



# 2019 Stormwater Management Report



**Boston Water & Sewer Commission**

**Boston Water and  
Sewer Commission**



980 Harrison Avenue  
Boston, MA 02119-2540  
617-989-7000

BY CERTIFIED MAIL, RETURN  
RECEIPT REQUESTED

February 26, 2020

Mr. Ken Moraff, Director  
Office of Ecosystem Protection  
NPDES Program  
U.S. Environmental Protection Agency  
5 Post Office Square, Suite 100  
Boston, MA 02109-3912

Mr. Eric Worrall, Regional Director  
Massachusetts Department of Environmental Protection  
205B Lowell Street  
Wilmington, MA 01887

Ms. Laura Schiffman  
Massachusetts Department of Environmental Protection  
1 Winter Street  
Boston, MA 02108

**Re: Annual Stormwater Management Report  
MAS010001 – Boston Water and Sewer Commission**

Dear Messrs. Moraff, Worrall and Ms. Schiffman:

The Boston Water and Sewer Commission is pleased to provide you with the enclosed Stormwater Management Report for the year 2019. To save resources the Commission is distributing the report on CD. Paper copies of the report are available upon request. Also, the document will be posted on our website at [www.bwsc.org](http://www.bwsc.org).

The Commission's NPDES Stormwater Permit (MAS010001) was issued by Environmental Protection Agency and the Massachusetts Department of Environmental Protection on September 29, 1999, and became effective on October 29, 1999. The five year permit expired on October 29, 2004, but the EPA administratively continued the permit as allowed by the regulations, and its terms remain in effect. The Commission's 2003 Stormwater



Management Report, which was submitted to the EPA on February 27, 2004, constituted the Commission's reapplication for an NPDES Stormwater Permit.

If you have any questions or comments regarding this Annual Report, please contact Ms. Amy M. Schofield, Project Manager at extension 617-989-7432.

Yours truly,

John P. Sullivan, P.E.  
Chief Engineer & Operations Officer

JPS/AS

cc: EPA, Stormwater and Construction Permits (OEP06-1)  
T. Borci, EPA  
K. Brander, DEP  
C. Jewell, BWSC  
J. Steinkrauss, BWSC

Municipality/Organization: Boston Water and Sewer Commission

EPA NPDES Permit Number: MAS010001

Report/Reporting Period: January 1, 2019-December 31, 2019

## NPDES Phase I Permit Annual Report

### General Information

Contact Person: Amy M. Schofield

Title: Project Manager

Telephone #: 617-989-7432

Email: Schofieldam@bwsc.org

### Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

Signature: 

Printed Name: John P. Sullivan, P.E

Title: Chief Engineer and Operations Officer

Date: 2/26/20

## TABLE OF CONTENTS

### 1.0 INTRODUCTION

1.1	Permit History.....	1-1
1.2	Annual Report Requirements.....	1-1
1.3	Commission Jurisdiction and Legal Authority for Drainage System and Stormwater Management.....	1-2
1.4	Storm Drains Owned and Stormwater Activities Performed by Others.....	1-3
1.5	Characterization of Separated Sub-Catchment Areas.....	1-4
1.6	Mapping of Sub-Catchment Areas and Outfall Locations .....	1-4

### 2.0 FIELD SCREENING, SUB-CATCHMENT AREA INVESTIGATIONS AND ILLICIT DISCHARGE REMEDIATION

2.1	Field Screening.....	2-1
2.2	Sub-Catchment Area Prioritization.....	2-4
2.3	Status of Sub-Catchment Investigations.....	2-6
2.4	Illicit Discharge Detection and Elimination Plan .....	2-7
2.5	Illicit Discharge Investigation Contracts.....	2-7
2.6	Correction/Repair of Illicit Discharges.....	2-7
2.7	Supplemental Environmental Project.....	2-8
2.8	2019 Illicit Discharge Remediation Summary.....	2-8

### 3.0 STORMWATER MANAGEMENT ACTIVITIES

3.1	Operation and Maintenance and Structural Controls.....	3-1
3.2	Sewer System Overflow Control and Response.....	3-3
3.3	Illegal Dumping and Emergency Spill Response.....	3-4
3.4	Drainage Discharge Permits.....	3-5
3.5	Development and Redevelopment.....	3-5
3.6	Controls for Construction Sites.....	3-9
3.7	Industrial Facility Stormwater Pollution Prevention.....	3-10
3.8	Roadways.....	3-11
3.9	Pesticide, Herbicide and Fertilizer Application.....	3-12
3.10	Other Non-structural Stormwater Management Measures.....	3-13
3.11	Public Education and Outreach.....	3-14
3.12	Support for Watershed Organizations.....	3-21

### 4.0 STRUCTURAL BEST MANAGEMENT PRACTICES AND GREEN INFRASTRUCTURE

4.1	Stormwater Model.....	4-1
4.2	Stormwater BMP Proposal and Phase I BMP Implementation Plan ...	4-1

4.3	BMP Recommendations Report.....	4-2
4.4	Green Infrastructure for Three Tributary Areas.....	4-2
4.5	Daisy Field Green Infrastructure.....	4-3
4.6	Green Infrastructure at Five Boston Public Schools.....	4-3
4.7	Other BMP/GI Projects and On-Call BMP/GI Contract.....	4-3
4.8	Boston Complete Streets.....	4-4

**5.0 ASSESSMENT OF STRUCTURAL CONTROLS**

5.1	Assessment of Stormwater BMP/GI.....	5-1
5.2	Catch Basins.....	5-1
5.3	Particle Separators.....	5-2

**6.0 WATER QUALITY MONITORING**

6.1	Outfall Monitoring.....	6-1
6.2	Stormwater Monitoring and Model Validation.....	6-1
6.3	Urban Runoff Water Quality Project.....	6-2
6.4	Other Past Water Quality Monitoring Projects.....	6-3

**7.0 WATER QUALITY IMPROVEMENTS**

7.1	Stormwater Model .....	7-1
7.2	Pollutant Loadings and Reductions.....	7-2
7.3	Illicit Discharge Elimination.....	7-3
7.4	Sewer, Drain, Catch Basin and Particle Separator Cleaning.....	7-3
7.5	BMPs on Private Property.....	7-3

