

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

**Annual Growing Area Review**

**PREPARED BY:** Eric Schlorff  
**AREA:** North Bay  
**YEAR ENDING:** December 31, 2015  
**CLASSIFICATION:** Approved, Unclassified and Prohibited

**Activities In The Growing Area in 2015**

The growing area was sampled six times using the Systematic Random Sampling method. No additional activities have been documented. The area was closed for seven days in December due to excessive rainfall. Mason County received a grant for pollution identification and correction to assess potential pollution impacts in the area.

**Analytical Results Of Water Samples**

Table 1 summarizes a minimum of the last 30 samples collected from the area. This summary shows that all stations in the Approved area pass the NSSP water quality standard. Elevated estimated 90<sup>th</sup> percentile bacteria levels at stations 1, 11, and 12 place these stations in Concerned status. Elevated estimated 90<sup>th</sup> percentile fecal coliform values at stations 7 (33.3 fc/100 ml), 548 (37.3 fc/100 ml), and 575 (36.1 fc/100 ml) place these station in Threatened status. Sampling results for the Threatened stations are shown in the attached tables.

Marine water samples were collected near three significant rain events which resulted in elevated fecal coliform bacteria levels. Rainfall records show that on September 24, 2014, 1.92 inches of rain was recorded, on September 24, 2014, 0.64 inches of rain, and on December 17, 2012, 1.41 inches of rain, all recorded at the Minter Creek Salmon Hatchery rain gage.

**Change In Actual Pollution Sources That Impact The Growing Area**

We currently have no information indicating that the growing area has 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

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**Remarks and Recommendations**

All stations in the North Bay growing area meet NSSP water quality standards for an Approved classification and the area is correctly classified.

**TABLE 1: Summary of Marine Water Data (SRS)  
Growing Area: North Bay**

Sampling Event Type: Regulatory

Tides Included: ALL

Maximum Number of Samples: 30

Station Number	Classification	Date Range	Range (FC/100 mL)	GeoMean (FC/100 mL)	E90th (FC/100 mL)	Meets Standard
1	Approved	1/6/2011 - 12/15/2015	1.7 - 540.0	3.9	21.2	Y
2	Approved	1/6/2011 - 12/15/2015	1.7 - 220.0	4.0	19.1	Y
3	Approved	1/6/2011 - 12/15/2015	1.7 - 220.0	3.2	12.8	Y
4	Approved	1/6/2011 - 12/15/2015	1.7 - 220.0	2.7	10.5	Y
5	Approved	1/6/2011 - 12/15/2015	1.7 - 33.0	2.7	8.0	Y
6	Approved	1/6/2011 - 12/15/2015	1.7 - 130.0	2.7	9.2	Y
7	Approved	1/6/2011 - 12/15/2015	1.7 - 2400.0	4.3	33.3	Y
11	Approved	1/6/2011 - 12/15/2015	1.7 - 540.0	3.9	22.6	Y
12	Approved	12/21/2010 - 12/15/2015	1.7 - 350.0	5.0	24.9	Y
14	Approved	12/21/2010 - 12/15/2015	1.7 - 240.0	4.2	17.9	Y
15	Approved	1/6/2011 - 12/15/2015	1.7 - 220.0	3.8	18.4	Y
16	Approved	1/6/2011 - 12/15/2015	1.7 - 23.0	2.8	7.8	Y
548	Approved	1/6/2011 - 12/15/2015	1.7 - 920.0	5.6	37.3	Y
551	Approved	1/6/2011 - 12/15/2015	1.7 - 49.0	2.7	7.2	Y
552	Approved	1/6/2011 - 12/15/2015	1.7 - 920.0	3.2	17.1	Y
553	Approved	1/6/2011 - 12/15/2015	1.7 - 350.0	3.2	18.4	Y
575	Approved	12/21/2010 - 12/15/2015	1.7 - 1600.0	5.8	36.1	Y
9	Prohibited	1/6/2011 - 12/15/2015	1.7 - 350.0	4.1	19.2	Y
549	Prohibited	1/6/2011 - 12/15/2015	1.7 - 920.0	5.1	30.6	Y
550	Prohibited	1/6/2011 - 12/15/2015	1.7 - 920.0	4.9	29.9	Y
762	Unclassified	3/17/2011 - 12/15/2015	1.7 - 920.0	8.3	67.7	*N/A

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.

