	Flood	19	30	1.7
12/09/2015	Regulatory	10:45	Flood	11	15	79.0

TABLE 3

**Marine Water Quality Summary
Growing Area: Nemah River
Station 144**

Classification: Approved
Meets Standard: Y

Total Samples: 30

Sample Date	Event Type	Time	Tide	Surface Water Temperature	Salinity (ppt)	Fecal Coliform (FC/100 mL)
02/02/2011	Regulatory	10:35	Flood	8	11	1.7
04/14/2011	Regulatory	10:27	Flood	14	10	1.7
06/15/2011	Regulatory	12:10	Flood	16	15	33.0
08/24/2011	Regulatory	10:24	Flood	19	21	2.0
10/12/2011	Regulatory	10:51	Flood	14	22	33.0
12/13/2011	Regulatory	10:57	Flood	5	19	1.7
01/12/2012	Regulatory	11:33	Flood	5	14	4.0
03/06/2012	Regulatory	11:19	Flood	7	10	1.7
05/03/2012	Regulatory	11:34	Flood	12	10	1.7
07/31/2012	Regulatory	10:51	Flood	19	22	4.0
09/27/2012	Regulatory	10:21	Flood	16	25	2.0
10/31/2012	Regulatory	11:34	Flood	12	6	350.0
01/30/2013	Regulatory	11:37	Flood	7	5	49.0
03/12/2013	Regulatory	11:22	Flood	9	18	1.7
05/09/2013	Regulatory	11:46	Flood	15	25	1.7
08/20/2013	Regulatory	11:53	Flood	19	30	2.0
10/03/2013	Regulatory	10:48	Flood	13	16	33.0
01/16/2014	Regulatory	11:04	Flood	8	20	4.5
02/11/2014	Regulatory	11:20	Flood	5	20	2.0
04/10/2014	Regulatory	10:49	Flood	12	15	2.0
06/25/2014	Regulatory	11:33	Flood	18	25	13.0
08/26/2014	Regulatory	12:21	Flood	21	27	13.0
10/08/2014	Regulatory	11:31	Flood	18	28	17.0
12/03/2014	Regulatory	10:40	Flood	8	20	1.7
01/22/2015	Regulatory	10:55	Flood	9	10	11.0
03/04/2015	Regulatory	10:41	Flood	10	18	1.7
05/14/2015	Regulatory	10:54	Flood	14	25	1.7
07/28/2015	Regulatory	10:55	Flood	20	30	1.7
09/10/2015	Regulatory	10:54	Flood	19	30	2.0
12/09/2015	Regulatory	10:46	Flood	11	5	130.0