**8.0 ENFORCEMENT**

**9.0 FINANCING STORMWATER MANAGEMENT**

9.1	Current Expense Budget.....	9-1
9.2	Capital Expenditures.....	9-2

**10.0 PROGRAM MODIFICATIONS**

**APPENDIX A - TABLES**

Table 1-1	BWSC Stormwater Outfalls
Table 1-2	BWSC Interconnections
Table 1-3	BWSC Combined Sewer Overflow Outfalls
Table 2-1	2019 Dry Weather Outfall Screening Results
Table 2-2	Dry Weather Screening Samples Collected vs. Not Collected (Page 2-3)
Table 2-3	2019 Wet Weather Outfall Screening Results

<b>Table 2-4</b>	<b>Wet Weather Screening Samples Collected vs. Not Collected (Page 2-4)</b>
<b>Table 2-5</b>	<b>2020 Revised Priority Ranking and Schedule</b>
<b>Table 2-6</b>	<b>Bacteria Ranking (Page 2-5)</b>
<b>Table 2-7</b>	<b>Sub-Catchment Area Investigation Status by Manholes</b>
<b>Table 2-8</b>	<b>Sub-Catchment Area Investigation Status by Storm Drain Pipe</b>
<b>Table 2-9</b>	<b>Direct Illicit Connections 2019</b>
<b>Table 2-10</b>	<b>Indirect Illicit Discharges 2019</b>
<b>Table 3-1</b>	<b>Brook Inlet and Outlet Cleaning</b>
<b>Table 3-2</b>	<b>BWSC Particle Separator Cleaning 2019</b>
<b>Table 3-3</b>	<b>2018 HazMat Spill &amp; Sewer Use Violations</b>
<b>Table 3-4</b>	<b>Private Infiltration Devices Approved 2019</b>
<b>Table 3-5</b>	<b>Private Grit Chambers Approved 2019</b>
<b>Table 5-1</b>	<b>Particle Separator Cleaning-Material Removed 2005-2019</b>
<b>Table 7-1</b>	<b>2012 Stormwater Model-Mean Annual Pollutant Loads for Boston's 27 Reporting Areas</b>
<b>Table 7-2</b>	<b>Annual Load Reductions Based on Illicit Discharges Removed in 2012/2013</b>
<b>Table 7-3</b>	<b>Annual Load Reductions Based on Illicit Discharges Removed in 2014</b>
<b>Table 7-4</b>	<b>Annual Load Reductions Based on Illicit Discharges Removed in 2015</b>
<b>Table 7-5</b>	<b>Annual Load Reductions Based on Illicit Discharges Removed in 2016</b>
<b>Table 7-6</b>	<b>Annual Load Reductions Based on Illicit Discharges Removed in 2017</b>
<b>Table 7-7</b>	<b>Annual Load Reductions Based on Illicit Discharges Removed in 2018</b>
<b>Table 7-8</b>	<b>Annual Load Reductions Based on Illicit Discharges Removed in 2019</b>
<b>Table 7-9</b>	<b>Annual Loads as of End of 2019 Subsequent to Illicit Discharge Removal</b>

## **APPENDIX B - FIGURES**

**Figure 1-1 Locations of Outfalls and Sub-Catchment Areas**  
**Figure 2-1 IDDE Priority Ranking Map-January 2020**  
**Public Information Supporting Documents**

## **1.0 INTRODUCTION**

### **1.1 PERMIT HISTORY**

Discharges to the Boston Water and Sewer Commission's (Commission) municipal separate storm sewer system (MS4) are regulated under the U.S. Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) Stormwater Permit Regulations. The Commission's NPDES Stormwater Permit (MAS010001) was issued by the EPA and the Massachusetts Department of Environmental Protection (DEP) on September 29, 1999, and became effective on October 29, 1999. The five year permit expired on October 29, 2004, but the EPA administratively continued the permit as allowed by the regulation and its terms remain in effect until a new permit is issued. The Commission's 2003 Stormwater Management Report, which was submitted to the EPA on February 27, 2004, constituted the Commission's reapplication for an NPDES Stormwater Permit.

In August 2012, the Commission entered into a Consent Decree following two years of negotiations with the U.S. Environmental Protection Agency, U.S. Department of Justice and the Conservation Law Foundation (CLF) regarding discharges of pollutants from the Commission's MS4 and wastewater collection system. The Consent Decree, lodged in the U.S. District Court on August 23, 2012, outlines a series of short-term and long-term remedial measures that the Commission is implementing to further its compliance with its existing NPDES permit and the Clean Water Act. They include enhancements to the Commission's Illicit Discharge Detection and Elimination Program and its Capacity, Management Operation and Maintenance (CMOM) Program; expansion of the Commission's stormwater related public education and outreach activities; requirements for developing and implementing Green Infrastructure and Stormwater Best Management Projects within the City; updating the Commission's stormwater model; executing intergovernmental agreements with various state and local agencies; improvements to the tracking and reporting of sewer system overflows; development of an SSO Emergency Response Plan; and development of programs to inspect Construction Sites and Industrial Facilities to confirm that they are in compliance with the terms of their own NPDES Stormwater Permits.

### **1.2 ANNUAL REPORT REQUIREMENTS**

In accordance with the NPDES Stormwater Permit (Permit), the Commission is required to report annually to EPA and DEP regarding the status of its pollution prevention and stormwater management programs. This report provides a summary of the stormwater management program activities undertaken by the Commission in 2019. Provided herein



are descriptions of the Commission's outfall monitoring and illicit discharge remediation programs, stormwater related enforcement actions, discussions regarding modifications to these programs, annual expenditures, water quality improvements and an assessment of structural controls.

Many of the programs, plans and activities described in this report are required under the Consent Decree. Separate Consent Decree compliance reports are submitted to EPA, the U.S. Department of Justice, DEP and the CLF on a semi-annual basis. Some of the deadlines for submittals of reports, plans and implementation of programs required under the Consent Decree occurred before 2019. To the extent they occurred in 2019, they are reported herein.

