

Appendix 1

2020 MS4 Stormwater Annual Report

Water Testing Data

Spreadsheets summarizing all

2020 test results

together with those for 2018 and 2019

Table 1
Stormwater Laboratory Analytical Results
 October 2020
 New Haven, Connecticut

Location ID	Receiving Waterbody	Sample Date	Field Parameters										Laboratory Analytical Parameters														
			Temperature (Celsius)	Specific Conductivity (µm/cm)	pH (SU)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Color	Boron (mg/L)	Hardness CaCO3 (mg/L)	Chlorine Residual (mg/L)	COD (mg/L)	MBAS (mg/L)	Ammonia as Nitrogen (mg/L)	Nitrite-N (mg/L)	Nitrate-N (mg/L)	Oil and Grease (mg/L)	TKN (mg/L)	Total P (mg/L)	TSS (mg/L)	Escherichia Coli (MPN/100 ml)	Enterococcal Bacteria (MPN/100ml)	Fecal Coliforms MPN (MPN/100ml)	Total Coliforms (MPN/100ml)	Conductivity (µm/cm)	Salinity (ppt)
OF-60A	Wintergreen Brook	10/29/2020	12.2	311.2	7.09	11.43	47.8	27.88	light brown-yellow	<0.05	3.7	<0.02	21	0.25	0.21	0.011	0.25	<1.4	0.51	0.051	14	12,000	19,900	19,900	>24,200	15	<0.5
CB-6078	Wintergreen Brook	10/29/2020	11.8	24.7	6.69	8.77	61.2	31.21	clear-yellow	<0.05	19.2	<0.02	27	<0.10	0.35	0.010	0.10	<1.4	0.94	0.068	19	1,900	9,800	2,060	>24,200	15	<0.5
CB-6124	Wintergreen Brook	10/29/2020	12.2	13.9	6.05	9.04	124.2	26.15	clear-yellow	<0.05	3.8	<0.02	21	<0.10	0.12	0.019	0.12	<1.4	0.66	0.117	620	109	3,870	31	>24,200	14	<0.5
CB-Wintergreen	Wintergreen Brook	10/29/2020	11.2	25.4	5.86	9.76	151.6	176.2	Black-brown, suspended solids	<0.05	12.4	<0.02	89	<0.10	0.33	0.030	0.39	5.2	1.49	0.217	87	7,700	24,200	6,490	>24,200	26	<0.5
OF-45	West River	10/29/2020	12.0	30.6	5.86	9.02	160.7	57.96	yellow-brown	<0.05	6.4	<0.02	53	0.16	0.33	0.023	0.20	1.7	0.99	0.110	34	4,610	>24,200	8,660	>24,200	29	<0.5
OF-25	West River	10/29/2020	10.8	76	6.12	8.21	151.6	450.3	Dark brown-black, suspended solids	0.06	115	0.04	1,410	0.34	1.35	0.032	0.04	7.8	24.5	4.40	1,500	5,790	15,500	15,500	>24,200	77	<0.5
CB-112	West River	10/29/2020	11.2	57.9	6.37	9.48	152.4	263.2	Dark brown-black, suspended solids	<0.05	21.1	<0.02	195	0.22	0.17	0.017	0.12	1.9	3.02	0.689	150	>24,200	>24,200	>24,200	54	<0.5	
CB-76	West River	10/29/2020	10.8	21.4	6.51	9.97	146.2	53.09	yellow-brown	<0.05	3.3	<0.02	46	0.48	0.16	0.011	0.08	<1.4	0.75	0.194	19	9,210	>24,200	6,490	>24,200	23	<0.5
CB-110	West River	10/29/2020	11.0	23.3	6.22	14.05	167.1	33.17	clear-yellow	<0.05	7.7	<0.02	44	0.12	0.12	<0.010	0.04	1.4	0.81	0.270	25	6,490	17,300	9,210	>24,200	23	<0.5
CB-825	West River	10/29/2020	10.9	24.9	6.16	9.36	167.9	48.77	clear-yellow	<0.05	7.9	<0.02	51	0.16	0.13	0.014	0.07	<1.4	0.82	0.368	32	>24,200	>24,200	24,200	24	<0.5	
OF-26	West River	10/29/2020	11.9	35.7	6.20	9.29	165.5	91.52	brown	<0.05	11.7	<0.02	68	0.14	0.15	0.016	0.10	3.4	0.86	0.281	44	>24,200	>24,200	24,200	35	<0.5	
CB-244	West River	10/29/2020	11.1	13.7	6.45	11.57	159.2	48.78	yellow-brown	<0.05	8.3	<0.02	51	<0.10	0.16	<0.010	0.04	1.6	1.08	0.222	52	1,520	9,800	1,340	>24,200	12	<0.5
CB-378	West River	10/29/2020	11.0	47.3	6.23	9.85	166.5	503.3	Black, suspended solids	0.06	97.9	<0.02	908	0.37	<0.25	0.028	0.08	70	4.03	0.910	700	>24,200	>24,200	>24,200	57	<0.5	
CB-399	West River	10/29/2020	10.7	45.8	6.6	8.71	159.6	90.77	brown, little suspended solids	<0.05	12.7	<0.02	63	0.13	0.20	0.021	0.36	<1.4	1.18	0.288	25	19,900	17,300	8,660	45	<0.5	
CB-383	West River	10/29/2020	10.6	17.5	6.55	9.72	161.6	53.32	brown	<0.05	3.1	<0.02	57	0.24	0.12	0.012	0.04	<1.4	0.68	0.367	27	1,550	5,170	1,220	>24,200	19	<0.5
CB-789	West River	10/29/2020	14.7	81.7	5.98	6.88	184.7	50.78	brown	<0.05	35.8	<0.02	65	0.13	0.43	0.013	0.02	<1.4	1.96	0.314	27	884	>24,200	1,440	>24,200	83	<0.5
CB-448	West River	10/29/2020	11.9	48.3	6.64	9.12	139.1	34.66	yellow-brown	<0.05	17	<0.02	23	<0.10	0.22	<0.010	0.34	<1.4	1.0	0.217	10	5,480	15,500	4,110	>24,200	46	<0.5

Notes:
 Turbidity and pH field tested by ATC
 Concentrations in bold were reported above the laboratory reporting limits
 mg/L: milligrams per liter
 TKN = Nitrogen Tot Kjeldahl
 < 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
 >24,200: Indicates sample was found above the laboratory detection limit

Table 2
Stormwater Laboratory Analytical Results

Laboratory Duplicate Bacteria Samples
Oct. 2020
New Haven, Connecticut

Location ID	Receiving Waterbody	Sample Date	Environmental Consulting Laboratories				Phoenix Environmental Laboratories			
			Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)	Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)
OF-60A	Wintergreen Brook	10/29/2020	16,070	30,760	13,960	51,720	12,000	19,900	19,900	>24,200
CB-6078	Wintergreen Brook	10/29/2020	2,880	9,850	1,480	34,480	1,900	9,800	2,060	>24,200
CB-6124	Wintergreen Brook	10/29/2020	520	2,920	200	129,970	109	3,870	31	>24,200
CB-Wintergreen	Wintergreen Brook	10/29/2020	6,500	12,590	8,330	>241,960	7,700	24,200	6,490	>24,200
OF-45	West River	10/29/2020	3,450	22,470	3,590	>241,960	4,610	>24,200	8,660	>24,200
OF-25	West River	10/29/2020	5,730	38,730	5,730	>241,960	5,790	>24,200	15,500	>24,200
CB-112	West River	10/29/2020	104,620	155,310	77,010	>241,960	>24,200	>24,200	>24,200	>24,200
CB-76	West River	10/29/2020	8,200	22,820	7,940	>241,960	9,210	>24,200	6,490	>24,200
CB-110	West River	10/29/2020	5,910	12,740	4,800	>241,960	6490	17300	9210.0	>24,200
CB-825	West River	10/29/2020	32,550	68,670	26,130	>241,960	>24,200	>24,200	24200	>24,200
OF-26	West River	10/29/2020	41,060	86,640	19,350	>241,960	>24,200	>24,200	24200	>24,200
CB-244	West River	10/29/2020	2,160	5,480	410	173,290	1520	9800	1440	>24,200
CB-378	West River	10/29/2020	104,620	198,630	57,940	>241,960	>24,200	>24,200	>24,200	>24,200
CB-399	West River	10/29/2020	19,890	13,910	10,860	>241,960	19900	17300	8660	>24,200
CB-383	West River	10/29/2020	1,460	2,130	1,100	>241,960	1550	5170	1220	>24,200
CB-789	West River	10/29/2020	1,090	26,030	1,450	>241,960	884	>24,200	1440	>24,200
CB-448	West River	10/29/2020	4,390	16,640	2,990	241,960	5480	15500	4110	>24,200

