Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Pam Elardo, P.E.
Deputy Commissioner

Bureau of Wastewater Treatment

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June 30, 2020

Mr. Selvin Southwell. P.E.,
Regional 2 Acting Water Engineer
New York State Department of
Environmental Conservation
Division of Water – Region 2
47-40 21st Street - 4th Fl
Long Island City, NY 11101-5407

Re: 2019 Integrated Sentinel Monitoring Report

Dear Mr. Southwell:

Pursuant to the State Pollutant Discharge Elimination System permit and in accordance with the section for Untreated Discharges, and the Municipal Separate Storm Sewer System permit section for Illicit Discharge Detection and Elimination, attached is the Department of Environmental Protection's Integrated Sentinel Monitoring report for 2019.

Sincerely,

Pamela Elardo, P.E.
Deputy Commissioner

INTEGRATED SENTINEL MONITORING REPORT 2019

NYC Environmental Protection

Bill de Blasio
Mayor

Vincent Sapienza, P. E.
Commissioner

TABLE OF CONTENTS

INTRODUCTION

The Shoreline Survey Program-Cycle II conducted by the Bureau of Wastewater Treatment's Compliance Monitoring Section (CMS) between 1998 and 2019 has resulted in the identification of 5,312 outfalls including 420 Combined Sewer Overflows (CSO), 452 storm outfalls and other outfalls such as highway drains and non-city owned drains. A total of 420 contaminated discharges representing a flow of 4.424 MGD were identified. Since then, 414 of these contaminated discharges have been abated, representing a flow of 4.406 MGD, of which 267 discharging pipes are city-owned and the remainder, 153, falls under the jurisdiction of NYSDEC. Currently NYCDEP has four (4) contaminated discharge pipes under abatement investigation, or 0.014 MGD, whereas two (2) sewer pipes under the jurisdiction of NYSDEC remain to be abated or 0.004 MGD. Therefore, the benefit has been a 99.6 % abatement rate of contaminated dry weather discharges.

As an enhancement and modification of the two-year cycle of surveying the City's coastal waters under the Shoreline Survey Program, a **"SENTINEL MONITORING PROGRAM"** was designed, in cooperation with NYSDEC, to monitor specific sampling areas for fecal coliform (a raw sewage indicator) in water bodies throughout New York City. NYCDEP currently performs sentinel monitoring at eighty ambient monitoring stations in accordance with the current SPDES permit Storm-water Management Program. When a survey of the shoreline is performed, all shoreline survey protocols described in the Untreated Discharges Section of the SPDES permit are followed.

The goal of the **Sentinel Monitoring Program** is the periodic monitoring and sampling of ambient stations throughout New York City's harbor. Quarterly fecal coliform sampling is conducted at eighty stations. Sampling is performed after a dry antecedent period of forty eight hours and during various tidal cycles and seasons to ensure statistical integrity. The sampling results are compared to an established baseline. If sampling results are above the baseline trigger limits, NYCDEP aggressively pursues field investigations and surveillance of the adjacent shoreline of such sentinel stations to determine the source and cause of the contamination. Immediate actions are implemented to abate any found illegal discharges

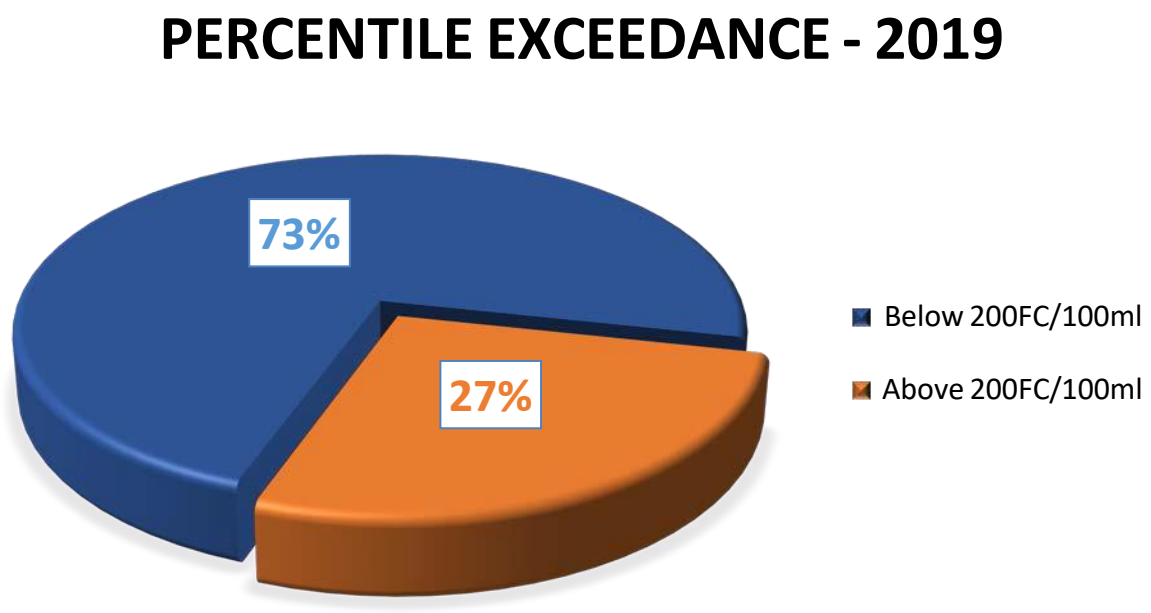
OPERATIONAL PLAN

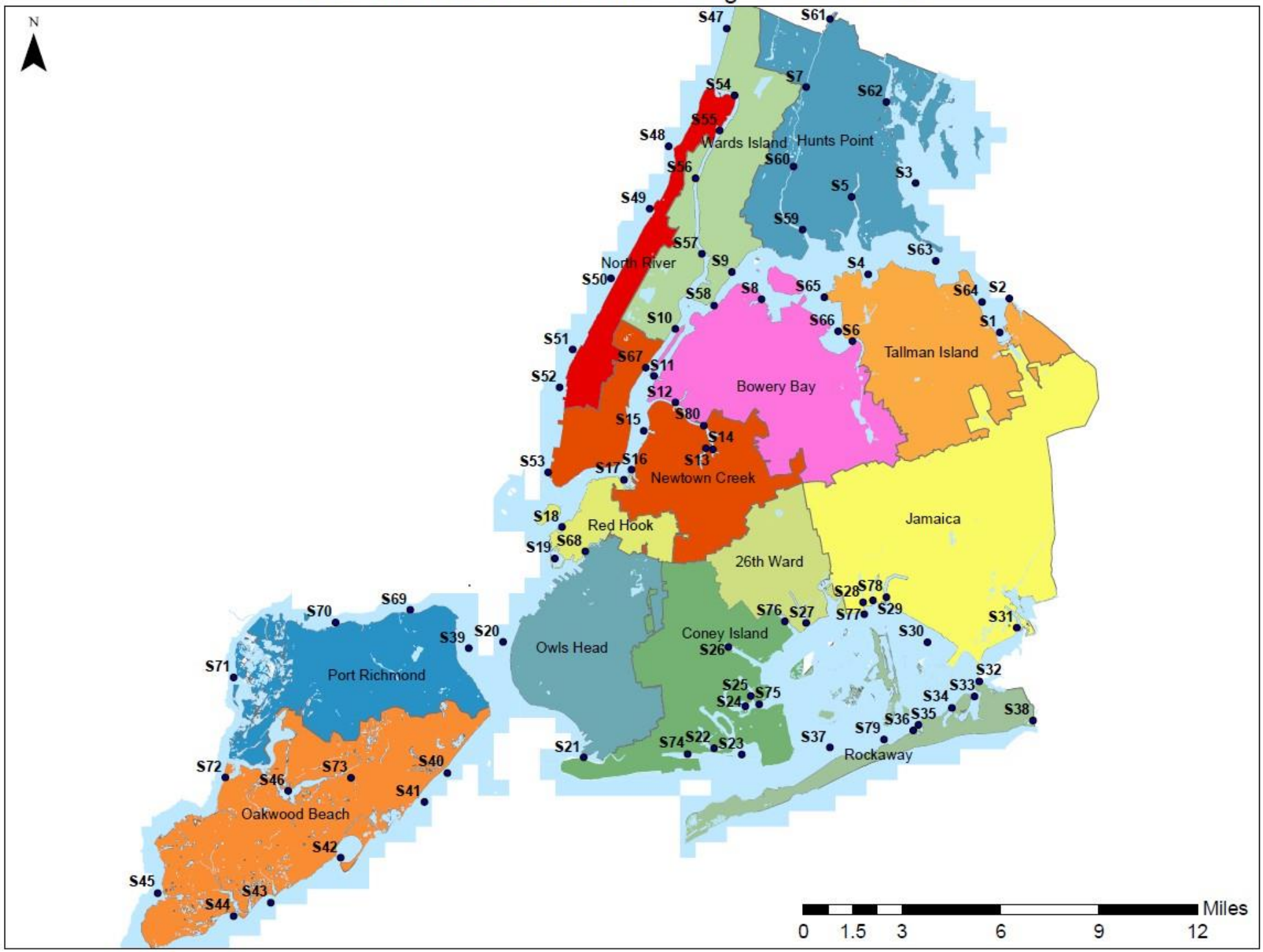
For 2019, an interim baseline of 200 fecal/100 mL, based on NYSDEC water quality standards, was assigned to all of the 80 sentinel stations. A mini-shoreline investigation was conducted for any exceedance of this baseline. In addition, Enterococci samples were collected from all 80 sentinel stations in each of the quarters. However, DEP will continue to use fecal coliform as the trigger for the mini-shoreline survey as required by the SPDES Permit and MS4 Permit Part IV. D. 5.

