

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

**ANNUAL GROWING AREA REVIEW**

**PREPARED BY:** Lawrence Sullivan, Public Health Advisor

**AREA:** South Skagit Bay

**YEAR ENDING:** December 31, 2008

**CLASSIFICATION:** Approved, Prohibited

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

Samples were collected from the growing area six times during the year using the systematic random sampling method. We are currently completing a shoreline survey in this growing area.

**ANALYTICAL RESULTS OF WATER SAMPLES:**

Table #1 summarizes the results of the most recent 30 samples collected from the South Skagit Bay area. The Table #1 summary shows that all stations pass the NSSP water quality standard. Stations #183 and #184 are threatened and station #186 is of concern due to elevated bacteria levels. Individual sample results for stations #183 and #184 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:**

Skagit Bay and Skagit River are on the 303d list for fecal coliform.

## TABLE 1

### SUMMARY OF MARINE WATER DATA (SRS)

Growing Area: **SOUTH SKAGIT BAY**

Classification: **Prohibited,Unclassified,Approved**

From **07/22/2004** To **12/01/2008**

### FECAL COLIFORM ORGANISMS/100 ML

Station Number	Classification	Number of Samples	Range	Geometric Mean	Est. 90th Percentile	Meets Std.
179	Prohibited	32	1.7 - 33.0	4.9	17.0	Yes
185	Unclassified	34	1.7 - 240.0	7.0	35.0	Yes
189	Unclassified	33	1.7 - 49.0	3.3	11.0	Yes
192	Unclassified	34	1.7 - 95.0	7.8	35.0	Yes
269	Unclassified	33	1.7 - 540.0	6.1	39.0	Yes
312	Unclassified	23	1.7 - 220.0	8.4	43.0	*N/A
180	Approved	34	1.7 - 49.0	4.7	18.0	Yes
181	Approved	30	1.7 - 240.0	3.8	15.0	Yes
182	Approved	34	1.0 - 49.0	2.9	9.0	Yes
183	Approved	34	1.7 - 240.0	6.5	34.0	Yes
184	Approved	34	1.7 - 130.0	7.4	35.0	Yes
186	Approved	34	1.7 - 130.0	5.9	25.0	Yes
187	Approved	33	1.7 - 49.0	4.6	17.0	Yes
188	Approved	34	1.7 - 170.0	4.1	17.0	Yes
190	Approved	34	1.7 - 95.0	3.7	16.0	Yes
191	Approved	34	1.7 - 79.0	4.0	16.0	Yes
270	Approved	34	1.7 - 33.0	3.7	11.0	Yes

All tides information is presented

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 from each station. \*

† All samples have been verified.

**TABLE 2****SUMMARY OF SHELLFISH GROWING AREAS  
WATER QUALITY STUDY RESULTS**Growing Area: **SOUTH SKAGIT BAY**Sampling Station Number: **183**Classification: **Approved**

<b>Sample Date</b>	<b>Sample Time</b>	<b>Tide</b>	<b>Fcoli/100ml</b>	<b>Temperature</b>	<b>Salinity</b>
07/22/2004	08:36	Flood	79	18	5
08/25/2004	14:08	Flood	22	16	21
09/22/2004	11:59	Flood	4.5	13	14
10/21/2004	11:35	Flood	7.8	11	18
12/09/2004	11:37	Flood	4.5	6	15
01/13/2005	10:07	Ebb	13	4	
02/09/2005	08:38	Ebb	13	4	
03/09/2005	13:57	Flood	4.5	11	22
04/07/2005	07:27	Ebb	1.7	10	
05/04/2005	14:40	Flood	2	16	
06/16/2005	13:33	Flood	2	17	12
07/27/2005	11:44	Ebb	13	18	24
08/25/2005	10:42	Flood	7.8	18	21
10/13/2005	13:16	Flood	2	13	25
11/09/2005	12:00	Ebb	6.8	11	19
12/08/2005	10:27	Flood	1.7	12	
02/09/2006	10:02	Flood	79	4	2
04/10/2006	13:48	Flood	1.7	10	25
06/06/2006	13:08	Flood	7.8	15	4
08/28/2006	11:37	Ebb	240	17	15
10/02/2006	13:22	Flood	6.8	13	25
12/14/2006	09:26	Flood	33	5	2
02/26/2007	12:48	Ebb	1.7	6	20
03/22/2007	10:29	Ebb	4.5	7	10
08/27/2007	14:22	Ebb	6.1	16	20
10/22/2007	13:27	Flood	1.7	11	22
10/25/2007	06:48	Ebb	49	11	4
12/18/2007	12:32	Ebb	4.5	6	20
01/07/2008	13:36	Flood	2	6	18
03/06/2008	07:12	Ebb	2	5	5
07/14/2008	16:07	Flood	4.5	16	10
10/27/2008	15:15	Flood	1.7	11	20
11/04/2008	12:13	Ebb	23	11	15
12/01/2008	10:54	Ebb	2	10	8