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Stormwater Laboratory Analytical Results
October 2020
New Haven, Connecticut

Location ID	Receiving Waterbody	Sample Date	Field Parameters										Laboratory Analytical Parameters														
			Temperature (Celsius)	Specific Conductivity (µm/cm)	pH (SU)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Color	Boron (mg/L)	Hardness CaCO3 (mg/L)	Chlorine Residual (mg/L)	COD (mg/L)	MBAS (mg/L)	Ammonia as Nitrogen (mg/L)	Nitrite-N (mg/L)	Nitrate-N (mg/L)	Oil and Grease (mg/L)	TKN (mg/L)	Total P (mg/L)	TSS (mg/L)	Escherichia Coli (MPN/100 mb)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)	Conductivity (µmhos/cm)	Salinity (ppt)
OF-15	Lake Wintergreen	10/2/2020	20.3	190.3	5.33	0.88	156.2	20.22	Oily brown, visible solids	0.05	43.5	0.12	349	0.25	0.50	0.041	0.5	46	6.25	1.090	790	>24,200	24,200	>24,200	>24,200	182	<0.5
OF-16	Lake Wintergreen	10/2/2020	18.7	198.5	6.86	6.89	82.6	17.02	clear-light yellow, visible solids	<0.05	61.1	<0.02	49	0.19	0.16	0.014	1.23	<1.4	1.25	0.254	57	987	8,160	2,600	>24,200	206	<0.5
OF-21	Lake Wintergreen	10/2/2020	19.8	194.1	6.91	0.84	155.2	16.41	light grey-clear, visible solids	<0.05	45.2	<0.02	76	161	0.16	<0.010	<0.02	<1.4	1.38	0.291	9.3	10,500	6,870	19,900	>24,200	161	<0.5
CB-110	Lake Wintergreen	10/2/2020	19.3	193.2	5.31	0.22	150.8	15.54	light grey-clear, visible solids	<0.05	42.6	<0.02	83	0.44	0.10	<0.010	<0.02	<1.4	1.39	0.302	20	6,290	10,500	19,900	>24,200	160	<0.5
CB-76	Lake Wintergreen	10/2/2020	19.6	195.6	6.45	0.54	152.6	15.77	grey-clear, visible solids	<0.05	44.5	<0.02	81	0.29	<0.10	<0.010	<0.02	<1.4	1.76	0.316	27	9,800	8,160	24,200	163	<0.5	
CB-751	Lake Wintergreen	10/2/2020	19.4	192.3	6.88	0.73	143.6	14.86	grey-clear, visible solids	<0.05	42.9	<0.02	76	0.33	<0.10	<0.010	<0.02	<1.4	1.18	0.299	13	7,270	9,800	>24,200	167	<0.5	
CB-114	Lake Wintergreen	10/2/2020	19.7	196.3	7.02	0.85	156.4	14.66	light grey-clear, visible solids	<0.05	51.7	<0.02	87	0.21	0.12	<0.010	<0.02	<1.4	1.39	0.342	22	7,270	10,500	24,200	164	<0.5	

Notes:
Turbidity and pH field tested by ATC
Concentrations in bold were reported above the laboratory reporting limits
mg/L: milligrams per liter
TKN = Nitrogen Tot Kjeldahl
< 0.5: Indicates compound was Not Detected at or above the specified laboratory reporting limit
>24,200: Indicates sample was found above the laboratory detection limit

Table 2
Stormwater Laboratory Analytical Results

Laboratory Duplicate Bacteria Samples
Oct. 2020
New Haven, Connecticut

Location ID	Receiving Waterbody	Sample Date	Environmental Consulting Laboratories				Phoenix Environmental Laboratories			
			Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)	Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)
			OF-15	Lake Wintergreen	10/2/2020	5,790	19,510	198,630	>241,960	>24,200
OF-16	Lake Wintergreen	10/2/2020	750	3,830	3,010	>241,960	987	8,160	2,600	>24,200
OF-21	Lake Wintergreen	10/2/2020	6,200	4,710	41,060	>241,960	10,500	6,870	19,900	>24,200
CB-110	Lake Wintergreen	10/2/2020	7,430	6,090	41,060	>241,960	6,290	10,500	19,900	>24,200
CB-76	Lake Wintergreen	10/2/2020	6,370	7,030	19,180	>241,960	9,800	8,160	24,200	>24,200
CB-751	Lake Wintergreen	10/2/2020	5,730	5,540	41,060	>241,960	7,270	9,800	>24,200	>24,200
CB-114	Lake Wintergreen	10/2/2020	6,380	4,590	38,730	>241,960	7,270	10,500	24,200	>24,200

Notes
Concentrations in **bold** were reported above the laboratory reporting limits
mg/l: milligrams per liter
< 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
>24,200: Indicates sample was found above the laboratory detection limit

Table 1
Summary of Stormwater Analytical Results
New Haven, CT
June 11, 2020

Location ID	Receiving Waterbody	Sample Date	Field Parameters										Laboratory Analytical Parameters														
			Temperature (Celsius)	Specific Conductivity (µs/cm)	pH (SU)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Color	Boron (mg/L)	Hardness CaCO3 (mg/L)	Chlorine Residual (mg/L)	COD (mg/L)	MIBAS (mg/L)	Ammonia as Nitrogen (mg/L)	Nitrite-N (mg/L)	Nitrate-N (mg/L)	Oil and Grease (mg/L)	TKN (mg/L)	Total P (mg/L)	TSS (mg/L)	Escherichia Coli (MPN/100 ml)	Enterococci Bacteria (MPN/100ml)	Fecal Coliforms MPN (MPN/100ml)	Total Coliforms (MPN/100ml)	Conductivity (µmhos/cm)	Salinity (ppt)
OF 156	New Haven Harbor	6/11/2020	21.0	4.11	7.05	4.41	140.9	22.32	White-Cloudy	21.8	53900	<0.02	7470	0.68	2.67	<4.00	<1.25	<1.4	14.2	0.420	99	<10	2,050	<10	373	238,000	328
CB 5123	New Haven Harbor	6/11/2020	23.1	1.59	8.51	6.92	13.6	147.4	Light yellow-clear	<0.50	278	<0.02	363	1.1	3.50	0.021	1.02	4.5	8.75	0.573	150	31	2,140	228	>24,200	2,390	1.2
CB 5128	New Haven Harbor	6/11/2020	20.1	0.88	8.06	2.57	-71.0	91.71	Brown-light brown	0.05	55.6	<0.02	217	0.5	0.69	<0.010	<0.02	3.3	4.77	0.733	130	323	195	20	>24,200	447	<0.5
CB 5141	New Haven Harbor	6/11/2020	21.9	0.303	7.39	5.30	-12.2	62.99	Clear-light yellow	0.06	67.7	<0.002	319	0.6	3.34	<0.010	<0.02	13	10	2.1	190	860	>24,200	>24,200	282	<0.5	
CB 5152	New Haven Harbor	6/11/2020	20.2	0.481	7.67	5.45	-24.8	67.35	Light brown-clear	0.08	145	0.11	82	0.35	0.70	0.04	0.45	2.3	2.31	0.216	52	743	2,400	3,080	>24,200	405	<0.5
CB5000	New Haven Harbor	6/11/2020	21.5	0.405	7.76	5.01	-34.6	97.76	Brown-light brown	<0.05	54.2	<0.02	177	0.66	2.37	0.025	0.87	3.6	6.17	0.636	50	309	4,350	6,130	>24,200	222	<0.5