### **1.3 COMMISSION JURISDICTION AND LEGAL AUTHORITY FOR DRAINAGE SYSTEM AND STORMWATER MANAGEMENT**

The Commission was created pursuant to an act of the Massachusetts Legislature under Chapter 436 of the Acts of 1977, as a political subdivision of the Commonwealth, separate and apart from the City of Boston. The enabling act charged the Commission with the responsibility for the operation and maintenance of the water distribution system and the wastewater collection and stormwater drainage systems which serve the City of Boston. Through its enabling legislation the Commission is empowered to promulgate rules and regulations in order to perform its statutory functions and duties. The Commission's Regulations Governing the Use of Sanitary and Combined Sewers and Storm Drains and Requirements for Site Plans are briefly described below. Downloadable copies of the documents are available from the Commission's web site located at [www.bwsc.org](http://www.bwsc.org).

Pursuant to the Consent Decree, the Commission is exercising greater authority over stormwater discharges originating from construction sites and industrial facilities. These programs are discussed further in Section 3.

Sewer Use Regulations: The majority of the Commission's stormwater management controls are enforced through its Regulations Governing the Use of Sanitary and Combined Sewers and Storm Drains (the Sewer Use Regulations). The Sewer Use Regulations were adopted in 1983 and amended in 1989. They were amended again in 1998 to strengthen and clarify the requirements, particularly as they pertain to stormwater discharges. In 1998, the Commission also amended its Penalty Schedule by adding and increasing the fines for several Sewer Use Regulation violations.

General Service Applications and Requirements for Site Plans: The Commission requires that a General Service Application and a site plan be submitted for every new or reconstructed water, sewer, or storm drain service connection. The Requirements for Site Plans are to assist developers, builders, architects, engineers, and others in preparing site plans that conform to the Commission's Sewer Use Regulations and to help them secure the necessary approvals from the Commission.

The site plan must be approved by the Commission's Chief Engineer before construction may begin, and it will not be approved unless it complies with the Commission's Requirements for Site Plans and Sewer Use Regulations. The site plan review provides an opportunity to review the components of the project and condition the approval on compliance with the Commission's Sewer Use Regulations, Requirements for Site Plans, and other requirements. The Commission's Requirements for Site Plans are updated as needed, generally about once a year. In accordance with Section VII, Part K of the Consent Decree, the Commission revised its Requirements for Site Plans to require developers of Construction Sites (over 1 acre or plan to disturb more than 1 acre) to apply for a Notice of Intent with EPA for a Construction General Permit and also require the submission of a Stormwater Pollution Prevention Plan (SWPPP), which will be summarily reviewed by the Commission with the site plan application.

#### **1.4 STORM DRAINS OWNED AND STORMWATER ACTIVITIES PERFORMED BY OTHERS**

The Commission controls most of the municipal storm drains in Boston. However, some storm drains and outfalls are owned by other city agencies. For example, drains and outfalls located in the Marine Industrial Park in South Boston are owned and operated by the Economic Development and Industrial Corporation of Boston; the Boston Parks Department owns drains in Franklin Park and Boston Common, and in other city parks.

Other storm drains and outfalls in the city are owned by state agencies, such as the Massachusetts Department of Transportation and the Department of Conservation and Recreation; these drains and outfalls are not controlled by the Commission. In several locations Commission owned storm drains interconnect with those owned by the Town of Brookline, Town of Dedham, Town of Milton, the City of Newton and the City of Somerville. The Commission does not have jurisdiction or control over the discharges originating from these municipalities, nor does it have jurisdiction and/or control over roadways, roadway maintenance, city parks or city or state facilities which may impact the Commission's separate storm system. Further, the Commission does not manage or control some of the stormwater programs and activities required under its NPDES. For example, the Household Hazardous Waste Collection Program is managed by the Boston Public Works Department.

To help address jurisdictional issues, and in compliance with terms of the Consent Decree, in 2013, the Commission established Memorandums of Understanding (MOUs) with the following: Boston Public Works Department, Boston Parks and Recreation Department, Boston Inspectional Services Department, Boston Redevelopment Authority (now called the Boston Planning and Development Agency), Economic Development and Industrial Corporation, Boston Housing Authority, Brookline, Dedham, Milton and Newton, Massachusetts Department of Transportation and Massachusetts Department of Conservation and Recreation. In 2016, the Commission executed Amendment No. 1 to the Memorandums of Agreement with each of the twelve (12) existing inter-agency agreements to extend the term of the agreements through December 31, 2021. The

Commission also executed a MOU with the Boston Public Schools Department for a pilot Best Management Practice, Green Infrastructure project.

The Commission coordinates with these entities as necessary to meet the requirements of the Commission's NPDES Stormwater Permit and the Consent Decree.

## **1.5 CHARACTERIZATION OF SEPARATED SUB-CATCHMENT AREAS**

The Commission's storm drain outfalls are listed in Table 1-1. There are currently 207 storm drain outfalls in the Commission's drainage system. Table 1-2 lists locations where Commission owned storm drains interconnect with (discharge to) storm drains owned by others. There are currently 18 interconnection locations. Table 1-3 lists the Commission's 30 combined sewer overflow outfalls. Combined sewer overflow 19MCSO083 has been eliminated from the Commission's combined sewer system; however, it is still listed in the Commission's NPDES CSO Permit; therefore, it is included on the list.

## **1.6 MAPPING OF SUB-CATCHMENT AREAS AND OUTFALL LOCATIONS**

Figure 1-1 in Appendix B contains a map showing the locations of the Commission's storm drain outfalls, the interconnections and the combined sewer overflow (CSO) outfalls. The sub-catchment areas tributary to the storm drain outfalls, the interconnections and the separated portion of the Stony Brook Conduit are also shown.

## **2.0 FIELD SCREENING, SUB-CATCHMENT AREA INVESTIGATIONS AND ILLICIT DISCHARGE REMEDIATION**

Under the terms of the Consent Decree the Commission is required to: annually perform wet and dry weather field screening of its storm drain outfalls, CSO outfalls and storm drain manholes that discharge (interconnect) with other MS4 drain systems; establish priorities and schedules for investigating sub-catchment areas that demonstrate contamination; implement a sub-catchment investigation program based on the priorities and schedules established; and, correct or repair illicit discharges within deadlines established in the Consent Decree. The Commission performed illicit discharge investigations and elimination prior to entry of the Consent Decree in 2012, and continued to do so in 2019, in accordance with Consent Decree requirements.

