

Birch Bay/Terrell Creek

Water Quality Status: Fecal Coliform Bacteria

as of June 2021

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:

Whatcom County Public Works (WCPW) has monitored fecal coliform bacteria in the Birch Bay/Terrell Creek watershed since 2006.

More information is available at:
www.whatcomcounty.us/1072/Water-Quality



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.

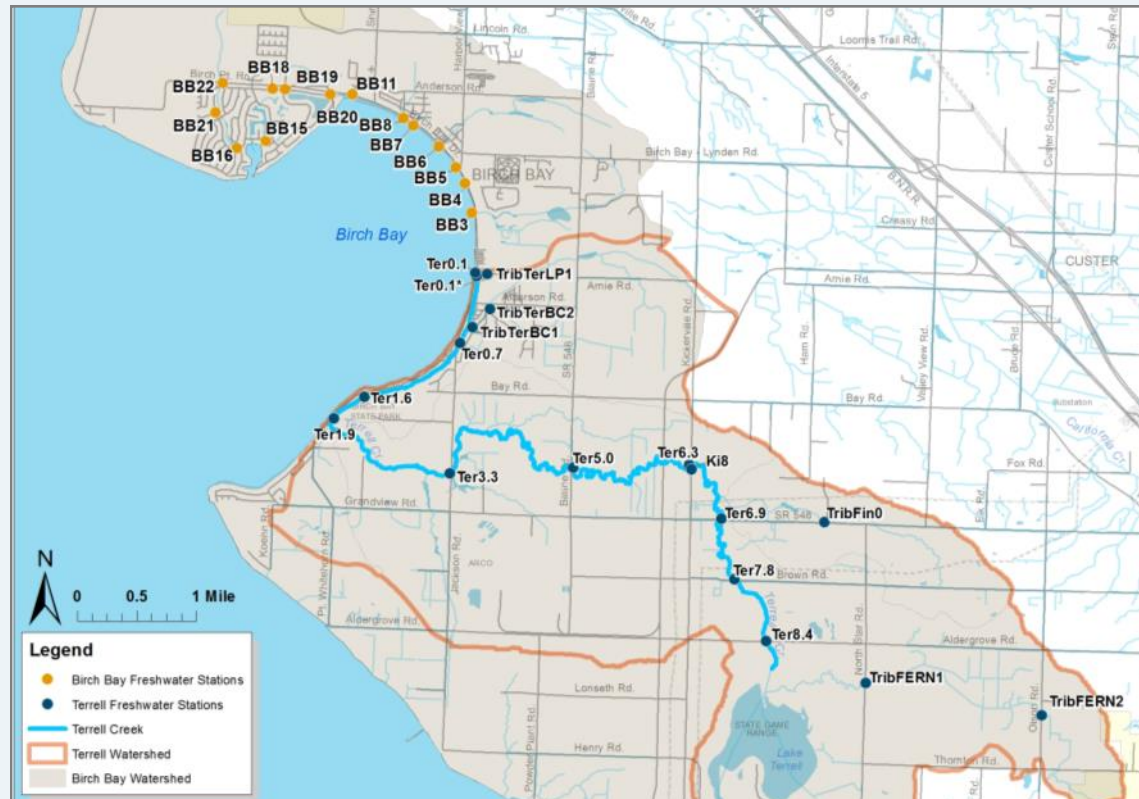
Where Does the Bacteria Come From?

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!