Notes:
Turbidity and pH field tested by ATC
Concentrations in bold were reported above the laboratory reporting limits
mg/L: milligrams per liter
TKN = Nitrogen Tot Kjeldahl
< 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
>24,200: Indicates sample was found above the laboratory detection limit

Table 2
Stormwater Sampling Bacterial Comparative Results
 New Haven, CT
 June 11, 2020

Laboratory Analytical Results										
				Environmental Consulting Laboratories			Phoenix Environmental Laboratories			
Location ID	Receiving Waterbody	Sample Date	Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)	Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)
OF 156	New Haven Harbor	6/11/2020	200	100	<100	2,130	<10	2,050	<10	373
CB 5123	New Haven Harbor	6/11/2020	<100	3,450	<100	61,310	31	2,140	228	>24,200
CB 5128	New Haven Harbor	6/11/2020	970	610	410	>241,960	323	195	20	>24,200
CB 5141	New Haven Harbor	6/11/2020	1,350	53,350	61,310	>241,960	860	>24,200	>24,200	>24,200
CB 5152	New Haven Harbor	6/11/2020	840	3,860	14,080	>241,960	743	2,400	3,080	>24,200
CB 5000	New Haven Harbor	6/11/2020	410	32,550	4,710	>241,960	309	4,350	6,130	>24,200

Notes

Concentrations in **bold** were reported above the laboratory reporting limits

mg/l: milligrams per liter

< 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit

>24,200: Indicates sample was found above the laboratory detection limit

Table 1
Summary of Stormwater Analytical Results
 New Haven, CT
 April 24, 2020

Location ID	Receiving Waterbody	Sample Date	Field Parameters										Laboratory Analytical Parameters														
			Temperature (Celsius)	Specific Conductivity (µm/cm)	pH (SU)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Color	Boron (mg/L)	Hardness CaCO3 (mg/L)	Chlorine Residual (mg/L)	COD (mg/L)	MBAS (mg/L)	Ammonia as Nitrogen (mg/L)	Nitrite-N (mg/L)	Nitrate-N (mg/L)	Oil and Grease (mg/L)	TKN (mg/L)	Total P (mg/L)	TSS (mg/L)	Escherichia Coli (MPN/100 mL)	Enterococci Bacteria (MPN/100mL)	Fecal Coliforms MPN (MPN/100mL)	Total Coliforms (MPN/100mL)	Conductivity (µmho/cm)	Salinity (ppt)
OF 141	New Haven Harbor	4/24/2020	6.6	0.485	9.32	11.47	138.8	60.86	Light-to-medium brown	<0.05	31.9	<0.02	46	0.18	0.13	0.021	0.11	2.7	0.42	0.090	48	218	187	131	4,880	390	<0.5
CB 5036J	New Haven Harbor	4/24/2020	7.1	0.84	8.26	11.41	129.8	41.79	Clear/light brown	<0.05	77.6	<0.02	25	0.17	0.09	0.018	0.14	<1.4	0.53	0.046	31	31	52	<10	691	1,210	0.6
CB 5007	New Haven Harbor	4/24/2020	6.2	0.166	7.93	11.43	100.9	75.22	Brown/dark grey-Murky	<0.05	38.9	<0.02	78	0.18	0.33	0.059	0.22	8.4	1.31	0.159	88	355	4,160	169	15,500	193	<0.5
CB 5036A	New Haven Harbor	4/24/2020	7.3	3.66	7.38	8.31	146.7	99.86	Clear, strong oil sheen	0.49	662	<0.02	160	0.14	0.39	0.016	0.21	11	1.69	0.576	350	98	512	74	6,490	3,980	2.2
CB 5145	New Haven Harbor	4/24/2020	7.4	0.09	8.42	11.13	35.6	22.99	Clear-to-light yellow	<0.05	5.2	<0.02	19	0.08	0.22	<0.010	0.11	<1.4	0.42	0.054	28	20	131	<10	15,500	23	<0.5
CB 5163	New Haven Harbor	4/24/2020	7.3	0.084	7.84	10.03	61.5	67.67	Clear-to-light yellow, strong oil sheen	<0.05	26.9	<0.02	48	0.1	0.14	0.017	0.25	2.4	0.66	0.099	110	161	228	75	24,200	83	<0.5
OF 147	New Haven Harbor	4/24/2020	11.2	0.69	7.05	6.63	92	38	Light brown-to-grey, strong oil sheen	0.10	179	<0.02	120	1.04	7.13	0.073	0.64	13	13.3	1.76	65	>24,200	>24,200	>24,200	933	0.5	
CB 5027	New Haven Harbor	4/24/2020	9.0	0.221	7.63	7.39	77.9	28.15	Light yellow-to-clear	<0.05	66.6	<0.02	23	0.16	0.14	<0.010	0.41	<1.4	0.57	0.123	13	2,280	776	2,010	24,200	570	<0.5
CB 5033	New Haven Harbor	4/24/2020	6.8	0.131	7.86	11.31	48.3	72.14	Dark yellow-to-brown, slight oil sheen	<0.05	20.4	<0.02	31	0.14	0.20	0.033	0.39	1.7	0.70	0.096	37	8,160	5,480	6,870	>24,200	139	<0.5
OF 148	New Haven Harbor	4/24/2020	9.8	0.412	7.55	9.41	69.1	12.32	Clear/light yellow	<0.05	88.7	<0.02	<10	0.07	<0.05	<0.010	1.18	<1.4	0.22	0.026	13	393	880	355	19,900	403	<0.5
CB 5199C	New Haven Harbor	4/24/2020	9.0	0.044	7.38	10.03	49.8	112.9	Dark yellow-to-brown, slight oil sheen	<0.05	14.5	<0.02	50	0.11	0.14	0.021	0.31	<1.4	0.61	0.228	220	24,200	384	10,500	>24,200	42	<0.5
CB 5221	New Haven Harbor	4/24/2020	7.3	0.132	7.43	11.52	46.1	11.63	Dark yellow-to-dark brown	<0.05	35.3	<0.02	19	0.10	0.13	<0.010	0.87	<1.4	0.77	0.091	27	226	1,500	96	>24,200	128	<0.5

Notes:

Turbidity and pH field tested by ATC

Concentrations in bold were reported above the laboratory reporting limits

mg/L: milligrams per liter

TKN = Nitrogen Tot Kjeldahl

<0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit

>24,200: Indicates sample was found above the laboratory detection limit

Table 2
Stormwater Sampling Bacterial Comparative Results
 New Haven, CT
 April 24, 2020

				Environmental Consulting Laboratories				Phoenix Environmental Laboratories			
Location ID	Receiving Waterbody	Sample Date	Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)	Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)	
OF 141	New Haven Harbor	4/24/2020	200	520	100	6,630	218	187	131	4,880	
CB 5036J	New Haven Harbor	4/24/2020	<100	100	<100	1,100	31	52	<10	691	
CB 5007	New Haven Harbor	4/24/2020	860	2,230	410	22,470	355	4,160	169	15,500	
CB 5036A	New Haven Harbor	4/24/2020	200	740	100	9,060	98	512	74	6,490	
CB 5145	New Haven Harbor	4/24/2020	100	410	<100	24,890	20	131	<10	15,500	
CB 5163	New Haven Harbor	4/24/2020	520	100	100	27,550	161	228	75	24,200	
OF 147	New Haven Harbor	4/24/2020	>241,960	241,960	>241960	>241,960	>24,200	>24,200	>24,200	>24,200	
CB 5027	New Haven Harbor	4/24/2020	3,790	410	850	54,750	2,280	776	2,010	24,200	
CB 5033	New Haven Harbor	4/24/2020	10,170	8,800	3,590	21,430	8,160	5,480	6,870	>24,200	
OF 148	New Haven Harbor	4/24/2020	1,450	1,190	310	36,540	393	880	355	19,900	
CB 5199C	New Haven Harbor	4/24/2020	36,540	200	13,140	48,840	24,200	384	10,500	>24,200	
CB 5221	New Haven Harbor	4/24/2020	310	2,530	100	86,640	226	1,500	96	>24,200	

