

Fishtrap Creek Focus Area

Water Quality Status: Fecal Coliform Bacteria

April, 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.

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 Fishtrap 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 Fishtrap Creek drainage area since March 2015.

What are Fecal Coliform Bacteria?

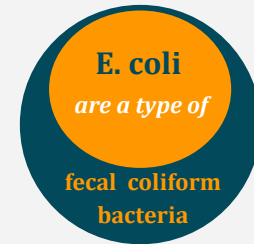
Fecal coliform bacteria are found in human and animal feces. Detection in a creek is a sign that pathogens from these wastes may be polluting the water. Contact with fecal contaminated waters can result in **gastroenteritis, skin rashes, upper respiratory infections** and other illnesses.

Where Does the Bacteria Come From?

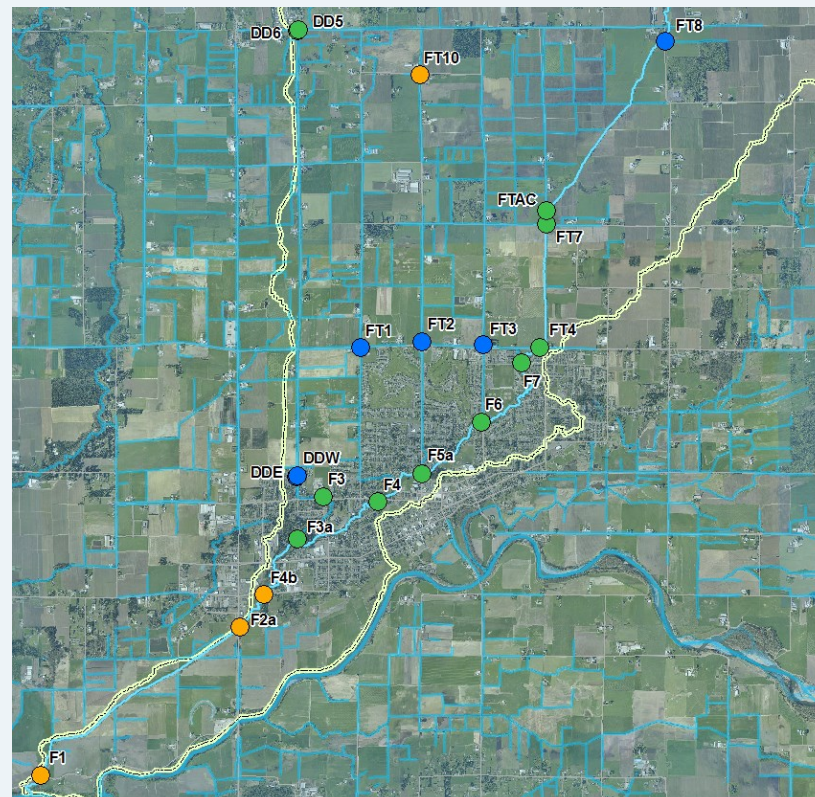
Potential sources of bacteria include:

- 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 Fishtrap Creek Water Quality Monitoring Stations



