

North Chuckanut Bay Drainage Area

Water Quality Status: Fecal Coliform Bacteria

June 2018

Background: Clean water is a valuable resource; it is essential for human health and for the health of fish, shellfish, wildlife, and livestock. To protect water quality, WA state has criteria for bacteria levels in both fresh and marine waters.

● Marine Water Standards

Geometric Mean

Average sample contains less than:
14 fecal coliform/100mL

- and -

90th Percentile

Less than 10% of samples contain over:
43 fecal coliform/100mL

■ Freshwater Standards

Geometric Mean

Average sample contains less than:
100 fecal coliform/100mL

- and -

90th Percentile

Less than 10% of samples contain over:
200 fecal coliform/100mL

What are Fecal Coliform Bacteria?

Fecal coliform bacteria are found in human and animal feces. Detection in a creek is a sign that pathogens from these wastes may be polluting the water. Contact with fecal contaminated waters can result in **gastroenteritis, skin rashes, upper respiratory infections** and other illnesses.

Where Does the Bacteria Come From?

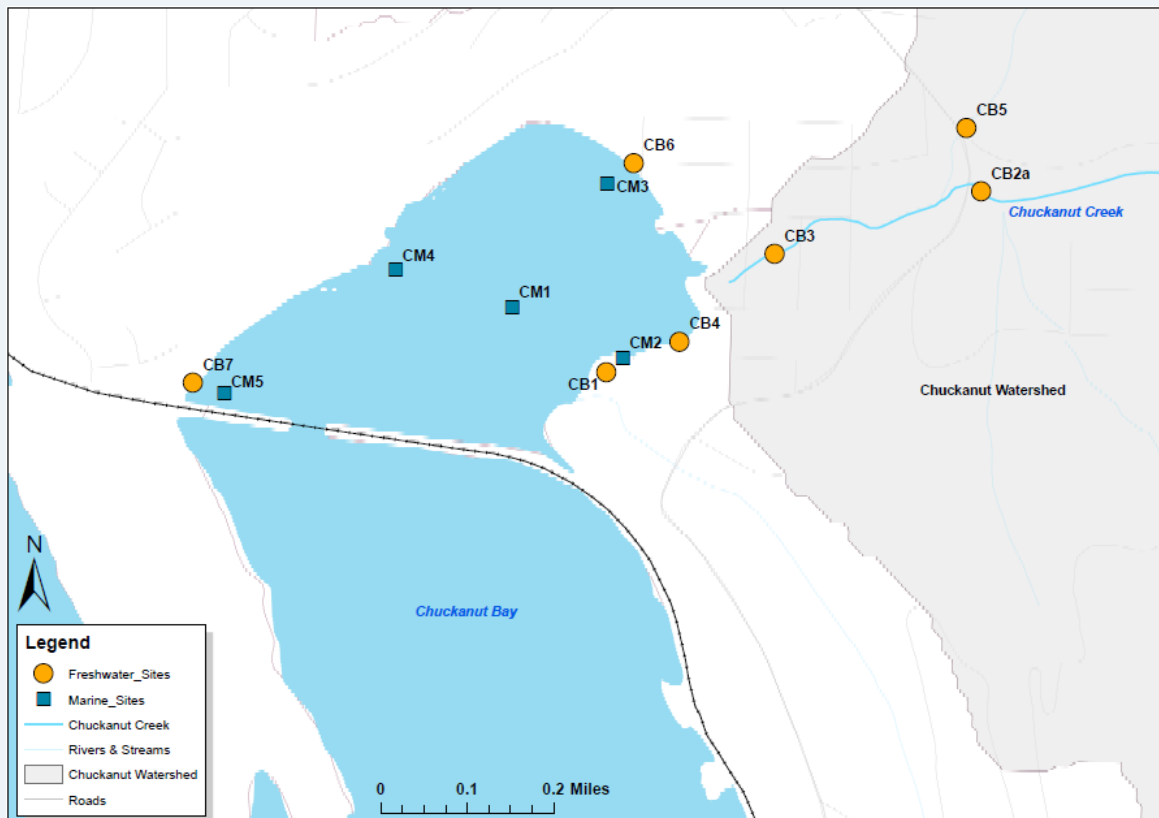
Potential sources of bacteria include:

- 1) Animal waste from livestock, domestic pets, and wildlife
- 2) Human sewage from failing septic systems, leaking sewer lines or cross-connections between sewer and stormwater systems

E. coli are a fecal coliform bacteria

Routine Monitoring: Whatcom County Public Works (WCPW) has monitored fecal coliform bacterial in the North Chuckanut Bay drainage area since February 2015.

Whatcom County Public Works North Chuckanut Bay Water Quality Monitoring Stations

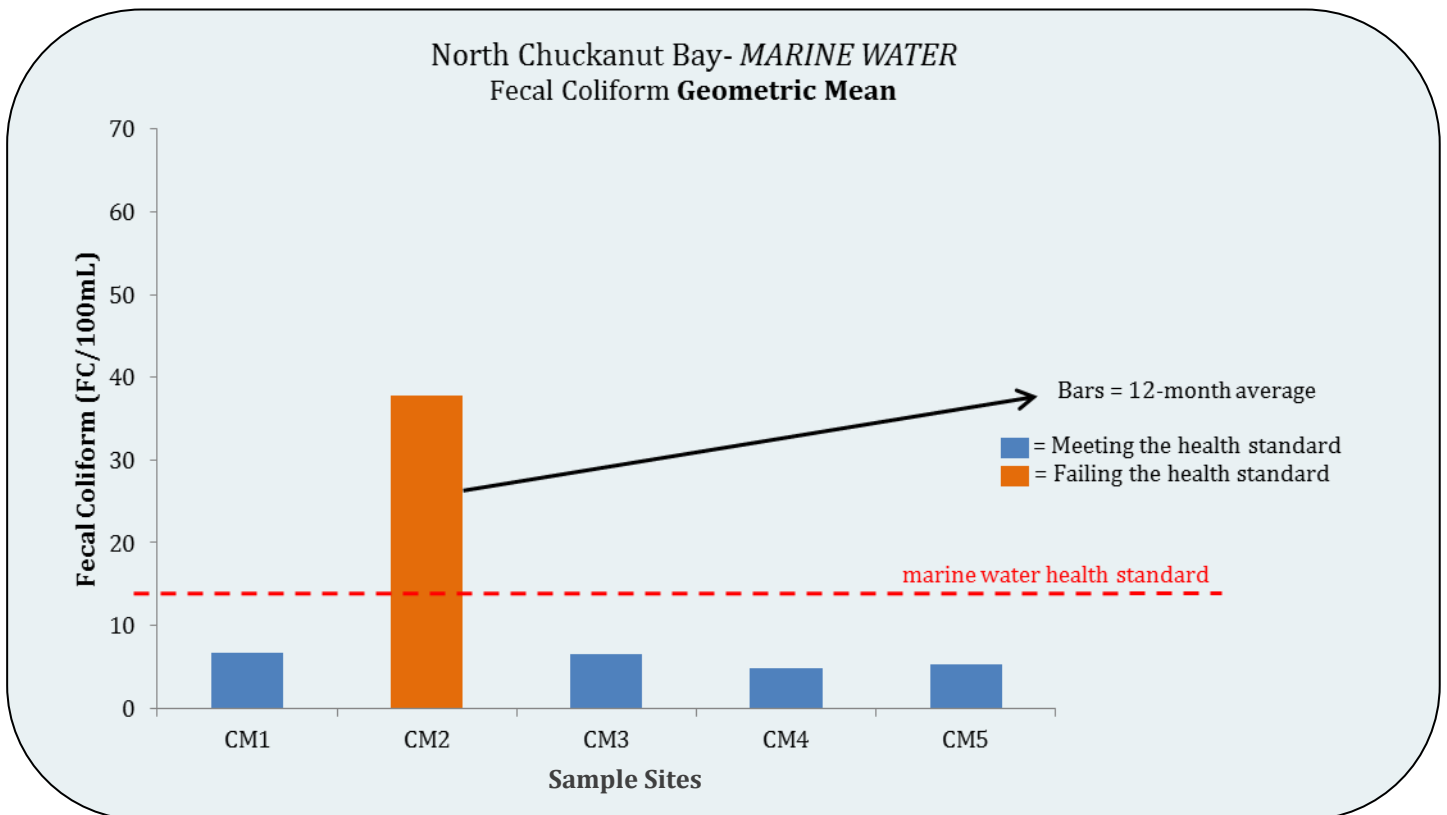
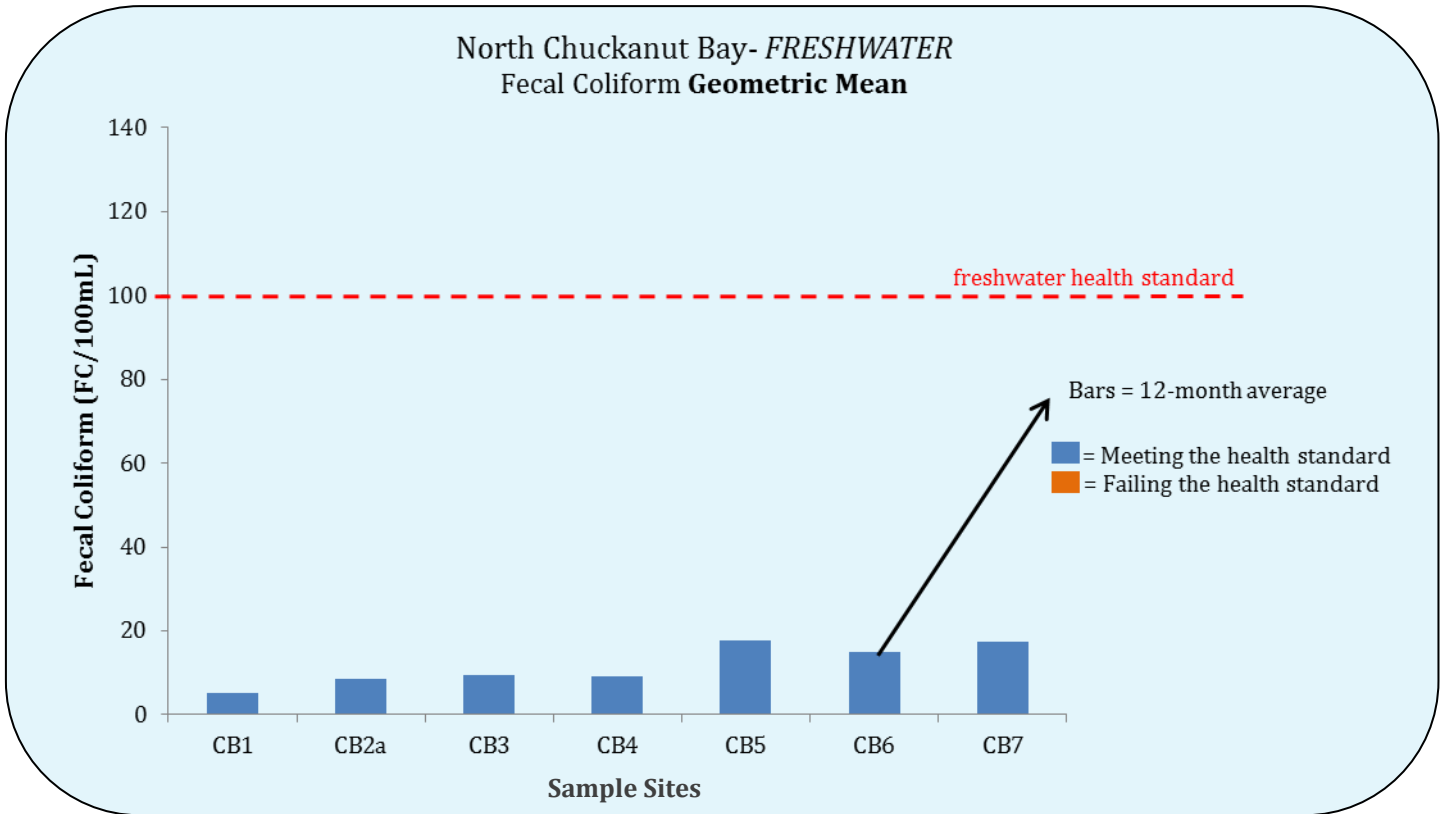