Notes
 Concentrations in **bold** were reported above the laboratory reporting limits
 mg/l: milligrams per liter
 < 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
 >24,200: Indicates sample was found above the laboratory detection limit

Table 1
Summary of Stormwater Sampling Analytical Results
 New Haven, CT
 February 4, 2020
 March 19, 2020

Location ID	Receiving Waterbody	Sample Date	Field Parameters										Laboratory Analytical Parameters														
			Temperature (Celsius)	Specific Conductivity (µm/cm)	pH	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Color	Boron (mg/L)	Hardness CaCO3 (mg/L)	Chlorine Residual (mg/L)	COD (mg/L)	MBAS (mg/L)	Ammonia as Nitrogen (mg/L)	Nitrite-N (mg/L)	Nitrate-N (mg/L)	Oil and Grease (mg/L)	TKN (mg/L)	Total P (mg/L)	TSS (mg/L)	Escherichia Coli (MPN/100 ml)	Enterococci Bacteria (MPN/100ml)	Fecal Coliforms (MPN/100ml)	Total Coliforms (MPN/100ml)	Conductivity (µm/cm)	Salinity (ppt)
OF-122	Mill River	2/6/20	3.4	259.5	7.23	13.76	372.4	12.68	Clear, oil sheen	<0.05	10	<0.02	65	0.11	0.36	0.037	0.33	3.3	1.23	0.121	26	161	272	110	6,870	277	<0.5
CB-8547	Mill River	2/6/20	5.3	216.8	8.33	11.42	326.7	20.66	Light brown, clear	<0.05	4.6	<0.02	29	0.35	0.27	0.016	0.24	<1.4	1.13	0.108	28	41	108	<10	2,360	147	<0.5
CB-8560	Mill River	2/6/20	3.5	90.9	7.9	13.56	366.5	10.81	Clear	<0.05	10.4	<1.0	59	0.12	0.47	0.03	2.11	5	1.61	0.393	110	31	173	20	2,140	201	<0.5
CB-8961	Mill River	2/6/20	3.8	161.6	7.94	13.42	357.4	36.62	Light brown	<0.05	5.9	<0.02	65	0.16	0.11	0.021	0.32	1.6	1	0.152	44	573	2,490	41	9,210	160	<0.5
CB-8989	Mill River	2/6/20	4.9	300.1	7.3	14.61	397.3	19.68	Yellow-light brown	<0.05	71	<0.10	1,350	0.24	2.34	0.059	0.43	49	53.3	7	600	573	1,470	243	14,100	632	<0.5
CB-9037	Mill River	2/6/20	4.5	114.5	7.32	13.13	386.7	56.62	Yellow/tan	<0.05	11.4	<0.02	31	0.07	0.33	0.029	0.22	<1.4	0.85	0.96	12	161	441	218	9,210	113	<0.5
CB-9080	Mill River	2/6/20	4	100.8	7.52	13.21	379.8	40.26	Yellow/tan	<0.05	7.2	<0.02	73	0.11	0.24	0.025	0.24	<1.4	1.64	0.223	51	41	315	75	14,100	96	<0.5
OF-124	Mill River	2/6/20	4.3	867	7.03	16.63	381.9	37.43	Brown, murky	<0.05	80.9	<0.10	576	0.21	1.06	0.084	0.38	23	7.31	0.303	210	408	1,210	594	19,900	902	<0.5
CB-9307	Mill River	2/6/20	3.8	84	7.01	12.81	377.6	39.6	Clear to light brown	<0.05	12.9	<0.02	65	0.13	0.13	0.01	0.21	<1.4	1.07	0.229	44	160	235	10	3,450	51	<0.5
CB-9368	Mill River	2/6/20	3.8	125.6	7.24	12.67	362	25.92	Light brown, murky	<0.05	6.4	<0.02	95	0.15	0.19	0.029	0.33	1.4	1.37	0.281	40	5,010	1,400	2,380	11,200	126	<0.5
CB-9392	Mill River	2/6/20	3.9	102.1	7.47	12.71	356.6	22.74	Brown	<0.05	14.5	<0.02	42	0.12	0.21	0.031	0.28	4.8	0.97	0.185	67	41	84	63	3,260	56	<0.5
OF-161	New Haven Harbor	3/13/2020	9.0	497.7	6.54	9.1	101.7	10.25	Light brown, clear	<0.05	121.0	<0.02	12	<0.05	0.13	0.016	2.78	<1.4	0.60	0.041	3.5	2,500	1,960	1,350	>24,200	487	<0.5
CB-5195	New Haven Harbor	3/13/2020	7.9	105.2	7.1	7.81	77.61	10.13	Clear	<0.05	6.6	0.03	40	0.30	0.30	0.013	0.38	<1.4	0.86	0.089	17	10	1,790	10	7,700	105	<0.5
CB-5165	New Haven Harbor	3/13/2020	7.8	180.31	6.76	5.97	90.9	40.75	Light brown, clear	<0.05	23.4	<0.02	284	0.32	0.70	0.028	0.53	8.9	5.05	0.542	420	52	4,610	52	>24,200	209	<0.5
CB-5176	New Haven Harbor	3/13/2020	9.3	67.1	6.79	13.27	94.61	36.98	Brown	<0.05	8.8	<0.02	246	0.27	0.46	0.015	0.49	3.9	2.61	0.491	380	74	>24,200	4,880	>24,200	73	<0.5
OF-162	New Haven Harbor	3/13/2020	9.8	29.61	6.61	9.96	102.5	40.22	Clear	<0.05	5.2	<0.02	86	0.27	0.3	<0.010	0.18	2.2	0.88	0.168	99	74	657	31	8,160	30	<0.5
CB-5186	New Haven Harbor	3/13/2020	9.5	29.21	6.74	11.06	100.5	77.26	Light brown, murky	<0.05	16.4	<0.02	155	0.11	0.59	<0.010	0.34	1.4	3.06	0.340	210	74	24,200	738	>24,200	37	<0.5
CB-5203	New Haven Harbor	3/13/2020	9.7	44.41	6.66	10.09	101.6	37.37	Yellow	<0.05	7.4	<0.02	63	0.17	0.22	<0.010	0.24	2.2	0.92	0.158	79	74	836	120	14,100	42	<0.5
OF-162A	New Haven Harbor	3/13/2020	9.6	9.71	6.51	9.21	105.2	75.99	Yellow/tan	<0.05	2.1	<0.02	29	0.06	0.17	<0.010	0.19	<1.4	0.99	0.067	14	594	727	350	11,200	25	<0.5
CB-5206A	New Haven Harbor	3/13/2020	9.81	20.9	6.91	9.52	110.1	35.93	Yellow/tan	<0.05	3.9	<0.02	52	0.17	0.17	<0.010	0.18	<1.4	1.00	0.135	72	884	169	749	4,880	28	<0.5
CB-5208	New Haven Harbor	3/13/2020	9.5	6.19	6.22	9.95	116.7	22.97	Light brown, murky	<0.05	5.1	<0.02	19	0.06	0.22	<0.010	0.17	<1.4	0.73	0.114	26	10	52	10	7,270	24	<0.5
CB-5591	New Haven Harbor	3/13/2020	9.4	46.6	6.29	9.45	106.7	12.91	Brown	<0.05	8.2	<0.02	16	0.13	0.12	<0.010	0.23	<1.4	0.55	0.083	14	<10	31	<10	15,500	47	<0.5
OF-44	West River	3/19/2020	7.4	89.5	7.84	12.0	41.1	54.97	Clear to light brown	<0.05	12.1	0.03	84	0.19	0.29	0.012	0.16	7.4	0.84	0.163	92	1,940	776	122	4,350	29	<0.5
CB-280	West River	3/19/2020	6.2	15.8	7.48	12.57	63.1	16.44	Clear to light brown	<0.05	2.9	<0.02	16	0.09	0.56	0.016	0.20	<1.4	0.99	0.113	21	292	75	109	>24,200.0	14	<0.5
CB-374	West River	3/19/2020	6.7	16.0	7.3	11.64	68.1	24.89	Clear	<0.05	5.0	<0.02	21	0.09	0.21	<0.010	0.06	<1.4	1.07	0.125	30	1,080	345	110	8,660	16	<0.5
CB-286	West River	3/19/2020	5.7	24.0	6.98	20.49	83.6	19.97	Clear to light yellow	<0.05	10.6	<0.02	78	0.09	0.1	<0.010	0.05	3.4	0.93	0.174	70	20	464	20	19,900	24	<0.5
OF-6	Mally Lake	3/19/2020	6.3	15.27	7.0	11.96	83.7	19.65	Clear	<0.05	5.5	<0.02	33	0.08	0.06	<0.010	0.04	<1.4	0.67	0.155	34	10	487	10	>24,200	15	<0.5
CB-671	Mally Lake	3/19/2020	6.2	8.31	6.65	11.77	95.2	13.38	Light yellow/tan	<0.05	3.8	0.05	29	0.09	0.05	<0.010	0.05	<1.4	0.53	0.089	37	10	238	<10	4,880	8	<0.5
CB-674	Mally Lake	3/19/2020	6.5	12.86	6.75	11.54	9.6	8.08	Clear to light brown	<0.05	2.6	<0.02	21	0.08	0.06	<0.010	0.07	<1.4	0.34	0.091	5	4,350	384	836	5,790	13	<0.5
CB-577	Mally Lake	3/19/2020	6.5	30.0	6.43	16.21	105.8	11.96	Murky to clear, tan	<0.05	5.7	<0.02	23	0.06	0.09	<0.010	0.13	<1.4	0.52	0.147	16	85	223	63	12,000	18	<0.5
CB-883	Mally Lake	3/19/2020	5.7	20.5	6.55	12.93	100.6	67.18	Light brown, murky	<0.05	31.4	<0.02	208	0.08	0.27	<0.010	0.07	1.6	5.52	0.319	310	145	5,790	10	5,170	16	<0.5
OF-24	West River	3/19/2020	6.1	14.1	6.49	15.67	108.3	8.42	Murky to clear, tan	<0.05	1.4	<0.02	27	0.06	0.13	<0.010	0.07	<1.4	1.09	0.171	6.7	86	141	20	19,900	9	<0.5
CB-106A	West River	3/19/2020	6.6	16.7	6.35	11.6	111.9	14.87	Light yellow/tan	<0.05	1.5	0.04	25	0.07	0.07	<0.010	0.03	<1.4	0.63	0.122	19	<10	813	10	>24,200	17	<0.5
OF-25	West River	3/19/2020	6.0	20.6	6.38	11.51	112.8	14.52	Light yellow/tan	<0.05	2.9	<0.02	33	<0.05	0.10	<0.010	0.08	<1.4	0.37	0.099	13	31	455	10	0	21	<0.5

