

# Birch Bay/Terrell Creek

## Water Quality Status: Fecal Coliform Bacteria

as of April 2019

### 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:

**50 fecal coliform/100mL**

- and -

#### 90th Percentile

Less than 10% of samples contain over:

**100 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](http://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.

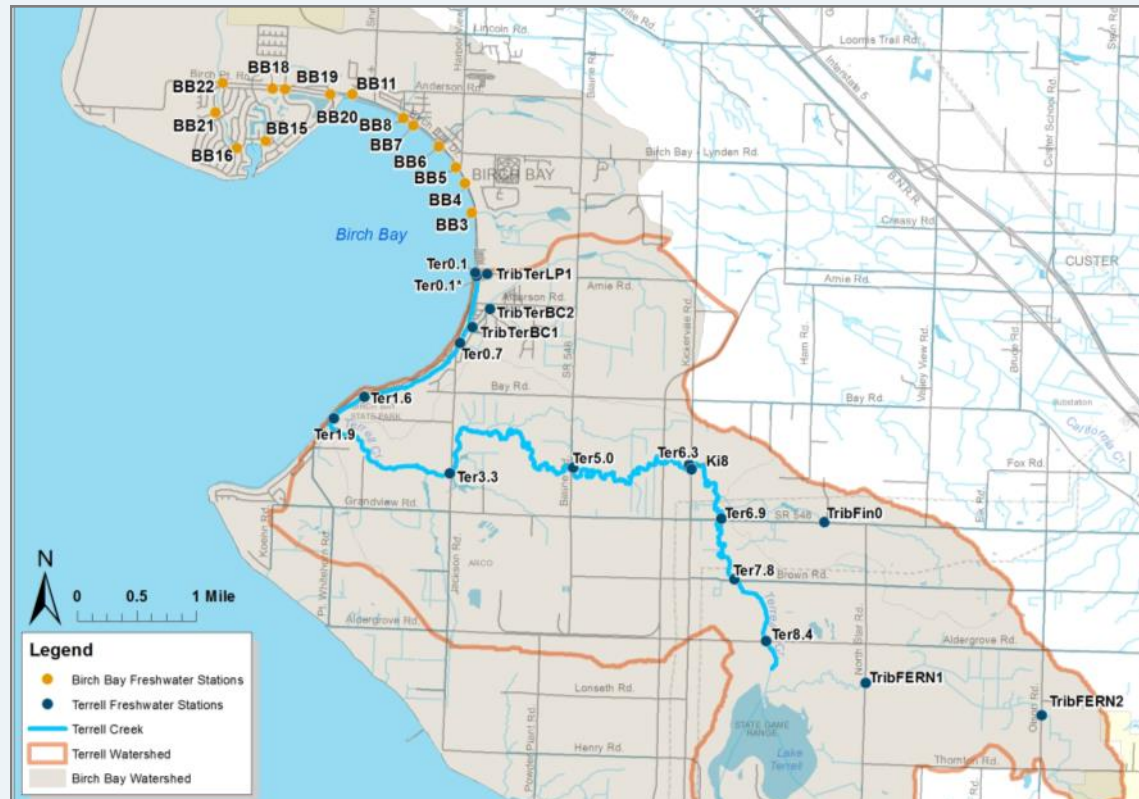
### Where Does the Bacteria Come From?