Each site is identified by a station number. Its location in the water is pinpointed using latitude and longitude coordinates from a Global Positioning System Navigator. Details of the **Sentinel Monitoring Program,** such as coordinate system, site map, analytical result, and baseline are described through the following tables, graphs and maps.

SURVEY STATISTICS

Fecal Coliform Baseline FC/100 ml	Number of Stations	Percentage (%) of Stations
1 – 200	58	73
> 200	22	27




New York Harbor Sentinel Monitoring Stations - 2019
N
S47
S61
S7
S62
S54
S55
S48
Wards Island
Hunts Point
S60
S3
S56
S5
S49
S59
S57
S63
North River
S9
S4
S50
S65
S64
S2
S58
S8
S10
S66
S6
S1
S51
Tallman Island
S67
S11
S52
Bowery Bay
S12
S80
S15
S14
S53
S16
S13
S17
Newtown Creek
S18
Red Hook
Jamaica
S19
S68
26th Ward
S28
S78
S69
S70
S76
S27
S77
S29
S31
S20
S39
Coney Island
S30
Owls Head
S26
S71
Port Richmond
S32
S25
S75
S33
S24
S34
S38
S36
S35
S79
S37
S21
S74
S22
S23
Rockaway
S72
S73
S40
S46
S41
Oakwood Beach
S42
S45
S43
S44
Miles
0
1.5
3
6
9
12

Sampling Stations

Station ID	Location	Latitude	Longitude
S1	Alley Creek & Northern Boulevard (Northside)	40° 46' 07"	73° 45' 26"
S2	Entrance to Udall's Cove at Village Park	40° 47' 01"	73° 45' 06"
S3	Eastchester Bay & Lafayette Avenue	40° 50' 05"	73° 48' 21"
S4	Entrance to Powell's Cove	40° 47' 40"	73° 50' 01"
S5	Westchester Creek north of Unionport Bridge	40° 49' 43"	73° 50' 35"
S6	Entrance to Flushing River w/o Whitestone Expressway	40° 45' 54"	73° 50' 34"
S7	Bronx River South of East Gun Hill Road	40° 52' 38"	73° 52' 10"
S8	Entrance to Steinway Creek	40° 47' 01"	73° 53' 44"
S9	Entrance to Bronx Kills n/o Randall's Island Park	40° 47' 44"	73° 54' 46"
S10	Hallets Cove and 30th Drive	40° 46' 14"	73° 56' 44"
S11	East Channel & Entrance to 45th Avenue Canal	40° 44' 59"	73° 57' 29"
S12	Entrance to Dutch Kills South of LIRR Bridge	40° 44' 17"	73° 56' 44"
S13	Newtown Creek n/o Grand Avenue Bridge	40° 43' 02"	73° 55' 26"
S14	Entrance to English Kills at Scott street	40° 43' 04"	73° 55' 41"
S15	Entrance to Bushwick Inlet	40° 43' 32"	73° 57' 50"
S16	Entrance to Wallabout Channel	40° 42' 30"	73° 58' 16"
S17	Entrance to Brooklyn Navy Yard	40° 42' 14"	73° 58' 32"
S18	Entrance to Atlantic Basin	40° 40' 59"	74° 00' 41"
S19	Entrance to Erie Basin at Dwight Street	40° 40' 09"	74° 00' 56"
S20	Upper New York Bay & 79th street	40° 37' 56"	74° 02' 44"
S21	Entrance to Coney Island Creek at Kaiser Playground	40° 34' 53"	73° 59' 56"
S22	Shell Bank Creek & Lois Avenue	40° 35' 07"	73° 55' 24"
S23	Gerritsen Inlet at Dead Horse Bay	40° 34' 57"	73° 54' 26"
S24	Mill Basin & Indiana Place	40° 36' 14"	73° 54' 19"
S25	Entrance to East Mill Basin at Basset Street	40° 36' 30"	73° 54' 07"
S26	Paerdegat Basin & Avenue K Marina	40° 37' 48"	73° 54' 54"
S27	Entrance to Hendrix Creek southeast of Belt Parkway	40° 38' 26"	73° 52' 12"

Sampling Stations

Station ID	Location	Latitude	Longitude
S28	Entrance to Shellbank Basin at 165th Avenue	40° 38' 59"	73° 50' 13"
S29	Entrance to Hawtree Basin at 164th Avenue	40° 39' 02"	73° 49' 52"
S30	Grassy Bay at South Runway 7-JFK Airport	40° 37' 55"	73° 47' 59"
S31	Entrance to Thurston Basin	40° 38' 18"	73° 44' 52"
S32	Entrance to Mott Basin at Breeze Place	40° 36' 53"	73° 46' 11"
S33	Entrance to Norton Basin at Dunbar Street	40° 36' 29"	73° 46' 21"
S34	Entrance to Sommerville Basin	40° 36' 11"	73° 47' 08"
S35	Entrance to Vernam Basin at Alameda Avenue	40° 35' 44"	73° 48' 18"
S36	Entrance to Barbadoes Basin at Beach 83rd Street	40° 35' 35"	73° 48' 29"
S37	Beach Channel and Beach 131st Street	40° 35' 08"	73° 51' 23"
S38	Bannister Creek & Atlantic Beach Bridge Approach	40° 35' 50"	73° 44' 19"
S39	Upper NY Bay &Navy Homeport (at Union Street)	40° 37' 46"	74° 03' 56"
S40	Lower NY Bay n/o Sand Lane (South Beach)	40° 34' 28"	74° 04' 40"
S41	Lower NY Bay s/o New Dorp Lane (Gateway Park)	40° 33' 42"	74° 05' 28"
S42	Entrance to Great Kills Harbor at Cleveland Avenue	40° 32' 13"	74° 08' 22"
S43	Raritan Bay n/o Huguenot Avenue	40° 31' 01"	74° 10' 48"
S44	Prince's Bay& entrance to Lemon Creek	40° 30' 40"	74° 12' 05"
S45	Arthur Kill & Entrance to Mill Creek	40° 31' 16"	74° 14' 43"
S46	Richmond Creek and Richmond Avenue (Eastside)	40° 33' 59"	74° 10' 12"
S47	Hudson River & W.233rd Street	40° 54' 11"	73° 54' 56"
S48	Hudson River Under George Washington Bridge	40° 51' 04"	73° 56' 58"
S49	Hudson River & W.135th Street	40° 49' 25"	73° 57' 38"
S50	Hudson River & W. 86th Street	40° 47' 34"	73° 58' 59"
S51	Hudson River & W. 38th Street	40° 45' 41"	74° 00' 19"
S52	Hudson River & W. 14th Street	40° 44' 41"	74° 00' 46"
S53	Hudson River & South Cove (The Battery)	40° 42' 26"	74° 01' 10"
S54	Harlem River Under Broadway Bridge	40° 52' 25"	73° 54' 40"

Sampling Stations

Station ID	Location	Latitude	Longitude
S55	Harlem River & Sherman Creek	40° 51' 29"	73° 55' 11"
S56	Harlem River & W. 170th Street	40° 50' 13"	73° 56' 02"
S57	Harlem River n/o Willis Avenue Bridge	40° 48' 13"	73° 55' 49"
S58	East River & 24th Avenue	40° 46' 51"	73° 55' 23"
S59	Bronx River & Randall Avenue	40° 48' 51"	73° 52' 18"
S60	Bronx River & E. 180th Street	40° 50' 32"	73° 52' 37"
S61	Bronx River & E. 241st Street	40° 54' 26"	73° 51' 20"
S62	Hutchinson River & Ash Loop	40° 52' 14"	73° 49' 22"
S63	East River Under The Throggs Neck Bridge	40° 48' 01"	73° 47' 39"
S64	Little Neck Bay & 26th Avenue	40° 46' 56"	73° 46' 03"
S65	East River & 18th Avenue	40° 47' 04"	73° 51' 33"
S66	Flushing Bay & 31st Avenue	40° 46' 10"	73° 51' 04"
S67	East River & E. 51 Street	40° 45' 12"	73° 57' 46"
S68	Gowanus Bay e/o Hamilton Avenue Bridge	40° 40' 20"	73° 59' 53"
S69	Kill Van Kull & Tysen Street	40° 38' 47"	74° 05' 58"
S70	Kill Van Kull w/o Bayonne Bridge	40° 38' 27"	74° 08' 34"
S71	Arthur Kill e/o Prall's Island	40° 36' 59"	74° 12' 06"
S72	Arthur Kill & Fresh Kills	40° 34' 20"	74° 12' 23"
S73	Lower NY Bay e/o Crooke's Point (Gateway Park)	40° 31' 20"	74° 08' 01"
S74	Sheepshead Bay & Nostrand Avenue	40° 34' 58"	73° 56' 19"
S75	Mill Basin e/o Belt Parkway	40° 36' 17"	73° 53' 50"
S76	Fresh Creek Basin & Avenue N	40° 38' 29"	73° 52' 56"
S77	Grassy Bay Under Cross Bay Boulevard Bridge	40° 38' 40"	73° 50' 10"
S78	Bergen Basin & 163rd Avenue	40° 39' 07"	73° 49' 24"
S79	Broad Channel e/o Giant Bar Marsh	40° 35' 21"	73° 49' 30"
S80	Newtown Creek Under Kosciusko Bridge	40° 43' 40"	73° 55' 45"