Notes:
 Turbidity and pH field tested by ATC
 Concentrations in bold were reported above the laboratory reporting limits
 mg/L = milligrams per liter
 TKN = Nitrogen Tot Kjeldahl
 < 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
 >24,200: Indicates sample was found above the laboratory detection limit

Table 2
Stormwater Sampling Bacterial Comparative Results
New Haven, CT
February 6, 2020,
March 13 19, 2020,

Laboratory Analytical Results										
			Environmental Consulting Laboratories				Phoenix Environmental Laboratories			
Location ID	Receiving Waterbody	Sample Date	Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)	Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)
OF-122	Mill River	2/6/2020	100	520	<100	3,990	161	272	110	6,870
CB-8547	Mill River	2/6/2020	<100	300	<100	520	41	108	<10	2,360
CB-8560	Mill River	2/6/2020	<100	200	<100	1,220	31	173	20	2,140
CB-8961	Mill River	2/6/2020	740	1,380	<100	9,590	573	2,490	41	9,210
CB-8989	Mill River	2/6/2020	200	2,260	200	9,900	573	1,470	243	14,100
CB-9037	Mill River	2/6/2020	100	980	<100	6,200	161	441	218	9,210
CB-9080	Mill River	2/6/2020	<100	200	310	14,670	41	315	75	14,100
OF-124	Mill River	2/6/2020	520	960	100	20,460	408	1,210	594	19,900
CB-9307	Mill River	2/6/2020	100	520	200	4,370	160	235	10	3,450
CB-9368	Mill River	2/6/2020	7,490	1,440	2,280	30,760	5,010	1,400	2,380	11,200
CB-9392	Mill River	2/6/2020	100	100	<100	5,040	41	84	63	3,260
OF-161	New Haven Harbor	3/13/2020	13,140	2,310	860	57,940	2,500	1,960	1,350	>24,200
CB-5195	New Haven Harbor	3/13/2020	100	100	<100	6,330	10	1,790	<10	7,700
CB-5165	New Haven Harbor	3/13/2020	200	5,200	<100	6,830	52	4,610	52	>24,200
CB-5176	New Haven Harbor	3/13/2020	14,390	49,960	2,590	>241,960	4,880	>24,200	4,610	>24,200
OF-162	New Haven Harbor	3/13/2020	300	750	<100	3,360	74	657	31	8,160
CB-5186	New Haven Harbor	3/13/2020	1,690	1,100	410	12,110	1,210	24,200	738	>24,200
CB-5203	New Haven Harbor	3/13/2020	100	750	<100	14,830	74	836	120	14,100
OF-162A	New Haven Harbor	3/13/2020	860	11,090	200	14,210	594	727	350	11,200
CB-5206A	New Haven Harbor	3/13/2020	1,990	200	310	5,200	884	169	749	4,880
CB-5208	New Haven Harbor	3/13/2020	<100	100	<100	7,030	<10	52	10	7,270
CB-5591	New Haven Harbor	3/13/2020	<100	100	<100	22,240	<10	31	<10	15,500
OF-44	West River	3/19/2020	1,610	620	410	6,630	1,940	776	122	4,350
CB-286	West River	3/19/2020	<100	1,180	100	2,950	20	464	20	19,900
CB-274	West River	3/19/2020	520	410	100	4,710	1,080	345	110	8,668
CB-280	West River	3/19/2020	410	<100	200	29,090	292	75	109	>24,200
OF-6	Maltby Lake	3/19/2020	100	1,310	<100	23,100	<10	487	<10	>24,200
CB-671	Maltby Lake	3/19/2020	<100	970	<100	9,500	10	238	<10	4,880
CB-674	Maltby Lake	3/19/2020	2,410	410	2,490	2,720	4,350	384	836	5,790
CB-577	Maltby Lake	3/19/2020	100	750	<100	7,800	85	223	63	12,000
CB-883	Maltby Lake	3/19/2020	100	8,910	<100	1,950	145	5,790	<10	5,170
OF-24	West River	3/19/2020	100	310	100	15,390	86	141	20	19,900
CB-106A	West River	3/19/2020	<100	960	<100	34,480	<10	813	10	>24,200
OF-25	West River	3/19/2020	100	1,830	<100	9,060	31	455	10	15,500