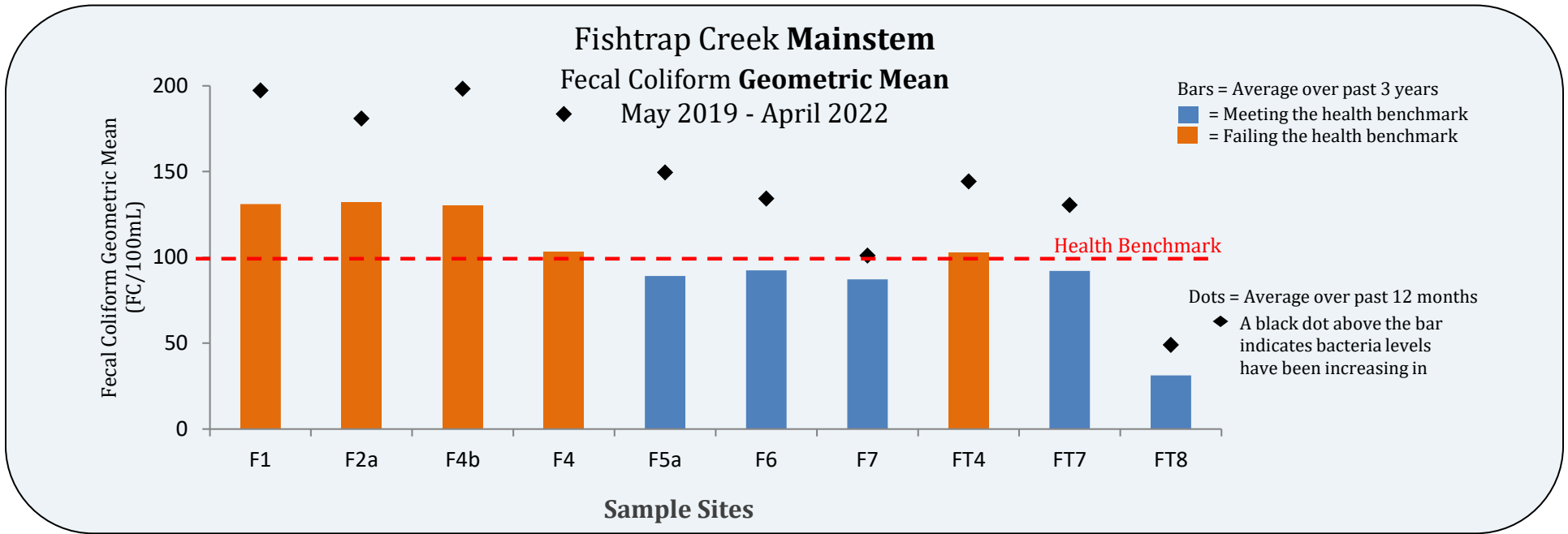
Water Quality Status (Geometric Mean)

- < 50 FC/100mL
- 50-100 FC/100mL
- 100-200 FC/100mL
- 200-500 FC/100mL
- 500-1000 FC/100mL
- > 1000FC/100mL

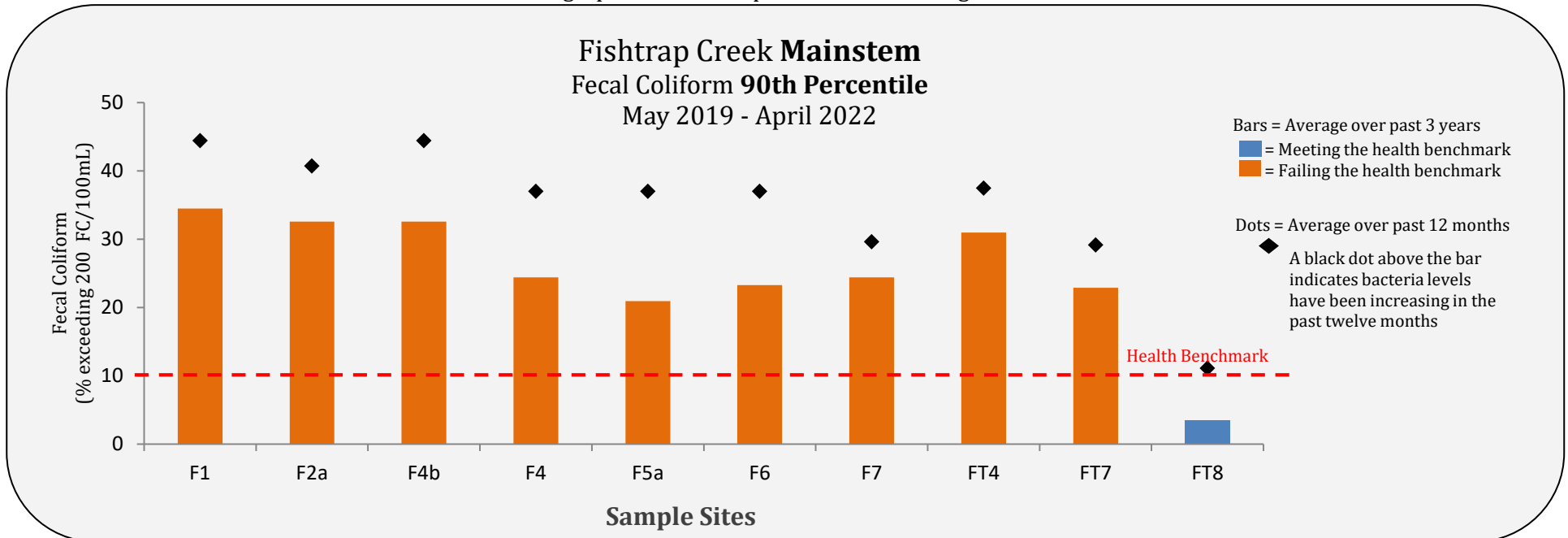
Note: This map illustrates the status of each station for the 3-year geometric mean to assist with identifying hot spots.

