

Custer Focus Area

Water Quality Status: Fecal Coliform Bacteria

as of June 28, 2018

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 protect water quality, Washington State has developed criteria for bacteria levels in both fresh and marine waters.

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.

E. coli are a fecal coliform bacteria

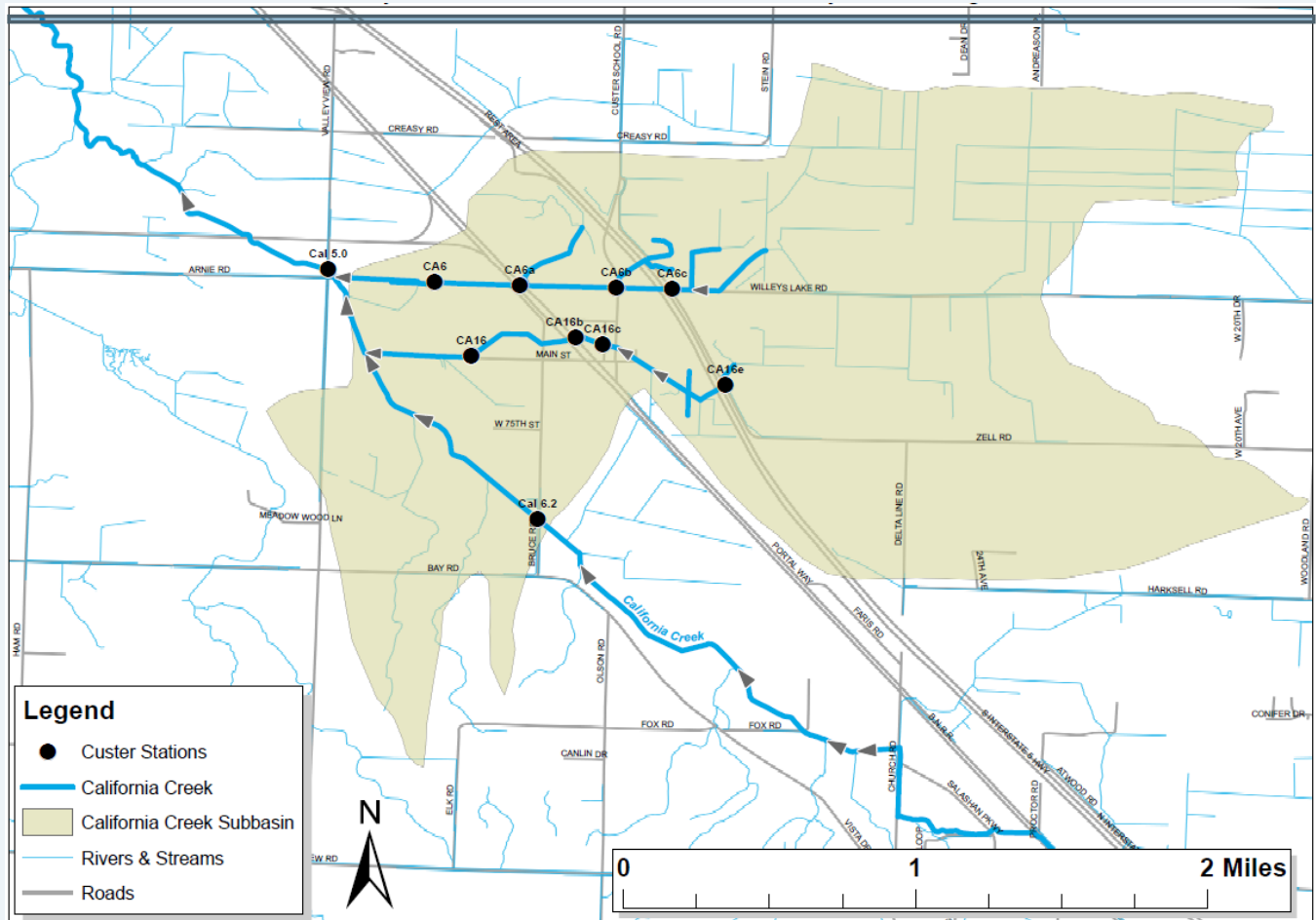
Where Does the Bacteria Come From?