Number of Samples: 34

Geometric Mean: 6.5

Range: 1.7 - 240

Estimated 90th Percentile: 34

**TABLE 3****SUMMARY OF SHELLFISH GROWING AREAS  
WATER QUALITY STUDY RESULTS**Growing Area: **SOUTH SKAGIT BAY**Sampling Station Number: **184**Classification: **Approved**

<b>Sample Date</b>	<b>Sample Time</b>	<b>Tide</b>	<b>Fcoli/100ml</b>	<b>Temperature</b>	<b>Salinity</b>
07/22/2004	08:39	Flood	79	18	4
08/25/2004	14:05	Flood	23	16	21
09/22/2004	12:12	Flood	6.8	13	14
10/21/2004	11:32	Flood	11	11	17
12/09/2004	11:35	Flood	7.8	6	15
01/13/2005	10:10	Ebb	7.8	4	
02/09/2005	08:41	Ebb	23	3	
03/09/2005	13:54	Flood	1.7	11	22
04/07/2005	07:29	Ebb	7.8	10	
05/04/2005	14:38	Flood	1.7	16	
06/16/2005	13:36	Flood	4	17	12
07/27/2005	11:47	Ebb	11	18	23
08/25/2005	10:45	Flood	13	18	21
10/13/2005	13:19	Flood	2	13	24
11/09/2005	12:03	Ebb	7.8	11	19
12/08/2005	10:30	Flood	13	12	
02/09/2006	10:06	Flood	49	4	0
04/10/2006	14:02	Flood	4.5	10	25
06/06/2006	13:25	Flood	4.5	15	4
08/28/2006	11:41	Ebb	130	17	15
10/02/2006	13:18	Flood	14	13	25
12/14/2006	09:30	Flood	49	5	2
02/26/2007	12:44	Ebb	2	6	14
03/22/2007	10:44	Ebb	1.7	7	8
08/27/2007	14:25	Ebb	6.8	16	20
10/22/2007	13:31	Flood	1.7	11	20
10/25/2007	06:52	Ebb	23	11	10
12/18/2007	12:36	Ebb	1.7	6	20
01/07/2008	13:49	Flood	13	4	15
03/06/2008	07:09	Ebb	4.5	5	3
07/14/2008	16:21	Flood	2	16	8
10/27/2008	15:26	Flood	1.7	10	20
11/04/2008	12:16	Ebb	17	11	14
12/01/2008	10:58	Ebb	1.7	10	12