Notes

Concentrations in **bold** were reported above the laboratory reporting limits

mg/l: milligrams per liter

< 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit

>24,200: Indicates sample was found above the laboratory detection limit

TABLE 1
 STORMWATER LABORATORY ANALYTICAL RESULTS
 JUNE 2018, QUINNIPAC AND MILL RIVER
 NEW HAVEN, CONNECTICUT

Sampling Location	Receiving Waterbody	Sample Date	Field Parameters			Laboratory Analytical Parameters																
			pH	Turbidity	Boron (mg/L)	Hardness CaCO3 (mg/L)	Chlorine Residual (mg/L)	COD (mg/L)	MBAS (mg/L)	Ammonia as Nitrogen (mg/L)	Nitrite-N (mg/L)	Nitrate-N (mg/L)	Oil and Grease (mg/L)	TKN (mg/L)	Total P (mg/L)	TSS (mg/L)	Escherichia Coli (MPN/100 ml)	Enterococci Bacteria (MPN/100ml)	Fecal Coliforms (MPN/100ml)	Total Coliforms (MPN/100ml)	Conductivity (umhos/cm)	Salinity (ppt)
O180	Quinnipiac	6/21/18	7.04	6.37	0.05	220	<0.02	<10	< 0.05	0.08	0.033	2.23	<1.4	0.82	0.123	8.0	616	>24,200	605	>24,200	678	<0.5
CB3140	Quinnipiac	6/21/18	6.85	160.5	0.06	115	<0.02	305	1.15	3.80	0.044	1.27	4.4	8.17	0.959	76	1,660	6,870	1,350	>24200	165	<0.5
CB3154D	Quinnipiac	6/21/18	6.58	218.3	<0.05	11.1	<0.02	164	0.89	0.80	0.054	0.68	11	2.65	0.460	110	1,860	>24,200	>24,200	92	<0.5	
CB3145	Quinnipiac	6/21/18	6.97	36.42	<0.05	5.4	<0.02	368	0.56	0.42	0.033	0.67	4.8	4.99	1.25	26	>24,200	>24,200	>24,200	38	<0.5	
CB3163	Quinnipiac	6/21/18	6.81	181.5	<0.05	94.5	<0.02	276	0.54	2.04	0.168	<0.02	3.7	6.17	1.940	100	3,870	2,480	17,300	>24,200	299	<0.5
CB3111	Quinnipiac	6/21/18	6.89	386.2	<0.05	33.0	<0.02	257	0.49	2.98	0.492	0.05	4.9	6.88	1.510	340	>24,200	>24,200	19,900	>24200	169	<0.5
CB3245	Quinnipiac	6/21/18	6.63	204.5	<0.05	25.3	<0.02	212	0.98	1.06	0.056	1.00	5.7	2.77	0.471	120	789	2,360	884	>24,200	506	<0.5
O119	Mill	6/28/18	6.95	303.0	<0.05	43.2	<0.02	204	0.67	0.42	0.012	0.15	2.7	3.32	0.545	200	3,450	12,000	4,110	>242,000	112	<0.5
CB9268	Mill	6/28/18	7.00	298.0	<0.05	4.5	<0.02	90	0.23	0.18	<0.010	0.25	1.6	1.48	0.295	280	9,800	27,600	7,270	>242,000	28	<0.5
CB8843	Mill	6/28/18	6.55	224.9	<0.05	15.4	<0.02	124	0.11	0.28	<0.010	0.12	3.5	1.58	0.476	140	15,500	29,100	5,170	>242,000	14	<0.5
CB8818	Mill	6/28/18	6.89	66.86	<0.05	4.9	<0.02	40	<0.10	0.08	<0.010	0.09	<1.4	1.16	0.231	48	24,200	61,300	17,300	>242,000	16	<0.5
CB8810	Mill	6/28/18	6.65	45.26	<0.05	4.4	0.03	25	<0.10	0.20	<0.010	0.14	<1.4	0.91	0.249	30	15,500	19,900	11,200	>242,000	16	<0.5
CB8803	Mill	6/28/18	6.71	43.79	<0.05	3.0	<0.02	38	0.11	0.09	<0.010	0.14	1.5	0.60	0.177	24	36,500	19,900	19,900	>242,000	20	<0.5
CB8494	Mill	6/28/18	6.80	48.50	<0.05	2.7	<0.02	31	0.11	0.46	<0.010	0.23	<1.4	1.45	0.254	39	2,910	24,200	1,350	>242,000	25	<0.5

Notes:
 Turbidity and pH field tested by ATC
 Concentrations in bold were reported above the laboratory reporting limits
 mg/l: milligrams per liter
 TKN = Nitrogen Tot Kjeldahl
 < 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
 >24,200: Indicates sample was found above the laboratory detection limit

TABLE 2
STORMWATER LABORATORY ANALYTICAL RESULTS

West River
November 2018
New Haven, Connecticut

Location ID	Sample Date	Temp	Field Parameters							Laboratory Analytical Parameters																
			Conductivity	pH	DO	ORP	Turbidity	Color	Boron (mg/L)	Hardness CaCO ₃ (mg/L)	Chlorine Residual (mg/L)	COD (mg/L)	MBAS (mg/L)	Ammonia as Nitrogen (mg/L)	Nitrite-N (mg/L)	Nitrate-N (mg/L)	Oil and Grease (mg/L)	TKN (mg/L)	Total P (mg/L)	TSS (mg/L)	Escherichia Coli (MPN/100 ml)	Enterococci Bacteria (MPN/100ml)	Fecal Coliforms MPN (MPN/100ml)	Total Coliforms (MPN/100ml)	Conductivity (umhos/cm)	Salinity (ppt)
O11	11/13/18	10.2	195.8	6.37	9.91	294.5	8.49	Tan	<0.05	43.2	<0.02	19	0.09	0.17	<0.010	0.49	<1.4	0.48	0.076	7.0	609	602	383	17,300	186	<0.5
	11/13/18	7.4	40.9	5.9	11.7	358.5	131.5	Brown	<0.05	17.5	0.03	139	0.07	<0.10	<0.010	<0.02	<1.4	0.79	0.452	17	243	862	134	>24,200	37	<0.5
CB157	11/13/18	8	82.3	5.28	7.67	337.1	57.24	Tan/Brown	<0.05	14.2	<0.02	294	0.06	0.31	<0.010	<0.02	<1.4	3.11	1.210	39	146	24,200	388	>24,200	84	<0.5
	11/13/18	7.3	34.1	5.39	12.3	340.6	31.31	Brown	<0.05	13.2	<0.02	127	<0.05	<0.10	<0.010	<0.02	<1.4	0.72	0.49	66	439	650	148	>24,200	34	<0.5
CB172	11/13/18	8.3	55.8	5.18	12.1	347.8	17.86	Tan	<0.05	12.7	0.03	199	0.09	0.21	<0.010	<0.02	<1.4	1.99	1.910	68	161	>24,200	231	>24,200	61	<0.5
	11/13/18	7.3	12.1	5.58	13.6	323	9.18	Clear	<0.05	1.3	0.03	<10	<0.05	<0.05	<0.010	0.05	<1.4	0.13	0.115	25	41	201	31	17,300	11	<0.05
CB689	11/13/18	7.9	138.6	5.8	9.09	368.6	55.66	Yellow	<0.05	42.9	<0.02	298	0.16	0.36	0.012	<0.02	<1.4	3.12	0.890	140	>24,200	>24,200	>24,200	>24,200	139	<0.5
	11/13/18																									

Notes:

Concentrations in **bold** were reported above the laboratory reporting limits

mg/l: milligrams per liter

TKN = Nitrogen Tot Kjeldahl

< 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit

>24,200: Indicates sample was found above laboratory detection limits

TABLE 3
 STORMWATER LABORATORY ANALYTICAL RESULTS
 Individual Outfalls - November, December 2018, April 2019 December 2019
 New Haven, Connecticut