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

Station: 7

Classification: Approved

Method: SRS

Total Samples: 30

Date Range: 01/06/2011 - 12/15/2015

Range (FC/100 mL): 1.7 - 2400.0

E90th (FC/100 mL): 33.3

GeoMean (FC/100 mL): 4.3

Meets Standard: Y

Sample Date	Event Type	Time	Tide	SWT	Salinity	Fecal Coliform
01/06/2011	Regulatory	13:49	Ebb	7	27	2.0
03/17/2011	Regulatory	15:47	Flood	9	5	2.0
05/05/2011	Regulatory	09:30	Ebb	13	24	23.0
07/07/2011	Regulatory	11:37	Ebb	18	27	4.5
09/21/2011	Regulatory	10:24	Flood	16	27	1.7
12/01/2011	Regulatory	13:57	Ebb	8	25	1.7
02/28/2012	Regulatory	11:18	Ebb	6	21	1.7
05/15/2012	Regulatory	13:45	Flood	18	21	1.7
06/27/2012	Regulatory	11:07	Flood	16	20	2.0
07/19/2012	Regulatory	08:08	Ebb	19	22	1.7
09/18/2012	Regulatory	09:15	Ebb	15	27	2.0
12/19/2012	Regulatory	10:47	Flood	6	16	33.0
02/28/2013	Regulatory	08:51	Ebb	7	22	23.0
04/17/2013	Regulatory	10:19	Flood	11	22	1.7
06/12/2013	Regulatory	10:26	Ebb	17	27	1.7
08/12/2013	Regulatory	10:22	Flood	20	28	2.0
10/08/2013	Regulatory	10:17	Ebb	13	25	2.0
12/05/2013	Regulatory	09:21	Ebb	7	28	1.7
01/09/2014	Regulatory	10:31	Flood	8	28	2.0
03/18/2014	Regulatory	11:33	Ebb	9	15	1.7
05/01/2014	Regulatory	08:03	Ebb	12	24	17.0
07/15/2014	Regulatory	09:13	Ebb	20	27	1.7
09/24/2014	Regulatory	08:06	Ebb	17	16	2400.0
11/24/2014	Regulatory	10:07	Ebb	9	20	1.7
02/17/2015	Regulatory	14:23	Flood	10	26	2.0
04/13/2015	Regulatory	11:22	Flood	12	14	1.7
06/18/2015	Regulatory	08:29	Ebb	19	25	4.0
08/17/2015	Regulatory	10:54	Ebb	19	22	13.0
10/27/2015	Regulatory	08:23	Ebb	13	25	23.0
12/15/2015	Regulatory	09:09	Flood	7	10	23.0