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

Refer to the map on page 1 or the tables on page 4 for site locations.



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



Fishtrap Creek Focus Area Mainstem Stations

13- Month Historical Fecal Coliform Bacteria Data

Results in light orange exceeded 200 FC/100mL. Results in dark orange exceed 1000 FC/100mL.

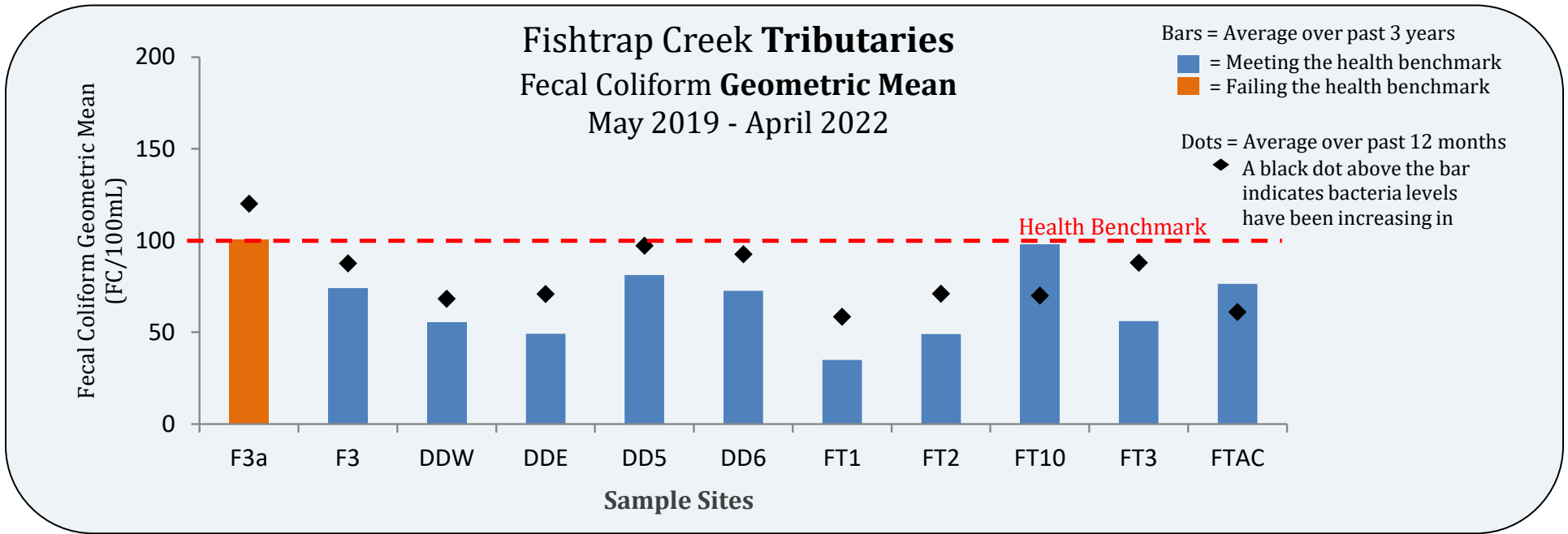
Date	Rainfall Data (inches)		Creek Access Point	River Rd.	Guide Meridian	Kok Rd.	Main St.	Depot Rd. Bridge	Bender Rd.	Aaron	Badger	Pangborn	Northwood
	24 hr*	72 hr**	F1	F2a	F4b	F4	F5a	F6	F7	FT4	FT7	FT8	
4/7/21	0.15	0.00	60	58	52	54	48	70	10	11	10	11	
4/15/21	0.00	0.00	31	40	30	42	13	23	21	15	13	2	
5/3/21	0.19	0.26	76	96	98	90	94	82	88	118	78	25	
5/17/21	0.26	0.00	98	164	173	200	145	210	91	300	600	58	
6/3/21	0.00	0.00	164	280	460	530	230	250	280	280	230	28	
6/14/21	0.20	0.43	1,900	500	1,000	1,100	1,000	600	340	550	590	72	
6/24/21	0.00	0.00	104	191	300	191	118	220	191	109	118	33	
7/13/21	0.00	0.00	1,100	310	210	320	340	164	1,800	490	116	84	
7/29/21	0.00	0.00	220	310	290	60	310	280	38	84	136	11	
8/9/21	0.00	0.59	1,200	2,300	2,300	4,600	210	380	21	ST	ST	30	
8/23/21	0.02	0.00	340	3,000	4,100	112	240	136	23	ST	ST	91	
9/7/21	0.00	0.17	86	92	260	330	210	280	96	ST	ST	39	
9/20/21	0.21 ¹	2.64 ¹	1,800	2,700	3,600	1,500	2,200	1,300	540	1,900	4,900	6,000	
10/4/21	0.01	0.02	314	80	132	168	900	132	83	84	196	13	
10/18/21	0.00	1.59	200	76	56	86	109	92	60	50	98	23	
10/26/21	0.14	0.62	480	96	72	76	66	72	86	76	54	54	
11/8/21	0.00	0.47	46	40	68	31	50	44	52	46	33	7	
11/22/21	0.01	0.05	300	44	46	28	8	21	23	42	40	11	
12/6/21	0.37	0.37	149	84	46	129	114	69	2	25	25	17	
12/20/21	0.00	1.61	350	250	109	136	100	80	106	104	109	82	
1/3/22	0.11	0.01	40	220	220	44	116	52	80	108	48	92	
1/18/22	0.27	0.53	84	64	94	50	92	118	333	540	235	118	
1/31/22	0.10	0.42	108	78	80	137	118	78	176	157	98	176	
2/14/22	0.43	0.00	50	58	42	373	108	82	118	112	50	13	
2/14/22	0.45	0.58	480	353	314	255	196	333	314	235	440	960	
3/15/22	0.26	1.40	490	800	900	1400	300	580	460	1200	1600	1100	
3/28/22	0.16	0.12	42	44	52	220	54	44	530	480	46	8	
4/14/22	0.00	0.03	96	76	96	46	44	36	42	28	48	7	
4/25/22	0.25	0.1	68	100	104	200	104	110	28	23	33	30	