### **2.1 FIELD SCREENING**

Protocols have been developed for both dry and wet weather screening of sub-catchments. The screening protocols were established for conducting visual inspections; screening and sampling of outfalls/interconnections; monitoring weather conditions and tides in order to select appropriate days to conduct screening and sampling visits; and mobilizing field staff. The protocols also define required sampling procedures, including: specific parameters to be sampled in the field vs. in the lab, equipment calibration and operation, communications, record keeping, and health and safety concerns. The documents also include analytical requirements for collecting water quality samples, sample blanks, and duplicates; sample preservation and holding time requirements; and laboratory analytical quality assurance/quality control (QA/QC) procedures. In general, the following protocols were followed in 2019:

- Visual inspections were conducted to confirm outfall/interconnection locations, collect inspection data, and plan sampling.
- Screening and sampling was performed during dry and wet weather for collection of samples for field and lab analysis.
- Ammonia, surfactants, pH, temperature, specific conductivity, total chlorine and salinity were measured using field test kits.
- Samples were delivered by courier to G&L Laboratories for bacterial analysis.
- Bacterial analysis consisted of *E. coli* for freshwater samples and *Enterococci* for marine water samples.
- All samples were taken as grab samples. No confined space entry was required.

All the screening data in 2019 were collected by Commission's consultant, Stacey DePasquale Engineering, under sub-contract to CH2M/Jacobs.

The purpose of the dry weather sub-catchment screening and inventory effort was to:

- Confirm the location of the outfalls/interconnections.
- Characterize the current condition (size, material, flow, etc.) of each outfall or interconnection.
- Identify outfalls/interconnections with dry weather flow and determine if the flow was potentially contaminated.

The purpose of the wet weather screening was to collect a wet weather sample at all locations where flow was not observed during dry weather screening, as well as locations where dry weather flow was below the Illicit Discharge Detection and Elimination (IDDE) limits established by the Consent Decree. The 2019 wet weather screening followed the modified program set forth in the Commission's Proposed Wet Weather Outfall Monitoring Program, which was approved by EPA in a letter dated April 22, 2014. Under the modified program the same wet weather protocols, parameters and thresholds identified in the Consent Decree were used. However, in order to start wet weather screening earlier in the year the selection of sub-catchments included in the 2019 wet weather program were based on the 2018 dry weather screening data.

Field screening during 2019 included inspection and sampling of 254 Commission-owned sub-catchments, which included 207 storm drain outfalls (SDOs)<sup>1</sup>, 18 storm drain manholes where storm drainage is conveyed to other municipality's MS4s or non-BWSC outfalls (referred to as "interconnections"), and 29 Combined Sewer Overflow (CSO) outfalls.<sup>2</sup>

All the results of the 2019 dry weather screening program are provided in Table 2-1 in Appendix A, and a summary of dry weather screening and sampling performed during 2019 is shown in Table 2-2 below. Dry weather field screening took place at 31 CSO locations<sup>3</sup> in 2019. Dry weather samples were collected at 22 CSO locations. Nine (9) locations were not sampled because there was no flow to sample (4 locations); or the outfall had standing water or was submerged, and the upstream manholes also had standing water or were submerged (5 locations).

Dry weather screening took place at 226 SDO and interconnection locations in 2019<sup>4</sup>. Dry weather samples were collected at 121 of the locations visited. The remaining 105 locations were not sampled because there was no flow to sample (68 locations); the outfall had standing water or was submerged, and the upstream manholes also had

---

<sup>1</sup> Outfalls 21HSDO01 and 21HSDO02 were created as part of the Muddy River Restoration Project. 21HSDO045 and 21HSDO047 were eliminated due to the Muddy River Restoration Project. Therefore, the number of SDOs remained the same in 2019.

<sup>2</sup> There are still 30 CSO outfalls listed in the Commission's NPDES CSO Permit. However, CSO 19MCSO083 has been eliminated; therefore, it was not screened in 2019.

<sup>3</sup> The Stony Brook Conduit 21HCSO046 was screened in three locations in 2019. All three locations were ranked in the 2020 prioritization.

<sup>4</sup> There are 225 SDOs and interconnections in the Commission's system. However, one storm drain sub-catchment was sampled twice in 2019 bringing the total screened up to 226.

**TABLE 2-2  
2019 Dry Weather Screening Samples Collected versus Not Collected**

Results of Dry Weather Sampling CSOs		2019
Total CSO Screenings Performed		31
Samples Collected		22
Samples Not Collected		9
	No flow, dry	4
	No flow, standing water/submerged	5
	Could not access outfall/no suitable sampling location	0
Results of Dry Weather Sampling SDO/Interconnections		2019
Total SDOs/Interconnect Screenings Performed		226
Samples Collected		121
Samples Not Collected		105
	No flow, dry	68
	No flow, standing water/submerged	34
	Could not access outfall/no suitable sampling location	3

standing water or were submerged (34 locations); or there was no access or suitable locations to sample (3 locations).

All the results of the 2019 wet weather screening program are provided in Table 2-3 in Appendix A, and a summary of the wet weather screening and sampling performed is shown in Table 2-4 below.

Wet weather field screening took place at 19 CSO locations in 2019. Wet weather samples were collected at 16 of the CSO locations. Three (3) locations were not sampled during wet weather because the outfall had standing water or was submerged, and the upstream manholes also had standing water or were submerged.

Wet weather screening took place at 123 SDO and interconnection locations in 2019. Wet weather samples were collected at 98 of the locations visited. Samples could not be collected at 25 locations because there was no flow or insufficient flow to sample (2 locations), the outfall had standing water or was submerged and upstream manholes also had standing water or were submerged (19 locations); or there was no access or suitable location to sample (4 locations).

