

# Upper California Creek Watershed

## Water Quality Status: Fecal Coliform Bacteria

September, 2022

**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.

### What are Fecal Coliform Bacteria?

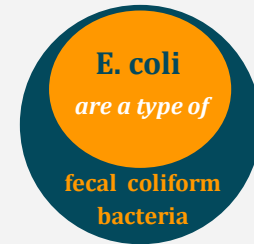
Fecal coliform bacteria are found in human and animal feces. Detection in a creek is a sign that pathogens from these wastes may be polluting the water. Contact with fecal contaminated waters can result in **gastroenteritis, skin rashes, upper respiratory infections** and other illnesses.

### 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.



### Freshwater Benchmarks

#### Geometric Mean

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

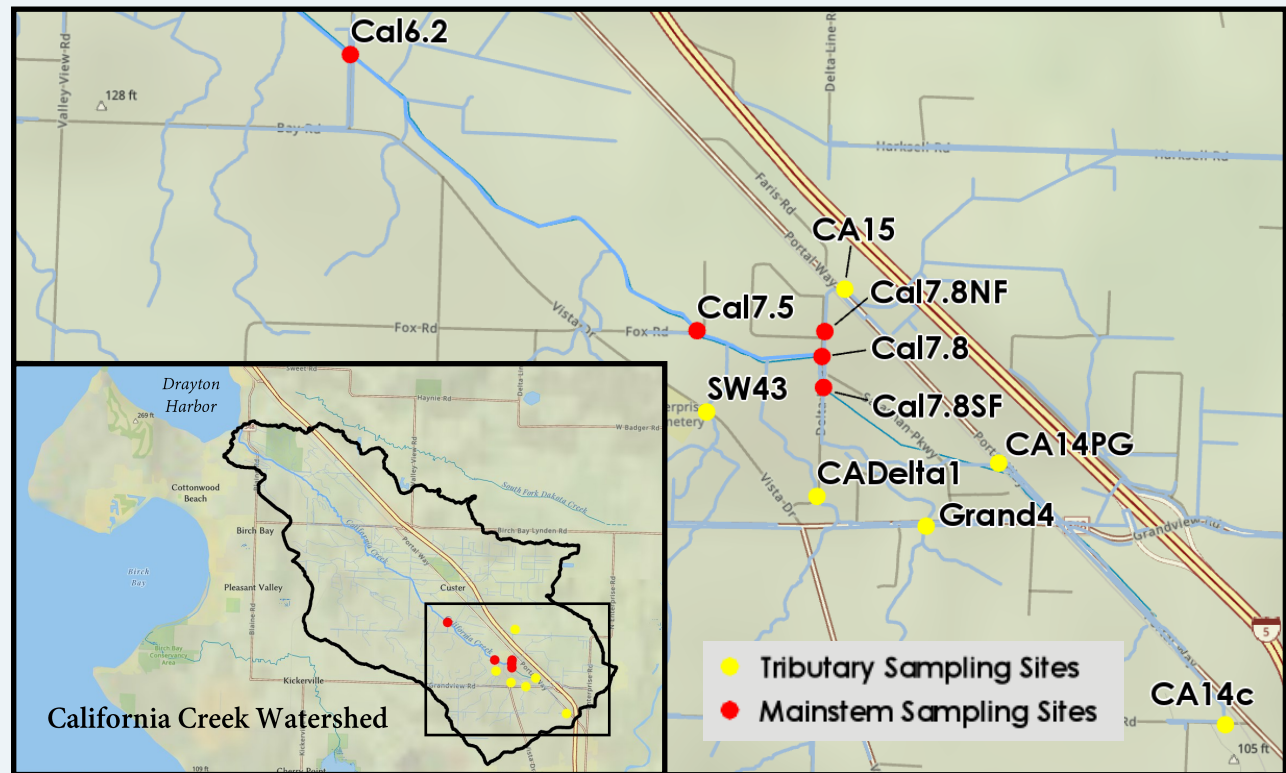
- and -

#### 90th Percentile

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

**Routine Monitoring:** The California Creek watershed has been monitored for fecal coliform bacteria by Whatcom County Public Works (WCPW) since March 2008. Additional monitoring sites in upper California Creek were established in September 2021.