Gray box indicates an event where no sample was collected for varying reasons. ST- Stagnant, FL- Flood, D-Dry, TNS-Temporarily Not Sampling.

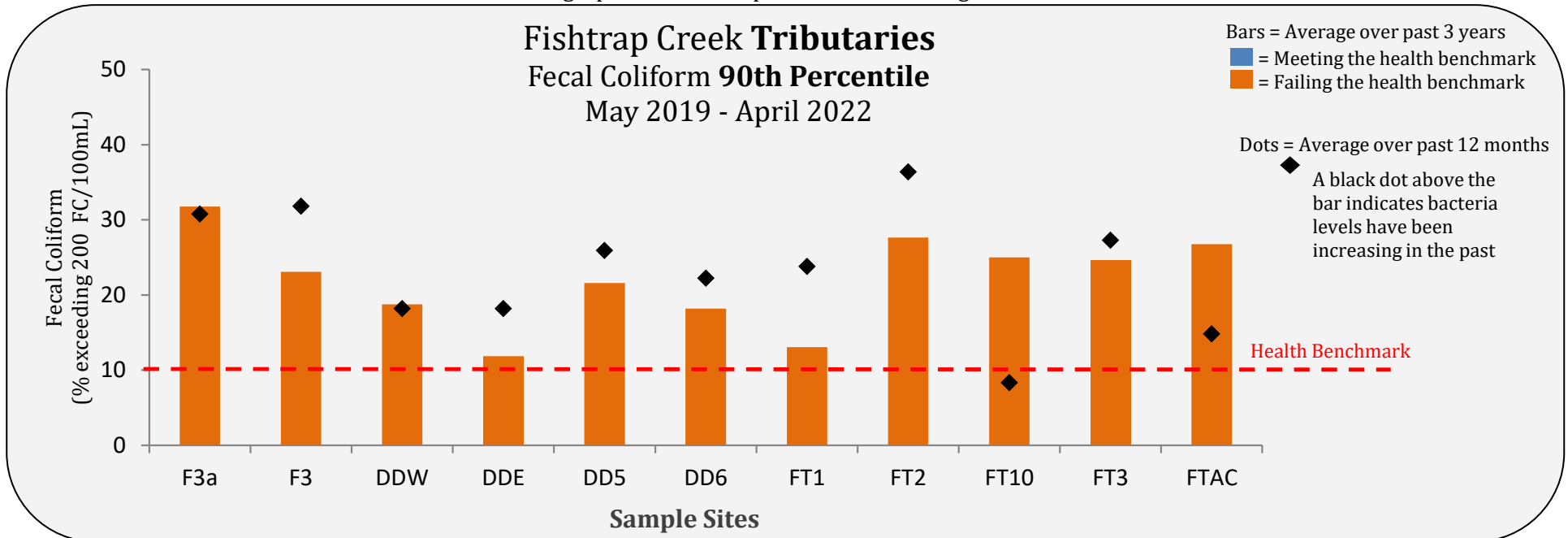
¹ Rainfall data from CoCoRAHS station WA-WC-8, ² Rainfall data from Lynden AgWeathernet. *Day of sampling event **Three days prior to, but not including, day of sampling event