More information is available at: <http://www.co.whatcom.wa.us/1072/Water-Quality>

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Comparison of Bacteria Levels to Health Standards

Refer to the map on page 1 for site locations.



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13-Month Historical Fecal Coliform Bacteria Data

This table provides the individual results at each station for the past thirteen months. For the *freshwater samples*, results in light orange exceed 100 FC/100mL, results in dark orange exceed 1000 FC/100mL. For the *marine samples*, results in light orange exceed 14 FC/100mL, results in dark orange exceed 100 FC/100mL.

Date	Stations		Freshwater Samples							Marine Samples				
	Rainfall		CB1	CB2a	CB3	CB4	CB5	CB6	CB7	CM1	CM2	CM3	CM4	CM5
6/15/17	0.20	0.01	30	100	106	60	135	LF	SC	SC	SC	SC	SC	SC
6/29/17	0.00	0.00	20	60	62	56	108	ST	2	33	540	33	14	7.8
7/17/17	0.00	0.00	D	19	52	35	D	NS	10200	5	240	8	2	2
7/31/17	0.00	0.00	D	18	5	2	D	D	737	8	79	2	2	2
8/10/17	0.00	0.00	D	30	88	20	D	D	40	17	1,600	33	2	22
8/23/17	0.00	0.00	D	35	92	17	D	D	112	13	110	8	7	7
9/12/17	0.00	0.23	D	14	7	12	D	D	27	5	33	2	2	8
9/27/17	0.00	0.03	D	2	2	10	D	D	17	2	2	2	2	5
10/11/17	0.14	0.05	D	ND	4	2	D	5	33	2	2	2	2	2
10/25/17	0.17	0.05	4	19	4	7	D	19	333	1.7	33	1.7	11	1.7
11/8/17	0.00	0.00	4	4	10	15	23	96	2	5	33	11	2	4
11/29/17	trace	0.49	2	4	5	12	14	14	7	33	14	27	33	13
12/11/17	0.00	0.00	2	2	2	4	2	2	2	2	13	2	2	2
1/31/18	0.14	1.05	ND	ND	5	ND	54	52	ND	NS	NS	NS	NS	NS
2/15/18	trace	0.33	5	5	ND	4	4	33	2	1.7	8	1.7	1.7	8
3/12/18	0.00	0.07	23	ND	5	7	92	9	ND	13	13	5	33	22
3/26/18	0.61	0.14	2	2	2	2	12	23	48	13	23	5	23	17
4/18/18	0.01	0.49	2	56	20	12	30	2	7	11	13	13	11	13
4/25/18	0.00	0.00	7	2	2	2	ND	2	28	1.7	5	23	1.7	2
5/8/18	0.07	0.02	40	20	330	102	23	370	ND	23	130	13	23	11
5/23/18	0.00	0.00	5	4	9	7	38	NS	4	33	130	17	5	5
6/18/18	0.00	trace	ST	106	12	64	LF	ST	17	5	350	13	5	2

D- Dry, ST- Stagnant, LF- Low Flow, IS- Improper Sampling, NS -Not Sampled, S-No Staff, ND- Non-Detect, SC—Small Craft Advisory

Gray box indicated an event where no sample was collected for varying reasons.

Rainfall measured in inches.