

## Woodward WWTP Bypass and CSO Overflow Log 2021

Event #	Location	Start		Stop		Duration Hours	Volume ML	Disinfection Yes / No	Reason Code
		Date yyyy-mm-dd	Time	Date yyyy-mm-dd	Time				
1	HCG03	2021-01-02	00:17	2021-01-02	02:51	2.56	n/a	No	1,2,7
		2021-01-02	03:19	2021-01-02	04:37	1.30			
2	HCG14	2021-01-02	01:06	2021-01-02	02:20	1.23	n/a	No	1,2,7
3	S	2021-01-02	01:48	2021-01-02	08:36	6.80	50.877	No	1,2,7
		2021-01-02	12:17	2021-01-02	20:37	8.33			
4	HCG03	2021-02-27	06:46	2021-02-27	09:46	3.00	n/a	No	1,2,7
5	HCG14	2021-02-27	07:34	2021-02-27	08:00	0.44	n/a	No	1,2,7
		2021-02-27	08:58	2021-02-27	09:13	0.25			
6	S	2021-02-27	08:36	2021-02-27	12:52	4.25	36.996	No	1,2,7
7	HCG03	2021-02-28	12:46	2021-02-28	13:03	0.28	n/a	No	1,2,7
8	HCG03	2021-03-11	19:09	2021-03-11	19:38	0.48	n/a	No	1,2,7
9	HCG03	2021-03-26	03:14	2021-03-26	08:39	5.43	n/a	No	1,7
		2021-03-26	09:01	2021-03-26	09:59	0.98			
10	HCG14	2021-03-26	03:55	2021-03-26	05:59	2.07	n/a	No	1,7
		2021-03-26	06:41	2021-03-26	07:30	0.82			
11	S	2021-03-26	04:45	2021-03-26	11:46	7.02	41.994	No	1,7
12	HCG04	2021-03-26	07:29	2021-03-26	10:55	3.45	n/a	No	1,7
13	HCS04	2021-03-26	09:09	2021-03-26	13:48	4.65	11.934	No	1,7
14	HCS01	2021-03-26	10:32	2021-03-26	21:16	10.73	33.235	No	1,7
15	HCG03	2021-03-28	10:35	2021-03-28	11:14	0.66	n/a	No	1,7
		2021-03-28	11:30	2021-03-28	14:08	2.64			
16	HCG03	2021-04-05	17:28	2021-04-05	18:12	0.72	n/a	No	1,7
17	HCG03	2021-04-11	05:51	2021-04-11	06:20	0.48	n/a	No	1,7
		2021-04-11	06:56	2021-04-11	10:43	3.79			
18	HCG14	2021-04-11	07:49	2021-04-11	08:46	0.96	n/a	No	1,7
19	S	2021-04-11	09:03	2021-04-11	12:07	3.07	7.092	No	1,7
20	HCG03	2021-04-18	15:49	2021-04-18	16:54	1.08	n/a	No	1,7
21	HCG03	2021-04-29	18:26	2021-04-29	18:36	0.66	n/a	No	1,7
		2021-04-29	18:51	2021-04-29	19:30	0.16			
22	HCG03	2021-05-08	13:43	2021-05-08	14:07	0.40	n/a	No	1,7
23	HCG03	2021-05-26	19:01	2021-05-26	19:34	0.56	n/a	No	1,7
24	HCG14	2021-05-26	19:15	2021-05-26	19:33	0.29	n/a	No	1,7
25	HCG03	2021-05-28	12:01	2021-05-28	17:01	5.00	n/a	No	1,7

