# Woodward WWTP Bypass / Wastewater Pumping Station or CSO Tank Overflow Event Log 2019

	T T					Sample Results							Results				
Event #	Start Date   Time		Location	Stop Date Time		Duration	<b>Volume</b> ML	Disinfection Yes / No	Reason Code	TBOD	Bypass or CSO Overflow Sample TBOD   cBOD   TSS   TP   E.coli   pH   Total CI						
	yyyy-mm-dd	Time	(see below)	vvvv-mm-dd	Tillle	Hours	IVIL	162 / NO	Code	mg/L	mg/L	mg/L	mg/L	CFU/100ml	рп	mg/L	
1	2019-01-23	17:26	S S	2019-01-24	05:26	12.00	112.068	No	1,2,7	72.0	n/a	116	2.01	n/a	7.49	n/a	
2	2019-01-23	16:20	S	2019-01-24	20:32	4.20	24.089	No	1,2,7	68.0	n/a	95.5	1.54	n/a	7.02	n/a	
3	2019-02-00	23:43	S	2019-02-00	02:34	2.86	28.050	No	1,2,7	62.0	n/a	73.2	1.54	n/a	7.02	n/a	
4	2019-02-12	14:03	S	2019-02-13	21:10	7.12	21.111	No	1,2,7	39.0	n/a	89.0	1.62	n/a	7.19	n/a	
5	2019-02-24	11:12	S	2019-02-24	23:28	12.26	100.792	No	1,2,7	54.0	n/a	67.0	1.54	n/a	6.97	n/a	
6	2019-03-30	14:00	S	2019-04-01	00:33	34.55	375.967	No	1,2,7	33.0	n/a	73.4	1.56	n/a	7.09	n/a	
7	2019-03-31	01:10	HCS01	2019-03-31	05:50	4.67	1.981	No	1,2,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
8	2019-04-08	00:55	S	2019-04-08	04:06	3.18	17.428	No	1,2,7	59.0	n/a	87.0	1.97	n/a	7.21	n/a	
9	2019-04-14	21:17	S	2019-04-15	10:46	13.48	107.730	No	1,7	42.0	n/a	76.1	1.27	n/a	7.09	n/a	
10	2019-04-15	08:20	HCS01	2019-04-15	14:40	6.33	19.591	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	2019-04-19	22:13		2019-04-20	04:55				,						7.44	n/a	
11	2019-04-19	12:06	S	2019-04-20	02:30	21.11	190.770	No	1,7	51.0	n/a	64.3	1.160	n/a	7.56	n/a	
12	2019-04-20	11:30	HCS01	2019-04-21	12:10	24.67	151.847	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
13	2019-04-20	13:20	HCS05	2019-04-21	05:10	15.83	25.241	No	1.7	n/a	16	23.1	0.969	1.070.000	n/a	n/a	
14	2019-04-20	18:10	HCS04	2019-04-21	02:20	8.17	8.033	No	1,7	n/a	n/a*	n/a*	n/a*	n/a*	n/a	n/a	
15	2019-04-26	07:14	S	2019-04-26	12:31	5.30	32.390	No	1,7	41.0	n/a	74.0	1.16	n/a	7.14	n/a	
16	2019-05-01	06:28	S	2019-05-01	10:39	4.18	19.610	No	1,7	25.0	n/a	17.0	0.716	n/a	7.15	n/a	
17	2019-05-03	03:05	S	2019-05-03	20:25	17.33	127.990	No	1,7	40.0	n/a	49.5	0.890	n/a	7.14	n/a	
18	2019-05-03	05:10	HCS01	2019-05-04	00:50	19.00	97.821	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
19	2019-05-10	07:20	S	2019-05-10	12:18	4.97	27.850	No	1,7	27.0	n/a	39.0	0.841	n/a	7.10	n/a	