### Whatcom County Public Works Upper California Creek Water Quality Monitoring Stations

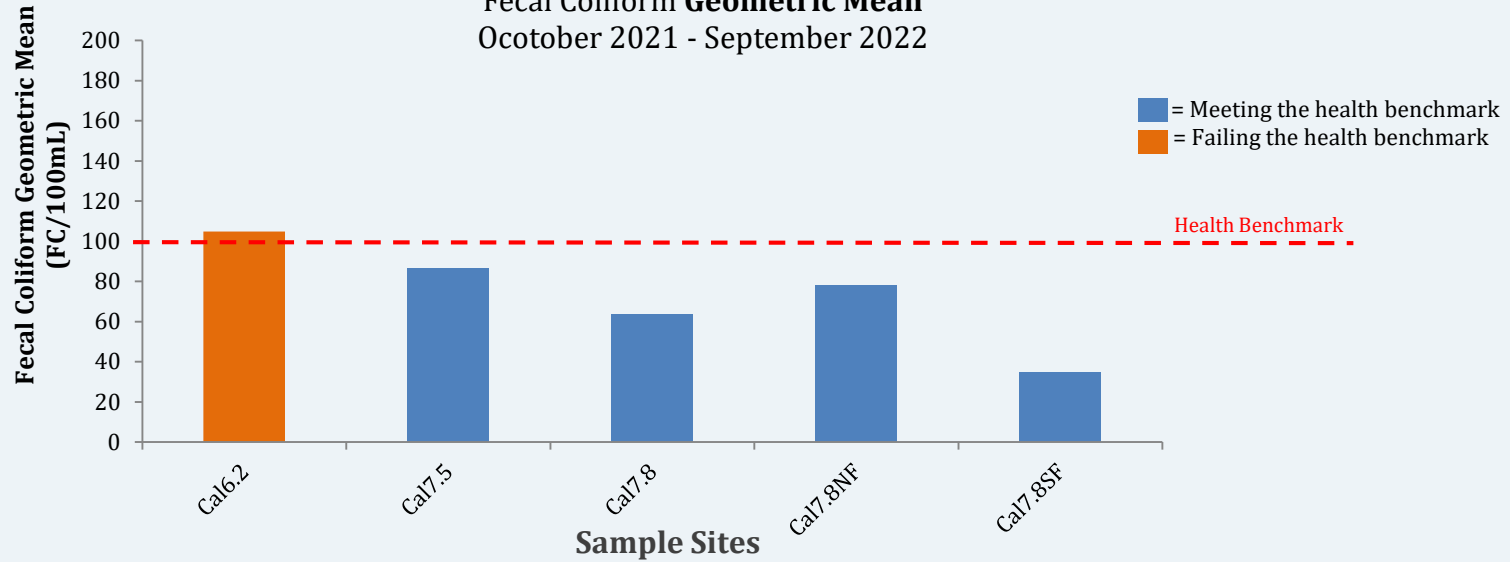


# Upper California Creek Sampling Stations

## Comparison of Bacteria Levels to Health Benchmarks

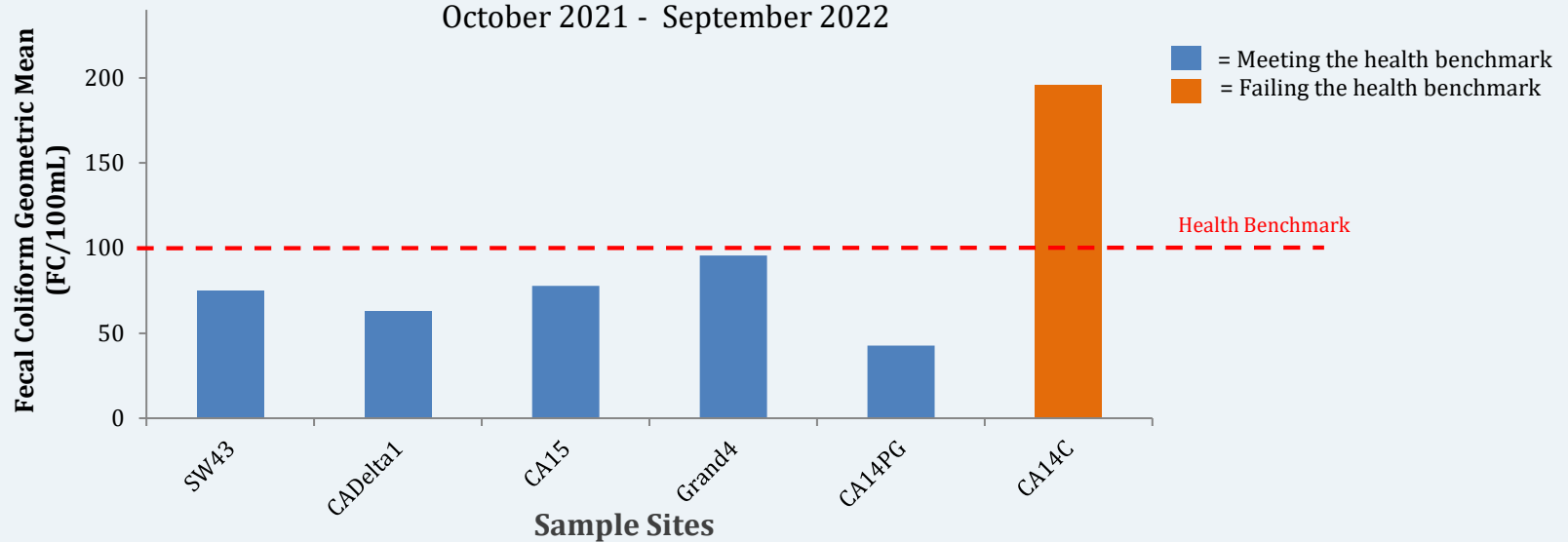
Refer to the map on page 1 or the table on page 3 for site locations.

**Upper California Creek Focus Area Mainstem Sites**  
**Fecal Coliform Geometric Mean**  
 October 2021 - September 2022



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

**Upper California Creek Focus Area Tributary Sites**  
**Fecal Coliform Geometric Mean**  
 October 2021 - September 2022



## Upper California Creek Mainstem Sampling Stations 7-Month Historical Fecal Coliform Bacteria Data

These tables provide the individual results at each station for the past four months. Results in light orange exceed 200 FC/100mL. Results in dark orange exceed 1,000 FC/100mL.

Date	Creek Access		California Creek at Bruce Road	California Creek at Fox Road, East of Vista	Cross culvert on west side of Delta Line Road	Delta Line Road, north of Delta Ring Road intersection	Cross culvert south of Cal 7.8 on east side of Delta Line Road
	Rainfall 24 hr*	72 hr**	Cal-6.2	Cal- 7.5	Cal7.8	Cal7.8NF	Cal7.8SF