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Event #	Location	Start		Stop		Duration Hours	Volume ML	Disinfection Yes / No	Reason Code
		Date yyyy-mm-dd	Time	Date yyyy-mm-dd	Time				
26	S	2021-05-28	16:20	2021-05-28	19:32	3.20	18.663	Yes	1,7
27	HCG03	2021-06-03	04:46	2021-06-03	05:20	0.56	n/a	No	1,7
28	HCG03	2021-06-08	05:17	2021-06-08	06:03	0.76	n/a	No	1,7
		2021-06-08	16:32	2021-06-08	17:33	1.01			
29	HCG14	2021-06-08	05:32	2021-06-08	06:04	0.52	n/a	No	1,7
		2021-06-08	16:38	2021-06-08	17:27	0.82			
30	HCG03	2021-06-14	09:02	2021-06-14	09:20	0.29	n/a	No	1,7
		2021-06-14	18:29	2021-06-14	19:11	0.71			
31	HCG14	2021-06-14	18:39	2021-06-14	19:03	0.40	n/a	No	1,7
32	HCG03	2021-06-18	12:55	2021-06-18	13:01	0.09	n/a	No	1,7
33	HCG03	2021-06-21	02:25	2021-06-21	03:15	0.83	n/a	No	1,7
34	HCG03	2021-06-25	22:09	2021-06-25	23:21	1.19	n/a	No	1,7
		2021-06-25	23:54	2021-06-26	01:27	1.56			
		2021-06-26	03:30	2021-06-26	05:58	2.47			
		2021-06-26	06:31	2021-06-26	07:29	0.96			
		2021-06-26	07:59	2021-06-26	08:33	0.57			
		2021-06-26	08:47	2021-06-26	09:05	0.30			
35	HCG14	2021-06-26	00:06	2021-06-26	01:28	1.36	n/a	No	1,7
		2021-06-26	03:44	2021-06-26	04:14	0.50			
		2021-06-26	04:37	2021-06-26	05:05	0.47			
		2021-06-26	05:34	2021-06-26	05:52	0.31			
		2021-06-26	06:47	2021-06-26	07:17	0.49			
36	S	2021-06-26	01:42	2021-06-26	03:07	1.42	35.636	Yes	1,7
		2021-06-26	06:01	2021-06-26	10:29	4.46			
37	HCS04	2021-06-26	08:17	2021-06-26	15:51	7.56	7.592	No	1,7
38	HCS01	2021-06-26	10:50	2021-06-26	12:50	2.00	1.945	No	1,7
39	HCG03	2021-06-29	18:06	2021-06-29	18:56	0.83	n/a	No	1,7
40	HCG14	2021-06-29	18:19	2021-06-29	19:03	0.74	n/a	No	1,7
41	HCG03	2021-07-01	17:04	2021-07-01	17:16	0.21	n/a	No	1,7
		2021-07-01	18:34	2021-07-01	19:39	1.08			
42	HCG14	2021-07-01	18:46	2021-07-01	19:37	0.86	n/a	No	1,7
43	HCG03	2021-07-02	16:05	2021-07-02	19:13	3.15	n/a	No	1,7