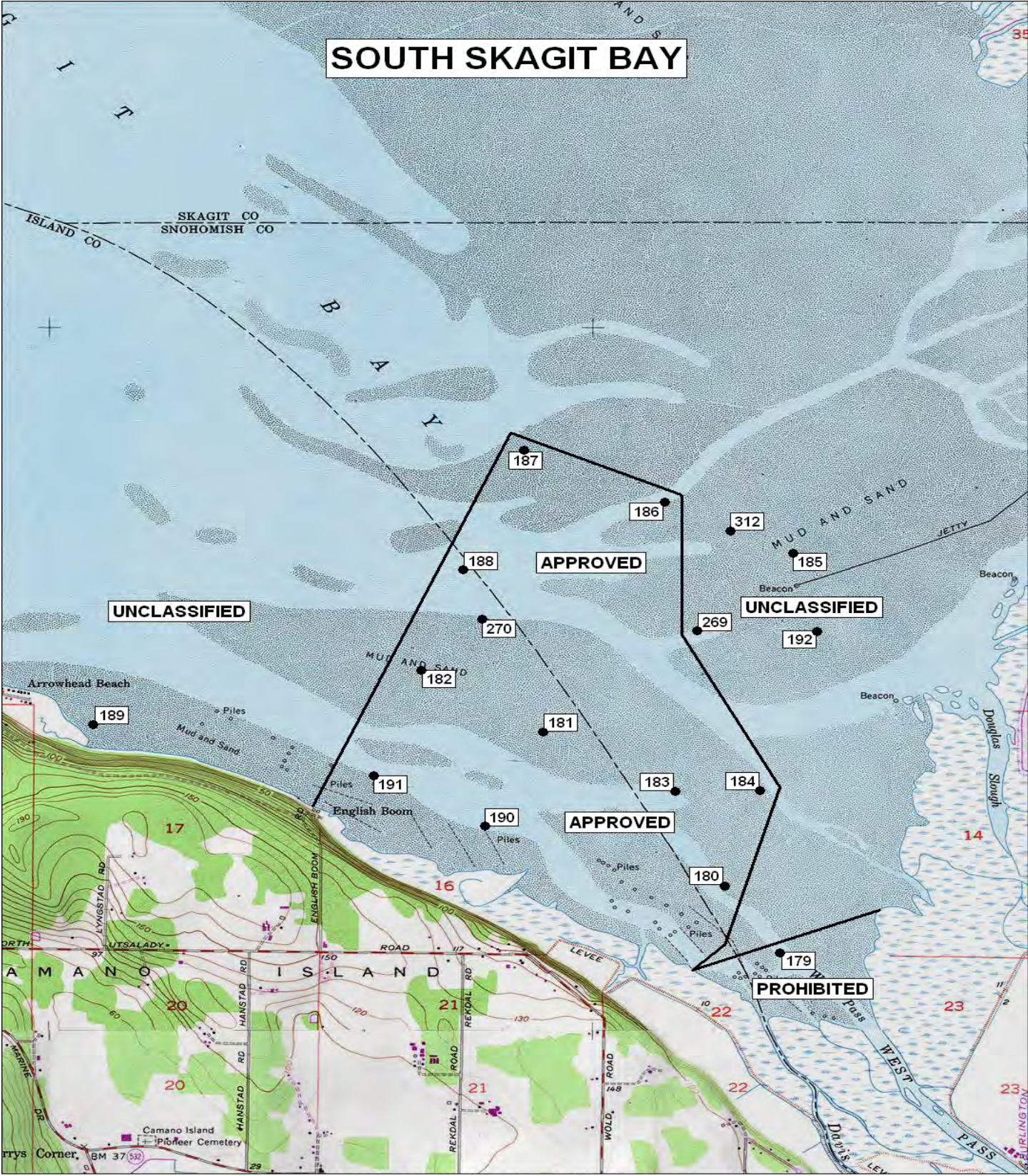
Number of Samples: 34

Geometric Mean: 7.4

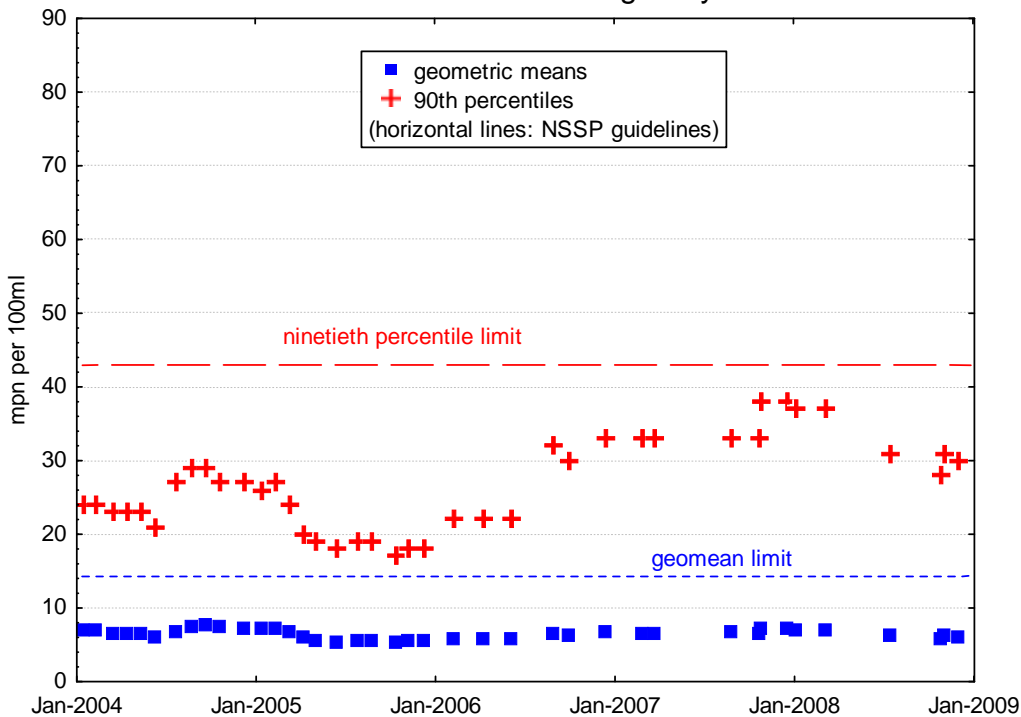
Range: 1.7 - 130

Estimated 90th Percentile: 35

# SOUTH SKAGIT BAY



Station 183 South Skagit Bay



Station 184 Skagit Bay

