

Bertrand Creek Focus Area

Water Quality Status: Fecal Coliform Bacteria

April 2023

Background: Clean water is a valuable resource; it is essential for human health and for the health of fish, shellfish, wildlife, and livestock. Water provides irrigation for crops and a safe place for water-based recreation. To maintain safe shellfish harvest, Washington State has developed standards for fecal bacteria in marine waters. Meeting the fecal coliform benchmarks in freshwater systems leads to satisfying the marine water standards to protect public health.

Freshwater Benchmarks

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

Routine Monitoring: The Bertrand Creek drainage has been identified as a **focus area** for water quality monitoring due to high levels of bacteria observed through the routine monitoring program. Whatcom County Public Works (WCPW) has monitored fecal coliform bacteria in the Bertrand Creek drainage area since March of 2020.

What are Fecal Coliform Bacteria?

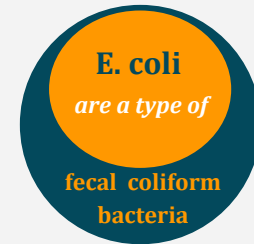
Fecal coliform bacteria are found in human and animal feces. Detection in a creek is a sign that pathogens from these wastes may be polluting the water. Contact with fecal contaminated waters can result in **gastroenteritis, skin rashes, upper respiratory infections** and other illnesses.

Where Does the Bacteria Come From?

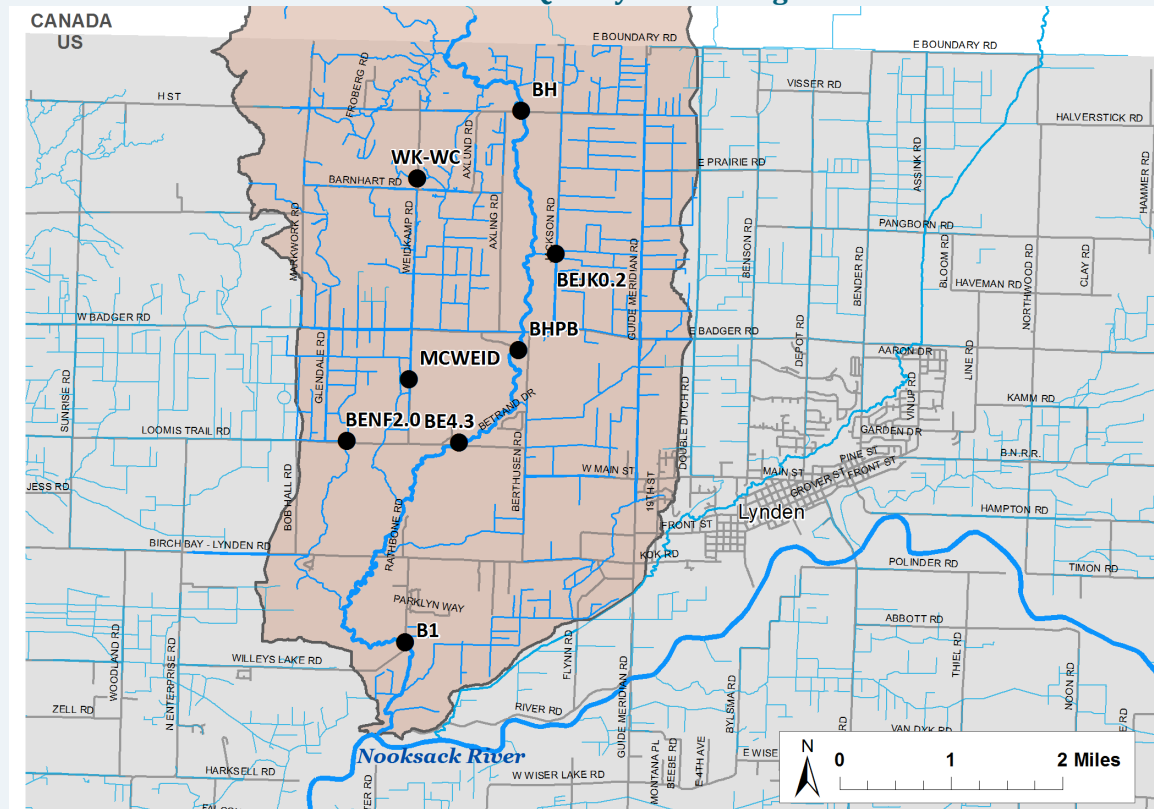
Potential sources of bacteria include:

- 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

Other potential sources are continually being investigated.