SHORELINE MONITORING PROGRAM

2019 ANALYTICAL RESULTS

Station ID	Samp1	Samp2	Samp3	Samp4	Samp5	Samp6	Samp7	Samp8	Samp9	Samp10	95% UCL
S1	218	2	207	2	62	72	58	16	101	14	92
S2	168	6	18	2	74	40	30	8	24	20	45
S3	72	2	2	2	18	6	2	2	4	6	10
S4	1,099	6	18	6	205	24	24	26	22	122	103
S5	360	52	80	113	104	3,800	20	56	144	490	369
S6	62,000	3,500	8,100	3,200	9,200	10,100	7200	38	12600	5700	16342
S7	240	580	233	240	300	289	11400	1055	4000	450	1505
S8	220	128	10	2	196	98	72	136	56	30	133
S9	92	16	14	20	84	40	54	2	300	88	86
S10	24	12	116	18	62	10	46	28	268	77	76
S11	4	10	104	10	40	54	8	32	209	42	58
S12	28	42	1,190	22	330	470	42	115	250	64	262
S13	5,100	18	19,700	70	220	3,000	22	1091	800	2100	2446
S14	182	420	13,400	212	17,100	8,700	44	736	2300	152	3315
S15	8	10	2	81	200	40	34	86	91	34	74
S16	230	12	16	22	94	60	90	125	32	50	90
S17	8	8	2	38	24	42	22	52	30	70	40
S18	8	2	110	68	172	28	14	48	2600	64	159
S19	20	10	2	24	24	36	8	44	510	42	58
S20	16	14	28	93	110	30	8	250	36	62	75
S21	10	8,100	2,100	1,218	10	882	300	6000	312	48	1664
S22	12	4	11,400	2	720	6	2	28	18	32	143
S23	4	40	2	2	22	3	18	4	48	22	19
S24	8	2	10	2	32	10	116	48	10	16	28
S25	20	4	4	2	40	8	18	4	2	8	13
S26	490	44	8	6	560	92	72	4	6600	30	298
S27	124	24	10	8	270	34	34	85	836	5600	315

Fecal result = FC / 100ml

UCL – Upper Confidence Limit

SHORELINE MONITORING PROGRAM

2019 ANALYTICAL RESULTS

Station ID	Samp1	Samp2	Samp3	Samp4	Samp5	Samp6	Samp7	Samp8	Samp9	Samp10	95% UCL
S28	20	8	8	2	86	500	2	62	542	228	124
S29	88	2	26	2	34	540	2	32	7700	6000	399
S30	8	10	2	2	8	74	4	4	271	164	39
S31	4	52	76	20	20	18	233	144	84	116	97
S32	410	2	2	2	8	4	2	4	2	2	13
S33	36	20	36	2	84	10	2	46	4	6	29
S34	2,400	2	12	2	16	32	2	600	6	6	79
S35	4	12	2	4	8	34	6	32	112	2	21
S36	92	12	2	6	20	176	8	4	120	2	40
S37	4	2	6	4	6	10	2	26	14	10	10
S38	16	2	2	10	2	230	12	4	26	44	28
S39	48	16	2	10	54	224	28	250	48	20	78
S40	4	4	2	6	92	22	10	24	16	12	21
S41	12	4	10	2	10	14	6	30	8	12	14
S42	8	2	2	8	10	2	8	8	2	14	8
S43	4	4	2	2	36	6	8	4	4	10	9
S44	4	2	2	2	76	10	12	6	2	2	10
S45	60	4	2	124	1,318	16	36	180	22	63	129
S46	260	12	132	4	600	8	260	600	400	260	332
S47	4	4	34	8	18	132	105	12	44	252	64
S48	8	10	24	10	10	174	148	40	46	282	80
S49	24	44	44	2	16	84	64	270	96	148	104
S50	16	30	60	106	86	144	82	380	96	110	138
S51	28	93	258	128	8	92	118	300	42	410	191
S52	64	16	24	6	260	96	176	243	72	410	171
S53	32	2	18	6	74	16	105	28	82	249	72
S54	300	18	44	28	8	216	91	12	60	196	114

Fecal result = FC / 100ml

UCL – Upper Confidence Limit

SHORELINE MONITORING PROGRAM

2019 ANALYTICAL RESULTS

Station ID	Samp1	Samp2	Samp3	Samp4	Samp5	Samp6	Samp7	Samp8	Samp9	Samp10	95% UCL
S55	520	8	26	36	18	66	220	14	107	297	139
S56	530	14	28	18	12	62	128	32	82	420	132
S57	68	14	12	18	6	40	104	34	290	218	89
S58	120	60	16	22	98	22	66	12	400	103	105
S59	400	30	14	42	2,300	560	781	32	4000	480	790
S60	169	74	550	16	260	845	520	1218	209	250	538
S61	1,500	3,400	580	1,045	1,036	1,154	4000	9500	1109	370	2723
S62	72	2	5,100	228	15,200	17,700	691	14400	1073	3900	6382
S63	420	2	28	2	40	22	8	36	2	4	37
S64	183	100	112	2	28	64	22	10	6	8	61
S65	6,636	36	6	6	330	188	40	92	8500	101	623
S66	1,018	160	26	86	3,500	440	99	9200	6000	34	1512
S67	20	40	88	28	50	52	82	34	30	52	58
S68	218	2	4	75	330	52	14	250	6000	82	305
S69	112	14	8	26	93	92	60	239	50	8	86
S70	132	4	24	320	320	109	50	339	144	110	214
S71	286	12	10	20	530	118	100	2300	235	30	289
S72	187	14	4	50	133	164	20	64	2	38	83
S73	4	2	2	8	30	14	2	2	2	2	7
S74	4	96	212	58	214	172	173	590	480	330	338
S75	40	2	4	2	14	34	87	8	36	12	28
S76	84	6	14	4	148	60	68	320	16100	233	370
S77	24	2	4	2	290	340	2	40	544	105	109
S78	4	2	62	4	4	12,100	83	148	10300	128	466
S79	4	8	4	6	6	16	2	8	4	2	7
S80	500	30	4,800	88	2,900	330	30	490	238	185	821

Fecal result = FC / 100ml

UCL – Upper Confidence Limit

1ST QUARTER

JANUARY 1 - MARCH 31, 2019

SHORELINE MONITORING PROGRAM

2019

FECAL COLIFORM (MF) SAMPLE RESULTS

1st QUARTER

No	Sample	Station ID	Fecal Coliform	Enterococci	2019 Fecal Coliform Baseline
1	1/15/2019	S 1	58	E 12	200
2	1/15/2019	S 2	E 30	E 6	200
3	1/15/2019	S 3	E 2	E 2	200
4	1/15/2019	S 4	E 24	E 2	200
5	1/15/2019	S 5	E 20	E 12	200
6	1/15/2019	S 6	***7,200****	***4,200****	200
7	1/29/2019	S 7	***11,400****	***E 1,000****	200
8	2/11/2019	S 8	72	E 16	200
9	2/11/2019	S 9	54	E 32	200
10	1/14/2019	S 10	46	E 6	200
11	1/28/2019	S 11	E 8	48	200
12	1/14/2019	S 12	42	E 20	200
13	1/14/2019	S 13	E 22	E 20	200
14	1/14/2019	S 14	44	E 10	200
15	1/28/2019	S 15	E 34	E 18	200
16	1/28/2019	S 16	90	52	200
17	1/28/2019	S 17	E 22	E 28	200
18	2/6/2019	S 18	E 14	E 6	200
19	2/6/2019	S 19	E 8	E 10	200
20	2/6/2019	S 20	E 8	E 16	200
21	2/6/2019	S 21	***300****	***E 800****	200
22	2/6/2019	S 22	< 2	E 4	200
23	2/6/2019	S 23	E 18	E 32	200
24	1/16/2019	S 24	116	E 4	200
25	1/16/2019	S 25	E 18	E 2	200
26	1/16/2019	S 26	72	64	200
27	1/16/2019	S 27	E 34	E 24	200
28	3/13/2019	S 28	E 2	< 2	200
29	3/13/2019	S 29	< 2	< 2	200
30	3/13/2019	S 30	E 4	E 2	200
31	2/27/2019	S 31	***233****	< 2	200
32	2/27/2019	S 32	< 2	< 2	200
33	2/27/2019	S 33	E 2	E 2	200
34	2/27/2019	S 34	< 2	< 2	200
35	3/19/2019	S 35	E 6	E 2	200
36	2/27/2019	S 36	E 8	E 2	200
37	2/27/2019	S 37	< 2	< 2	200
38	3/5/2018	S 38	E 12	< 2	200
39	2/26/2019	S 39	E 28	E 18	200
40	2/26/2019	S 40	E 10	E 8	200