Event #	Location	Start		Stop		Duration Hours	Volume ML	Disinfection Yes / No	Reason Code
		Date yyyy-mm-dd	Time	Date yyyy-mm-dd	Time				
44	HCG14	2021-07-02	16:08	2021-07-02	17:06	0.97	n/a	No	1,7
		2021-07-02	17:17	2021-07-02	19:05	1.80			
46	HC001	2021-07-02	17:36	2021-07-02	18:43	1.10	1.567	No	1,7
45	S	2021-07-02	19:02	2021-07-02	20:45	1.72	15.607	Yes	1,7
46	HCG03	2021-07-07	20:39	2021-07-07	20:55	0.28	n/a	No	1,7
47	HCG03	2021-07-08	11:00	2021-07-08	13:00	2.01	n/a	No	1,7
		2021-07-08	14:12	2021-07-08	15:20	1.13			
48	HCG14	2021-07-08	12:05	2021-07-08	12:41	0.60	n/a	No	1,7
		2021-07-08	12:41	2021-07-08	12:42	0.01			
		2021-07-08	14:27	2021-07-08	14:45	0.30			
49	S	2021-07-08	12:43	2021-07-08	17:15	4.53	19.350	Yes	1,7
50	HCG03	2021-07-24	15:34	2021-07-24	15:51	0.28	n/a	No	1,7
		2021-07-24	23:35	2021-07-25	00:25	0.84			
51	HCG03	2021-07-27	11:10	2021-07-27	11:32	0.37	n/a	No	1,7
52	HCG03	2021-07-29	08:03	2021-07-29	09:53	1.83	n/a	No	1,7
53	HCG14	2021-07-29	08:23	2021-07-29	09:31	1.12	n/a	No	1,7
54	DC011	2021-08-01	17:17	2021-08-01	17:23	0.09	0.003	No	1,7
		2021-08-01	17:37	2021-08-07	17:38	0.02			
55	S	2021-08-07	16:26	2021-08-07	18:47	2.35	16.689	Yes	1,7
56	HCG03	2021-08-07	14:54	2021-08-07	16:17	1.38	n/a	No	1,7
57	DC011	2021-08-07	14:54	2021-08-07	14:55	0.01	0.006	No	1,7
		2021-08-07	14:56	2021-08-07	14:58	0.02			
		2021-08-07	14:58	2021-08-07	15:01	0.05			
58	HCG14	2021-08-07	14:57	2021-08-07	16:28	1.51	n/a	No	1,7
59	DC012	2021-08-07	14:58	2021-08-07	14:59	0.02	0.00011	No	1,7
		2021-08-07	19:35	2021-08-07	19:35	0.02			
60	HCS03	2021-08-07	15:22	2021-08-07	15:35	0.22	0.101	No	1,7
61	HCS09	2021-08-07	16:11	2021-08-07	18:30	2.31	0.053	No	1,7
62	HCG03	2021-08-11	05:13	2021-08-11	05:58	0.76	n/a	No	1,7
		2021-08-11	06:57	2021-08-11	07:21	0.40			
63	HCG14	2021-08-11	05:19	2021-08-11	06:04	0.76	n/a	No	1,7
64	HCG03	2021-08-17	13:24	2021-08-17	14:12	0.80	n/a	No	1,7
65	HCG14	2021-08-17	13:27	2021-08-17	14:08	0.68	n/a	No	1,7

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Event #	Location	Start		Stop		Duration Hours	Volume ML	Disinfection Yes / No	Reason Code
		Date yyyy-mm-dd	Time	Date yyyy-mm-dd	Time				
66	HCG03	2021-08-26	19:01	2021-08-26	20:35	1.57	n/a	No	1,7
67	HCG14	2021-08-26	19:11	2021-08-26	20:44	1.54	n/a	No	1,7
68	S	2021-08-26	19:40	2021-08-26	23:51	4.18	65.926	Yes	1,7
69	HC001	2021-08-26	20:06	2021-08-26	20:29	0.38	0.940	No	1,7
70	HCS7C	2021-08-26	20:49	2021-08-26	23:42	2.88	2.695	No	1,7
71	HCG03	2021-08-29	13:56	2021-08-29	14:20	0.39	n/a	No	1,7
		2021-08-29	22:55	2021-08-29	23:42	0.79			
72	HCG14	2021-08-29	14:01	2021-08-29	14:18	0.29	n/a	No	1,7
		2021-08-29	23:09	2021-08-29	23:37	0.47			
73	HCG03	2021-09-05	00:36	2021-09-05	01:08	0.54	n/a	No	1,7
		2021-09-05	02:48	2021-09-05	03:38	0.83			
74	HCG14	2021-09-05	02:58	2021-09-05	03:37	0.65	n/a	No	1,7
75	HCG03	2021-09-07	19:38	2021-09-07	20:51	1.22	n/a	No	1,7
		2021-09-07	21:25	2021-09-08	01:01	3.60			
		2021-09-08	03:38	2021-09-08	05:09	1.51			
76	HCG14	2021-09-07	19:50	2021-09-07	20:27	0.60	n/a	No	1,7
		2021-09-07	21:35	2021-09-08	00:38	3.03			
		2021-09-08	03:45	2021-09-08	04:53	1.14			
77	S	2021-09-07	22:12	2021-09-08	16:24	18.19	213.360	Yes	1,7
78	HC001	2021-09-07	22:47	2021-09-08	00:32	1.75	3.755	No	1,7
79	HCG04	2021-09-07	23:02	2021-09-08	02:16	3.23	n/a	No	1,7
80	HCS04	2021-09-07	23:31	2021-09-08	15:53	16.36	54.750	No	1,7
81	HCS7C	2021-09-08	00:06	2021-09-08	02:35	2.49	4.211	No	1,7
82	HCS01	2021-09-08	00:17	2021-09-08	11:54	11.62	73.655	No	1,7
83	HCS08	2021-09-08	05:50	2021-09-08	09:58	4.14	0.002	No	1,7
84	HCG03	2021-09-09	14:18	2021-09-09	14:41	0.38	n/a	No	1,7
85	HCG03	2021-09-12	19:11	2021-09-12	19:49	0.64	n/a	No	1,7
		2021-09-12	23:28	2021-09-13	00:38	1.17			
86	HCG14	2021-09-12	23:38	2021-09-13	00:16	0.63	n/a	No	1,7
87	HCG03	2021-09-13	21:15	2021-09-13	21:27	0.20	n/a	No	1,7
		2021-09-13	21:59	2021-09-13	23:19	1.33			
88	HCG14	2021-09-13	22:09	2021-09-13	23:14	1.07	n/a	No	1,7
89	S	2021-09-13	23:36	2021-09-14	02:39	3.05	24.033	Yes	1,7