TABLE 4

**Marine Water Quality Summary
Growing Area: Nemah River
Station 203**

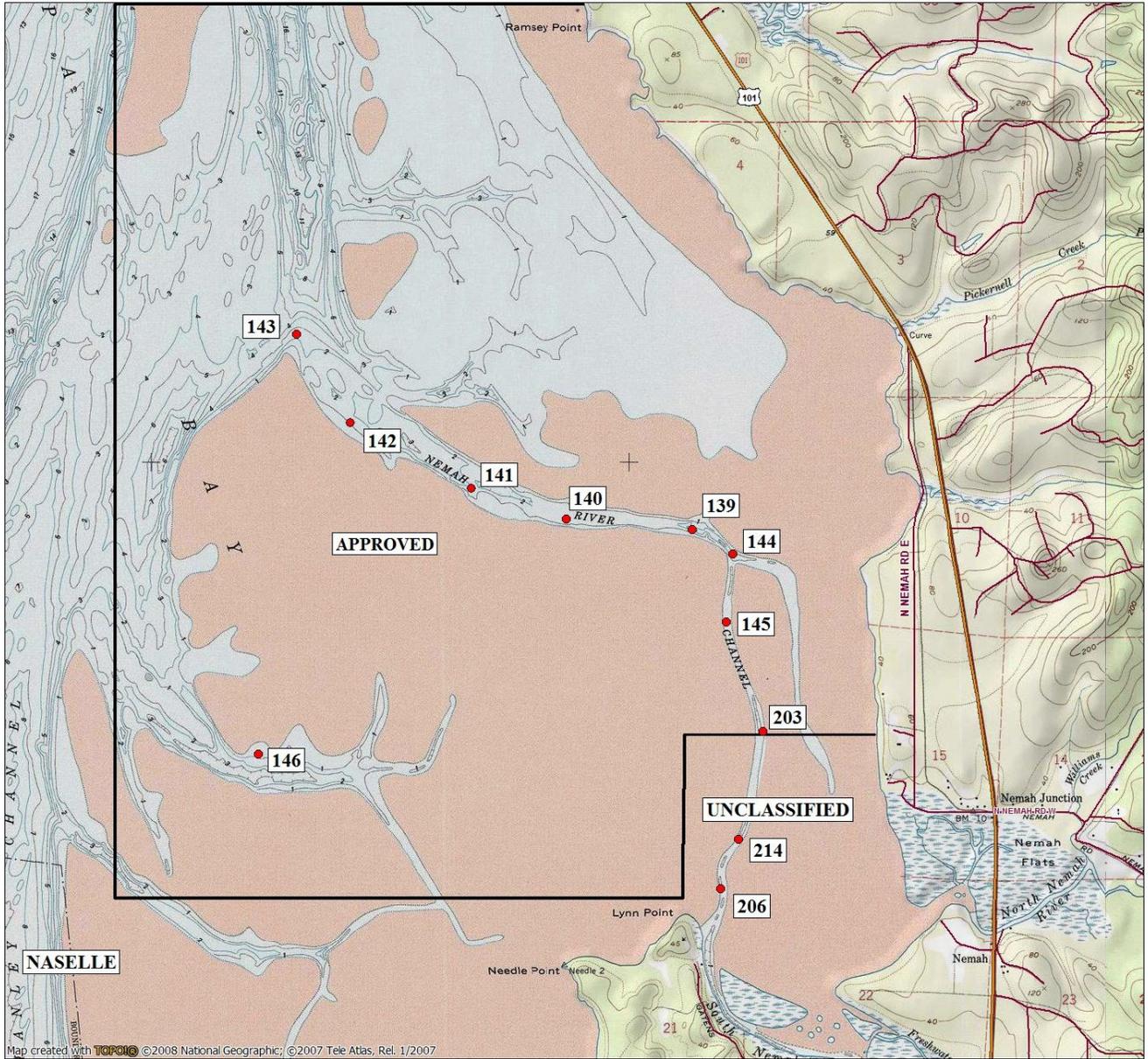
Classification: Approved
Meets Standard: Y

Total Samples: 30

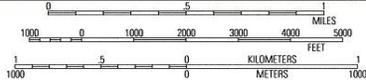
Sample Date	Event Type	Time	Tide	Surface Water Temperature	Salinity (ppt)	Fecal Coliform (FC/100 mL)
12/21/2010	Regulatory	10:39	Flood	7	14	23.0
02/02/2011	Regulatory	10:40	Flood	8	9	4.0
04/14/2011	Regulatory	10:33	Flood	13	10	2.0
08/24/2011	Regulatory	10:31	Flood	19	20	1.8
10/12/2011	Regulatory	10:57	Flood	14	20	49.0
12/13/2011	Regulatory	11:02	Flood	4	15	7.8
01/12/2012	Regulatory	11:39	Flood	5	14	1.7
03/06/2012	Regulatory	11:23	Flood	7	10	4.5
05/03/2012	Regulatory	11:39	Flood	12	10	2.0
07/31/2012	Regulatory	10:59	Flood	19	20	11.0
09/27/2012	Regulatory	10:26	Flood	16	25	1.7
10/31/2012	Regulatory	11:38	Flood	12	4	350.0
01/30/2013	Regulatory	11:43	Flood	7	0	49.0
03/12/2013	Regulatory	11:28	Flood	9	10	7.8
05/09/2013	Regulatory	11:52	Flood	15	22	1.7
08/20/2013	Regulatory	11:57	Flood	19	30	2.0
10/03/2013	Regulatory	10:52	Flood	14	15	22.0
01/16/2014	Regulatory	11:08	Flood	7	15	1.7
02/11/2014	Regulatory	11:24	Flood	6	18	1.8
04/10/2014	Regulatory	10:52	Flood	12	12	2.0
06/25/2014	Regulatory	11:39	Flood	18	24	23.0
08/26/2014	Regulatory	12:27	Flood	19	29	1.7
10/08/2014	Regulatory	11:35	Flood	18	28	31.0
12/03/2014	Regulatory	10:43	Flood	7	15	2.0
01/22/2015	Regulatory	11:03	Flood	8	10	2.0
03/04/2015	Regulatory	10:45	Flood	10	16	2.0
05/14/2015	Regulatory	10:58	Flood	14	25	1.7
07/28/2015	Regulatory	10:59	Flood	20	30	1.7
09/10/2015	Regulatory	10:58	Flood	19	30	1.7
12/09/2015	Regulatory	10:50	Flood	11	5	79.0

MAP 1

NEMAH RIVER



Map created with **TOPOIG** ©2008 National Geographic; ©2007 Tele Atlas, Rel. 1/2007



TN / MN
16°
11/20/15