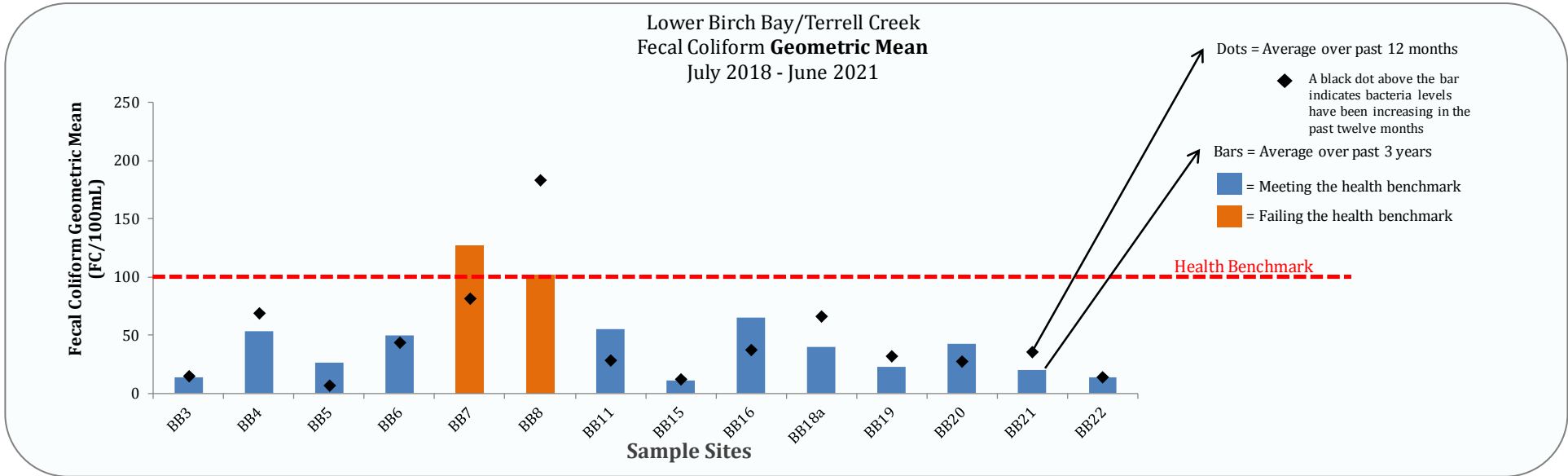
Whatcom County Public Works Birch Bay/Terrell Creek Water Quality Monitoring Stations



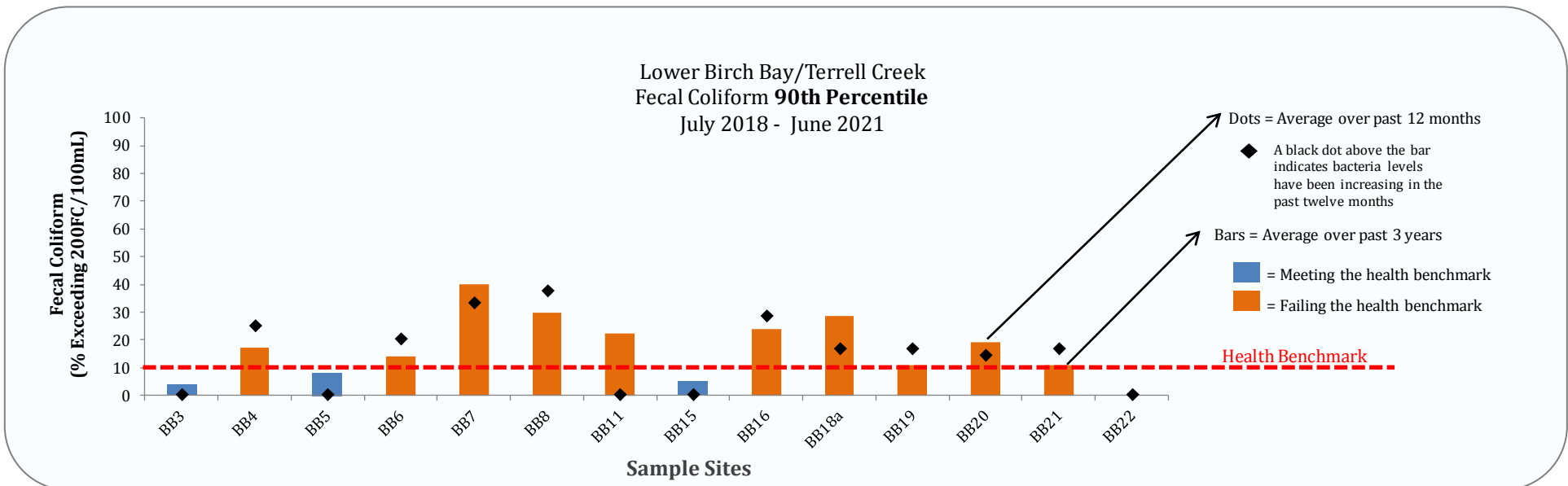
Lower Birch Bay/Terrell Creek

Comparison of Bacteria Levels to Health Benchmarks

Refer to the orange dots on 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.