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!**

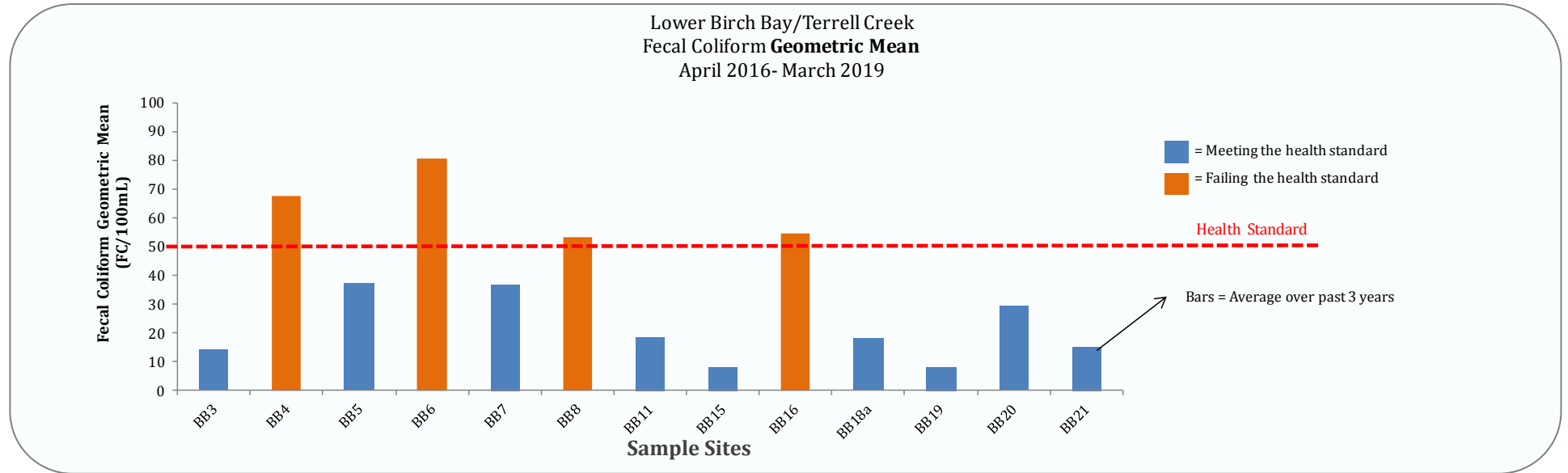
### Whatcom County Public Works Birch Bay/Terrell Creek Water Quality Monitoring Stations



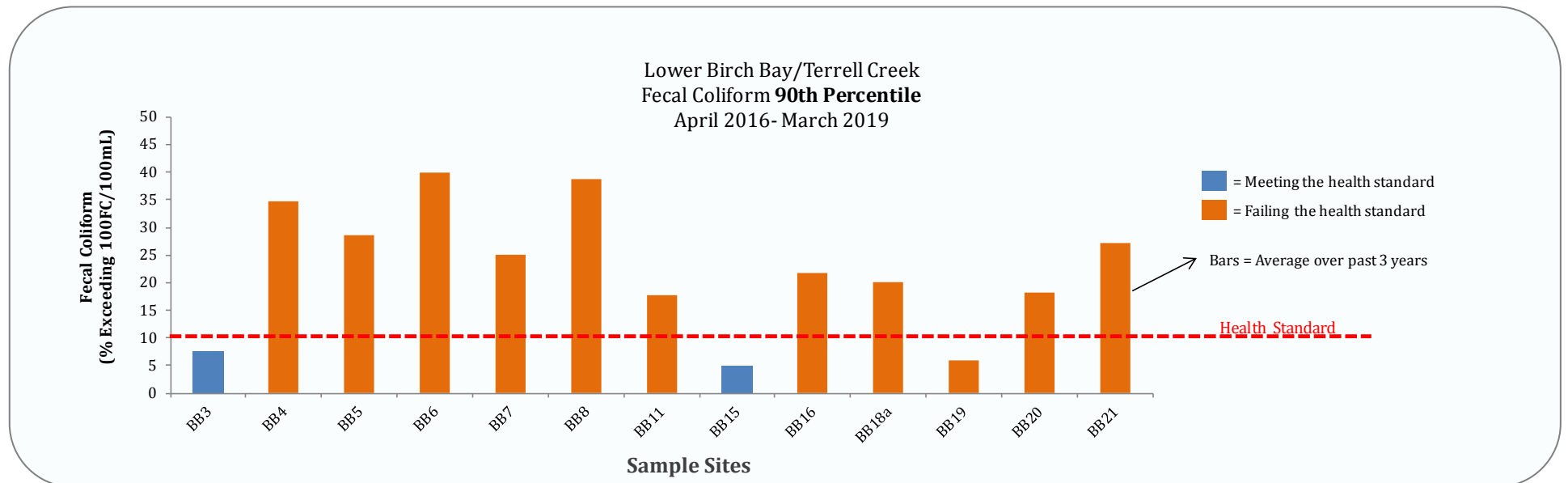
## Lower Birch Bay/Terrell Creek

### Comparison of Bacteria Levels to Health Standards

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 standard.



Note: samples collected monthly. Data for site BB18a begins in October 2016.

