

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

## Annual Growing Area Review

**PREPARED BY:** Mark Toy, Environmental Engineer  
**AREA:** Dyes Inlet  
**YEAR ENDING:** December 31, 2015  
**CLASSIFICATION:** Approved, Conditionally Approved, Prohibited

### Activities in the Growing Area in 2015

The Approved and Prohibited portions of the growing area were sampled six times using the Systematic Random Sampling (SRS) method and the Conditionally Approved portion was sampled 12 times using the Adverse Pollution Condition (APC) method. An annual CAAMP evaluation of the Bremerton Eastside CSO plant was conducted in September and all operation reports from CSO events show satisfactory treatment. The Conditionally Approved area was closed 3 times (with one extension) for 23 total days due to the activation of the CSO plant. One closure due to untreated CSO for 7 days also occurred in August due to an electrical failure during a thunderstorm.

### Analytical Results Of Water Samples

Tables 1 and 2 summarize the results of the most recent 30 water samples collected from stations in the Approved, Conditionally Approved, and Prohibited portions. Table 1 summarizes results from stations evaluated under the SRS method, while Table 2 summarizes results from stations evaluated under the APC method. Station 472 is Threatened with an estimated 90<sup>th</sup> percentile value of 34.1 FC/100 ml; the last 30 samples from this station are shown in Table 3. Station 464 and 473 are Concerned.

### 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 downgrade in classification
- Fails to meet current classification standards

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**Remarks and Recommendations**

Table 1 shows that all Approved stations meet NSSP water quality standards for an Approved classification under the SRS method while Table 2 shows that all Conditionally Approved stations meet NSSP water quality standards for an Approved classification (when open for harvest) under the APC method. Dyes Inlet is correctly classified.

**Management Plan Evaluation:**

1. Have all parties involved complied with the conditions of the management plan..... Yes
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 an evaluation of critical pollution sources been conducted ..... Yes

**TABLE 1**  
**Summary of Marine Water Data (SRS)**  
**Growing Area: Dyes Inlet**

Sampling Event Type: Regulatory  
Maximum Number of Samples: 30

Tides Included: ALL

| Station Number | Classification | Date Range            | Range (FC/100 mL) | GeoMean (FC/100 mL) | E90th (FC/100 mL) | Meets Standard |
|----------------|----------------|-----------------------|-------------------|---------------------|-------------------|----------------|
| 469            | Approved       | 12/20/2010 - 1/5/2016 | 1.7 - 70.0        | 4.4                 | 17.7              | Y              |
| 470            | Approved       | 12/20/2010 - 1/5/2016 | 1.7 - 23.0        | 3.4                 | 10.5              | Y              |
| 471            | Approved       | 12/20/2010 - 1/5/2016 | 1.7 - 49.0        | 5.0                 | 18.7              | Y              |
| 472            | Approved       | 12/20/2010 - 1/5/2016 | 1.7 - 130.0       | 7.2                 | 35.5              | Y              |
| 473            | Approved       | 12/20/2010 - 1/5/2016 | 1.7 - 170.0       | 4.3                 | 23.5              | Y              |
| 474            | Approved       | 12/20/2010 - 1/5/2016 | 1.7 - 79.0        | 4.4                 | 18.1              | Y              |
| 466            | Prohibited     | 5/13/2013 - 1/5/2016  | 1.7 - 240.0       | 7.1                 | 46.1              | N              |
| 485            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 13.0        | 3.1                 | 7.7               | Y              |
| 486            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 49.0        | 5.0                 | 21.6              | Y              |
| 487            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 130.0       | 6.0                 | 32.6              | Y              |
| 488            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 49.0        | 4.3                 | 14.4              | Y              |
| 489            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 79.0        | 4.8                 | 18.6              | Y              |
| 490            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.4 - 49.0        | 4.9                 | 17.3              | Y              |
| 492            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 49.0        | 2.9                 | 8.0               | Y              |
| 546            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 14.0        | 3.4                 | 8.5               | Y              |
| 576            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 17.0        | 2.9                 | 7.4               | Y              |
| 577            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 2400.0      | 7.4                 | 80.9              | N              |
| 578            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 79.0        | 2.7                 | 7.8               | Y              |
| 604            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 17.0        | 2.6                 | 5.7               | Y              |
| 605            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 23.0        | 2.8                 | 6.7               | Y              |
| 606            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 23.0        | 4.3                 | 12.1              | Y              |
| 656            | Prohibited     | 12/20/2010 - 1/5/2016 | 1.7 - 23.0        | 2.2                 | 5.1               | Y              |
| 817            | Prohibited     | 9/17/2012 - 1/5/2016  | 1.7 - 49.0        | 5.2                 | 23.5              | *N/A           |

The standard for approved shellfish growing areas 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 from each station. \*