**TABLE 2-4  
2019 Wet Weather Screening Samples Collected versus Not  
Collected**

Results of Wet Weather Sampling CSOs		2019
Total CSO Screenings Performed		19
Samples Collected		16
Samples Not Collected		3
	No flow, dry	0
	No flow, standing water/submerged	3
	Could not access outfall/no suitable sampling location	0
Results of Wet Weather Sampling SDO/Interconnections		2019
Total SDOs/Interconnect Screenings Performed		123
Samples Collected		98
Samples Not Collected		25
	No flow, dry/insufficient flow	2
	No flow, standing water/submerged	19
	Could not access outfall/no suitable sampling location	4

## 2.2 SUB-CATCHMENT AREA PRIORITIZATION

On November 21, 2012, the Commission submitted to EPA, DEP and CLF the first required sub-catchment Prioritization and Schedule for Completion of Investigations report (Priority Report). Revised Priority Reports were submitted in January 2013, 2014, 2015, 2016, 2017, 2018 and 2019.

The Priority Reports described the protocols used for collecting the screening data; the methodology for prioritizing sub-catchment areas for investigation; the priority ranking of the sub-catchments which resulted; and a schedule for completing sub-catchment area investigations within the seven-year time line established by the Consent Decree.

IDDE screening thresholds as defined in the Commission's Consent Decree are as follows.

*Bacteria:*

*Class A and Class B waters*

*E. coli: greater than 235 cfu/ 100 mL*

*Enterococcus: greater than 61 cfu/ 100 mL*

*Class SA and Class SB waters*

*Enterococcus: greater than 104 cfu/ 100 mL*

*Ammonia: = >0.5 mg/L*

*Surfactants: = > 0.25 mg/L via field kits; => 0.1 mg/L via laboratory analysis*

*Chlorine: greater than non-detect (0.02 mg/L method detection limit)*

The results of the priority ranking for 2020 are shown in Table 2-5 in Appendix A. For comparison purposes the rankings from the 2013, 2014, 2015, 2016, 2017, 2018 and 2019 priority rankings are also shown on Table 2-5. For the 2020 priority ranking sub-catchments were re-ranked within the same time frames (tiers) established in the 2019 priority ranking. This was done in order to maintain the schedule for completion already established by previous priority rankings, and to avoid fragmentation in the progress of investigations.

As required by the Consent Decree, 12 sub-catchments discharging to beach areas were given first priority. The remaining sub-catchments were re-ranked based on bacteria results according to the ranges presented in Table 3, although other parameters and factors were taken into consideration. Priority 5 was given to those sub-catchments where investigations were completed.

**TABLE 2-6**  
*Bacteria Ranking*

Bacteria	Priority 2	Priority 3	Priority 4
E. coli (CFU/100mL)	>10,000	1,000 - 10,000	<1,000
Enterococci (CFU/100mL)	>5,000	500 - 5,000	<500

Where bacteria concentrations for individual sub-catchments were the same, a secondary ranking using the ammonia results was completed. For locations that had a field duplicate sample collected or were sampled more than once, the higher bacteria result was used for prioritization purposes.

During the summer of 2014, the Commission and EPA engaged in discussions regarding the Prioritization Ranking. During those discussions EPA identified several sub-catchments they believed should receive higher priority. These were 10LSDO094, 20DSDO055, 20DSDO062, 23LSDO164, 25LSDO058, and 29JCSO017. These sub-catchments are highlighted in beige in Appendix A. Sub-catchments 10LSDO094 and 20DSDO055 were completed in 2015. Sub-catchments 20DSDO062, 23LSDO164, 25LSDO058 and 29JCSO017 were completed in 2018 and appear at the top of the 2018 tier. Municipal and other MS4 interconnections are highlighted in blue the priority ranking table.

As of August 23, 2019, investigations in all 254 of the Commission’s sub-catchments were complete and were thus all were given a ranking of 5 in the 2020 priority ranking. Investigations in 28 sub-catchments were deemed complete prior to 2013; investigations in the six (6) Constitution Beach Priority 1 sub-catchments were completed in 2013; investigations in the six (6) Dorchester Bay Priority 1 sub-catchments were completed in 2014; investigations in an additional 64 sub-catchments were completed by August 23, 2015; investigations in an additional 81 sub-catchments were completed by August 23,



2019; investigations in an additional 69 sub-catchments were completed by August 23, 2019.

Figure 2-1, provided in a pocket at the end of this report, is a map illustrating the 2020 rankings of the sub-catchments.

Investigations in all 254 of the Commission's sub-catchments were completed as of August 23, 2019. However, the 2019 outfall screening results show discharges from some sub-catchments still demonstrate levels of contamination above the thresholds established in the Consent Decree.

In 2020 the Commission will request proposals from qualified firms to perform the next phase of its Illicit Connection Investigation Program (Phase 5). The primary purpose of Phase 5 will be to perform follow-up investigations in sub-catchments still demonstrating elevated levels of contamination, and to explore alternative methods for identifying sources of sewage contamination in the Commission's storm drain system. The CW15 contract will include annual wet and dry weather field screening of the Commission's outfalls and interconnections, and annual compilation of field screening data to produce Revised Priority Rankings of sub-catchments to provide to EPA by January 31, each year of the contract. During Phase 5 the Commission will review the current methodology for ranking sub-catchments for follow-up investigations and revise it as warranted. The duration of the Phase 5 contract is expected to be four years.

Until a new prioritization ranking methodology is developed in mid-2020, the Commission will focus its IDDE investigations in 25 sub-catchments demonstrating the highest bacteria concentrations based on the 2019 dry weather outfall screening results.

### **2.3 STATUS OF SUB-CATCHMENT INVESTIGATIONS**

Tables 2-7 and 2-8 provide the "percent complete" for IDDE investigations within each sub-catchment area in the Commission's system as of January 1, 2020.

The percent complete by manholes for Table 2-7 was calculated based on the total number of stormwater and common manholes in the sub-catchment area that were systematically investigated<sup>5</sup>, divided by the total number of stormwater and common manholes in the sub-catchment area. The percent complete by linear footage of pipe for Table 2-8 was calculated based on the total footage of storm drain pipe in the sub-catchment area that was systemically investigated, divided by the total footage of storm drain pipe in the sub-catchment.

As of August 23, 2019, investigations in all 254 of the Commission's sub-catchments were complete.