Location ID	Sample Date	Field Parameters							Laboratory Analytical Parameters																	
		Temp	Conductivity	pH	DO	ORP	Turbidity	Color	Boron (mg/L)	Hardness CaCO3 (mg/L)	Chloride (mg/L)	COD (mg/L)	MBAS (mg/L)	Ammonia as Nitrogen (mg/L)	Nitrite-N (mg/L)	Nitrate-N (mg/L)	Oil and Grease (mg/L)	TKN (mg/L)	Total P (mg/L)	TSS (mg/L)	Escherichia Coli (MPN/100 ml)	Enterococci (MPN/100ml)	Fecal Coliforms (MPN/100ml)	Total Coliforms (MPN/100ml)	Conductivity (microhm/cm)	Salinity (ppt)
O7	11/13/18	16	544.3	6.57	6.22	222.2	30.99	Brown-tan	0.05	101	<0.02	152	0.86	5.14	0.07	1.02	6.7	13.6	1.340	82	>24,200	>24,200	>24,200	>24,200	505	<0.5
O10	12/28/18	12.2	653.1	6.97	5.32	139.4	37.86	Brown, cloudy	<0.05	102	<0.02	167	0.25	3.64	0.077	2.20	6.0	14.4	1.760	73	>24,200	>24,200	>24,200	>24,200	678	<0.5
O12	11/13/18	9.8	107	6.41	11.07	333.1	14.12	Tan	<0.05	26.3	<0.02	23	<0.05	<0.05	<0.010	0.18	<1.4	0.26	0.229	6.0	5.480	5.170	1.860	>24,200	106	<0.5
O13	12/28/18	11.5	631.7	6.96	6.14	144.6	25.64	Brown, cloudy	<0.05	117	<0.02	420	0.35	4.60	0.132	1.56	11	15.8	2.020	120	>24,200	>24,200	>24,200	>24,200	276	<0.5
O14	11/13/18	9.5	121.3	6.33	11.08	350.5	16.82	Clear tan	<0.05	41.4	<0.02	42	0.07	<0.05	<0.010	0.48	<1.4	0.44	0.278	19	3.450	2.280	588	>24,200	118	<0.5
O41	12/28/18	8.2	274.1	7.13	9.45	198.7	29.78	Tan	<0.05	52.8	<0.02	97	0.75	3.42	0.032	0.86	5.6	10.6	1.330	51	>24,200	>24,200	>24,200	>24,200	276	<0.5
O46	12/21/18	9.5	20.7	8.67	11.94	197.5	21.42	Clear	<0.05	4.9	<0.02	20	<0.05	0.06	<0.010	0.04	<1.4	0.38	0.130	36	637	2.280	197	9.800	14	<0.5
O47	12/21/18	8.4	43.3	9.09	9.86	117.6	34.57	Clear	<0.05	8.8	<0.02	37	0.11	0.10	<0.010	0.05	2.7	0.67	0.161	57	9.140	3.870	5.170	10,100	15	<0.5
O57	12/28/18	17.6	519.1	7.76	3.6	168.5	63.38	Brown-gray	0.07	124	<0.02	407	2.15	13.10	0.082	0.76	100	31.4	4.09	120	>24,200	>24,200	>24,200	>24,200	488	<0.5
O58	12/28/18	11.9	493.4	7.25	12.72	197.8	42.98	Brown-green	0.06	98.6	<0.02	205	2.23	11.50	0.191	1.32	21	24.5	2.960	91	>24,200	>24,200	>24,200	>24,200	515	<0.5
O66	11/13/18	8.8	26.2	6.06	12.06	339.3	16.3	Clear	<0.05	6.0	0.02	38	<0.05	0.15	<0.010	0.08	<1.4	0.41	0.182	12	3.080	2.190	1.480	>24,200	24	<0.5
O68	12/28/18	5.3	118.4	8.12	12.72	159.1	34.26	Brown	<0.05	6.5	<0.02	27	0.12	0.40	0.020	0.23	2.1	0.70	0.069	49	30	249	20	13,000	120	<0.5
O81	6/18/19	21.4	36	7.45	7.11	177.8	22.9	Clear	<0.05	11.4	<0.02	16	<0.05	0.13	<0.010	0.13	<1.4	0.63	0.072	8	2,060	9,210	934	>24,200	42	<0.5
O87	12/28/18	13.4	524.4	7.5	3.33	168.1	42.64	Brown, cloudy	0.08	115	<0.02	190	6.29	10.8	0.215	2.05	18	22.1	2.18	110	>24,200	6,910	>24,200	>24,200	528	<0.5
O88	12/28/18	7.5	61.5	7.72	9.98	165.6	19.87	Brown, cloudy	<0.05	7.3	<0.02	27	0.14	0.22	0.016	0.21	1.8	0.60	0.105	12	591	471	637	>24,200	51	<0.5
O89	12/21/18	10.7	42.8	7.95	11.13	251.0	34.45	Clear	<0.05	11.6	<0.02	35	0.11	0.14	<0.010	0.08	6.3	0.64	0.133	30	7,700	5,480	2,610	>24,200	39	<0.5
O121	12/21/18	10.6	51.3	7.63	11.22	282.4	14.01	Slightly tan	<0.05	12.4	<0.02	16	0.08	0.10	<0.010	0.33	6.5	0.39	0.113	7.0	708	1,620	288	17,300	49	<0.5
O124X	4/26/19	13.7	410.1	7.16	4.00	410.1	67.5	Brown	0.05	23.9	< 0.02	99	0.44	0.92	0.033	0.19	3.5	2.4	0.196	38	216	134	395	19,900	432	< 0.5
O125	4/26/19	11.7	465.9	6.81	6.32	22.5	7.22	Clear	0.41	788	< 0.02	65	< 0.05	0.17	< 0.010	0.54	6.6	0.59	0.967	37	10	61	10	934	4250	3.1
O127	4/26/19	13.3	263.9	7.96	8.74	-72.2	4.44	Light brown	< 0.05	69.8	< 0.02	20	0.09	0.18	0.015	1.31	< 1.4	1.12	0.114	< 5.0	703	1170	24,200	>24,200	254	< 0.5
O128	12/9/19	10.8	392.8	8.38	8.07	343	564.2	Greyish	< 0.05	12.9	< 0.02	72	0.19	0.34	0.050	0.13	4.8	1.12	0.174	62	384	836	350	>24,200	336	< 0.5
O132	12/21/18	12.1	245.3	7.26	9.02	271.9	11.21	Clear	<0.05	8	<0.02	14	0.07	0.23	<0.010	0.21	1.5	0.64	0.061	<5.0	12,000	2,190	1,260	19,900	300	<0.5
O133	6/18/19	22.1	553	8.74	6.88	121.7	309.8	Opaque	0.07	65.6	<0.02	123	0.07	<0.25	0.059	0.26	7.5	0.87	0.376	550	211	657	546	>24,200	525	<0.5
O134	6/18/19	22	61	8.17	6.51	144.5	267.5	Opaque	<0.05	29.6	<0.02	154	0.21	<0.25	0.021	0.26	12	2.1	0.35	100	3,260	8,660	3,650	>24,200	60	<0.5
O138	12/21/18	10.3	49.6	7.65	10.39	293.1	13.45	Tan	<0.05	11.8	0.03	31	<0.05	0.14	<0.010	0.12	7.4	1.07	0.135	16	171	554	158	>24,200	48	<0.5

Notes:

old were reported above the laboratory reporting limits

mg/l: milligrams per liter

TKN = Nitrogen Tot Kjeldahl

s Not Detected at or above the specified laboratory reporting limit

* sample was found above laboratory detection limits

indicate outfalls that have not yet been sampled

TABLE 5
STORMWATER LABORATORY ANALYTICAL RESULTS

Mill River - Outfall 126
December 2019
New Haven, Connecticut

Location ID	Sample Date	Temp	Conductivity	pH	Field Parameters							Laboratory Analytical Parameters														
					DO	ORP	Turbidity	Color	Boron (mg/L)	Hardness CaCO3 (mg/L)	Chloride Residual (mg/L)	COD (mg/L)	MBAS (mg/L)	Ammonia as Nitrogen (mg/L)	Nitrite-N (mg/L)	Nitrate-N (mg/L)	Oil and Grease (mg/L)	TKN (mg/L)	Total P (mg/L)	TSS (mg/L)	Escherichia Coli (MPN/100 ml)	Enterococci Bacteria (MPN/100ml)	Fecal Coliforms MPN (MPN/100ml)	Total Coliforms (MPN/100ml)	Conductivity (umhos/cm)	Salinity (ppt)
O126	12/9/19	9.9	162.3	7.49	8.98	334.4	287.1	Greyish/Brown	<0.05	15.4	<0.02	293	0.20	0.51	0.024	0.04	7.5	3.95	0.812	110	2,600	>24,200	1,080	>24,200	205	<0.5
	12/9/19	9.8	295.5	7.46	9.25	347.5	11.67	Greyish/Brown	<0.05	12.0	<0.02	118	0.15	<0.10	0.010	0.05	2.0	0.91	0.149	90	459	2,610	109	>24,200	297	<0.5
CB13001	12/9/19	11.6	329.8	7.37	8.30	328	28.6	Greyish	<0.05	4.5	<0.02	36	0.12	<0.05	0.013	0.06	<1.4	0.46	0.124	28	10	633	10	12,000	38	<0.5
	12/9/19	9.9	103.6	7.98	9.42	313.2	8.65	Greyish	<0.05	2.7	<0.02	19	0.12	<0.05	<0.010	0.07	<1.4	0.51	0.075	13	31	448	74	17,300	64	<0.5
CB13033	12/9/19	9.8	1,029	7.11	9.06	356.8	125.1	Greyish/Brown	<0.05	22.4	<0.02	125	0.14	0.32	0.053	0.15	3.6	1.70	0.386	70	1,040	3,450	583	>24,200	3,460	0.5
	12/9/19	9.8	199.6	7.57	9.42	343.3	28.7	Greyish	<0.05	16.2	<0.02	223	0.12	<0.25	0.013	0.03	<1.4	3.08	1.14	25	958	3,870	529	>24,200	199	<0.5
CB13089	12/9/19	11.2	474.4	6.96	7.82	354.8	118.7	Greyish/Brown	<0.05	44.8	<0.02	220	0.13	0.42	0.071	0.13	8.4	2.20	0.553	220	134	1,400	187	24,200	471	<0.5
	12/9/19	9.9	175.1	7.16	9.44	338.6	55.2	Greyish	<0.05	12.6	<0.02	42	0.11	0.16	<0.010	0.06	<1.4	1.01	0.182	29	145	3,450	199	>24,200	174	<0.5
CB9129	12/9/19	10.0	189.7	7.24	9.12	377.8	78.7	Greyish	<0.05	12.9	<0.02	70	0.16	0.31	0.030	0.10	2.1	1.10	0.257	39	2,050	9,800	465	>24,200	214	<0.5
	12/9/19	11.0	427.3	6.97	5.72	355.2	287.1	Greyish/Brown	<0.05	55.1	<0.02	405	0.27	<0.25	0.025	0.04	8.2	5.83	1.39	240	987	9,800	520	>24,200	293	<0.5
CB9436	12/9/19	9.0	339.6	7.70	8.39	339.5	183	Greyish	0.10	118	<0.02	161	0.41	0.44	0.066	0.13	10	1.94	0.265	100	327	857	189	>24,200	928	0.5
	12/9/19	9.9	91.3	8.10	9.22	315.4	53.1	Greyish	<0.05	11.1	<0.02	690	0.27	0.58	0.011	0.06	5.7	7.28	1.10	160	31	557	20	>24,200	84	<0.5
CB13157	12/9/19	9.9	220.8	7.11	8.86	940.9	90.3	Greyish	<0.05	60.0	<0.02	378	0.32	0.60	0.031	0.10	13	4.42	4.70	250	134	1,350	52	>24,200	226	<0.5
	12/9/19	9.9	314.7	8.29	8.68	329.5	110	Greyish	<0.05	26.6	<0.02	152	0.25	0.61	0.046	0.11	6.2	2.27	0.390	92	51	1,210	10	14,100	314	<0.5

Notes:
Concentrations in **bold** were reported above the laboratory reporting limits
mg/L: milligrams per liter
TKN = Nitrogen Tot Kjeldahl
< 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
>24,200: Indicates sample was found above laboratory detection limits

**TABLE 6
STORMWATER LABORATORY ANALYTICAL RESULTS**

Laboratory Duplicate Bacteria Samples
New Haven, Connecticut

Location ID	Sample Date	Phoenix Environmental Labs				Environmental Consulting Laboratories			
		Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)	Escherichia Coli (MPN/100 mls)	Enterococci Bacteria (MPN/100mls)	Fecal Coliforms MPN (MPN/100mls)	Total Coliforms (MPN/100mls)
O11	11/13/18	609	602	383	17,300	200	310	300	17,250
CB157	11/13/18	243	862	134	>24,200	200	630	<100	173,290
CB166A	11/13/18	146	24,200	388	>24,200	<100	12,220	100	>241,960
CB172	11/13/18	439	650	148	>24,200	1,030	850	100	241,960
CB214	11/13/18	161	>24,200	231	>24,200	410	28,120	630	>241,960
CB689	11/13/18	41	201	31	17,300	200	<100	<100	25,950
CB771	11/13/18	>24,200	>24,200	>24,200	>24,200	>241,960	92,080	173,290	>241,960
O7	11/13/18	>24,200	>24,200	>24,200	>24,200	241,960	>241,960	48,840	>241,960
O10	12/28/18	>24,200	>24,200	>24,200	>24,200	>241,960	>241,960	>241,960	>241,960
O12	11/13/18	5,480	5,170	1,860	>24,200	5,040	6,770	1,560	198,630
O13	12/28/18	>24,200	>24,200	>24,200	>24,200	>241,960	61,310	155,310	>241,960
O14	11/13/18	3,450	2,280	588	>24,200	6,310	1,870	630	86,640
O41	12/28/18	>24,200	>24,200	>24,200	>24,200	>241,960	92,080	>241,960	>241,960
O46	12/21/18	637	2,280	197	9,800	410	1,990	200	8,420
O47	12/21/18	9,140	3,870	5,170	10,100	3,360	1,580	1,610	13,540
O57	12/28/18	>24,200	>24,200	>24,200	>24,200	>241,960	>241,960	>241,960	>241,960
O58	12/28/18	>24,200	>24,200	>24,200	>24,200	>241,960	81,640	>241,960	>241,960
O66	11/13/18	3,080	2,190	1,480	>24,200	2,350	1,350	1,610	61,310
O68	12/28/18	30	249	20	13,000	100	8,600	100	5,810
O87	12/28/18	>24,200	6,910	>24,200	>24,200	>241,960	>241,960	>241,960	>241,960
O88	12/28/18	591	471	637	>24,200	520	1,100	200	30,760
O89	12/21/18	7,700	5,480	2,610	>24,200	9,590	5,540	2,980	46,110
O121	12/21/18	708	1,620	288	17,300	520	1,580	310	11,450
O132	12/21/18	12,000	2,190	1,260	19,900	7,940	630	1,100	18,600
O138	12/21/18	171	554	158	>24,200	100	1,630	100	77,010
CB13001	12/9/19	459	2,610	109	>24,200	630	4,540	100	41,060
CB13015	12/9/19	10	633	10	12,000	<100	630	<100	11,780
CB13033	12/9/19	31	448	74	17,300	<100	1,340	<100	11,460
CB13073	12/9/19	1,040	3,450	583	>24,200	740	5,460	310	111,990
CB13089	12/9/19	958	3,870	529	>24,200	850	10,030	300	104,620
CB8609	12/9/19	134	1,400	187	24,200	200	950	310	14,140
CB9129	12/9/19	145	3,450	199	>24,200	100	6,310	520	51,720
CB13175	12/9/19	2,050	9,800	465	>24,200	1,890	15,760	410	98,040
CB9436	12/9/19	987	9,800	520	>24,200	1,600	9,340	1,090	>241,960
O126	12/9/19	2,600	>24,200	1,080	>24,200	2,750	111,990	2,130	>241,960
CB13157	12/9/19	31	557	20	>24,200	<100	740	<100	72,700
CB13205	12/9/19	51	1,210	10	14,100	100	1,580	<100	11,120
O129	12/9/19	327	857	189	>24,200	100	1,090	300	18,600
O128	12/9/19	384	857	189	>24,200	410	1,450	520	21,870
CB9473	12/9/19	134	1,350	52	>24,200	310	2,720	100	24,000

< 0.5: indicates compound was Not Detected at or above the specified laboratory reporting limit
 >24,200: Indicates sample was found above laboratory detection limits
 Blank cells indicate outfalls that have not yet been sampled