**TABLE 2**  
**Summary of Marine Water Data (APC)**  
**Growing Area: Dyes Inlet**

Tides Included: ALL

Sampling Event Type: Regulatory

Maximum Number of Samples: 30

| Station Number | Classification         | Date Range              | Range (FC/100 mL) | GeoMean (FC/100 mL) | % Samples > 43 | Meets Standard |
|----------------|------------------------|-------------------------|-------------------|---------------------|----------------|----------------|
| 462            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 79.0        | 2.4                 | 3.33           | Y              |
| 463            | Conditionally Approved | 12/20/2010 - 11/19/2015 | 1.7 - 17.0        | 2.3                 | 0.00           | Y              |
| 464            | Conditionally Approved | 4/2/2013 - 11/19/2015   | 1.7 - 240.0       | 3.4                 | 6.67           | Y              |
| 465            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 130.0       | 2.7                 | 3.33           | Y              |
| 467            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 11.0        | 2.2                 | 0.00           | Y              |
| 468            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 23.0        | 2.7                 | 0.00           | Y              |
| 477            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 6.8         | 1.9                 | 0.00           | Y              |
| 478            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 7.8         | 2.0                 | 0.00           | Y              |
| 479            | Conditionally Approved | 4/2/2013 - 11/19/2015   | 1.7 - 11.0        | 2.1                 | 0.00           | Y              |
| 480            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 33.0        | 3.6                 | 0.00           | Y              |
| 481            | Conditionally Approved | 4/2/2013 - 11/19/2015   | 1.7 - 22.0        | 2.8                 | 0.00           | Y              |
| 482            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 49.0        | 3.0                 | 3.33           | Y              |
| 483            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 4.5         | 1.9                 | 0.00           | Y              |
| 484            | Conditionally Approved | 4/2/2013 - 11/19/2015   | 1.7 - 6.8         | 2.0                 | 0.00           | Y              |
| 491            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 49.0        | 2.9                 | 3.33           | Y              |
| 655            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 31.0        | 3.4                 | 0.00           | Y              |
| 661            | Conditionally Approved | 5/13/2013 - 11/19/2015  | 1.7 - 23.0        | 2.7                 | 0.00           | Y              |