Fecal result = FC/100 ml

** Fecal Coliform Exceedance*

SHORELINE MONITORING PROGRAM

2019

FECAL COLIFORM (MF) SAMPLE RESULTS

1st QUARTER

No	Sample	Station ID	Fecal Coliform	Enterococci	2019 Fecal Coliform Baseline
41	2/26/2019	S 41	E 6	E 2	200
42	2/26/2019	S 42	E 8	E 6	200
43	2/26/2019	S 43	E 8	E 8	200
44	2/26/2019	S 44	E 12	E 6	200
45	2/26/2019	S 45	E 36	E 12	200
46	3/5/2018	S 46	***260****	E 34	200
47	1/28/2019	S 47	105	E 32	200
48	1/28/2019	S 48	148	40	200
49	1/28/2019	S 49	64	E 16	200
50	1/28/2019	S 50	82	E 30	200
51	1/28/2019	S 51	118	50	200
52	1/28/2019	S 52	176	46	200
53	1/28/2019	S 53	105	E 36	200
54	2/11/2019	S 54	91	E 34	200
55	2/11/2019	S 55	***220****	E 32	200
56	2/11/2019	S 56	128	E 20	200
57	2/11/2019	S 57	104	E 34	200
58	2/11/2019	S 58	66	E 26	200
59	2/11/2019	S 59	***781****	***227****	200
60	1/29/2019	S 60	***520****	***470****	200
61	1/29/2019	S 61	***4,000****	***2,600****	200
62	1/29/2019	S 62	***691****	***270****	200
63	1/15/2019	S 63	E 8	E 4	200
64	1/15/2019	S 64	E 22	< 2	200
65	1/15/2019	S 65	40	E 28	200
66	1/15/2019	S 66	99	E 28	200
67	1/14/2019	S 67	82	E 8	200
68	2/6/2019	S 68	E 14	58	200
69	2/26/2019	S 69	60	E 8	200
70	2/26/2019	S 70	50	E 10	200
71	2/26/2019	S 71	100	E 22	200
72	2/26/2019	S 72	E 20	E 14	200
73	2/26/2019	S 73	< 2	E 6	200
74	2/6/2019	S 74	173	E 50	200
75	1/16/2019	S 75	87	E 4	200
76	1/16/2019	S 76	68	E 14	200
77	3/13/2019	S 77	< 2	E 2	200
78	3/13/2019	S 78	83	< 2	200
79	2/27/2019	S 79	< 2	< 2	200
80	1/14/2019	S 80	E 30	E 8	200

Fecal result = FC/100 ml

** Fecal Coliform Exceedance*

WEATHER REPORT

The first quarter monitoring and sampling of ambient sampling stations began on January 01, 2019 and ended on March 31, 2019. During this quarter, all eighty sentinel stations were sampled. During this quarter, a total of 10.59 inches of precipitation fell.

MINI-SHORELINE SURVEY RESULTS

S-6: ENTRANCE TO FLUSHING RIVER W/O WHITESTONE EXPRESSWAY

A mini-shoreline survey was conducted at the beginning of February. The survey targeted the shoreline of Flushing Creek west of Whitestone Expressway off College Point Boulevard. No discharge or water discoloration was observed.

S-7: BRONX RIVER, S/O EAST GUN HILL ROAD

A mini-shoreline survey was conducted in the middle of February. The survey targeted the shoreline on both of sides of the Bronx River starting at East Gun Hill Road. No discharge or water discoloration was observed.

S-21: ENTRANCE TO CONEY ISLAND CREEK AT KAISER PLAYGROUND

A mini-shoreline survey was conducted at the end of March. The investigation started at West 32nd Street, proceeded eastward to West 20th Street, covering the shoreline and the surrounding area. No discharge or water discoloration was observed.

S-31: ENTRANCE TO THURSTON BASIN

A mini-shoreline survey was conducted in the middle of March. The survey targeted the shoreline on both sides of Thurston Basin of Broad Street. No discharge or water discoloration was observed.

S-46: RICHMOND CREEK & RICHMOND AVENUE

A mini-shoreline survey was conducted in the middle of March. The survey targeted the shoreline of Richmond Creek on both sides of the Richmond Avenue Bridge. No discharge or water discoloration was observed.

S-55: HARLEM RIVER & SHERMAN CREEK

A mini-shoreline survey was conducted in the end of February. The survey targeted the shoreline on both sides of the Harlem River and in Sherman Creek. No discharge or water discoloration was observed.

S-59: BRONX RIVER & RANDALL AVENUE

A mini-shoreline survey was conducted at the end of February. The survey targeted the Bronx River off of Randall Avenue in Soundview Park. Dry weather discharge was observed from outfall HP-010. NYC DEP has been notified of the problem. The investigation is ongoing.

S-60: BRONX RIVER & EAST 180TH STREET

A mini-shoreline survey was conducted in the middle of February. The survey targeted the shoreline of the Bronx River on both sides of East 180th Street. No discharge or water discoloration was observed.

S-61: BRONX RIVER & EAST 241st STREET

A mini-shoreline survey was conducted in the end of February. The investigation covered both sides of the Bronx River between East 241st Street and East 243rd Street. No discharge or water discoloration was observed.

S-62: HUTCHINSON RIVER & ASH LOOP

A mini-shoreline survey was conducted in the end of February. The investigation included the area along the Hutchinson River near Co-op City in the Bronx. No discharge or water discoloration was observed.

DRY WEATHER DISCHARGE

465 VANDERVOORT AVENUE BROOKLYN

In a joint investigation with NYS DEC and NYPD, at the establishment SHK Truck Repair, located at 465 Vandervoort Avenue Brooklyn, CMS noticed evidence of discharging engine-oil and fluid onto the street pavement and catch basin. A Commissioner's Order was issued to cease discharge to the catch basin and a pavement. The case was transferred to NYS DEC.

BB-008, 108th STREET & 37th AVENUE

The investigation to identify the source(s) of the dry weather discharge at the outfall is ongoing. Since this outfall is tidally impacted, The Bureau of Environmental Design and Construction (BEDC) has started a project to optimize CSO capture by modifying weirs in the regulators that discharge to BB-008. In addition, the Bureau of Wastewater Treatment's Compliance Monitoring Section (CMS) personnel will continue investigating the area to identify any other illegal connections to storm sewers tributary to the BB-008 outfall. Please refer to Item Number 3687.

HP-010 & BRONX RIVER

The investigation to abate the source(s) of contaminated dry weather discharge at the outfall, HP-010 is still ongoing. CMS has referred the case to the Bureau of Water and Sewer Operations (BWSO) for eliminating the contaminated discharge from the sanitary sewer to storm sewer. Please refer to Item Number 3374.

2ND QUARTER

APRIL 1 - JUNE 30, 2019

SHORELINE MONITORING PROGRAM

2019

FECAL COLIFORM (MF) SAMPLE RESULTS

2nd QUARTER

No	Sample	Station ID	Fecal Coliform	Enterococci	2019 Fecal Coliform Baseline
1	4/25/2019	S 1	E 16	E 2	200
2	4/25/2019	S 2	E 8	E 6	200
3	4/25/2019	S 3	E 2	< 2	200
4	4/22/2019	S 4	E 26	E 2	200
5	4/25/2019	S 5	56	E 2	200
6	4/22/2019	S 6	E 38	E 10	200
7	6/27/2019	S 7	***1,055****	***360****	200
8	4/22/2019	S 8	136	E 6	200
9	4/25/2019	S 9	E 2	E 2	200
10	5/21/2019	S 10	E 28	E 2	200
11	5/21/2019	S 11	E 32	E 2	200
12	6/24/2019	S 12	115	E 8	200
13	6/24/2019	S 13	***1,091****	103	200
14	6/24/2019	S 14	***736****	E 28	200
15	5/21/2019	S 15	86	E 4	200
16	6/5/2019	S 16	125	E 30	200
17	6/5/2019	S 17	52	E 6	200
18	6/24/2019	S 18	48	< 2	200
19	6/24/2019	S 19	44	< 2	200
20	6/24/2019	S 20	***250****	< 2	200
21	6/28/2019	S 21	***> 6000****	*50*	200
22	6/28/2019	S 22	E 28	< 2	200
23	6/28/2019	S 23	E 4	< 2	200
24	6/28/2019	S 24	48	< 2	200
25	6/28/2019	S 25	E 4	E 20	200
26	5/22/2019	S 26	E 4	< 2	200
27	5/22/2019	S 27	85	E 2	200
28	5/22/2019	S 28	62	< 2	200
29	5/22/2019	S 29	E 32	E 2	200
30	5/22/2019	S 30	E 4	< 2	200
31	6/28/2019	S 31	144	E 24	200
32	6/28/2019	S 32	E 4	E 10	200
33	6/28/2019	S 33	46	< 2	200
34	6/14/2019	S 34	***600****	58	200
35	6/28/2019	S 35	E 32	< 2	200
36	6/28/2019	S 36	E 4	< 2	200
37	6/28/2019	S 37	E 26	< 2	200
38	6/11/2019	S 38	E 4	< 2	200
39	6/24/2019	S 39	***250****	E 4	200
40	6/27/2019	S 40	E 24	E 2	200