Station: 548

Classification: Approved

Method: SRS

Total Samples: 30

Date Range: 01/06/2011 - 12/15/2015

Range (FC/100 mL): 1.7 - 920.0

E90th (FC/100 mL): 37.3

GeoMean (FC/100 mL): 5.6

Meets Standard: Y

Sample Date	Event Type	Time	Tide	SWT	Salinity	Fecal Coliform
01/06/2011	Regulatory	13:42	Ebb	4	14	4.5
03/17/2011	Regulatory	15:54	Flood	9	10	1.7
05/05/2011	Regulatory	09:40	Ebb	13	24	1.7
07/07/2011	Regulatory	11:10	Flood	17	27	4.5
09/21/2011	Regulatory	10:13	Flood	16	26	1.7
12/01/2011	Regulatory	14:07	Ebb	7	16	7.8
02/28/2012	Regulatory	11:33	Ebb	5	19	1.7
05/15/2012	Regulatory	13:54	Flood	16	26	1.7
06/27/2012	Regulatory	10:55	Flood	15	26	1.7
07/19/2012	Regulatory	07:57	Ebb	18	20	23.0
09/18/2012	Regulatory	10:48	Ebb	16	29	7.8
12/19/2012	Regulatory	12:33	Ebb	7	23	7.8
02/28/2013	Regulatory	10:58	Ebb	8	24	14.0
04/17/2013	Regulatory	11:46	Ebb	12	24	1.7
06/12/2013	Regulatory	10:20	Ebb	17	27	2.0
08/12/2013	Regulatory	12:33	Ebb	20	28	2.0
10/08/2013	Regulatory	12:18	Ebb	15	24	33.0
12/05/2013	Regulatory	11:28	Ebb	9	28	2.0
01/09/2014	Regulatory	12:49	Ebb	7	28	1.7
03/18/2014	Regulatory	11:44	Ebb	9	16	2.0
05/01/2014	Regulatory	09:24	Ebb	13	19	2.0
07/15/2014	Regulatory	10:40	Ebb	20	27	13.0
09/24/2014	Regulatory	09:45	Ebb	17	22	920.0
11/24/2014	Regulatory	09:57	Ebb	9	4	17.0
02/17/2015	Regulatory	12:28	Flood	10	18	1.7
04/13/2015	Regulatory	11:33	Flood	12	23	1.7
06/18/2015	Regulatory	09:50	Ebb	19	26	23.0
08/17/2015	Regulatory	11:02	Ebb	19	27	7.8
10/27/2015	Regulatory	10:11	Ebb	14	30	49.0
12/15/2015	Regulatory	10:55	Ebb	9	22	28.0