Event #	Location	Start		Stop		Duration Hours	Volume ML	Disinfection Yes / No	Reason Code
		Date yyyy-mm-dd	Time	Date yyyy-mm-dd	Time				
90	HCG03	2021-09-15	00:06	2021-09-15	00:56	0.84	n/a	No	1,7
91	HCG14	2021-09-15	00:18	2021-09-15	00:57	0.66	n/a	No	1,7
92	HCG03	2021-09-22	05:17	2021-09-22	07:08	1.84	n/a	No	1,7
		2021-09-22	08:52	2021-09-22	13:14	4.35			
		2021-09-22	14:18	2021-09-22	16:14	1.94			
		2021-09-22	19:22	2021-09-23	01:36	6.23			
		2021-09-23	02:59	2021-09-23	03:40	0.69			
93	HCG14	2021-09-22	09:13	2021-09-22	10:10	0.96	n/a	No	1,7
		2021-09-22	19:45	2021-09-22	22:47	3.04			
		2021-09-22	22:47	2021-09-22	22:49	0.02			
94	S	2021-09-22	10:57	2021-09-23	10:44	23.78	272.260	Yes	1,7
95	HCS04	2021-09-22	15:24	2021-09-24	07:08	39.71	164.034	No	1,7
96	DC011	2021-09-22	20:23	2021-09-23	00:15	3.87	0.265	No	1,7
97	HCS01	2021-09-22	20:37	2021-09-23	19:36	22.99	148.260	No	1,7
98	HC001	2021-09-22	20:48	2021-09-23	01:56	5.13	4.095	No	1,7
99	DC012	2021-09-22	21:16	2021-09-22	22:51	1.58	0.044	No	1,7
100	HCS05	2021-09-22	21:47	2021-09-23	18:49	21.03	82.099	No	1,7
101	HW	2021-09-22	21:53	2021-09-23	01:35	3.70	39.140	No	1,7
102	HCS08	2021-09-22	22:04	2021-09-23	12:07	14.05	2.092	No	1,7
103	HCG04	2021-09-22	22:19	2021-09-23	02:01	3.69	n/a	No	1,7
104	HCS7C	2021-09-23	00:38	2021-09-23	01:39	1.03	0.123	No	1,7
105	HCG03	2021-09-25	15:03	2021-09-25	15:23	0.33	n/a	No	1,7
106	HCG03	2021-10-03	13:28	2021-10-03	14:15	0.78	n/a	No	1,7
		2021-10-03	20:19	2021-10-04	07:18	10.99			
		2021-10-04	09:29	2021-10-04	10:12	0.71			
107	HCG14	2021-10-03	20:26	2021-10-04	00:22	3.93	n/a	No	1,7
		2021-10-04	00:45	2021-10-04	02:21	1.60			
		2021-10-04	02:50	2021-10-04	03:26	0.58			
108	S	2021-10-03	21:32	2021-10-04	20:45	23.40	265.084	Yes	1,7
109	DC011	2021-10-03	21:42	2021-10-04	04:06	0.29	0.039	No	1,7
110	HCS04	2021-10-03	22:18	2021-10-04	22:30	24.20	104.529	No	1,7
111	HCG04	2021-10-03	22:41	2021-10-04	04:32	5.85	n/a	No	1,7
112	HCS08	2021-10-03	22:41	2021-10-04	21:14	22.55	4.434	No	1,7