Note: samples collected monthly.

Lower Birch Bay/Terrell Creek

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	Site Access Point		Outfall across from BB Visitor's Center	Outfall across from S. Mariner's Cove Condominium	Outfall across from Harborview Rd. and Birch Bay Dr.	Outfall across from Cottonwood Dr. and Birch Bay Dr.	Outfall across from Birch Bay Dr. and Beachway Dr.	Outfall across from Birch Bay Dr. and Cedar Avenue	Intersection of Deer Trail and Birch Bay Dr.	Thunderbird Lake Outlet to marina, Coquitlam Drive.	Beaver Pond outlet to marina, Comox Rd + Chehalis Rd.	Culvert under Birch Pt. Rd. btwn Selder & Bay Ridge	Ditch from Birch Point Rd. at Salish and Cowichan Rds	Channel to Roger's Slough, near gauge	Pipe inlet, Skeena Way + Skagit Rd.	Culvert under Birch Point Rd. at N BB Village
	Rainfall Data															
	24 hr*	72 hr**														
6/16/20	0.00	0.03	21	118	200	70	6,000	114	5,600	TNS	TNS	164	TNS	TNS	TNS	92
7/29/20	0.00	0.00	15	84	LF	LF	ST	LF	ST	TNS	TNS	ST	TNS	TNS	TNS	ST
8/19/20	0.00	0.00	31	LF	D	D	D	D	NA	TNS	TNS	D	TNS	TNS	TNS	NA
9/15/20	0.05	0.06	NA	6,000	LF	ST	D	58	NA	TNS	TNS	LF	TNS	TNS	TNS	ST
10/13/20	0.54	1.10	NA	NA	NA	NA	6,000	5,600	NA	41	106	2,900	700	800	590	200
11/12/20	0.40	0.26	23	16	5	15	1,800	1,200	18	5	8	42	5	7	43	3
12/10/20	0.03	1.04	78	570	7	90	23	118	10	30	72	33	36	30	76	18
1/13/21	0.24	1.47	HT	HT	HT	HT	HT	52	20	10	240	21	200	42	16	11
2/16/21	0.04	0.47	HT	HT	HT	NA	58	580	52	TNS	TNS	118	TNS	TNS	TNS	78
3/29, 3/30	0.00	0.27	8	16	TNS	40	10	36	40	8	250	8	5	11	7	5
4/12/21	0.00	0.09	8	2	LF	8	2	25	60	2	3	TNS	7	5	8	2
5/10/21	0.25 ¹	0.34 ¹	11	62	LF	330	D	LF	LF	ST	ST	LF	D	26	D	LF
6/8/21	0.00	0.41	3	52	D	D	D	D	D	26	8	D	D	ST	D	D

D- Dry, ST- Stagnant, FL- Flooded, LF- Low Flow, HT- High Tide, TNS - Temporarily Not Sampling, NA—Not Accessible,

Gray box indicates no sample was collected for varying reasons.

*Day of sampling event (inches)

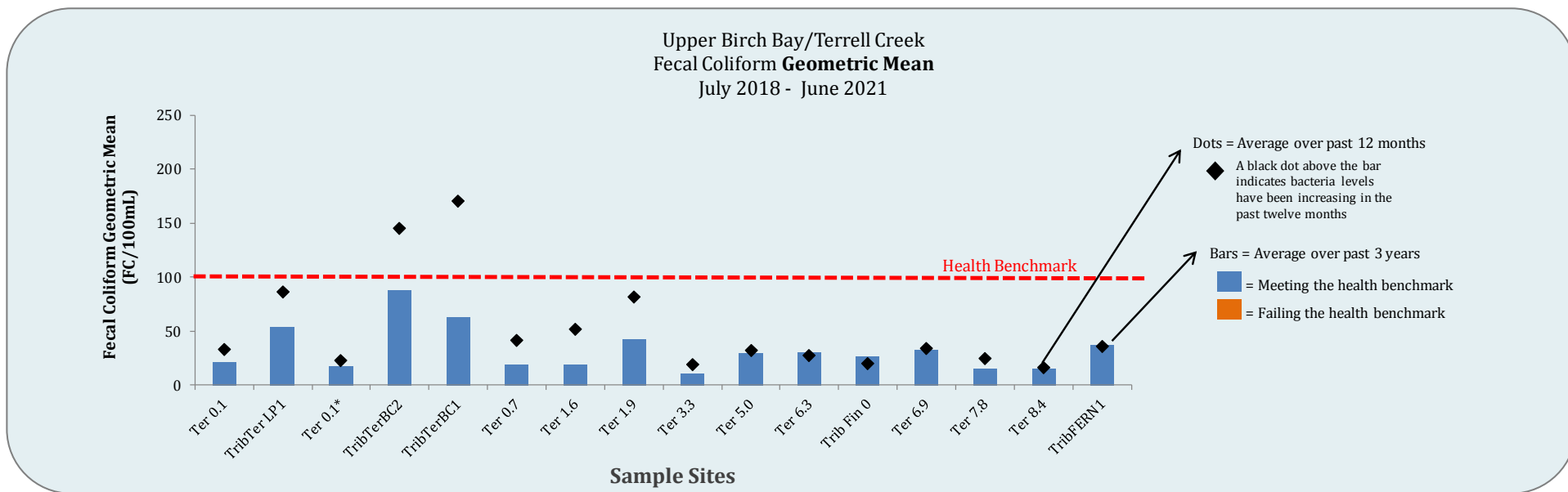
**Three days prior to, but not including, day of sampling event (inches)