Fecal result = FC/100 ml

** Fecal Coliform Exceedance*

SHORELINE MONITORING PROGRAM

2019

FECAL COLIFORM (MF) SAMPLE RESULTS

2nd QUARTER

No	Sample	Station ID	Fecal Coliform	Enterococci	2019 Fecal Coliform Baseline
41	6/27/2019	S 41	E 30	< 2	200
42	6/27/2019	S 42	E 8	< 2	200
43	6/27/2019	S 43	E 4	E 4	200
44	6/27/2019	S 44	E 6	< 2	200
45	6/27/2019	S 45	180	< 2	200
46	6/11/2019	S 46	***600****	58	200
47	6/5/2019	S 47	E 12	E 4	200
48	6/5/2019	S 48	40	E 4	200
49	6/5/2019	S 49	***270****	E 20	200
50	6/5/2019	S 50	***380****	E 30	200
51	6/5/2019	S 51	***300****	E 52	200
52	6/5/2019	S 52	***243****	E 20	200
53	6/5/2019	S 53	E 28	E 4	200
54	5/21/2019	S 54	E 12	E 8	200
55	5/21/2019	S 55	E 14	E 10	200
56	5/21/2019	S 56	E 32	E 16	200
57	5/21/2019	S 57	E 34	E 18	200
58	4/25/2019	S 58	E 12	E 2	200
59	4/25/2019	S 59	E 32	E 8	200
60	6/27/2019	S 60	***1,218****	107	200
61	6/27/2019	S 61	***9,500****	***3,500****	200
62	6/27/2019	S 62	***14,400****	***E 1,200****	200
63	4/22/2019	S 63	E 36	E 4	200
64	4/22/2019	S 64	E 10	< 2	200
65	4/22/2019	S 65	92	E 18	200
66	4/22/2019	S 66	***E 9,200****	E 2	200
67	5/21/2019	S 67	E 34	E 2	200
68	6/24/2019	S 68	***250****	E 32	200
69	6/27/2019	S 69	***239****	E 4	200
70	6/27/2019	S 70	***339****	E 2	200
71	6/27/2019	S 71	***2,300****	E 2	200
72	6/27/2019	S 72	64	< 2	200
73	6/27/2019	S 73	< 2	< 2	200
74	6/28/2019	S 74	**590***	E 2	200
75	6/28/2019	S 75	E 8	< 2	200
76	5/22/2019	S 76	***320****	< 2	200
77	5/22/2019	S 77	40	< 2	200
78	5/22/2019	S 78	148	< 2	200
79	6/28/2019	S 79	E 8	< 2	200
80	6/24/2019	S 80	***490****	E 22	200

Fecal result = FC/100 ml

** Fecal Coliform Exceedance*

WEATHER REPORT

The second quarter monitoring and sampling of ambient sampling stations began on April 01, 2019 and ended on June 30, 2019. During this quarter, all eighty sentinel stations were sampled. During this quarter, a total of 16.83 inches of precipitation fell.

MINI-SHORELINE SURVEY RESULTS

S-7: BRONX RIVER, S/O EAST GUN HILL ROAD

A mini-shoreline survey was conducted at the end of July. The survey targeted the shoreline along the Bronx River to the southeast of Gun Hill Road. No discharge was water discoloration was observed.

S-13: NEWTOWN CREEK N/O GRAND AVENUE BRIDGE

A mini-shoreline survey was conducted at the beginning of August. The survey targeted the shoreline of English Kills and Newtown Creek north of the Grand Avenue Bridge. No discharge or water discoloration was observed.

S-14: ENTRANCE TO ENGLISH KILLS AT SCOTT STREET

A mini-shoreline survey was conducted at the beginning of August. The survey targeted the shoreline of English Kills north of Grand Street and the Grand Street Bridge. No discharge or water discoloration was observed.

S-20: UPPER NEW YORK BAY & 79TH STREET

A mini-shoreline survey was conducted in the middle of August. The survey targeted the shoreline of New York Bay/ The Narrows off of Shore Road Promenade and Belt Parkway. No discharge or water discoloration was observed.

S-21: ENTRANCE TO CONEY ISLAND CREEK AT KAISER PLAYGROUND

A mini-shoreline survey was conducted in the beginning of August. The investigation started at West 32nd Street, proceeded eastward to West 20th Street, covering the shoreline and the surrounding area. No discharge or water discoloration was observed.

S-34: ENTRANCE TO SOMMERVILLE BASIN

A mini-shoreline survey was conducted at the end of August. The survey targeted the shoreline along Rockaway Community Park and Dubos Point Wildlife Sanctuary in Sommerville Basin and Grass Hassock Channel. No discharge or water discoloration was observed.

S-39: UPPER NY BAY & NAVY HOMEPORT (AT UNION STREET)

A mini-shoreline survey was conducted in the middle of August. The survey targeted the shoreline along Staten Island in the Narrows. No discharge or water discoloration was observed.

S-46: RICHMOND CREEK & RICHMOND AVENUE

A mini-shoreline survey was conducted in the beginning of August. The survey targeted the shoreline on both sides of Richmond Avenue Bridge of Richmond Creek. No discharge or water discoloration was observed.

S-49: HUDSON RIVER & WEST 135TH STREET

A mini-shoreline survey was conducted at the beginning of July. The survey targeted the shoreline of the Hudson River directly south of Riverbank State Park. No discharge or water discoloration was observed.

S-50: HUDSON RIVER & WEST 86TH STREET

A mini-shoreline survey was conducted at the beginning of July. The survey targeted the shoreline of the Hudson River and the Hudson River Greenway on 86th street. No discharge or water discoloration was observed.

S-51: HUDSON RIVER & WEST 38TH STEEET

A mini-shoreline survey was conducted at the beginning of July. The survey targeted the shoreline of the Hudson River between West 41st Street and West 40th Street. No discharge or water discoloration was observed.

S-52: HUDSON RIVER & WEST 14TH STREET

A mini-shoreline survey was conducted at the beginning of July. The survey targeted the shoreline of the Hudson River off 14th Street. No discharge or water discoloration was observed.

S-60: BRONX RIVER & EAST 180TH STREET

A mini-shoreline survey was conducted at the end of July. The survey targeted the shoreline of the Bronx River on both sides of East 180th Street. No discharge or water discoloration was observed.

S-61: BRONX RIVER & EAST 241st STREET

A mini-shoreline survey was conducted at the end of July. The investigation covered both sides of the Bronx River between East 241st Street and East 243rd Street. No discharge or water discoloration was observed.

S-62: HUTCHINSON RIVER & ASH LOOP

A mini-shoreline survey was conducted at the end of July. The investigation included the area along the Hutchinson River near Co-op City in the Bronx. No discharge or water discoloration was observed.

S-66: FLUSHING BAY & 31ST AVENUE

A mini-shoreline survey was conducted at the end of July. The survey targeted the area along Flushing Bay from 28th Avenue to 123rd Street. No discharge or water discoloration was observed.

S-68: GOWANUS BAY E/O HAMILTON AVENUE BRIDGE

A mini-shoreline survey was conducted at the beginning of August. The survey targeted Gowanus Bay, east of the Hamilton Avenue Bridge. No discharge or water discoloration was observed.

S-69: KILLVAN KULL & TYSEN STREET

A mini-shoreline survey was conducted in the middle of August. The survey targeted the shoreline along Staten Island, Kill Van Kull off Tysen Street. No discharge or water discoloration was observed.

S-70: KILL VAN KULL W/O BAYONNE BRIDGE

A mini-shoreline survey was conducted in the middle of August. The survey targeted the shoreline along Staten Island in Kill Van Kull off the Bayonne Bridge. No discharge or discoloration was observed.

S-71: ARTHUR KILL E/O PRALL'S ISLAND

A mini-shoreline survey was conducted in the middle of August. The survey targeted the area northeast of Pralls Island. No discharge or water discoloration was observed.

S-74: SHEEPSHEAD BAY & NOSTRAND AVENUE

A mini-shoreline survey was conducted at the end of August. The survey targeted the shoreline of Sheepshead Bay. No discharge or water discoloration was observed.

S-76: FRESH CREEK BASIN & AVENUE N

A mini-shoreline survey was conducted at the end of June. The survey targeted the shoreline of Fresh Creek Basin. No discharge or water discoloration was observed.

S-80: NEWTOWN CREEK UNDER KOSCIUSZKO BRIDGE

A mini-shoreline was conducted in the beginning of August. The survey targeted the shoreline of Newtown Creek under the Kosciuszko Bridge. No discharge or water discoloration was observed.

DRY WEATHER DISCHARGE

171-175**DIKEMAN STREET, BROOKLYN NY**

As part of a joint investigation with NYSDEC into illegal discharge, DEC and CMS personnel investigated basement units of 171 Dikeman St. and observed water seepage on the wall adjacent to Dell's Maraschino Cherries building at 173 Dikeman Street. CMS observed the adjacent wall inside Dell's Maraschino Cherries building and observed new piping installed. In addition, the bathroom at 173 Dikeman Street has been removed. CMS personnel dye tested the second floor bathroom at 173 Dikeman Street. Dye was observed in combined sewer. CMS personnel also dye tested 175 Dikeman Street bathroom. Dye was

also observed in the combined sewer on Dikeman Street. The case was transferred to NYS DEC.

OH-197

In a joint investigation with the NYS DEC, at the three establishments listed below, CMS confirmed illegal connection to a storm sewer tributary to the outfall from each establishment:

1. 5726 1st Avenue, Brooklyn, NY, 11220
2. 101 58th St, Brooklyn, NY, 11220
3. 140 58th St, Brooklyn, NY, 11220

The first two establishments promptly complied with the Commissioner's Order by removing the illegal connection to the storm sewer. The third establishment, Alma Bank, has gone out of business. As a result, CMS requested an extension for six months to require the property owner, New York City Economic Development Corporation (EDC), to remove illegal connection to the storm sewer. Please refer to Item Number 5514.

15TH RD & 17TH AVE, WATERS EDGE DRIVE

In response to high levels of bacterial contamination found on 15th Road, and 17th Avenue, Waters Edge Drive, CMS personnel performed an inspection and collected samples to find levels of fecal coliform and Enterococci of catch basins in the area. Feces and multiple bags filled with fecal material was found along Waters Edge Drive on days of sampling and during previous inspections. Catch basins where feces bags were observed nearby contained high levels of fecal coliform pointing to this being a source of high fecal coliform bacteria in the storm sewer on Waters Edge Drive. This matter was therefore closed.