Station: 575

Classification: Approved

Method: SRS

Total Samples: 30

Date Range: 12/21/2010 - 12/15/2015

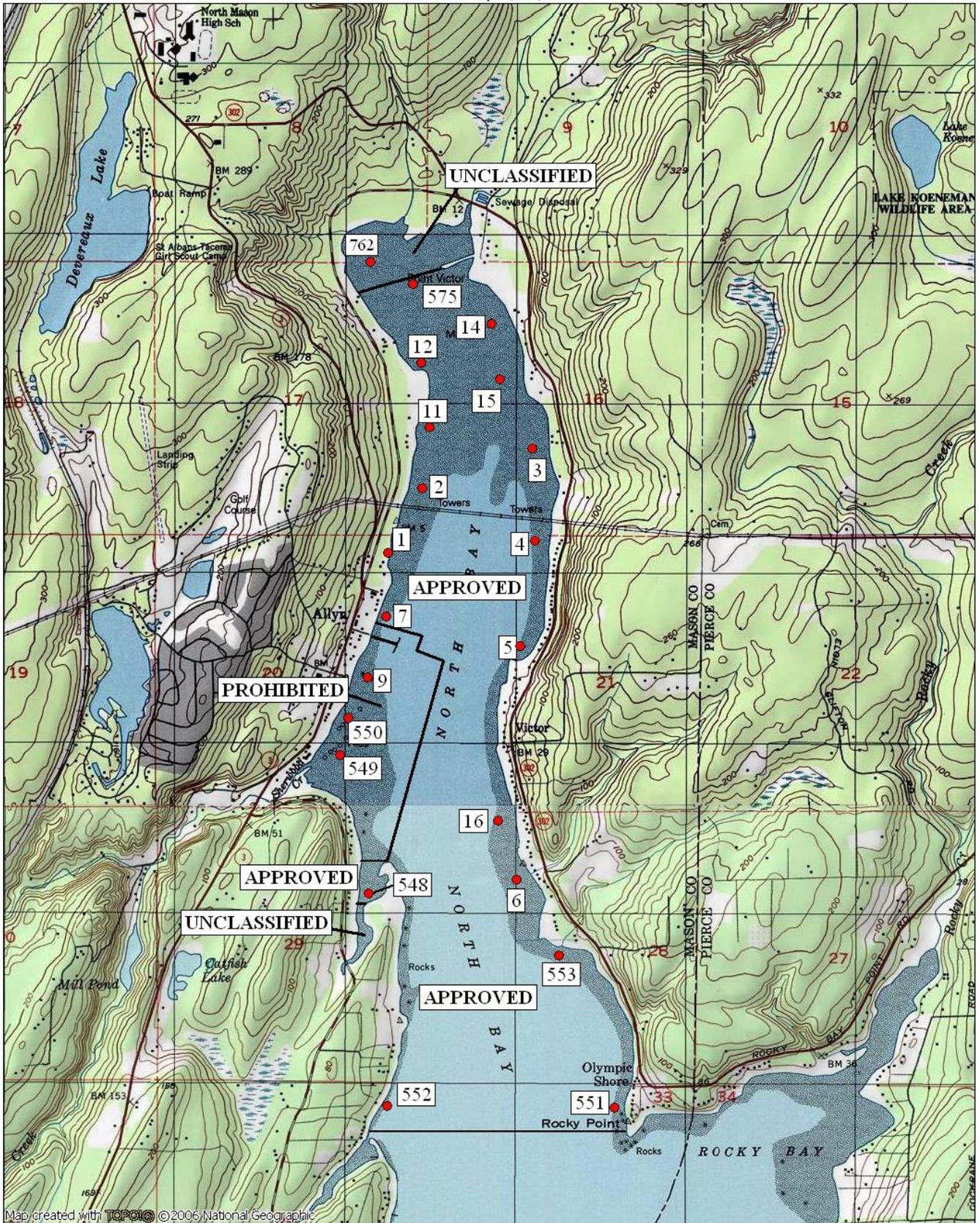
Range (FC/100 mL): 1.7 - 1600.0

E90th (FC/100 mL): 36.1

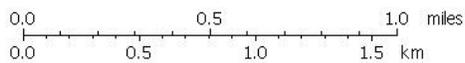
GeoMean (FC/100 mL): 5.8

Meets Standard: Y

Sample Date	Event Type	Time	Tide	SWT	Salinity	Fecal Coliform
12/21/2010	Regulatory	12:07	Ebb	7	6	4.5
01/06/2011	Regulatory	14:03	Ebb	8	26	2.0
03/17/2011	Regulatory	15:33	Flood	8	0	2.0
05/05/2011	Regulatory	09:10	Ebb	13	22	2.0
07/07/2011	Regulatory	11:18	Flood	19	23	6.8
09/21/2011	Regulatory	10:38	Flood	16	28	4.5
12/01/2011	Regulatory	13:40	Ebb	8	21	2.0
02/28/2012	Regulatory	11:02	Ebb	7	22	1.7
05/15/2012	Regulatory	13:30	Flood	17	24	4.5
06/27/2012	Regulatory	11:19	Flood	14	12	2.0
07/19/2012	Regulatory	08:21	Ebb	19	10	6.8
09/18/2012	Regulatory	09:25	Ebb	15	28	4.5
12/19/2012	Regulatory	10:57	Flood	5	12	33.0
02/28/2013	Regulatory	09:02	Ebb	8	25	2.0
04/17/2013	Regulatory	10:27	Flood	12	25	1.7
06/12/2013	Regulatory	08:53	Ebb	17	21	6.8
08/12/2013	Regulatory	10:31	Flood	20	26	13.0
10/08/2013	Regulatory	10:27	Ebb	13	25	23.0
12/05/2013	Regulatory	09:34	Ebb	6	26	1.7
01/09/2014	Regulatory	10:40	Flood	5	11	13.0
05/01/2014	Regulatory	08:13	Ebb	12	24	2.0
07/15/2014	Regulatory	09:23	Ebb	20	25	49.0
09/24/2014	Regulatory	08:17	Ebb	17	9	1600.0
11/24/2014	Regulatory	10:18	Ebb	9	8	4.5
02/17/2015	Regulatory	14:08	Flood	10	16	1.7
04/13/2015	Regulatory	11:08	Flood	11	23	1.7
06/18/2015	Regulatory	08:38	Ebb	19	19	7.8
08/17/2015	Regulatory	10:46	Ebb	19	27	4.5
10/27/2015	Regulatory	08:33	Ebb	13	12	13.0
12/15/2015	Regulatory	09:21	Ebb	7	6	13.0



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TN MN  
17 1/2  
07/07/10