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

**TABLE 3**  
**MARINE WATER QUALITY SUMMARY**  
**Growing Area: Dyes Inlet**

**Station: 472**

**Classification: Approved**

**Method: SRS**

**Total Samples: 30**

**Range (FC/100 mL): 1.7 - 130.0**

**Date Range: 11/29/2010 - 11/19/2015**

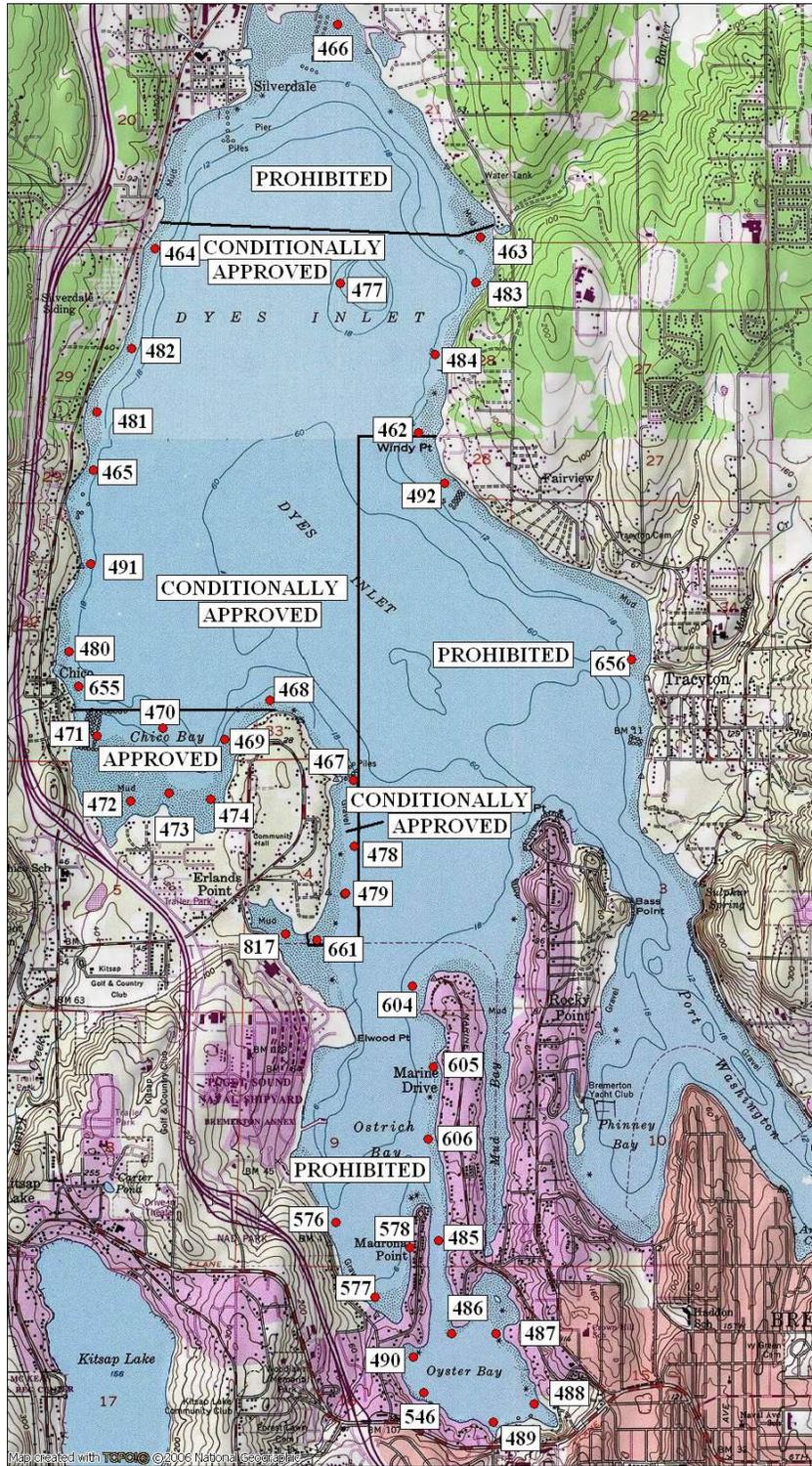
**GeoMean (FC/100 mL): 7**

**E90th (FC/100 mL): 34.1**

**Meets Standard: Y**

| Sample     | Event Type | Time  | Tide  | SWT | Salinity | Fecal |
|------------|------------|-------|-------|-----|----------|-------|
| 11/29/2010 | Regulatory | 13:17 | Ebb   | 7   | 28       | 7.8   |
| 12/20/2010 | Regulatory | 11:26 | Ebb   | 7   | 23       | 7.8   |
| 01/25/2011 | Regulatory | 11:07 | Ebb   | 8   | 27       | 1.7   |
| 03/07/2011 | Regulatory | 08:34 | Ebb   | 6   | 19       | 14.0  |
| 05/10/2011 | Regulatory | 10:27 | Flood | 13  | 26       | 4.5   |
| 07/20/2011 | Regulatory | 10:26 | Ebb   | 15  | 28       | 2.0   |
| 09/01/2011 | Regulatory | 10:19 | Ebb   | 16  | 27       | 2.0   |
| 01/23/2012 | Regulatory | 12:31 | Ebb   | 5   | 14       | 2.0   |
| 03/28/2012 | Regulatory | 11:15 | Ebb   | 8   | 27       | 2.0   |
| 05/23/2012 | Regulatory | 09:43 | Ebb   | 13  | 20       | 13.0  |
| 07/05/2012 | Regulatory | 08:37 | Ebb   | 15  | 7        | 2.0   |
| 09/17/2012 | Regulatory | 09:26 | Ebb   | 15  | 29       | 13.0  |
| 01/07/2013 | Regulatory | 11:08 | Flood | 7   | 29       | 2.0   |
| 03/13/2013 | Regulatory | 09:59 | Ebb   | 9   | 29       | 7.8   |
| 05/13/2013 | Regulatory | 09:14 | Ebb   | 13  | 28       | 1.8   |
| 07/29/2013 | Regulatory | 10:31 | Flood | 18  | 29       | 1.7   |
| 09/17/2013 | Regulatory | 13:31 | Flood | 17  | 29       | 4.5   |
| 11/12/2013 | Regulatory | 11:10 | Flood | 11  | 26       | 1.7   |
| 01/29/2014 | Regulatory | 10:55 | Ebb   | 8   | 28       | 4.5   |
| 03/24/2014 | Regulatory | 10:21 | Flood | 10  | 8        | 7.8   |
| 05/15/2014 | Regulatory | 08:52 | Ebb   | 14  | 28       | 130.0 |
| 07/14/2014 | Regulatory | 09:09 | Ebb   | 18  | 28       | 11.0  |
| 09/11/2014 | Regulatory | 10:01 | Ebb   | 16  | 14       | 7.8   |
| 11/04/2014 | Regulatory | 12:12 | Flood | 13  | 0        | 79.0  |
| 01/07/2015 | Regulatory | 10:55 | Ebb   | 9   | 21       | 21.0  |
| 03/11/2015 | Regulatory | 11:52 | Ebb   | 10  | 27       | 4.5   |
| 05/06/2015 | Regulatory | 09:43 | Ebb   | 13  | 29       | 11.0  |
| 07/16/2015 | Regulatory | 07:41 | Ebb   | 19  | 28       | 23.0  |
| 09/29/2015 | Regulatory | 10:19 | Ebb   | 15  | 28       | 49.0  |
| 11/19/2015 | Regulatory | 11:53 | Ebb   | 10  |          | 49.0  |

# MAP 1



NATIONAL GEOGRAPHIC

0.0 0.5 1.0 miles  
0.0 0.5 1.0 1.5 km

TNT/MN  
17 1/2  
12/07/12