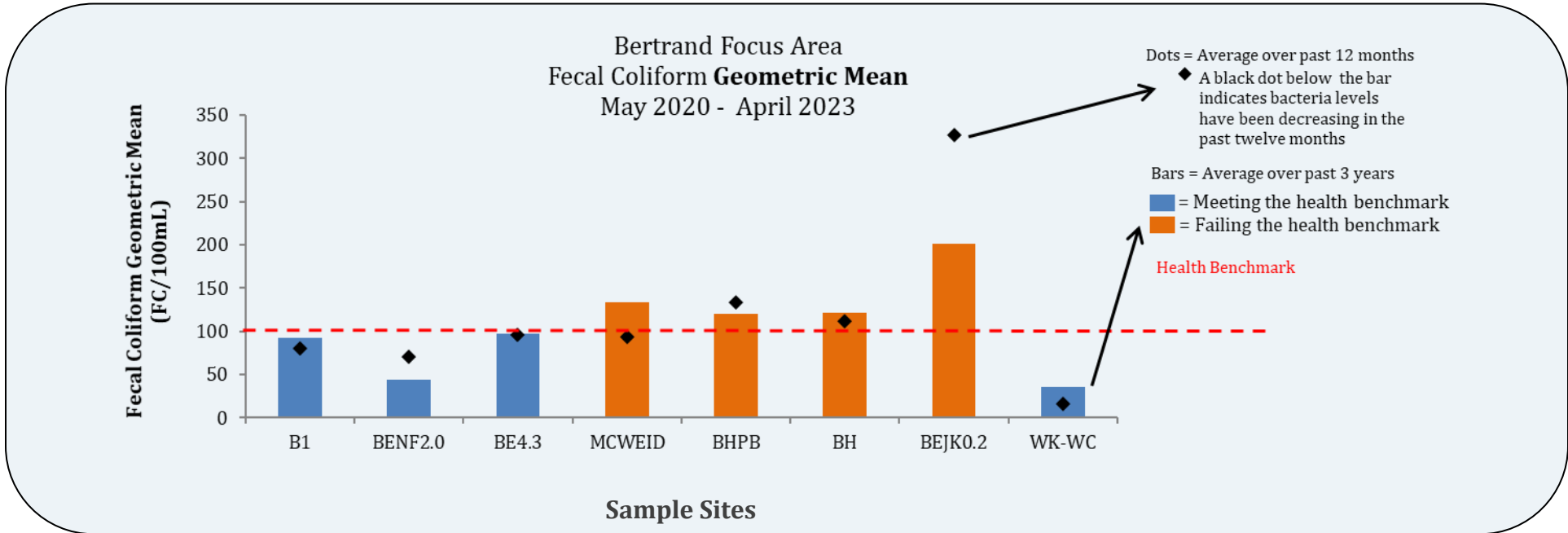


Whatcom County Public Works Bertrand Creek Water Quality Monitoring Stations

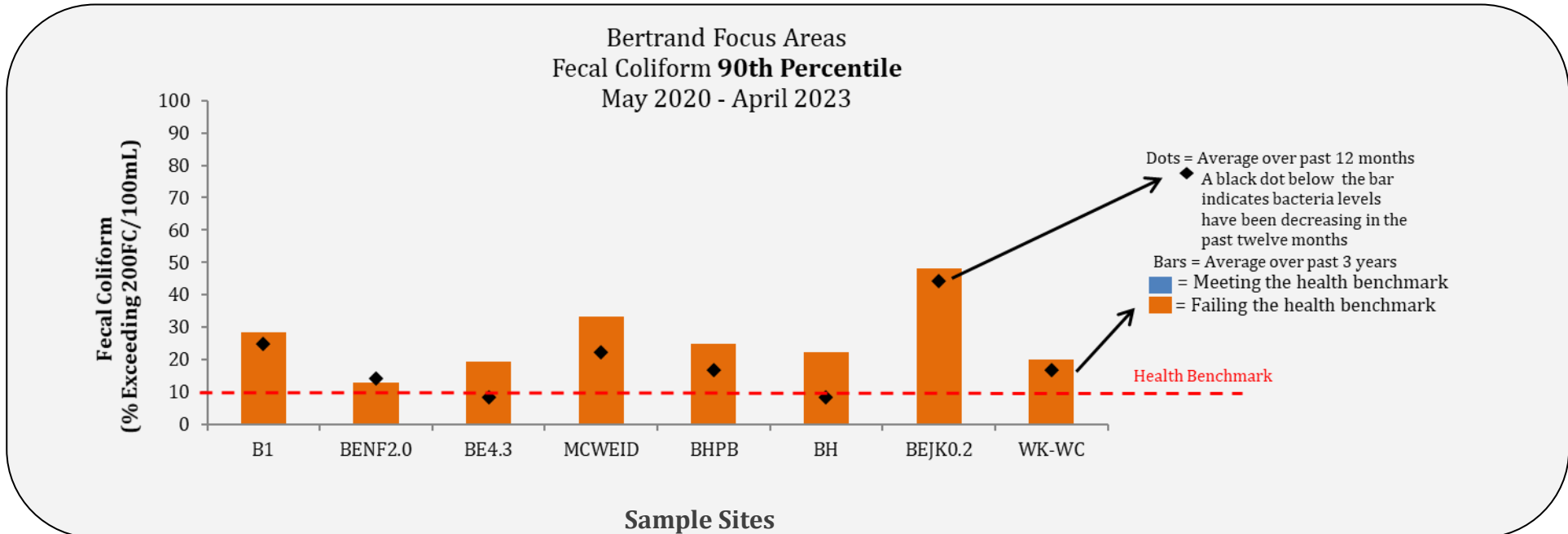


Bertrand Creek Focus Area *Mainstem Stations* Comparison of Bacteria Levels to Health Benchmarks

Refer to the map on page 1 or the table on page 3 for site locations.



*The bar must be blue on both graphs for the sample site to be meeting the freshwater health benchmark.



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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.
Results in light orange exceeded 200 FC/100mL. Results in dark orange exceed 1,000 FC/100mL.

Date	Creek Access Point Rainfall Data		Bertrand at Rathbone Rd.	N. Fork Loomis Trail	Bertrand Mainstem at Loomis Trail	McClellan at Wiedkamp	Bertrand at Berthusen Park	Bertrand at H St.	Jackman Ditch at Jackman Rd.	Wiedkamp Rd. N of Barnhart
	24 hr*	72 hr**	B1	BENF2.0	BE4.3	MCWEID	BHPB	BH	BEJK0.2	WK-WC