3RD QUARTER

JULY 1 - SEPTEMBER 30, 2019

SHORELINE MONITORING PROGRAM

2019

FECAL COLIFORM (MF) SAMPLE RESULTS

3rd QUARTER

No	Sample	Station ID	Fecal Coliform	Enterococci	2019 Fecal Coliform Baseline
1	7/15/2019	S 1	101	2	200
2	7/15/2019	S 2	24	2	200
3	7/15/2019	S 3	4	2	200
4	7/15/2019	S 4	22	2	200
5	7/15/2019	S 5	144	2	200
6	7/20/2019	S 6	***12,600****	***600****	200
7	7/30/2019	S 7	***4,000****	***450****	200
8	7/15/2019	S 8	56	2	200
9	7/20/2019	S 9	***300****	***236****	200
10	7/20/2019	S 10	***268****	140	200
11	8/5/2019	S 11	***209****	E 8	200
12	7/22/2019	S 12	***250****	E 30	200
13	7/22/2019	S 13	***800****	E 10	200
14	7/22/2019	S 14	***2,300****	E 12	200
15	7/22/2019	S 15	91	E 4	200
16	7/22/2019	S 16	E 32	E 2	200
17	7/22/2019	S 17	E 30	E 6	200
18	8/5/2019	S 18	***2,600****	E 10	200
19	8/5/2019	S 19	***510****	E 4	200
20	8/6/2019	S 20	E 36	E 6	200
21	8/6/2019	S 21	***312****	*E 6*	200
22	9/19/2019	S 22	E 18	< 2	200
23	9/19/2019	S 23	48	< 2	200
24	9/19/2019	S 24	E 10	< 2	200
25	9/19/2019	S 25	E 2	< 2	200
26	9/4/2019	S 26	***6,600****	E 18	200
27	9/4/2019	S 27	***836****	< 2	200
28	9/4/2019	S 28	***542****	E 10	200
29	9/4/2019	S 29	***7,700****	E 4	200
30	9/4/2019	S 30	***271****	< 2	200
31	8/21/2019	S 31	84	E 6	200
32	8/21/2019	S 32	E 2	E 2	200
33	8/21/2019	S 33	E 4	< 2	200
34	8/21/2019	S 34	E 6	E 4	200
35	8/21/2019	S 35	112	< 2	200
36	8/21/2019	S 36	120	< 2	200
37	8/21/2019	S 37	E 14	< 2	200
38	7/11/2019	S 38	26	16	200
39	8/6/2019	S 39	48	E 4	200
40	9/9/2019	S 40	E 16	< 2	200

Fecal result = FC/100 ml

** Fecal Coliform Exceedance*

SHORELINE MONITORING PROGRAM

2019

FECAL COLIFORM (MF) SAMPLE RESULTS

3rd QUARTER

No	Sample	Station ID	Fecal Coliform	Enterococci	2019 Fecal Coliform Baseline
41	9/9/2019	S 41	E 8	< 2	200
42	8/12/2019	S 42	E 2	< 2	200
43	8/12/2019	S 43	E 4	< 2	200
44	8/12/2019	S 44	E 2	< 2	200
45	8/12/2019	S 45	E 22	< 2	200
46	7/11/2019	S 46	***400****	4	200
47	7/22/2019	S 47	44	< 2	200
48	7/22/2019	S 48	46	< 2	200
49	7/22/2019	S 49	96	< 2	200
50	7/22/2019	S 50	96	< 2	200
51	8/6/2019	S 51	42	E 8	200
52	8/6/2019	S 52	72	E 6	200
53	8/6/2019	S 53	82	> 2	200
54	7/22/2019	S 54	60	E 4	200
55	7/22/2019	S 55	107	E 14	200
56	7/22/2019	S 56	82	E 22	200
57	7/22/2019	S 57	***290****	E 12	200
58	7/20/2019	S 58	***400****	116	200
59	7/20/2019	S 59	***4,000****	***E 1000****	200
60	7/30/2019	S 60	***209****	152	200
61	7/30/2019	S 61	***1,109****	120	200
62	7/30/2019	S 62	***1,073****	E 8	200
63	7/15/2019	S 63	2	2	200
64	7/15/2019	S 64	6	2	200
65	7/20/2019	S 65	***8,500****	***2,100****	200
66	7/20/2019	S 66	***>6000****	***14,000****	200
67	7/22/2019	S 67	E 30	< 2	200
68	8/5/2019	S 68	***>6000****	92	200
69	8/12/2019	S 69	50	< 2	200
70	8/12/2019	S 70	144	< 2	200
71	8/12/2019	S 71	***235****	E 8	200
72	8/12/2019	S 72	E 2	< 2	200
73	9/9/2019	S 73	< 2	< 2	200
74	9/19/2019	S 74	***480****	< 2	200
75	9/19/2019	S 75	E 36	< 2	200
76	9/4/2019	S 76	***16,100****	E 8	200
77	9/4/2019	S 77	***544****	< 2	200
78	9/4/2019	S 78	***10,300****	E 8	200
79	8/21/2019	S 79	E 4	E 4	200
80	7/22/2019	S 80	***238****	E 16	200

Fecal result = FC/100 ml ** Fecal Coliform Exceedance*

WEATHER REPORT

The third quarter monitoring and sampling of ambient sampling stations began on July 01, and ended on September 30, 2019. During this quarter, all eighty sentinel stations were sampled. During this quarter, a total of 10.42 inches of precipitation fell.

MINI-SHORELINE SURVEY RESULTS

S-6: ENTRANCE TO FLUSHING RIVER W/O WHITESTONE EXPRESSWAY

A mini-shoreline survey was conducted in the end of August. The survey targeted the shoreline of Flushing Creek west of Whitestone Expressway off College Point Boulevard. No discharge or water discoloration was observed

S-7: BRONX RIVER, S/O EAST GUN HILL ROAD

A mini-shoreline survey was conducted at the end of September. The survey targeted the shoreline on both of sides of the Bronx River starting at East Gun Hill Road. No discharge or water discoloration was observed.

S-9: ENTRANCE TO BRONX KILLS N/O RANDALL'S ISLAND PARK

A mini-shoreline survey was conducted in the beginning of August. The survey targeted the shoreline on both sides of Bronx Kills and the East River off of Randall's Island Park. No discharge or water discoloration was observed.

S-10: HALLETS COVE AND 30TH DRIVE

A mini-shoreline survey was conducted in the beginning of August. The survey targeted the shoreline along Hallet's Cove between Queens and Roosevelt Island. No discharge or water discoloration was observed.

S-11: EAST CHANNEL & ENTRANCE TO 45TH AVENUE CANAL

A mini-shoreline survey was conducted at the end of August. The survey targeted the shoreline along East Channel and the 45th Avenue Canal. No discharge or water discoloration was observed.

S-12: ENTRANCE TO DUTCH KILLS SOUTH OF LIRR BRIDGE

A mini-shoreline survey was conducted at the end of August. The survey targeted the shoreline along Dutch Kills to the south of the LIRR Bridge. No discharge or water discoloration was observed.

S-13: NEWTOWN CREEK N/O GRAND AVENUE BRIDGE

A mini-shoreline survey was conducted in the beginning of August. The survey targeted the area north of the Grand Avenue Bridge of English Kills and Newtown Creek. No discharge or water discoloration was observed.

S-14: ENTRANCE TO ENGLISH KILLS AT SCOTT STREET

A mini-shoreline survey was conducted in the beginning of August. The survey targeted the shoreline of English Kills north of Grand Street and the Grand Street Bridge. No discharge or water discoloration was observed.

S-18: ENTRANCE TO ATLANTIC BASIN:

A mini-shoreline survey was conducted in the end of August. The survey targeted the area of Atlantic Basin near Buttermilk Channel. No discharge or water discoloration was observed.

S-19: ENTRANCE TO ERIE BASIN AT DWIGHT STREET

A mini-shoreline survey was conducted in the end of August. The survey targeted the area off of Dwight Street and Van Brunt Street in Erie Basin. No discharge or water discoloration was observed.

S-21: ENTRANCE TO CONEY ISLAND CREEK AT KAISER PLAYGROUND

A mini-shoreline survey was conducted at the end of August. The investigation started at West 32nd Street, proceeded eastward to West 20th Street, covering the shoreline and the surrounding area. No discharge or water discoloration was observed.

S-26: PAERDEGAT BASIN & AVENUE K MARINA

A mini-shoreline survey was conducted in the middle of September. The survey targeted all of Paerdegat Basin. No discharge or water discoloration was observed.

S-27: ENTRANCE TO HENDRIX CREEK SE/O BELT PARKWAY

A mini-shoreline survey was conducted in the middle of September. The survey targeted the coast of Hendrix Creek from the head of the creek towards Belt Parkway. No discharge or water discoloration was observed.

S-28: ENTRANCE TO SHELLBANK BASIN AT 165TH AVENUE

A mini-shoreline survey was conducted in the middle of September. The survey targeted the coastline of Shellbank Basin at 165th Avenue. No discharge or water discoloration was observed.

S-29: ENTRANCE TO HAWTREE BASIN AT 164TH AVENUE

A mini-shoreline survey was conducted in the middle of September. The survey targeted the shoreline on both sides of Hawtree Basin from the 163rd Avenue Bridge to Grassy Bay. No discharge or water discoloration was observed.

S-30: GRASSY BAY AT SOUTH RUNWAY 7-JFK AIRPORT

A mini-shoreline survey was conducted in the middle of September. The survey targeted the shoreline off Rockaway Turnpike between Uncle Daniels and Norton Points by Head of Bay. No discharge or water discoloration was observed.