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

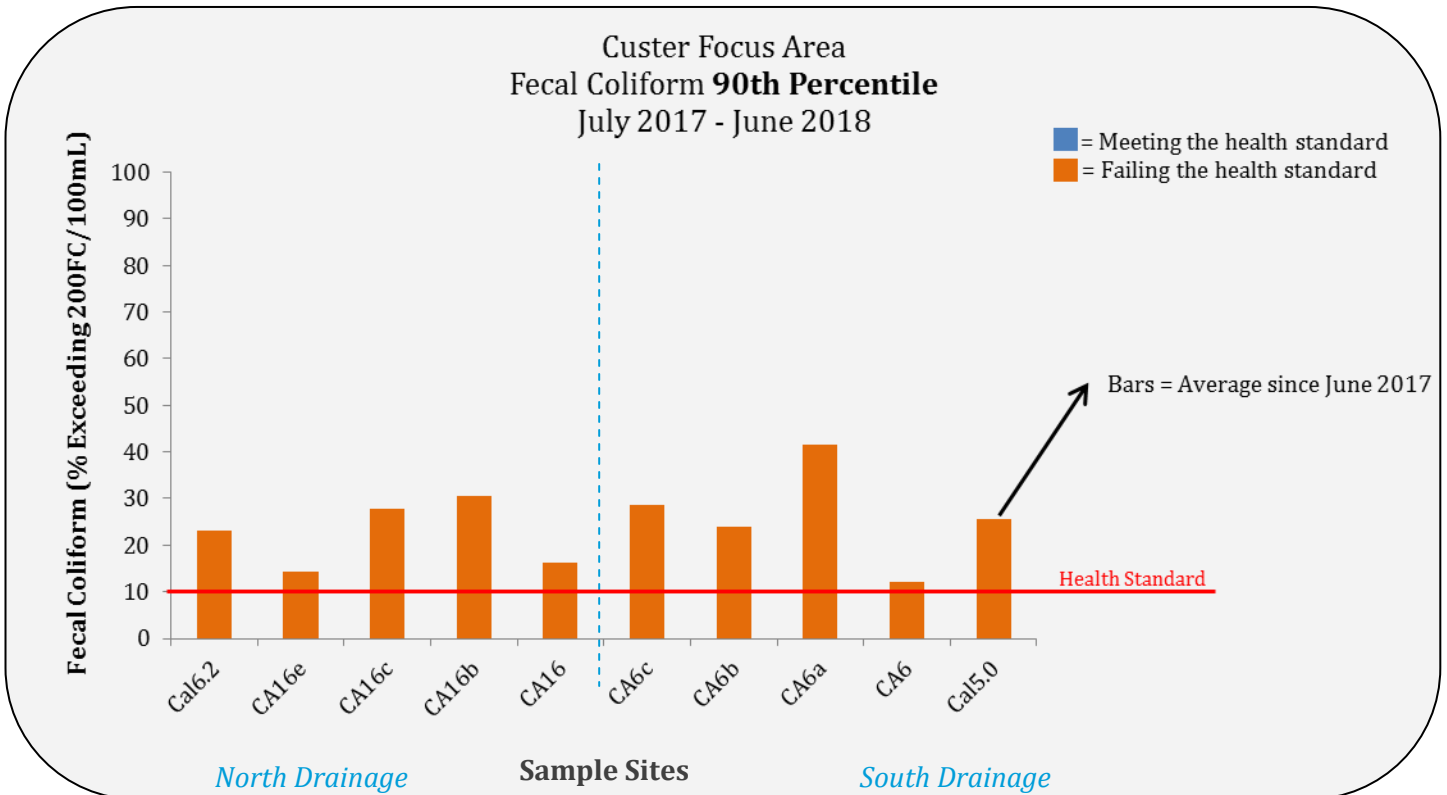
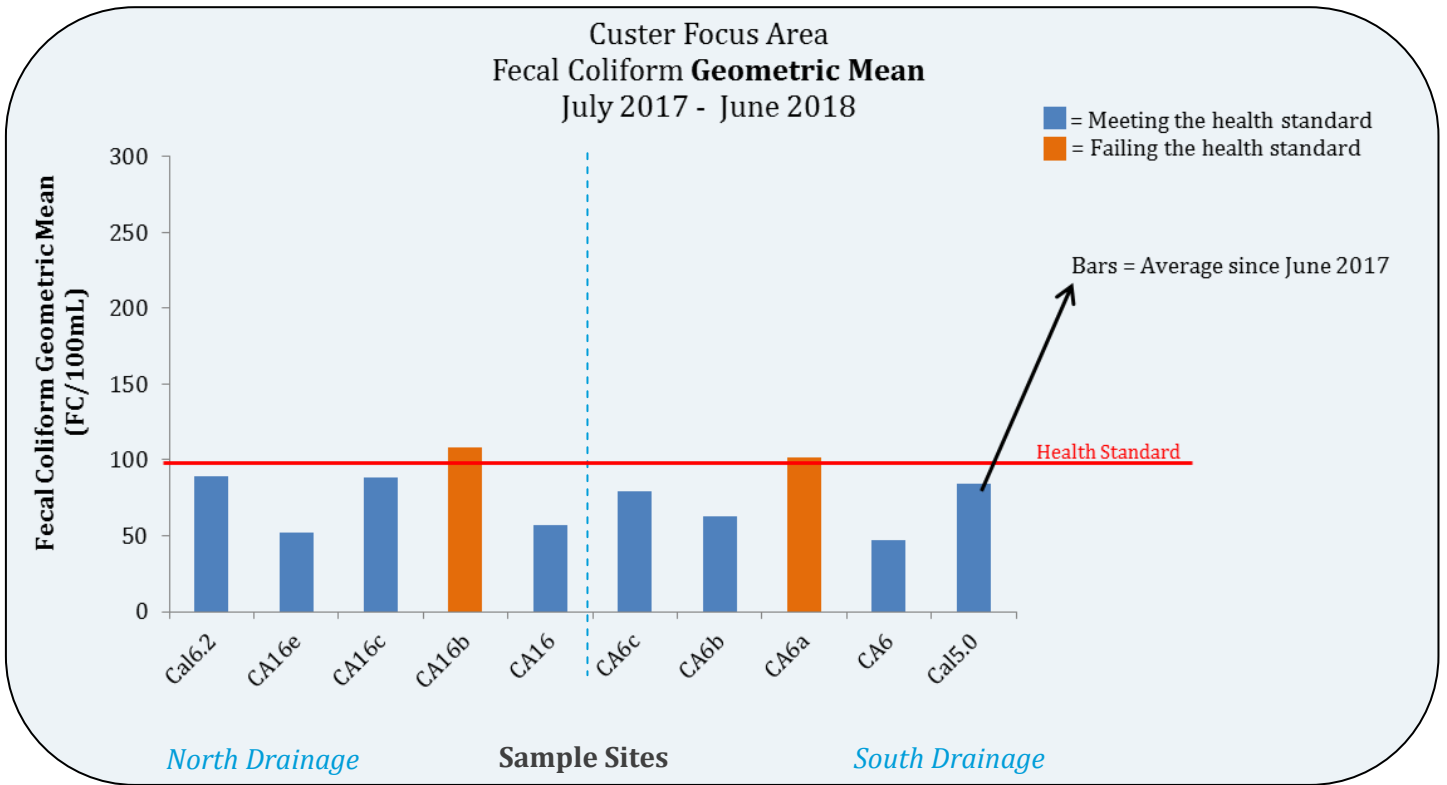
Routine Monitoring: The Custer drainage has been identified as a **focus area** for water quality monitoring due to high levels of bacteria observed through the routine monitoring program. Whatcom County Public Works (WCPW) has monitored fecal coliform bacterial in the Custer drainage area since May 2017.