Fishtrap Creek Focus Area *Tributary Stations* Comparison of Bacteria Levels to Health Benchmarks

Refer to the map on page 1 or the tables 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.



Fishtrap Creek Focus Area *Tributary Stations*

13- Month Historical Fecal Coliform Bacteria Data

Results in light orange exceeded 200 FC/100mL. Results in dark orange exceed 1000 FC/100mL.

Date	Creek Access		Double Ditch at Fishtrap	Double Ditch at Lynden	DD West at Pine	DD East at Pine	DD West at Border	DD East at Border	Benson at Badger	Deport at Badger	Deport at Visser	Bender at Badger	E Assink N of Pangborn
	Rainfall Data												
	24 hr*	72 hr**	F3a	F3	DDW	DDE	DD5	DD6	FT1	FT2	FT10	FT3	FTAC
4/7/21	0.15	0.00	64	52	8	13	10	20	80	11	26	210	7
4/15/21	0.00	0.00	60	36	38	56	23	20	30	82	74	50	20
5/3/21	0.19	0.26	TNS	50	72	44	62	60	10	520	D	116	173
5/17/21	0.26	0.00	155	230	118	84	64	70	118	280	D	191	70
6/3/21	0.00	0.00	118	127	54	92	44	66	76	600	D	230	191
6/14/21	0.20	0.43	1,400	900	1,500	350	260	173	240	700	D	2,400	1,100
6/24/21	0.00	0.00	250	182	155	209	76	41	44	430	D	145	350
7/13/21	0.00	0.00	64	D	D	D	88	110	D	5,300	D	D	50
7/29/21	0.00	0.00	410	D	D	D	96	62	D	ST	D	D	68
8/9/21	0.00	0.59	100	D	D	D	78	36	D	ST	D	D	94
8/23/21	0.02	0.00	52	D	D	D	54	52	D	D	D	D	84
9/7/21	0.00	0.17	164	D	D	D	28	25	D	D	D	D	16
9/20/21	0.21 ¹	2.64 ¹	530	310	62	104	68	41	ST	ST	D	96	82
10/4/21	0.01	0.02	136	50	10	17	17	23	63	53	D	27	84
10/18/21	0.00	1.59	64	36	15	26	26	31	5	8	D	127	34
10/26/21	0.14	0.62	64	60	15	54	145	100	41	5	D	220	136
11/8/21	0.00	0.47	7	10	3	15	20	16	10	7	D	10	114
11/22/21	0.01	0.05	11	7	7	10	46	127	13	10	44	30	44
12/6/21	0.37	0.37	30	33	22	58	350	260	13	10	44	2000	23
12/20/21	0.00	1.61	300	270	200	155	1400	1800	15	100	96	7	2
1/3/22	0.11	0.01	2100	6000	6000	6000	6000	6000	21	13	106	18	16
1/18/22	0.27	0.53	96	39	275	82	46	39	116	13	59	31	24
1/31/22	0.10	0.42	25	29	48	34	29	31	39	5	54	11	18
2/14/22	0.43	0.00	29	9	48	7	86	66	275	33	740	314	80
2/28/22	0.45	0.58	720	235	460	373	235	373	4000	235	118	60	64
3/15/22	0.26	1.40	420	290	98	182	210	220	230	1600	30	182	230
3/28/22	0.16	0.12	56	64	78	23	48	42	109	70	98	112	230
4/14/22	0.00	0.03	200	92	33	106	90	110	36	66	66	20	8
4/25/22	0.25	0.10	82	44	38	30	460	390	440	54	13	230	40

Gray box indicates an event where no sample was collected for varying reasons. ST- Stagnant, FL- Flood, D-Dry, TNS-Temporarily Not Sampling.

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