## 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 100 FC/100mL. Results in dark orange exceed 500 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**														
3/29/18	0.15	NR	23	98	17	58	9	106	15	2	138	9	15	74	5,000	2
4/17/18	0.06	0.91	200	25	2	44,400	40	10	15	4	346	35	40	200	122	4
5/16/18	0.00	0.00	9	23	LF	33	4	10	14	25	52	TNS	TNS	299	TNS	5
6/13/18	0.06	0.02	2	800	D	731	D	7	D	D	D	D	D	D	D	D
7/11/18	0.00	0.00	2	D	D	D	D	655	D	D	D	D	D	D	D	D
8/9/18	0.00	0.00	28	NS	NS	2	NS	NS	NS	D	D	D	D	D	D	D
9/20/18	0.14	0.00	15	60	LF	10	96	40	ST	ST	ST	LF	D	D	D	ST
10/18/18	0.00	0.00	2	2	D	D	2	12	ST	ST	ST	D	D	D	D	D
11/19/18	0.00	0.03	9	5	NA	9	46	60	NA	7	40	7	9	130	17	10
12/18/18	0.39	0.50	HT	82	HT	HT	HT	42	200	35	82	20	12	68	40	23
1/23/19	0.40	0.96	HT	143	28	60	84	33	70	260	580	66	168	60	20	10
2/21/19	0.00	0.32	5	20	82	58	7	11	21	8	48	8	3	18	2	18
3/7/19	0.16	0.09	8	23	7	52	30	11	52	7	118	2	2	5	290	8

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

Gray box indicates no sample was collected for varying reasons.

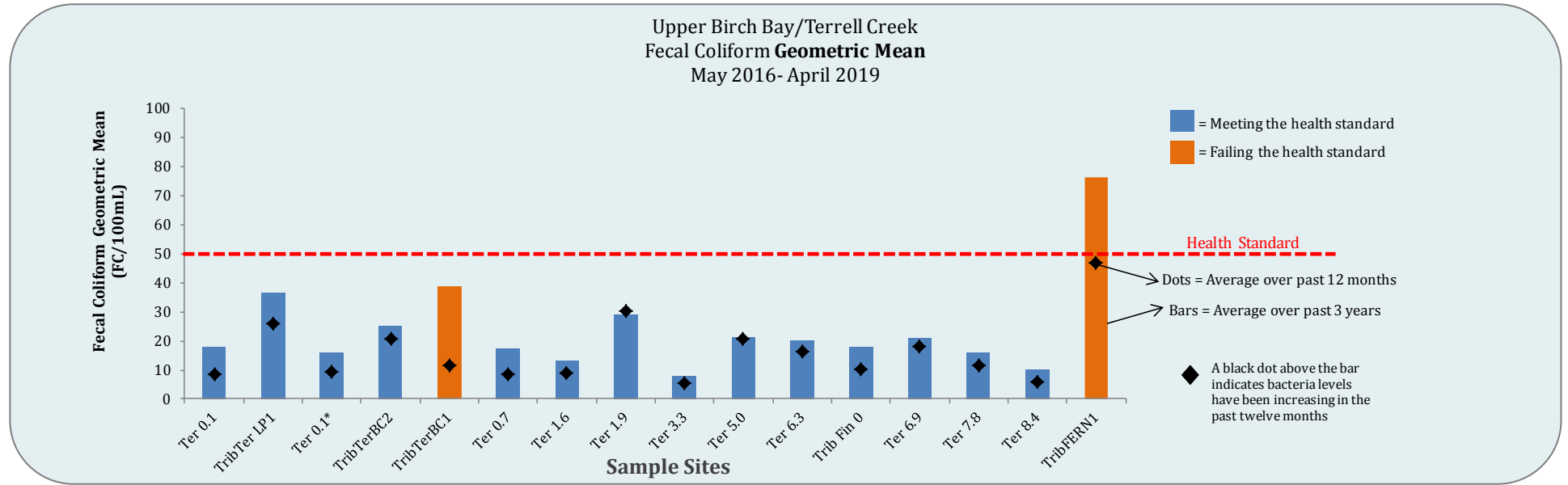
\*Day of sampling event (inches)