Whatcom County Public Works Custer Water Quality Monitoring Stations



Cluster Focus Area Comparison of Bacteria Levels to Health Standards

Refer to the map on page 1 or the tables on pages 3-6 for site locations.



Custer Focus Area Historical Fecal Coliform Bacteria Data

These tables provides the individual results at each station since focused sampling began in May 2017. Results in light orange exceeded 200 FC/100mL. Results in dark orange exceed 1000 FC/100mL.

Sampling Stations

Date	<i>Bruce Rd.</i>	<i>Zell Rd.</i>	<i>4th St.</i>	<i>Portal Way</i>	<i>Main St.</i>	<i>Zell/ Willey's Lk.</i>	<i>Custer School Rd.</i>	<i>Portal Way</i>	<i>Arnie Rd. W. of Bruce</i>	<i>Valley View</i>
	Cal6.2	CA16e	CA16c	Ca16b	CA16	CA6c	CA6b	CA6a	CA6	Cal5.0
6/1/17	138	56	102	220	120	310	230	210	106	130
6/8/17	240	1,291	1,155	2,000	148	755	400	127	127	230
6/15/17	828	310	68	82	32	220	116	220	88	280
6/28/17	380	58	320	62	62	137	270	220	112	70
7/6/17	90	61	151	110	92	250	320	210	106	250
7/13/17	100	100	219	181	106	220	92	110	128	540
7/20/17	120	55	200	80	62	60	88	72	56	64
8/3/17	1,355	ST	610	210	300	570	250	166	116	189
8/9/17	310	ST	540	210	155	828	782	610	310	270
8/15/17	270	ST	NS	1,800	510	330	310	310	102	106
8/24/17	82	ST	ST	460	6,400	310	290	250	320	510
8/31/17	230	ST	ST	ST	320	114	80	86	62	114
9/7/17	420	ST	ST	ST	2,000	94	110	62	20	153
9/14/17	118	ST	ST	ST	127	163	62	20	12	68
9/19/17	17,000	ST	ST	2,000	2,400	782	520	240	155	791
9/28/17	62	37	158	136	48	137	114	58	5	68
10/5/17	37	ST	23	25	17	80	58	19	22	50
10/12/17	92	ST	98	98	105	94	62	70	68	106
10/18/17	42	46	120	102	23	25	19	440	60	78
10/26/17	66	69	17	4	10	17	35	17	22	19
11/2/17	27	2	17	15	9	40	44	22	12	22
11/8/17	15	NS	NS	NS	5	66	23	NS	7	10
11/15/17	27	12	2	4	4	48	5	23	28	44
11/21/17	63	NS	NS	NS	7	NS	NS	NS	99	109
12/7/17	45	NS	NS	NS	2	14	22	NS	17	28
12/19/17	230	NS	NS	NS	4	92	61	NS	50	270
1/3/18	5	NS	NS	NS	40	9	2	NS	4	7
1/17/18	33	NS	NS	NS	2	4	7	NS	2	9
2/1/18	42	NS	NS	NS	54	37	14	NS	20	32
2/14/18	23	NS	NS	NS	7	28	20	NS	51	19
3/1/18	6	NS	NS	NS	68	16	4	NS	6	9
3/7/18	15	NS	NS	NS	34	3	7	NS	3	5
3/22/18	62	NS	NS	NS	64	48	58	NS	9	20


¹ NS- no sample. ² Samples collected upstream of culvert. ³ E.coli analyzed using Colilert, ⁴ Sample contaminated. No result. ST- stagnant. FL-Flood, D- Dry, NP-No personnel

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

Custer Focus Area Continued Historical Fecal Coliform Bacteria Data

Date	<i>Bruce Rd.</i>	<i>Zell Rd.</i>	<i>4th St.</i>	<i>Portal Way</i>	<i>Main St.</i>	<i>Zell/ Willey's Lk.</i>	<i>Custer School Rd.</i>	<i>Portal Way</i>	<i>Arnie Rd. W. of Bruce</i>	<i>Valley View</i>
	Cal6.2	CA16e	CA16c	Ca16b	CA16	CA6c	CA6b	CA6a	CA6	Cal5.0
4/5/18	96	NS	NS	NS	12	350	200	NS	41	91
4/12/18	24	NS	NS	NS	17	14	12	NS	44	26
4/26/18	57	NS	NS	NS	117	45	33	NS	48	192
5/9/18	190	NS	NS	NS	76	93	100	NS	42	174
5/17/18	130	NS	NS	NS	164	235	100	NS	70	148
5/31/18	102	NS	NS	NS	210	66	179	NS	10	56
6/6/18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
6/14/18	33	NS	NS	96	94	28	15	NS	48	140
6/28/18	74	NS	NS	25	143	80	48	NS	33	380

¹ NS- no sample. ² Samples collected upstream of culvert. ³ E.coli analyzed using Colilert, ⁴ Sample contaminated. No result. ST- stagnant. FL-Flood, D- Dry, NP-No personnel

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