---

<sup>5</sup> As described in the Commission's IDDE Plan, not every storm drain manhole in a sub-catchment area is inspected. Some manholes are inferred to be void of contamination based on the results of inspections of manholes upstream and downstream, or on dye tests of adjacent buildings.

## **2.4 ILLICIT DISCHARGE DETECTION AND ELIMINATION PLAN**

Under the Consent Decree the Commission was required to submit to EPA, DEP and CLF a revised Illicit Discharge Detection and Elimination Plan (IDDE Plan). The IDDE Plan was submitted to EPA, DEP and CLF on December 18, 2012. The IDDE Plan detailed and updated the Commission's approach, including modifications as appropriate, to address investigations of CSO outfalls. It described the investigation methods and analytical techniques that the Commission employs to locate and verify illicit discharges and methods by which sources of illicit discharges would be removed.

Most illicit discharge investigations are performed by Commission consultants. The contracts for investigations performed by consultants are described further below.

## **2.5 ILLICIT DISCHARGE INVESTIGATION CONTRACTS**

Since 1999, the Commission has executed four contracts to have consultants perform illicit discharge investigations of the Commission's drainage system. The Stony Brook Illegal Connection Investigation (SBI) Program was carried out between 1999 and 2005, at a cost of \$1,478,709. The Citywide Illegal Connection Investigation (CWI) Program overlapped with the SBI and was carried out between 2004 and 2009, at a cost of \$1,536,000. The Citywide Illegal Connection Investigation Program, Phase 2 (CWI2) was carried out between 2009 and 2012, at a cost of \$1,660,000. The Citywide Illegal Connection Investigation Program, Phase 3 (CWI3) was carried out between 2012 and 2016, at a cost of \$3,147,817. A contract for the Citywide Illegal Connection Investigation Program, Phase 4 (CWI4) was executed June 14, 2016. The contract ceiling for CWI4 is \$2,105,414, and the contract duration is four years. As of December 31, 2019, \$1,895,000 had been spent for services under the CWI4 contract.

These costs for the SBI and CWI contracts do not include the cost to correct the illicit discharges found, nor do they include other costs borne by the Commission for activities such as testing sewer laterals to determine whether they leak; CCTV of sewers and drains; police details; cleaning pipes and manholes; program management; and other support services.

## **2.6 CORRECTION/REPAIR OF ILLICIT DISCHARGES**

Correction and repair of illicit discharges is discussed in the Commission's IDDE Plan, which was submitted to EPA, DEP and CLF on December 18, 2012. The Commission identifies two types of illicit discharges: direct illicit connections and sanitary sewer defects such as leaking sewer laterals. Direct illicit connections include sanitary sewer laterals that are directly connected to storm drains in the public way; these are usually corrected by a Commission contractor. Direct connections also include sanitary connections, such as from a single toilet or washing machine, to an internal building drain; these require the owner of the property to correct. The leaking sewer lateral illicit

discharges are laterals that are properly connected to the sewer system; however, testing of the sewer laterals by the Commission confirm that they leak sewage into the drain system. The methods used by the Commission to eliminate illicit discharges are described in more detail in the IDDE Plan.

In November 2012, the Commission amended its Sewer Lateral Assistance Program to provide financial assistance to property owners to line or relay leaking sewer laterals, including those sections on private property. Under the program, owners of verified leaking sewer laterals may be reimbursed up to \$4,000 to have a licensed bonded contractor line or relay their leaking sewer lateral. A leaking lateral must be lined or relayed from inside the building foundation to the public sewer in the public way in order to be eligible for reimbursement. To obtain reimbursement the lateral must be confirmed as leaking by the Commission and the owner must obtain three or more quotes from contractors to repair or relay the leaking lateral. The Commission reviews the submission, the owner signs a waiver, and the Commission authorizes the owner to proceed with the work. After the owner reports repair of the sewer lateral the Commission or its contractor performs a post correction dye test to confirm that the lateral is not still leaking into the drain system.

## **2.7 SUPPLEMENTAL ENVIRONMENTAL PROJECT**

In accordance with the terms of the Consent Decree, the Commission implemented a Sewer Lateral Lining Program Supplemental Environmental Project (SEP). The project was undertaken in connection with the settlement of an enforcement action, Conservation Law Foundation and the United States of America v. Boston Water and Sewer Commission, et al., taken on behalf of the U.S. Environmental Protection Agency under the Clean Water Act.

As required by Section VIII of the Consent Decree, the Commission agreed to line a minimum of twenty-five (25) laterals and spend a minimum of \$160,000.00 by December 31, 2014. The Commission completed all construction activities for the SEP contract on December 10, 2014. The Commission structurally lined twenty-six (26) leaking laterals at a total cost of \$237,149.00. Two laterals inspected under the SEP could not be lined due to their condition. The two laterals were fully relayed at an additional cost \$33,195.00. Lining and repair of the laterals removed an estimated 1,950 gallons per day of sewage from the Commission's drainage system. The Commission filed its SEP Completion Report pursuant to Section VIII, Paragraph 69 on December 23, 2014.

## **2.8 2019 ILLICIT DISCHARGE REMEDIATION SUMMARY**

This section summarizes the Commission's 2019 Illicit Discharge Identification and Elimination Program. Table 2-9 lists the direct illicit connections that were outstanding (not corrected) as of January 1, 2019; it includes those that were verified and corrected in 2018, and it includes those that were verified but not corrected at the end of 2019.

Table 2-10 lists the indirect illicit connections (verified leaking laterals) that were outstanding (not corrected) as of January 1, 2019; it includes those that were verified and

corrected in 2019; and it includes those that were verified but not corrected at the end of 2019.

Below is a summary of 2019 Illicit Discharge Remediation Program.