S-46: RICHMOND CREEK & RICHMOND AVENUE

A mini-shoreline survey was conducted at the end of September. The survey target the coast along Richmond Creek. No discharge or water discoloration was observed.

S-57: HARLEM RIVER N/O WILLIS AVENUE BRIDGE

A mini-shoreline survey was conducted at the beginning of September. The survey targeted the shoreline along the Harlem River Drive between Bronx Kill and Harlem River. No discharge or water discoloration was observed.

S-58: EAST RIVER & 24TH AVENUE

A mini-shoreline survey was conducted in the beginning of August. The survey targeted the shoreline along Astoria, Queens off 24th Avenue in the East River No discharge or water discoloration was observed.

S-59: BRONX RIVER & RANDALL AVENUE

A mini-shoreline survey was conducted in the middle of August. The survey targeted the Bronx River off of Randall Avenue in Soundview Park. Dry weather discharge was observed from outfall HP-010. NYC DEP has been notified of the problem. The investigation is ongoing.

S-60: BRONX RIVER & EAST 180TH STREET

A mini-shoreline survey was conducted at the beginning of September. The survey targeted the shoreline on both sides of East 180th Street in the Bronx River. No discharge or water discoloration was observed.

S-61: BRONX RIVER & EAST 241st STREET

A mini-shoreline survey was conducted in the end of September. The investigation covered both sides of the Bronx River between East 241st Street and East 243rd Street. No discharge or water discoloration was observed.

S-62: HUTCHINSON RIVER & ASH LOOP

A mini-shoreline survey was conducted at the end of September. The investigation included the shoreline of Hutchinson River near Co-op City. No discharge or water discoloration was observed.

S-65: EAST RIVER & 18TH AVENUE

A mini-shoreline survey was conducted in the end of July. The survey targeted the area along the shoreline of Flushing Bay from 18th Avenue northward towards 9th Avenue. No discharge or water discoloration was observed.

S-66: FLUSHING BAY & 31ST AVENUE

A mini-shoreline survey was conducted in the end of July. The survey targeted the area along the shoreline of Flushing bay from 28th Avenue to 123rd Street. No discharge or water discoloration was observed.

S-68: GOWANUS BAY E/O HAMILTON AVENUE BRIDGE

A mini-shoreline survey was conducted at the end of August. The survey targeted the area along both sides of the Gowanus Canal. No discharge or water discoloration was observed.

S-71: ARTHUR KILL E/O PRALL'S ISLAND

A mini-shoreline survey was conducted in the end of August. The survey targeted the area northeast of Pralls Island. No discharge or water discoloration was observed.

S-74: SHEEPSHEAD BAY & NOSTRAND AVENUE

A mini-shoreline survey was conducted at the end of September. The survey targeted Sheepshead bay starting at Brigham Street and proceeding west to Kensington Street. No discharge or water discoloration was observed.

S-76: FRESH CREEK BASIN & AVENUE N

A mini-shoreline survey was conducted at the end of September. The investigation included the area of Fresh Creek Basin between Avenue K and Seaview Avenue. No discharge or water discoloration was observed.

S-77: GRASSY BAY UNDER CROSS BAY BOULEVARD BRIDGE

A mini-shoreline survey was conducted in the middle of September. The survey targeted the area along the shoreline of Grassy Bay. No discharge or water discoloration was observed.

S-78: BERGEN BASIN & 163RD AVENUE

A mini-shoreline survey was conducted in the middle of September. The area inspected included the shoreline of both sides of Bergen Basin between the entrance and 163rd Avenue. No discharge or water discoloration was observed.

S- 0: NEWTOWN CREEK UNDER KOSCIUSKO BRIDGE

A mini-shoreline was conducted at the end of August. The area inspected included the shoreline of both sides of Newtown Creek located under the Kosciusko Bridge. No discharge or water discoloration was observed in the area.

DRY WEATHER DISCHARGE

PR-904, GOETHALS RD, STATEN ISLAND

In response to a request from the NYSDEC, regarding a possible dry weather discharge at 2701 Goethals Road North, Staten Island, CMS personnel performed a joint investigation with NYSDEC personnel. A dye test was performed at the sewage treatment system and dye was observed in the storm sewer. Wastewater Management Company submitted a NYS DEC SPDES

permit for legal discharge to the storm sewer.

Also, joint investigations were done at the following locations with NYSDEC personnel. Dye testing was performed. Dye resulted in the private septic tank of the following properties:

1. 2777 Goethals Road North, Staten Island.
2. 2645 Forest Avenue, Staten Island
3. 200 Gulf Avenue, Staten Island

The case was transferred to NYS DEC.

4TH QUARTER

OCTOBER 1 - DECEMBER 31, 2019

SHORELINE MONITORING PROGRAM

2019

FECAL COLIFORM (MF) SAMPLE RESULTS

4th QUARTER

No	Sample	Station ID	Fecal Coliform	Enterococci	2019 Fecal Coliform Baseline
1	10/16/2019	S 1	E 14	E 2	200
2	10/16/2019	S 2	E 20	12	200
3	10/16/2019	S 3	E 6	E 2	200
4	12/5/2019	S 4	122	42	200
5	12/5/2019	S 5	***490****	***211****	200
6	10/16/2019	S 6	***5,700****	54	200
7	10/7/2019	S 7	***450****	***230****	200
8	12/23/2019	S 8	E 30	E6	200
9	12/5/2019	S 9	88	42	200
10	11/7/2019	S 10	77	E 16	200
11	11/7/2019	S 11	42	E 6	200
12	11/7/2019	S 12	64	E 20	200
13	11/7/2019	S 13	***2,100****	E 28	200
14	11/7/2019	S 14	152	E 18	200
15	11/6/2019	S 15	E34	E 2	200
16	11/6/2019	S 16	50	E 12	200
17	11/6/2019	S 17	70	E 8	200
18	11/6/2019	S 18	64	E 6	200
19	11/6/2019	S 19	42	E 2	200
20	11/6/2019	S 20	62	E 8	200
21	11/6/2019	S 21	48	E 4	200
22	12/13/2019	S 22	E 32	E 6	200
23	12/13/2019	S 23	E 22	E 6	200
24	12/13/2019	S 24	E 16	< 2	200
25	12/13/2019	S 25	E 8	< 2	200
26	12/13/2019	S 26	E 30	E 6	200
27	12/13/2019	S 27	***5,600****	***300****	200
28	12/13/2019	S 28	***228****	50	200
29	12/13/2019	S 29	***> 6,000****	***3,700****	200
30	12/13/2019	S 30	164	< 2	200
31	12/23/2019	S 31	116	E 18	200
32	12/23/2019	S 32	E 2	< 2	200
33	12/23/2019	S 33	E 6	E 2	200
34	12/23/2019	S 34	E 6	E 2	200
35	12/23/2019	S 35	E 2	E 2	200
36	12/23/2019	S 36	< 2	E 2	200
37	12/23/2019	S 37	E 10	E 2	200
38	10/7/2019	S 38	44	E 12	200
39	12/23/2019	S 39	E 20	E 8	200
40	12/23/2019	S 40	E 12	< 2	200

Fecal result = FC/100 ml

** Fecal Coliform Exceedance*

SHORELINE MONITORING PROGRAM

2019

FECAL COLIFORM (MF) SAMPLE RESULTS

4th QUARTER

No	Sample	Station ID	Fecal Coliform	Enterococci	2019 Fecal Coliform Baseline
41	12/23/2019	S 41	E 12	< 2	200
42	12/23/2019	S 42	E 14	E 4	200
43	10/2/2019	S 43	E 10	< 2	200
44	10/2/2019	S 44	E 2	E 2	200
45	10/2/2019	S 45	63	< 2	200
46	10/7/2019	S 46	***260****	68	200
47	11/27/2019	S 47	***252****	E 34	200
48	11/27/2019	S 48	***282****	E 26	200
49	11/27/2019	S 49	148	E 20	200
50	11/27/2019	S 50	110	E 18	200
51	12/5/2019	S 51	***410****	112	200
52	12/5/2019	S 52	***410****	94	200
53	12/5/2019	S 53	***249****	56	200
54	11/27/2019	S 54	196	E 34	200
55	11/27/2019	S 55	***297****	42	200
56	11/27/2019	S 56	***420****	E 38	200
57	11/27/2019	S 57	***218****	E 32	200
58	12/5/2019	S 58	103	44	200
59	12/23/2019	S 59	***480****	107	200
60	10/7/2019	S 60	***250****	58	200
61	10/7/2019	S 61	***370****	***540****	200
62	10/7/2019	S 62	***3,900****	192	200
63	10/16/2019	S 63	E 4	E 2	200
64	10/16/2019	S 64	E 8	< 2	200
65	10/16/2019	S 65	101	E 8	200
66	10/16/2019	S 66	E 34	E 2	200
67	11/7/2019	S 67	52	E 20	200
68	11/6/2019	S 68	82	E 4	200
69	10/2/2019	S 69	E 8	E 2	200
70	10/2/2019	S 70	110	E 4	200
71	10/2/2019	S 71	E 30	E 2	200
72	10/2/2019	S 72	E 38	< 2	200
73	10/2/2019	S 73	E 2	< 2	200
74	12/13/2019	S 74	***330****	E 4	200
75	12/13/2019	S 75	E 12	< 2	200
76	12/13/2019	S 76	***233****	E 22	200
77	12/13/2019	S 77	105	E 24	200
78	12/13/2019	S 78	128	E 8	200
79	12/23/2019	S 79	E 2	E 2	200
80	11/7/2019	S 80	185	E 10	200

Fecal result = FC/100 ml ** Fecal Coliform Exceedance*

WEATHER REPORT

The fourth quarter monitoring and sampling of ambient sampling stations began on October 01, and ended on December 31, 2019. During this quarter, all eighty sentinel stations were sampled. During this quarter, a total of 15.19 inches of precipitation fell.

