

Fishtrap Creek Focus Area

Water Quality Status: Fecal Coliform Bacteria

May 2023

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?

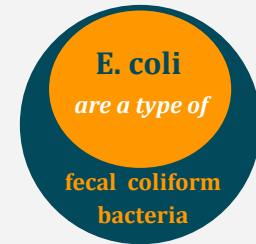
Fecal coliform bacteria are found in human and animal feces. Detection in a creek is a sign that pathogens from these wastes may be polluting the water. Contact with fecal contaminated waters can result in **gastroenteritis, skin rashes, upper respiratory infections** and other illnesses.

Where Does the Bacteria Come From?

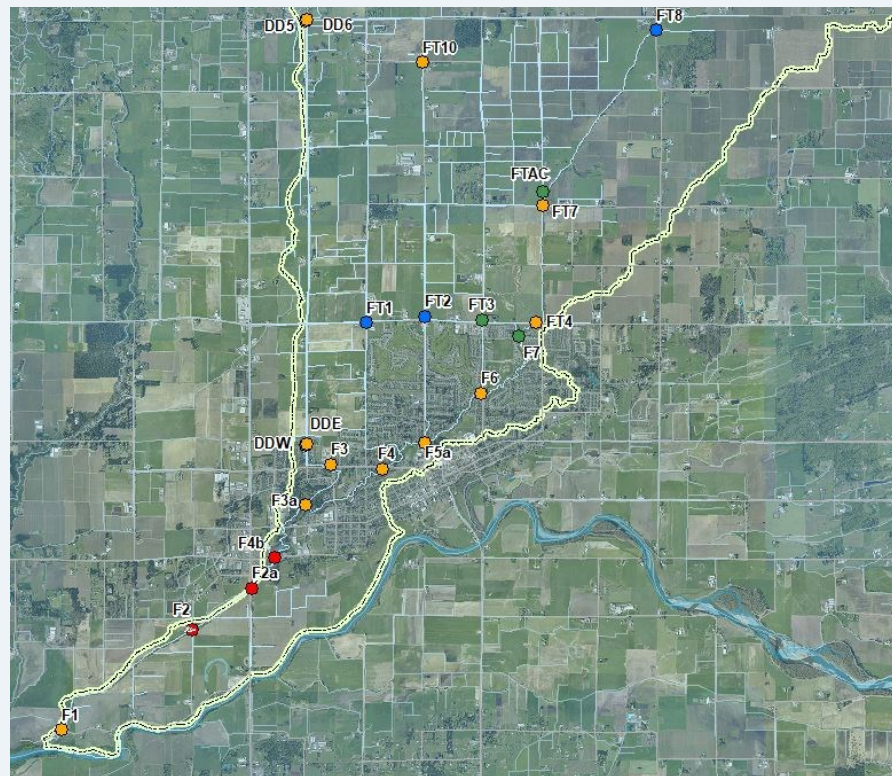
Potential sources of bacteria include:

- 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



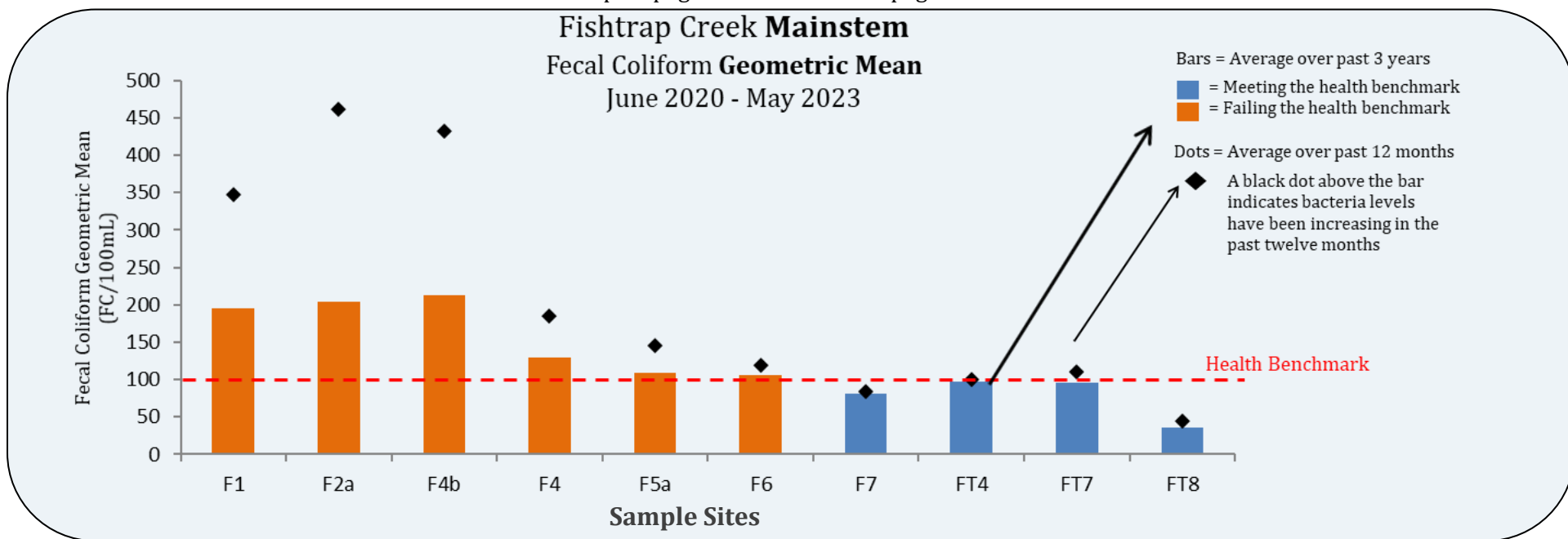
Water Quality Status (Geometric Mean)

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

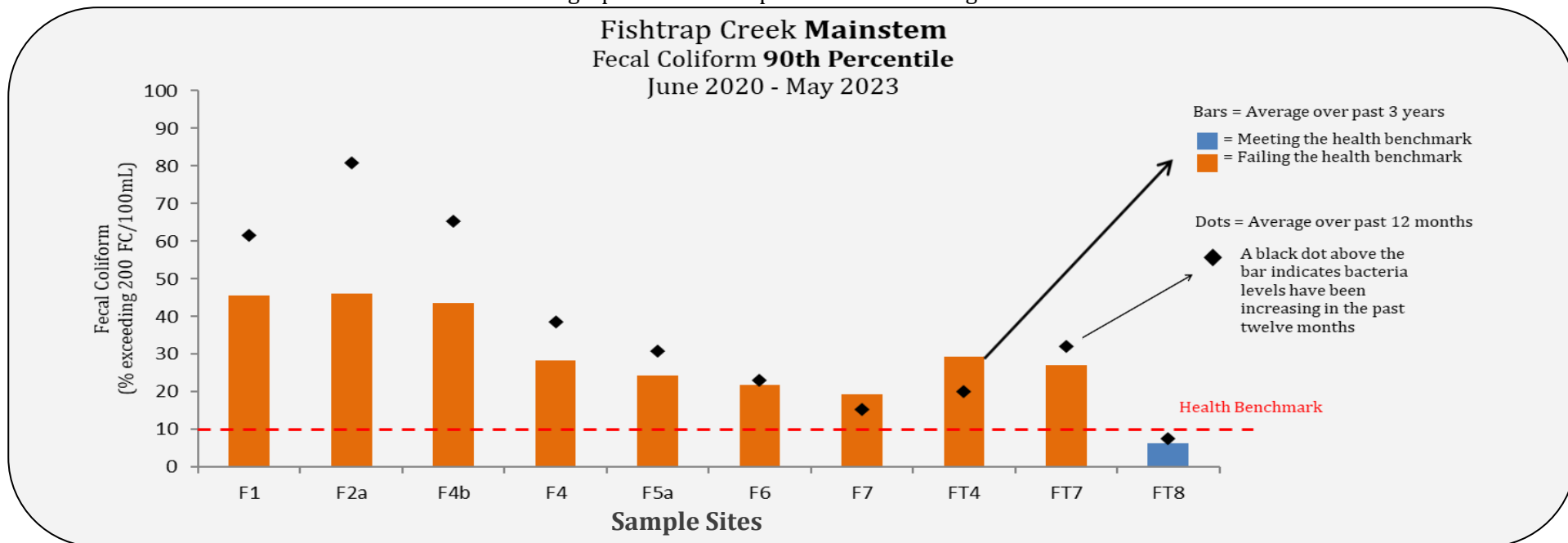
Note: This map illustrates the status of each station for the 3-year geometric mean to assist with identifying hot spots.