10/20/21	0.07	0.57	270	20	106	104	31
10/28/21	1.29	0.60	2400	2000	164	155	182
11/4/21	0.43	1.04	370	290	58	5600	1200
11/9/21	0.42	0.35	109	78	23	10	230
11/23/21	0.09	0.04	23	15	5	8	10
12/2/21	0.00	1.85	64	36	36	52	18
12/7/21	0.14	0.74	80	72	31	40	182
12/21/21	NR	1.61	36	18	3	8	20
1/5/22	0.01	0.13	68	40	36	33	31
1/19/22	0.36	0.89	56	46	137	102	11
1/26/22	0.00	0.00	31	7	42	13	5
2/1/22	0.00	0.51	40	24	76	78	29
2/16/22	0.00	0.43	34	33	24	46	18
2/23/22	0.00	0.04	40	34	16	58	11
3/1/22	NR	0.00	460	255	15	9	500
3/10/22	0.00	0.02	5	15	72	145	ST
3/24/22	0.00	0.93	30	25	11	8	2
4/12/22	0.03	NR	28	50	78	50	2
4/19/22	0.02	0.32	200	230	520	540	18
4/26/22	0.00	0.33	40	26	30	36	15
5/5/22	0.77	0.42	2000	1100	155	320	114
5/10/22	0.00	1.10	106	104	42	36	13
5/23/22	0.00	0.00	34	34	42	88	28
6/9/22	0.91	0.11	260	230	164	210	96
6/23/22	0.00	0.06	230	210	136	88	560
6/30/22	0.00	NR	72	102	91	209	ST
7/7/22	0.01	0.00	250	240	68	66	ST
7/20/22	0.00	0.00	240	260	102	92	ST
7/28/22	0.00	0.00	470	580	182	220	ST
8/4/22	0.06	0.14	1900	1000	118	182	ST
8/11/22	0.00	0.00	280	109	430	380	ST
8/23/22	0.00	0.00	191	145	1400	1300	D
9/1/22	NR	0.00	220	155	470	250	ST
9/21/22	0.00	0.00	54	270	72	ST	ST
9/29/22	0.00	0.00	82	76	ST	ST	ST