20	2019-05-13	08:10	HCS05	2019-05-13	19:10	11.00	49.171	No	1,7	n/a	11	4.0	0.051	550	n/a	n/a	
21	2019-05-14	04:00	HCS01	2019-05-15	01:00	21.00	48.702	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
22	2019-05-14	06:40	HCS05	2019-05-14	23:40	17.00	69.676	No	1,7	n/a	11	9.7	0.363	430,000	n/a	n/a	
23	2019-05-25	09:21	S	2019-05-27	00:47	39.45	215.300	Yes	1,7	n/a	32	75.7	1.46	n/a	7.20	0.01	
24	2019-05-25	18:40	HCS01	2019-05-27	02:10	31.50	85.306	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
25	2019-05-28	06:40	HCS01	2019-05-29	00:30	17.83	29.641	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
26	2019-05-28	08:05	S	2019-05-28	23:58	15.89	64.970	Yes	1,7	n/a	30	43.5	1.08	n/a	7.39	0.01	
27	2019-06-05	14:39	S	2019-06-06	03:04	12.43	91.070	Yes	1,7	n/a	13	28.3	0.792	n/a	7.01	0.00	
28	2019-06-10	18:02	S	2019-06-11	01:04	7.03	65.850	Yes	1,7	34.0	n/a	34.3	0.864	n/a	7.02	0.00	
29	2019-06-13	11:02	S	2019-06-14	06:02	19.01	116.970	Yes	1,7	24.0	n/a	17.8	0.702	41,263	7.03	0.01	
30	2019-06-20	21:47	S	2019-06-21	16:23	18.58	107.220	Yes	1,7	32.5	n/a	34.4	0.920	471,500	6.85	0.00	
31	2019-06-25	00:46	S	2019-06-25	15:10	14.39	90.380	Yes	1,7	42.0	n/a	51.0	1.26	1,050,000	6.93	0.00	
32	2019-07-06	13:59	S	2019-07-07	23:53	33.90	231.110	Yes	1,7	34.0	n/a	46.2	0.779	1,762,000	6.96	0.02	
33	2019-07-06	15:30	HCS08	2019-07-08	01:10	33.67	76.851	No	1,7	n/a	6	212	0.418	64,000	n/a	n/a	
34	2019-07-06	19:20	HCS04	2019-07-08	00:00	28.67	35.671	No	1,7	n/a	15	23.0	0.504	450,000	n/a	n/a	
35	2019-07-06	19:30	HCS09	2019-07-06	21:00	1.50	10.562	No	1,7	n/a	11	77.7	0.495	850,000	n/a	n/a	
36	2019-07-06	20:00	HCS01	2019-07-08	01:00	29.00	98.351	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
37	2019-07-17	11:19	S	2019-07-17	17:15	5.93	28.600	Yes	1,7	49.0	n/a	63.0	1.79	3,400,000	7.11	0.01	
38	2019-07-20	22:52	S	2019-07-21	02:30	3.63	26.260	Yes	1,7	39.0	n/a	64.8	1.26	2,400,000	7.07	0.00	
39	2019-07-30	07:38	S	2019-07-30	11:20	3.70	28.320	Yes	1,7	40.0	n/a	48.0	1.50	2,000,000	6.83	0.00	
40	2019-08-08	16:00	S	2019-08-08	18:35	2.60	25.710	Yes	1,7	99.0	n/a	69.0	2.62	7,300,000	6.84	0.00	
41	2019-08-18	06:37	S	2019-08-18	10:12	3.58	13.630	Yes	1,7	23.0	n/a	30.0	0.66	2,800,000	6.78	0.00	
42	2019-09-11	21:11	S	2019-09-11	23:59	2.79	28.700	Yes	1,7	65.0	n/a	51.5	1.68	6,100,000	6.77	0.00	