Rainfall data taken from the Bertrand Creek stream flow monitoring station.

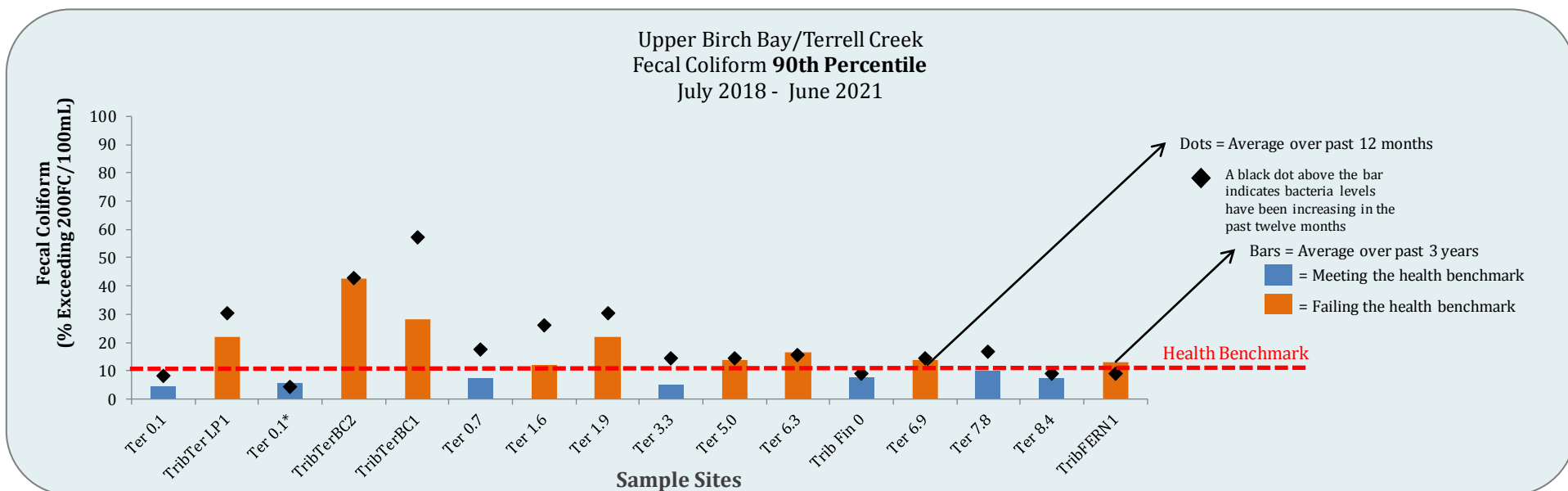
¹Rainfall data taken from CoCoRaHS Station WA-WC-29.

Upper Birch Bay/Terrell Creek Comparison of Bacteria Levels to Health Benchmarks

Refer to the [blue dots](#) on the map on page 1 or the table on page 5 for site locations.



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



Note: samples collected bi-monthly

Upper Birch Bay/Terrell Creek 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.