Gray box indicates an event where no sample was collected for varying reasons. ST- Stagnant, FL- Flood, D-Dry, I- Ice. NA—Not Accessible

\*Day of sampling event \*\*Three days prior to, but not including, day of sampling event Rainfall measured in inches. Rainfall data taken from the Bertrand Creek "NR mouth" stream flow monitoring station. NR- Not Recorded.

## Upper California Creek Tributary Sampling Stations 7-Month Historical Fecal Coliform Bacteria Data

These tables provide the individual results at each station for the past four months. Results in light orange exceed 200 FC/100mL. Results in dark orange exceed 1,000 FC/100mL.

Date	Creek Access		Southwest side of Vista Drive, northwest of Grandview	California Creek tributary at Delta Line Road northeast of Vista/Grandview intersection	Cross culvert at Portal Way, south of Farris Rd.	Cross culvert on south side of Grandview Road, west of Salashan Parkway	Box culvert on west side of Portal Way, north of Grandview	Box culvert on south side of Brown Rd west of RR tracks
	24 hr*	72 hr**						
			SW43	CADelta1	CA15	Grand4	CA14PG	CA14c
10/20/21	0.07	0.57	28				D	200
10/28/21	1.29	0.60	900	1400			D	6000
11/4/21	0.43	1.04	310	280			6000	6000
11/9/21	0.42	0.35	178	72			7	13
11/23/21	0.09	0.04	48	30			27	380
12/2/21	0.00	1.85	41	31			42	100
12/7/21	0.14	0.74	78	68			700	600
12/21/21	NR	1.61	50	18			43	44
1/5/22	0.01	0.13	NA	118			23	127
1/19/22	0.36	0.89	72	54		42	13	16
1/26/22	0.00	0.00	31	16	46	36	16	46
2/1/22	0.00	0.51	70	76	88	54	56	400
2/16/22	0.00	0.43	50	18	44	58	96	82
2/23/22	0.00	0.04	46	216	54	22	20	I
3/1/22	NR	0.00	15	82	11	18	400	460
3/10/22	0.00	0.02	25	7	127	ST	3	11
3/24/22	0.00	0.93	82	40	15	25	21	34
4/12/22	0.03	NR	84	80	40	52	2	21
4/19/22	0.02	0.32	64	164	560	530	90	320
4/26/22	0.00	0.33	48	23	48	440	2	66
5/5/22	0.77	0.42	1400	270	108	400	2400	6000
5/10/22	0.00	1.10	54	164	56	250	72	56
5/23/22	0.00	0.00	108	74	56	ST	28	36
6/9/22	0.91	0.11	145	82	250	200	60	2300
6/23/22	0.00	0.06	173	60	64	ST	ST	400
6/30/22	0.00	NR	ST	ST	164	68	ST	1500
7/7/22	0.01	0.00	10	ST	127	1500	ST	ST
7/20/22	0.00	0.00	ST	ST	84	60	ST	ST
7/28/22	0.00	0.00	ST	D	127	182	D	D
8/4/22	0.06	0.14	ST	ST	96	560	ST	ST
8/11/22	0.00	0.00	ST	D	240	155	D	D
8/23/22	0.00	0.00	D	D	370	136	D	D
9/1/22	NR	0.00	D	D	173	182	D	D
9/21/22	0.00	0.00	D	D	ST	ST	D	D
9/29/22	0.00	0.00	D	D	ST	ST	D	D

Gray box indicates an event where no sample was collected for varying reasons. ST- Stagnant, FL- Flood, D-Dry, I- Ice. NA—Not Accessible

\*Day of sampling event \*\*Three days prior to, but not including, day of sampling event Rainfall measured in inches. Rainfall data taken from the Bertrand Creek "NR mouth" stream flow monitoring station. NR- Not Recorded.