Event #	Location	Start		Stop		Duration Hours	Volume ML	Disinfection Yes / No	Reason Code
		Date yyyy-mm-dd	Time	Date yyyy-mm-dd	Time				
113	PH	2021-10-03	22:36	2021-10-04	04:25	5.81	48.434	No	1,3,7
114	HCS7C	2021-10-03	23:14	2021-10-04	04:21	5.11	8.750	No	1,7
115	HCS01	2021-10-03	23:25	2021-10-05	04:29	29.07	228.682	No	1,7
116	HW	2021-10-04	03:00	2021-10-04	07:07	4.12	40.108	No	1,7
117	HCG03	2021-10-09	03:03	2021-10-09	03:21	0.31	n/a	No	1,7
		2021-10-09	03:26	2021-10-09	03:41	0.24			
		2021-10-09	04:16	2021-10-09	08:31	4.25			
		2021-10-09	11:08	2021-10-09	12:04	0.93			
118	HCG14	2021-10-09	04:24	2021-10-09	04:48	0.40	n/a	No	1,7
		2021-10-09	05:08	2021-10-09	07:02	1.89			
119	HC001	2021-10-09	06:01	2021-10-09	10:43	4.70	3.586	No	1,7
120	S	2021-10-09	06:11	2021-10-10	00:15	18.08	156.669	Yes	1,7
121	HCS01	2021-10-09	08:30	2021-10-09	22:49	14.32	59.654	No	1,7
122	HCG03	2021-10-15	19:20	2021-10-15	19:49	0.49	n/a	No	1,7
		2021-10-15	19:53	2021-10-15	21:55	2.03			
123	HCG14	2021-10-15	20:03	2021-10-15	21:10	1.13	n/a	No	1,7
124	HC001	2021-10-15	20:20	2021-10-15	21:07	0.78	1.653	No	1,7
125	S	2021-10-15	20:45	2021-10-16	12:09	15.40	114.737	Yes	1,7
126	HCG03	2021-10-21	19:39	2021-10-21	20:10	0.50	n/a	No	1,7
127	HCG03	2021-10-25	01:42	2021-10-25	03:11	1.49	n/a	No	1,7
		2021-10-25	05:31	2021-10-25	06:19	0.79			
		2021-10-25	08:04	2021-10-25	08:31	0.45			
		2021-10-25	10:04	2021-10-25	12:08	2.07			
		2021-10-25	12:53	2021-10-25	15:07	2.24			
		2021-10-25	16:02	2021-10-25	18:49	2.79			
		2021-10-26	01:03	2021-10-26	02:12	1.14			
		2021-10-26	02:57	2021-10-26	03:38	0.69			
2021-10-26	04:20	2021-10-26	07:06	2.76					
128	S	2021-10-25	13:50	2021-10-27	05:26	39.61	453.663	No	1,7
129	HCS01	2021-10-25	16:40	2021-10-27	05:45	37.07	279.499	No	1,7
130	HCS04	2021-10-26	05:14	2021-10-27	01:54	20.67	40.147	No	1,7
131	HCS05	2021-10-26	11:18	2021-10-27	07:15	19.95	46.132	No	1,7