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.

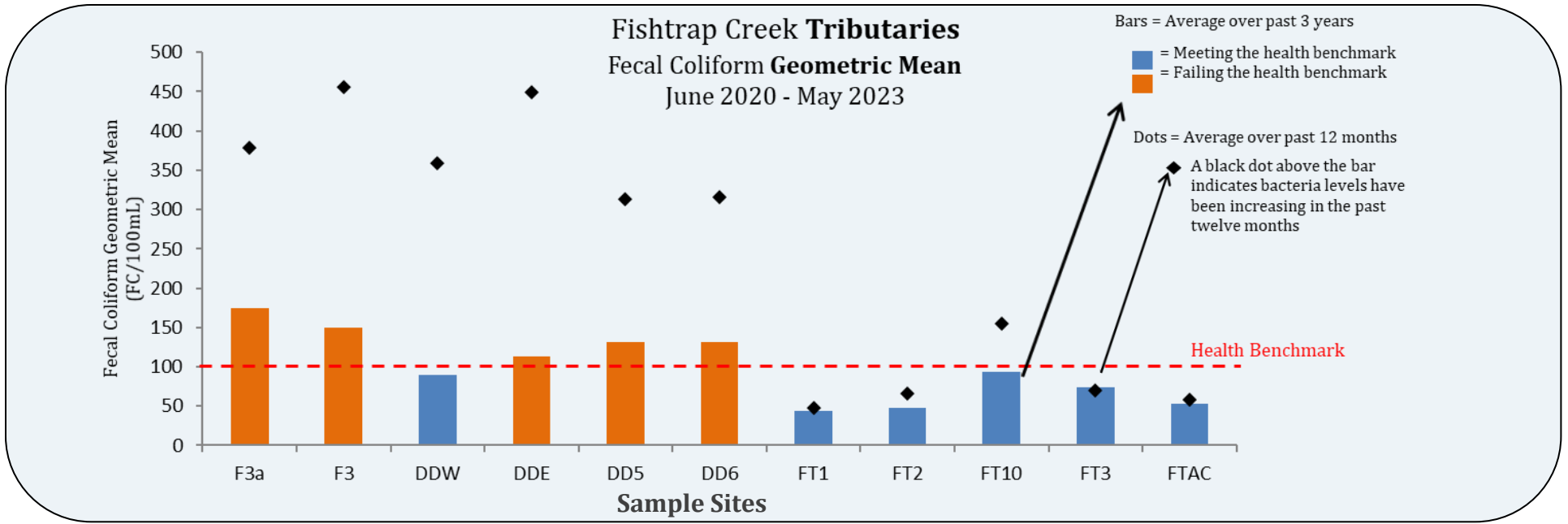
Date	Creek Access Point Rainfall Data (Lynden.S)		River Rd.	Guide Meridian	Kok Rd.	Main St.	Depot Rd. Bridge	Bender Rd.	Aaron	Badger	Pangborn	Northwood
	24 hr*	72 hr**	F1	F2a	F4b	F4	F5a	F6	F7	FT4	FT7	FT8
5/9/22	0.02	0.11	46	40	66	112	40	41	40	26	1,000	7
5/24/22	0.00	0.00	145	55	82	60	112	56	50	58	16	15
6/6/22	0.00	1.46	450	1,300	1,100	700	480	440	580	440	490	70
6/21/22	0.06	0.08	400	570	400	84	127	84	28	40	36	33
7/5/22	0.00	0.09	560	260	260	90	112	118	82	102	60	36
7/18/22	0.01	0.02	320	210	230	136	82	102	114	91	270	31
8/15/22	0.00	0.00	1,400	1,900	4,300	73	106	98	78	86	480	7
8/29/22	0.00	0.00	270	400	590	410	300	191	98	102	136	39
9/12/22	0.00	0.00	73	230	200	109	240	78	48	62	76	46
9/27/22	0.00	0.00	280	220	145	330	70	44	23	31	90	56
10/10/22	0.00	0.00	200	210	200	420	73	66	74	ST	ST	34
10/24/22	0.00	0.00	78	600	1,100	3,600	3,800	2,000	155	260	800	80
11/7/22	0.03	2.26	7,000	1,900	2,400	3,000	2,600	700	270	330	210	200
11/21/22	0.00	0.00	92	56	64	26	18	380	31	33	58	52
12/5/22	0.00	0.00	20,000	20,000	20,000	58	58	66	164	136	164	230
12/19/22	0.00	0.08	8,000	15,000	15,000	240	64	60	76	66	84	50
1/4/23	0.00	0.04	580	640	240	230	450	390	440	550	520	178
1/17/23	0.16	0.34	13,000	1,000	4,000	50	68	70	68	70	80	90
1/30/23	0.00	0.11	28	54	48	90	40	27	40	46	18	3
2/13/23	0.11	0.07	1,000	4,000	2,000	68	136	112	32	33	50	28
2/27/23	0.03	0.10	38	46	33	58	54	58	23	23	32	27
3/14/23	0.05	0.36	340	310	290	120	131	121	113	171	106	60
3/27/23	0.00	0.92	28	60	58	82	50	31	28	16	26	15
4/10/23	0.10	0.11	50	240	92	155	155	118	127	200	84	33
4/24/23	0.29	0.63	400	600	300	600	900	300	300	800	1,400	800
5/1/23	0.11	0.00	42	182	54	94	50	42	33	182	8	7
5/16/23	0.00	0.00	73	220	250	200	127	155	106	136	84	30
5/30/23	0.00	0.00	590	420	500	1,100	210	52	173	100	260	104