4/14/22	0.00	0.03	12	10	21	60	30	48	28	10
5/12/22	0.24	0.02	48	28	60	76	112	200	46	1,900
6/9/22	0.91	0.11	102	52	72	300	173	118	1,400	88
7/6/22	0.00	0.09	230	36	155	40	173	50	127	D
8/9/22	0.00	0.00	52	LF	164	ST	200	80	LF	D
9/7/22	0.00	0.02	230	LF	100	106	68	112	D	D
10/4/22	0.00	0.00	100	ST	94	ST	68	82	D	D
11/1/22	0.00	0.01	2,100	ST	6,500	ST	4,200	3,700	4,100	D
12/7/22	0.05	0.13	28	I	33	40	58	86	64	NS
1/12/23	0.66	0.14	34	4,500	80	34	220	60	14,000	13
2/14/23	0.01	0.11	139	3	90	132	104	106	64	2
3/20/23	0.00	0.00	10	118	12	310	58	76	250	2
4/13/23	0.00	0.21	18	108	34	106	34	28	88	2

Gray box indicates an event where no sample was collected for varying reasons. ST- Stagnant, FL- Flood, LF- Low Flow, D - Dry, I - Ice, NS - No Sample, NR - Not Recorded.

*Day of sampling event **Three days prior to, but not including, day of sampling event Rainfall measured in inches. Rainfall data taken from the Bellingham International Airport Station.