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

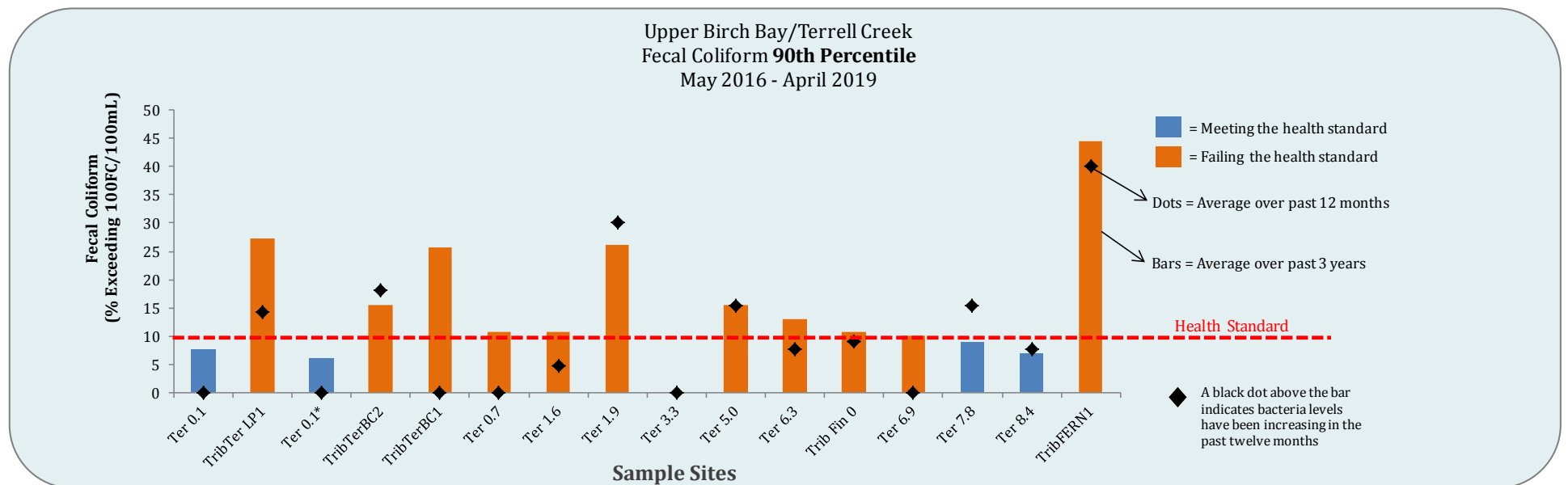
All rainfall data taken from the Bertrand Creek stream flow monitoring station. NR- Not Recorded

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

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 standard.



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 100 FC/100mL. Results in dark orange exceed 500 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 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
4/17/18	22	17	42	12	40	37	23	17	22	22	20	27	5	9	12	102	15	20
5/2/18	22	35	19	35	7	14	4	15	7	23	12	2	2	9	5	12	1610	2
5/16/18	42	530	12	D	LF	40	114	102	5	12	10	56	30	15	2	590	ST	ST
6/13/18	9	108	5	102	LF	4	62	187	7	23	19	ST	43	118	2	ST	ST	D
6/27/18	2	19	2	D	D	7	2	50	40	560	35	ST	48	23	2	ST	D	D
7/11/18	4	52	4	D	D	2	12	141	ST	LF	LF	D	LF	ST	ST	ST	D	D
7/24/18	7	41	2	D	D	4	4	100	ST	LF	LF	D	LF	ST	ST	ST	D	D
8/9/18	2	28	14	D	D	2	7	264	ST	LF	LF	D	LF	ST	ST	ST	D	D
8/23/18	2	104	2	D	ST	2	4	128	ST	ST	ST	D	LF	ST	ST	D	D	D
9/5/18	2	38	2	D	D	2	2	ST	ST	D	ST	D	LF	ST	ST	D	D	D
9/20/18	2	23	2	LF	ST	23	17	42	ST	LF	LF	ST	LF	ST	ST	ST	D	D
10/4/18	40	74	32	LF	LF	19	20	320	ST	LF	LF	ST	LF	ST	ST	ST	D	D
10/18/18	4	20	7	ST	ST	2	2	30	ST	LF	LF	ST	LF	ST	ST	ST	D	D
11/08/18	7	62	4	9	17	4	10	4	2	17	23	5	23	2	4	17	17	15
11/19/18	19	7	14	96	17	14	4	2	2	2	12	2	10	2	2	2	9	ST
12/4/18	15	10	40	12	22	17	15	15	2	4	9	7	9	2	2	7	5	LF
1/9/19	9	2	12	9	10	7	9	9	5	2	4	9	4	5	4	52	7	23
1/23/19	42	42	76	46	78	51	68	72	NS	174	135	128	58	68	68	491	117	5400
2/21/19	2	5	15	15	2	18	11	21	18	11	20	62	10	25	44	I	I	86
3/7/19	16	7	18	3	2	23	5	3	2	34	16	5	44	3	3	200	3	2
3/21/19	25	3	13	2	3	11	2	2	2	26	3	2	23	3	2	18	10	2
4/4/19	42	48	46	220	96	33	30	18	30	84	54	28	38	230	330	330	164	54

Gray box indicates no sample was collected for varying reasons.

D- Dry, ST- Stagnant, LF- Low Flow, TNS= Temporarily not sampling