MINI-SHORELINE SURVEY RESULTS

S-5: WESTCHESTER CREEK, N/O UNIONPORT BRIDGE

A mini-shoreline survey was conducted in the beginning of January. The survey targeted the shoreline at the mouth of Westchester Creek off of Castle Hill Avenue and Hart Street. No discharge or water discoloration was observed.

S-6: ENTRANCE TO FLUSHING RIVER W/O WHITESTONE EXPRESSWAY

A mini-shoreline survey was conducted in the beginning of November. The survey targeted the shoreline of Flushing Creek west of Whitestone Expressway off College Point Boulevard. No discharge or water discoloration was observed.

S-7: BRONX RIVER, S/O EAST GUN HILL ROAD

A mini-shoreline survey was conducted in the middle of October. The survey targeted the shoreline on both of sides of the Bronx River starting at East Gun Hill Road. No discharge or water discoloration was observed.

S-13: NEWTOWN CREEK N/O GRAND AVENUE BRIDGE

A mini-shoreline was conducted in the end of December. The survey targeted the area north of the Grand Avenue Bridge of English Kills and Newtown Creek. No discharge or water discoloration was observed.

S-27: ENTRANCE TO HENDRIX CREEK, SE/O BELT PARKWAY

A mini-shoreline survey was conducted in the end of December. The survey targeted the south eastern side of Belt Parkway on Hendrix Creek. No discharge, odor, or water discoloration was observed.

S-28: ENTRANCE TO SHELLBANK BASIN AT 165TH AVENUE

A mini-shoreline survey was conducted at the end of December. The survey targeted the coastline of Shellbank Basin at 165th Avenue. No discharge or water discoloration was observed.

S-29: ENTRANCE TO HAWTREE BASIN AT 164TH AVENUE

A mini-shoreline survey was conducted at the end of December. The survey targeted the shoreline on both sides of Hawtree Basin from the 163rd Avenue Bridge to Grassy Bay. No discharge or water discoloration was observed.

S-46: RICHMOND CREEK & RICHMOND AVENUE (EASTSIDE)

A mini-shoreline survey was conducted in the end of October. The survey targeted the shoreline on both sides of the Richmond Avenue Bridge. No discharge or water discoloration was observed.

S-47: HUDSON RIVER & WEST 233RD STREET

A mini-shoreline survey was conducted in the end of December. The survey targeted the shoreline along the Hudson River and Dyckman Street. No discharge or water discoloration was observed.

S-48: HUDSON RIVER, UNDER THE GEORGE WASHINGTON BRIDGE

A mini-shoreline survey was conducted in the beginning of January. The survey targeted the Hudson River off the Hudson River Greenway by the George Washington Bridge. No discharge or water discoloration was observed.

S-51: HUDSON RIVER & WEST 38TH STEEET

A mini-shoreline survey was conducted in the middle of December. The survey targeted the shoreline along the Hudson River between West 41st Street and West 40th Street. No dry weather discharge was observed in the area.

S-52: HUDSON RIVER & WEST 14TH STREET

A mini-shoreline survey was conducted in the beginning of January. The survey targeted the area of the Hudson River off 14th Street. No dry weather discharge or discoloration was observed.

S-53: HUDSON RIVER & SOUTH COVE (THE BATTERY)

A mini-shoreline survey was conducted in the beginning of January. The survey targeted the shoreline along the Hudson River by North End Avenue and in North Cove Yacht Harbor. No discharge or water discoloration was observed.

S-55: HARLEM RIVER & SHERMAN CREEK

A mini-shoreline survey was conducted in the end of December. The survey targeted the shoreline along the Harlem River and Sherman Creek. No signs of discharge or water discoloration were observed.

S-56: HARLEM RIVER & WEST 170TH STREET

A mini-shoreline survey was conducted in the end of December. The survey targeted the shoreline along the Harlem River and 170th Street. No signs of discharge or water discoloration were observed.

S-57: HARLEM RIVER N/O WILLIS AVENUE BRIDGE

A mini-shoreline survey was conducted in the end of December. The survey targeted the shoreline along the Harlem River Drive between Bronx Kill and Harlem River. No signs of discharge or water discoloration were observed.

S-59: BRONX RIVER & RANDALL AVENUE

A mini-shoreline survey was conducted in the beginning of January. The survey targeted the Bronx River off of Randall Avenue in Soundview Park. Dry weather discharge was observed from outfall HP-010. NYC DEP has been notified of the problem. The investigation is ongoing.

S-60: BRONX RIVER & EAST 180TH STREET

A mini-shoreline survey was conducted in the end of November. The survey targeted the shoreline on both sides of East 180th Street in the Bronx River. No discharge or water discoloration was observed.

S-61: BRONX RIVER & EAST 241st STREET

A mini-shoreline survey was conducted in the middle of October. The investigation covered both sides of the Bronx River between East 241st Street and East 243rd Street. No discharge or water discoloration was observed.

S-62: HUTCHINSON RIVER & ASH LOOP

A mini-shoreline survey was conducted in the middle of October. The investigation included the area along the Hutchinson River near Co-op City in the Bronx. No discharge or water discoloration was observed.

S-74: SHEEPSHEAD BAY & NOSTRAND AVENUE

A mini-shoreline survey was performed in the end of January. The investigation included the shoreline of Sheepshead Bay off Nostrand Avenue and Webers Court. No discharge or water discoloration was observed.

S- 6: FRESH CREEK BASIN & AVENUE N

A mini-shoreline survey was conducted in the end of December. The investigation included the shoreline of Fresh Creek Basin between Avenue K and Seaview Avenue. No discharge or water discoloration was observed.

DRY WEATHER DISCHARGE

CI-633, M&C LAUNDROMAT INC (9214 AVENUE L)

As per management request, CMS personnel investigated the storm sewers on Avenue L between E92nd and E93rd streets in Brooklyn, to identify the source of strong smell of detergent in the area. A laundromat located at 9214 Avenue L was identified through dye testing to be the source of the illegal discharge. The establishment has complied with a Commissioner's Order (CO) issued by CMS by ceasing the discharge and removing the illegal connection to the storm sewer. The case is therefore closed as of October 25th, 2019. Please refer to Item Number 5533.

CI-664, W. 15th STREET & CONEY ISLAND CREEK

The investigation to determine the source(s) of contaminated dry weather discharge at outfall, CI-664 is complete. Once the New York City Department of Design and Construction (DDC) completed constructing a new storm sewer in the area, tributary to the outfall, CI-664, CMS personnel dye tested the establishments in the area and found no illegal connections to the storm sewer. This case is therefore closed as of December 5th, 2019. Please refer to Item Number 3621.

NCO-077, MASPETH CREEK

As part of an investigation into dry-weather discharge into Maspeth Creek, CMS personnel observed a dry weather discharge at the outfall. The following three (3) establishments were identified to be illegally connected to the storm sewer tributary to the outfall through dye testing:

1. Way Fong LLC, 57-29 49th Street, Maspeth, New York 11378
2. President East Company, 36 Galasso Place, Maspeth, New York 11378
3. GD Citrus Inc., 16 Galasso Place, Maspeth, New York 11378

In compliance to the CO's issued by CMS, all three establishments promptly removed the illegal connections to the storm sewer and reconnected them to underground septic tanks or utilize portable toilets. CMS personnel verified the corrective measures and the case is therefore closed as of December 31st, 2019. Please refer to Item Number 5484.

ROCKWAWAY DRAINAGE INVESTIGATION

Representatives from Collections facilities South (BWT), CMS (BWT), Bureau of Water and Sewer Operation (BWSO) and NYS DEC inspected the following outfalls, ROC-009, ROC-014 and ROC-032 to determine whether the regulators , diversion chambers and outfalls were still functioning properly.

TI-024 & ALLEY CREEK

As part of an ongoing investigation and a request by the Bureau of Environmental Planning and Analysis (BEPA) to identify the source of high levels of bacteria in Alley Creek, CMS personnel conducted inspections of outfall TI-024 to see whether the outfall was continuing to discharge during dry weather conditions. No dry weather discharge was observed at the outfall as of September 30th, 2019. The investigation into the high levels of bacteria in Alley Creek is ongoing.

Unauthorized Non-Storm Water Discharges

DEP's Emergency Response Unit (ERU) tracks and responds to incidents of spills and illegal discharges to the NYC sewer system. These constitute unauthorized non-storm- water discharges under the New York City MS4 Permit. In accordance with an agreement between DEP and DEC, DEP will report citywide information on spills and illegal discharges to meet the requirement in MS4 Permit Part IV.D.5 through 2020, when DEP will submit the final MS4 map and can identify all spills and discharges located in the MS4.

The Table below includes ERU's complaint response tracking information for calendar year 2019, which includes the types and number of complaints received and responded to.

	Nature of Complaint		**Total for 2019**
1.	Oil		164
2.	Gasoline/Explosivity		121
3.	Chemicals		110
4.	Odors		20
5.	Wastewater/Concrete		587
6.	Discharge to Receiving Water		34
7.	Miscellaneous		51
		Sub Total	1087
8a.	Complaints received & referred to Others		116
8b.	Follow-up-Inspections		891
		Total	2094