Site Access Point Date	Mouth of Terrell Ck.	Leisure Pk. E of BB Dr.	Terrell, Leisure Pk., confluence	Birch Ck. At Leaside	Birch Ck., Morrison + Woolridge	Terrell Ck., Jackson Rd	Terrell Ck. At BBSP At Bridge	Terrell Ck. at Helwig Bridge	Terrell Ck., Jackson, N of Grandview	Terrell Ck., Blaine Road	Terrell Ck., Kickerville Road	Grandview + Alta Luna Alpaca	Terrell Ck., Grandview	Terrell Ck., Brown Rd.	Terrell Ck., Aldergrove	N. Star Rd., South of Aldergrove	Olsen Rd., South of Aldergrove	Kickerville Rd., South of Bay Rd.
	Ter 0.1	TribTer LP1	Ter 0.1*	TribTer BC2	TribTer BC1	Ter 0.7	Ter 1.6	Ter 1.9	Ter 3.3	Ter 5.0	Ter 6.3	Trib Fin 0	Ter 6.9	Ter 7.8	Ter 8.4	Trib FERN1	Trib FERN2	Ki8
6/2/20	51	92	61	340	42	25	42	18	68	3	68	25	60	78	82	44	26	200
6/16/20	74	380	60	540	173	16	10	26	11	82	100	112	100	48	42	78	33	250
7/6/20	38	155	26	ST	ST	23	370	145	209	114	ST	ST	118	ST	ST	ST	ST	D
7/29/20	420	2,800	64	ST	ST	62	1,900	1,900	ST	ST	ST	ST	ST	ST	ST	ST	D	D
8/3/20	56	320	8	ST	ST	11	230	570	ST	ST	ST	D	ST	ST	ST	ST	D	D
8/19/20	13	900	13	ST	D	13	46	3,100	ST	ST	ST	ST	D	ST	ST	D	D	D
9/1/20	7	88	11	D	D	26	48	1,000	ST	ST	ST	D	D	ST	ST	ST	D	D
9/15/20	26	54	26	ST	D	8	80	410	ST	ST	ST	D	D	ST	ST	ST	D	D
10/13/20	800	1,600	900	5,700	4,700	460	230	182	182	1,200	5,100	ST	5,100	300	ST	ST	ST	LF
10/27/20	36	46	54	82	LF	39	7	7	10	33	8	ST	38	ST	ST	ST	D	D
11/12/20	11	16	11	440	LF	2	2	3	2	2	2	5	2	240	240	3	3	LF
11/23/20	44	31	39	1,400	210	36	7	8	5	42	58	20	66	15	11	145	15	250
12/10/20	66	21	64	10	42	58	56	40	30	46	28	15	76	40	40	34	30	13
12/22/20	155	60	96	84	370	320	98	102	280	290	320	112	360	66	72	58	23	106
1/13/21	56	33	68	18	360	44	92	54	112	66	80	15	109	62	48	84	38	15
1/27/21	20	5	31	112	20	44	25	46	5	5	7	25	2	16	15	7	3	2
2/3/21	58	15	48	16	HT	46	25	50	28	23	52	23	38	94	54	52	48	15
3/15/21	23	80	11	550	LF	3	3	8	2	7	3	2	7	5	2	15	7	LF
3/29/21	11	10	10	46	38	20	18	13	8	23	5	15	5	3	2	34	42	30
4/12/21	23	10	3	70	LF	102	3	3	2	5	5	460	2	2	2	430	100	LF
4/26/21	66	164	38	240	LF	230	127	64	54	50	56	11	66	8	8	20	16	28
5/10/21	2	420	2	LF	D	100	110	36	ST	LF	LF	ST	LF	ST	LF	LF	LF	D
5/24/21	56	260	8	580	LF	50	550	1,000	ST	LF	LF	LF	LF	ST	LF	LF	LF	LF
6/8/21	48	230	2	LF	D	15	11	48	ST	LF	LF	LF	LF	ST	LF	LF	LF	D
6/22/21	50	155	50	D	ST	1,800	1,000	800	ST	LF	LF	ST	LF	ST	LF	ST	D	D

Gray box indicates no sample was collected for varying reasons.

D- Dry, ST- Stagnant, LF- Low Flow, I- Ice, LM- Lab Mishandled, TNS- Temporarily not sampling 5