2019 Illicit Discharge Remediation Program Summary

Direct Illicit Connections Outstanding as of January 1, 2019 .....	12
Direct Illicit Connections Verified in 2019 .....	34
Direct Illicit Connections Corrected in 2019 .....	37
Direct Illicit Connections Outstanding December 31, 2019.....	9
Leaking Laterals Outstanding as of January 1, 2019.....	16
Leaking Laterals Verified in 2019 .....	20
Verified Leaking Laterals Repaired in 2019.....	28
Leaking Sewer Pipe Repaired in 2019.....	1
Verified Leaking Laterals Outstanding as of December 31, 2019.....	7

In 2019, a total of 34 new direct illicit connections were verified, and 37 direct illicit connections were corrected. Of the direct connections corrected in 2019, 29 were corrected by a Commission contractor, six (6) were corrected by the property owner, and two (2) were corrected with collaboration between both the property owner and the Commission.

In 2019, a total of 20 leaking laterals were verified, and 28 leaking laterals were repaired by the property owners. One (1) leaking sewer pipe was repaired by the Commission.

In total there were 54 direct connections or leaking laterals verified in 2019. In 2019, 66 locations had an illicit connection or a leaking lateral corrected/repaired. As of the end of 2019, 16 illicit discharges remained to be corrected/ repaired.

Calculations of cost to remove illicit discharges

Tables 2-9 and 2-10 also provide the costs to the Commission to correct or repair illicit discharges in 2019. The cost to the Commission to correct 31 direct illicit connections and reimburse two (2) owners for corrections made to internal plumbing within their properties was \$872,203. The cost to the Commission to verify 28 leaking sewer laterals

was \$54,023. The cost to the Commission to reimburse owners for repairing 28 leaking laterals was \$103,900. The cost to the Commission to repair one (1) leaking sewer pipe was \$17,030.

In total, \$1,047,156 was expended by the Commission to verify and correct or repair illicit discharges in 2019. These costs do not include: the cost of permits, inspection fees, pavement restoration or police details; costs incurred by the Commission to clean and televise sewer mains adjacent to suspected leaking laterals before they were tested; costs covered by property owners who were responsible for making corrections to direct internal connections on their own property; and costs to owners to repair leaking laterals over and above what was reimbursed by the Commission.

#### Calculations of sewage removed

The Commission estimates the wastewater removed by elimination of an illicit discharge based upon water use records for the property where the illicit discharge was located. Average daily water consumption is calculated based on the previous 24-month period. For direct illicit connections it is assumed ten (10) percent of the water is consumed and only ninety (90) percent discharges to the drain system. If only a portion of the building contributed to the direct illicit discharge the figure is adjusted accordingly.

It is not possible to know exactly how much sewage is leaking into a drain from a leaking sewer lateral so for a leaking sewer lateral it is assumed that, because a proper sewer lateral exists at the location, only one-third (33%) of the sanitary flow is entering the drain system from the leaking lateral.

Due to the Commission's efforts in 2019, an estimated 30,715 gallons per day (gpd) of wastewater was removed from the storm drainage system and receiving waters by correcting direct illicit connections, and an estimated 18,764 gpd of wastewater was removed from the storm drainage system and receiving waters by repairing leaking laterals and a leaking sewer main. In total, an estimated 49,479 gpd of wastewater was removed from the storm drainage system and receiving water by correcting or repairing illicit discharges in 2019.

## **3.0 STORMWATER MANAGEMENT ACTIVITIES**

The Stormwater Management Program consists of a variety of programs, activities, and best management practices aimed at preventing the discharge of pollutants to storm drains and receiving waters. These measures include maintenance, structural, managerial, regulatory, and educational programs. Key elements of the Commission's Stormwater Management Program and Stormwater Management Plan implementation are described in this section.

### **3.1 OPERATION AND MAINTENANCE OF STRUCTURAL CONTROLS**

Combined sewer overflows, sanitary sewer overflows, sewage infiltration into storm drains and system backups can be prevented by maintaining the capacity and structural integrity of the sewerage and drainage systems. The Commission accomplishes this by cleaning, repairing or replacing sanitary and combined sewers and storm drains, separating combined sewers, preventing and correcting sewer system overflows, and by preventing and removing infiltration and inflow to the sewer system. To determine where structural deficiencies exist and where repairs are needed the Commission performs television inspections of sewers and drains.

Pursuant to the Consent Decree the Commission performed a Capacity Management, Operations, and Maintenance Program (CMOM) Assessment or "Self-Assessment", and submitted a Self-Assessment Report and Corrective Action Plan to EPA in July, 2013. The purpose of the Self-Assessment was to assess the overall performance of the Commission's collections system and determine whether improvements were necessary to maintain the collection system and prevent future sewer system overflows. It included, but was not limited to, the evaluation of operations, maintenance, emergency response, collection system performance, communications, financial and capital planning. The Corrective Action Plan described the findings of the Self-Assessment and identified specific short and long-term actions to be taken by the Commission to remedy deficiencies identified by the Self-Assessment.

In 2014, the Commission completed a CMOM Program Document (Program Document). The Program Document summarized the Commission's existing and planned preventative, corrective and capital planning practices for supporting its CMOM Program going forward and consolidated all of the Commission's collection system preventative maintenance and capital improvement plans into a single document.

**a. Storm Drain and Sewer Maintenance by BWSC Staff**

The Commission's Operations Division is responsible for smaller sewer and drain related repair, maintenance and cleaning jobs, as well as some television inspections of sewers and drains. In 2019, the Commission owned five (5) large and one (1) small "vactor" cleaning trucks to clean accumulated materials from sewers and drains; five (5) jet trucks; one (1) multi-rodder truck; and two (2) CCTV trucks. In 2019, the Commission jetted, vactored or rodded 437,956 linear feet of pipe. To determine where structural deficiencies exist and where repairs are needed, Commission crews and contract forces performed television inspections of 102 miles sewer and drain pipe in 2019.

In conjunction with the storm drain and catch basin cleaning programs, the Commission routinely clears debris from twelve (12) brook inlets and outlets throughout the City. Since the primary purpose of this practice is to prevent upstream flooding, the cleaning is typically performed immediately prior to major storm events and usually they are checked after storm events to determine if follow up cleaning is needed. The locations and frequency of cleaning is provided in Table 3-1.

**b. Catch Basin Maintenance**

The Commission has over 30,000 catch basins in its sewer and drainage systems. Other catch basins in the city are owned by other public agencies such as the state Department of Conservation and Recreation, Mass Department of Transportation, or are located on private property. The Commission currently owns six (6) clamshell trucks.