Gray box indicates an event where no sample was collected for varying reasons. ST- Stagnant, FL- Flood, D-Dry, TNS-Temporarily Not Sampling.
 Rainfall measured in inches. *Day of sampling event **Three days prior to, but not including, day of sampling event. Rainfall data provided courtesy of Washington State University AgWeatherNet. Data are copyright of Washington State University. To access raw data: www.weather.wsu.edu.

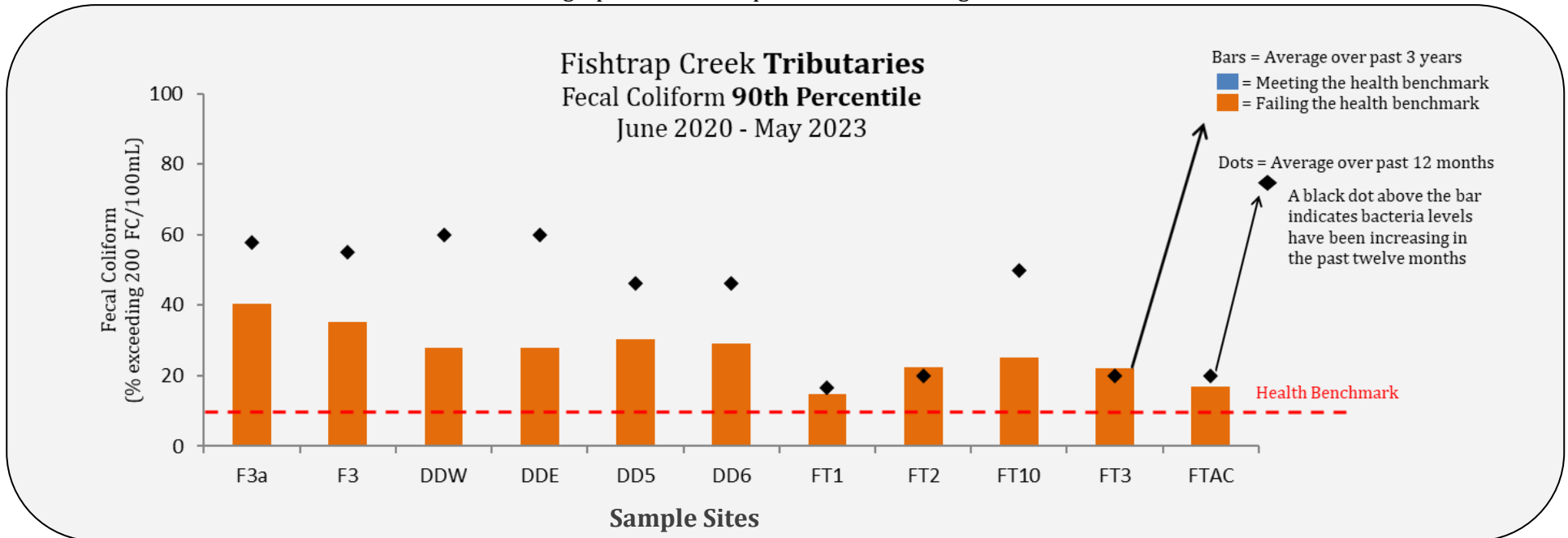
Fishtrap Creek Focus Area *Tributary Stations*