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Event #	Location	Start		Stop		Duration Hours	Volume ML	Disinfection Yes / No	Reason Code
		Date yyyy-mm-dd	Time	Date yyyy-mm-dd	Time				
132	HCG03	2021-10-29	16:18	2021-10-29	21:10	4.87	n/a	No	1,7
		2021-10-29	23:42	2021-10-30	05:43	6.02			
133	HCG14	2021-10-29	17:03	2021-10-29	18:27	1.41	n/a	No	1,7
		2021-10-29	19:09	2021-10-29	19:29	0.33			
134	S	2021-10-29	18:06	2021-10-31	01:42	31.59	346.886	No	1,7
135	HCS01	2021-10-30	00:15	2021-10-31	05:16	29.01	211.499	No	1,7
		2021-10-31	15:40	2021-10-31	15:55	0.25			
136	HCS04	2021-10-30	01:24	2021-10-31	09:43	32.32	68.835	No	1,7
137	HCS08	2021-10-30	08:53	2021-10-30	17:03	8.16	0.666	No	1,7
138	HCG03	2021-10-30	20:58	2021-10-30	21:10	0.20	n/a	No	1,7
139	HCG03	2021-11-12	20:01	2021-11-12	20:44	0.72	n/a	No	1,7
140	HCG03	2021-12-05	20:47	2021-12-06	00:28	3.67	n/a	No	1,7
		2021-12-06	08:57	2021-12-06	09:19	0.36			
141	HCG14	2021-12-05	21:16	2021-12-05	21:16	0.01	n/a	No	1,7
		2021-12-05	21:17	2021-12-05	21:35	0.29			
		2021-12-05	21:35	2021-12-05	21:36	0.01			
		2021-12-05	22:13	2021-12-05	22:39	0.43			
		2021-12-05	22:39	2021-12-05	22:40	0.00			
142	S	2021-12-05	22:38	2021-12-06	05:12	6.56	55.288	No	1,7
143	HCG03	2021-12-11	01:54	2021-12-11	02:18	0.39	n/a	No	1,7
		2021-12-11	04:07	2021-12-11	06:25	2.29			
144	HCG14	2021-12-11	04:30	2021-12-11	06:10	1.68	n/a	No	1,7
145	DC011	2021-12-11	05:17	2021-12-11	06:42	1.42	0.106	No	1,7
146	DC012	2021-12-11	05:24	2021-12-11	06:04	0.67	0.038	No	1,7
147	S	2021-12-11	05:40	2021-12-11	14:03	8.38	65.643	No	1,7
148	HCG03	2021-12-25	13:24	2021-12-25	14:14	0.83	n/a	No	1,7
		2021-12-25	15:11	2021-12-25	15:26	0.25			

888.11

4059.840

## Legend / Notes

### Bypass/Overflow Locations:

**PH**= Plant bypass

**HW**= Headworks bypass

**PR**= Primary bypass

**S** = Secondary bypass

**HCS01** = Greenhill CSO Tank

**HCS02** = Strachan St CSO Tank

**HCS03** = James St CSO Tank

**HCS04** = Main/King CSO Tank

**HCS05** = Eastwood CSO Tank

**HCS7C** = Red Hill CSO Tank

**HCS08** = Royal CSO Tank

**HCS09** = McMaster CSO Tank

**HCG03** = Wentworth CSO Outfall

**HCG04** = Strathearne CSO Outfall

**HCG14** = Wellington CSO Outfall

**HC001** = Parkdale Pump Station

**DC011** = Pleasant/Edenbridge Pump Station

**DC012** = Pleasant/Sunrise Pump Station

### Bypass 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.

### 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

### Volume Determination:

Bypass flow volumes at the Woodward WWTP are estimated.

CSO tank overflow volumes are measured.

Pumping stations overflow volumes are measured.

### Bypass 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