#### Woodward WWTP Bypass / Wastewater Pumping Station or CSO Tank Overflow Event Log 2019

					Sample Results									Results			
Event #	Start Date   Time		Location (see	Stop Date   Time		<b>Duration</b> Hours	<b>Volume</b> ML	Disinfection Yes / No	Reason Code	TBOD	Bypass o	Final Effluent for all Bypass Events pH   Total Cl					
	yyyy-mm-dd		`	yyyy-mm-dd		riouis	WIL	1037110	0000	mg/L	mg/L	TSS mg/L	TP mg/L	E.coli CFU/100ml		mg/L	
	2019-10-01	18:09	<u> </u>	2019-10-01	21:52							J	J		6.97	0.00	
43	2019-10-02	05:15	S	2019-10-02	09:59	14.66	53.390	Yes	1,7	62.0	n/a	72.7	1.73	4,700,000	7.01	0.01	
	2019-10-02	13:32		2019-10-02	19:45										7.01	0.01	
44	2019-10-16	07:31	HCG14	2019-10-16	07:39	0.13	n/a	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
45	2019-10-16	08:20	S	2019-10-16	14:22	6.03	30.160	No	1,7	36.0	n/a	47.0	1.43	1,500,000	6.91	n/a	
46	2019-10-27	02:33	S	2019-10-27	15:34	13.01	180.390	No	1,7	37.0	n/a	59.9	1.45	1,260,000	7.06	n/a	
47	2019-10-27	04:00	HCS04	2019-10-27	15:50	11.83	34.453	No	1,7	n/a	n/a*	n/a*	n/a*	n/a*	n/a	n/a	
48	2019-10-27	03:10	DC011	2019-10-27	04:03	0.88	0.009	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
49	2019-10-27	03:07	HCG14	2019-10-27	03:31	0.40	n/a	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
50	2019-10-27	04:20	HCS01	2019-10-28	00:10	19.83	103.195	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
51	2019-10-27	04:30	HCS07	2019-10-27	07:50	3.33	6.292	No	1,7	n/a	n/a**	n/a**	n/a**	n/a**	n/a	n/a	
52	2019-10-27	10:30	HCS05	2019-10-27	21:00	10.50	11.682	No	1,7	n/a	99	113	2.44	2,100,000	n/a	n/a	
53	2019-10-31	13:00	S HCS01	2019-11-01	02:30	13.51	171.000 116.802	No No	1,7 1,7	38.5	n/a	44.9	1.12	640,000	6.99	n/a	
54 55	2019-10-31 2019-10-31	16:20 16:30	HCS04	2019-11-01 2019-11-01	15:40 07:30	23.30 15.00	35.112	No	1,7	n/a n/a	n/a 20	n/a 10.7	n/a 0.975	n/a 1,900,000	n/a n/a	n/a n/a	
56	2019-10-31	12:03	S	2019-11-01	23:56	11.89	78.180	No	1,7	53.5	n/a	85.7	1.76	1,410,000	7.12	n/a	
57	2019-12-01	07:03	HCG03	2019-12-01	17:08	10.08	n/a	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
58	2019-12-14	10:36	S	2019-12-14	11:35	12.98	106.630	No	1,7	57.0	n/a	77.5	1.63	1,535,000	7.13	n/a	
59	2019-12-30	03:05	S	2019-12-30	19:52	16.79	127.000	No	1,7	48.7	n/a	73	1.53	1,766,667	7.23	n/a	
	2019-12-29	12:03		2019-12-29	17:23	5.30	121.000	110	.,,	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	2019-12-30	00:04	1	2019-12-30	04:12	4.10				n/a	n/a	n/a	n/a	n/a	n/a	n/a	
60	2019-12-30	05:20	HCG03	2019-12-30	08:46	3.40	n/a	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	2019-12-30	08:57		2019-12-30	10:23	1.40			•	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	2019-12-31	11:00		2019-12-31	11:21	0.30				n/a	n/a	n/a	n/a	n/a	n/a	n/a	
61	2019-12-30	08:32	HCS01	2019-12-31	05:10	20.60	85.023	No	1,7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
62	2019-12-30	08:32	HCS05	2019-12-30	16:53	8.30	18.646	No	1,7	n/a	65	176	2.12	1,600,000	n/a	n/a	
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	Total Nu	mber of E	vents:	62		822.84	4286.34	ļ					ļ	ļ			

## Woodward WWTP Bypass / Wastewater Pumping Station or CSO Tank Overflow Event Log 2019

### **Legend / Notes**

#### **Bypass/Overflow Locations:**

PH= Plant bypass

**HW**= Headworks bypass

**PR**= Primary bypass

**S**= Secondary bypass

HCS01=Greenhill CSO Tank

HCS02=Bayfront Strachan CSO Tank

HCS03=James St CSO Tank

**HCS04**=Main/King CSO Tank

**HCS05**=Eastwood CSO Tank

HCS07=Redhill CSO Tank

HCS08=Royal CSO Tank

HCS09=McMaster CSO Tank

HCG03=Wentworth CSO Outfall

Wastewater Pumping Stations: use station number

#### **Treatment Levels:**

Plant bypass (PH) - no treatment

Headworks bypass (HW) - receives preliminary treatment Primary

bypass (PR) - receives preliminary treatment

Secondary bypass (S) - receives preliminary and primary treatment

CSO tank overflows receive no treatment prior to discharge.

#### Notes:

- \* Sample could not be collected due to autosampler failure
- \*\* Sample could not be analysed within holding time

#### Sample Locations:

Plant: Headworks in front of the barscreens

Primary / Headworks: Inlet of the Primary Clarifiers

Secondary: Outlet of the Primary Clarifiers

Note: a Final Effluent Outfall sample must be collected for all bypass types

#### **Volume Determination:**

Bypass flow volumes at the Woodward WWTP are estimated.

CSO tank overflow volumes are measured.

Pumping stations overflow volumes are measured.

#### **Reason Codes:**

- 1. Heavy Precipitation
- 2. Snow Melt
- 3. Equipment Failure
- **4.** Equipment Maintenance
- 5. Sewer Problems
- 6. Power Failure
- 7. Exceed Design
- 8. Other