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 Rainfall Data(Lynden.S)		Double Ditch at Fish-	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
	24 hr*	72 hr**	F3a	F3	DDW	DDE	DD5	DD6	FT1	FT2	FT10	FT3	FTAC
5/9/22	0.02	0.11	64	30	40	106	31	44	18	26	6,000	250	270
5/24/22	0.00	0.00	240	220	23	240	46	60	23	13	173	56	31
6/6/22	0.00	1.46	270	90	100	76	36	55	520	280	300	270	1,400
6/21/22	0.06	0.08	1,900	1,800	380	40	66	44	40	44	21	50	104
7/5/22	0.00	0.09	210	164	260	118	34	42	94	40	D	104	155
7/18/22	0.01	0.02	380	70	90	600	60	62	102	86	D	116	108
8/15/22	0.00	0.00	62	D	ST	D	36	28	ST	ST	D	D	34
8/29/22	0.00	0.00	109	D	D	D	56	50	D	ST	D	D	52
9/12/27	0.00	0.00	118	D	D	D	44	44	D	D	D	D	182
9/27/22	0.00	0.00	94	D	D	D	26	40	D	D	D	D	76
10/10/22	0.00	0.00	90	D	D	D	58	41	D	D	D	D	66
10/24/22	0.00	0.00	240	ST	D	D	900	1,200	ST	D	D	D	700
11/7/22	0.03	2.26	490	510	209	800	1,500	500	1,600	2,700	ST	7,000	100
11/21/22	0.00	0.00	44	23	8	15	48	31	40	26	D	21	54
12/5/22	0.00	0.00	20,000	20,000	20,000	20,000	20,000	20,000	155	50	D	23	46
12/19/22	0.00	0.08	15,000	15,000	15,000	15,000	15,000	15,000	F	140	D	112	F
1/4/23	0.00	0.04	600	790	710	1,330	610	870	2	16	5	8	16
1/17/23	0.16	0.34	52,000	24,000	25,000	18,000	13,000	19,000	5	20	74	12	3
1/30/23	0.00	0.11	66	95	330	111	762	624	68	23	540	58	20
2/13/23	0.11	0.07	13,000	10,000	16,000	13,000	19,000	23,000	23	52	580	28	330
2/27/23	0.03	0.10	40	30	40	22	76	64	58	42	4,000	25	17
3/14/23	0.05	0.36	440	560	570	440	673	881	15	18	881	100	10
3/27/23	0.00	0.92	78	74	30	25	300	310	20	92	390	76	3
4/10/23	0.10	0.11	1,000	850	500	1,300	1,700	3,100	15	58	90	340	250
4/24/23	0.29	0.63	800	900	1,000	1,300	800	1,800	400	220	100	370	23
5/1/23	0.11	0.00	28	52	18	18	155	64	5	15	21	13	11
5/16/23	0.00	0.00	250	250	66	360	200	155	88	82	D	36	82
5/30/23	0.00	0.00	118	100	74	1,600	86	114	ST	270	D	72	220

Gray box indicates an event where no sample was collected for varying reasons. ST- Stagnant, FL- Flood, D-Dry, TNS-Temporarily Not Sampling.
 Rainfall measured in inches. *Day of sampling event **Three days prior to, but not including, day of sampling event. Rainfall data provided courtesy of Washington State University AgWeatherNet. Data are copyright of Washington State University. To access raw data: www.weather.wsu.edu.