Commission catch basin cleaning forces have been augmented by contract resources and equipment since 2001. In 2019, the Commission and contract resources performed 21,373 inspections/cleanings of catch basins. Catch basin cleanings are transported to the Commission's Material Handling Facility where they are temporarily stored to de-water until transferred for proper off-site disposal/reuse at an approved disposal facility. In 2019, the Commission removed approximately 2,865 tons of debris from catch basins, as recorded at the Commission's Material Handling Facility.

**c. Commission Particle Separators**

The Commission currently owns sixteen (16) particle separators. Information regarding the various particle separators, including their locations, receiving waters, and inspection and cleaning dates in 2019 is summarized in Table 3-2. All sixteen (16) particle separators were inspected in 2019. Of those, three (3) were cleaned although the amount of material removed from two (2) separators was not recorded. The recorded amount of material removed from particle separators in 2019 was 1.7 cubic yards.

**d. Large Storm Drain and Sewer Programs under BWSC's CIP**

Large cleaning and maintenance jobs are performed by outside contractors under the Commission's Capital Improvement Program. The Commission's three-year Capital

Improvement Program (CIP) is updated annually. The 2019-2021 CIP included \$100.7 million for sewer, drain and stormwater related projects, of which \$37.0 million was earmarked for 2019. A copy of the 2019-2021 Capital Improvement Program is available from the Commission's website and upon request from the Commission.

### **3.2 SEWER SYSTEM OVERFLOW CONTROL AND RESPONSE**

In compliance with the Consent Decree the Commission has improved its response and oversight over sewer system overflows (SSOs). On September 23, 2012, the Commission instituted a program (including iPad application and Oracle SSO database) to track and report all public and private SSOs to EPA and DEP within 24 hours pursuant to Part E of the Consent Decree. Prior to the programs commencement, the Commission performed internal training of Commission personnel in Engineering Services and Operations Division related to SSO response.

On November 21, 2012, the Commission submitted an SSO Emergency Response Plan (SSOERP). The objective of the SSOERP is to provide a standardized set of actions for the Commission to follow in the event of an unpermitted discharge (overflow) from the sanitary and combined sewer system. In addition, the implementation of the SSOERP accomplishes the following objectives:

- Minimize an SSO's impact on public health, public safety, and property damage.
- Comply with regulatory and enforcement reporting and public notification requirements.
- Minimize the reoccurrence of SSOs.
- Minimize the Commission's liability.

The following elements are included in the SSOERP:

- Description of the types of sewers and discharges addressed by the SSOERP.
- An outline of the Commission's collection system inventory and staff, equipment and hardware/software for responding to SSOs.
- Procedures for receiving notifications of a possible SSO, and protocols for internal notifications about confirmed SSOs with the Commission's collection system and initial notifications to DEP, EPA and other authorities such as the MWRA.
- Procedures for responding to SSOs.
- Procedures for documenting and reporting SSOs.
- Descriptions of the means of notifying the public affected by an SSO.
- Description of the activities to be taken after an SSO has been remedied.
- Objectives and methods for training and preparing staff regarding the SSOERP.

Once it has been confirmed that there has been an SSO event by field personnel, within 24 hours the Commission notifies EPA and DEP. EPA and DEP are notified for any SSOs caused by BWSC sewer lines as well as any caused by privately owned sewer lines



and sewer laterals with SSO amounts exceeding 100 gallons or any amount not contained inside the building or discharging to the environment. Other parties may be notified depending on the extent and potential impact of the overflow.

Within five days of an SSO, BWSC also submits to EPA and DEP, a DEP SSO notification form. The report includes any updated information as well as planned actions to either further investigate the SSO location or remedial actions taken. All SSO locations both BWSC caused and private caused are documented and tracked in the SSO database via the SSO IPAD application.

In 2019, the Commission responded to, investigated, and/or reported to EPA and DEP, a total of 203 SSO events. These included 85 reportable SSO events (46 public SSOs and 38 reportable private/building backups), and 118 non-reportable private/building backup events. There was one (1) dry weather combined sewer overflow during 2019. Details regarding SSOs addressed by the Commission are provided in the Commission's semi-annual Consent Decree Compliance Reports. Information regarding SSOs and maps showing the locations of recent SSO events are also provided on the Commission's website.

### **3.3 ILLEGAL DUMPING AND EMERGENCY SPILL RESPONSE**

The Commission's Sewer Use Regulations prohibit the dumping of any material into a catch basin, including any solid waste, construction debris, paint or painting product, antifreeze, hazardous waste, oil, gasoline, grease and all other automotive and petroleum products, solvents and degreasers, drain cleaners, commercial and household cleaners, soap, detergent, ammonia, food and food waste, grass or yard waste, leaves, animal feces, dirt, sand, gravel or other pollutant. Illegal dumping to catch basins carries a fine of up to \$5,000 per day of violation under the Commission's Sewer Use Regulations.

Commission crews are available 24-hours a day to assist the Department of Environmental Protection, the Boston Fire Department and the U.S. Coast Guard in determining where a hazardous spill has entered or could potentially enter the Commission's wastewater or storm drainage systems. If the spill has entered either system, Commission personnel determine how far the contamination has traveled and whether there is the risk of an overflow to a waterway. The Commission also attempts to trace the spill upstream to locate and identify its source. When the source of the spill cannot be determined, the Commission pays for a licensed contractor to clean up the spill.

In 2019, the Commission responded to 32 reports of a potential spill, leak, or report of illicit dumping. Table 3-3 lists the incidences to which the Commission responded in 2018. No violation/enforcement notices were issued in 2019 relating to illegal dumping or spills.

### **3.4 DRAINAGE DISCHARGE PERMITS**

Article C, Section 5 of the Commission's Sewer Use Regulations describes the discharge prohibitions and restrictions applicable to the Commission's storm drainage system. Under the Sewer Use Regulations any discharge of wastewater or other waters not composed entirely of stormwater into a building storm drain or a Commission storm drain is prohibited, except as authorized by the regulations. Authorized discharges include discharges for which the owner has obtained both a Drainage Discharge Permit from the Commission and an NPDES Permit or NPDES Permit Exclusion from EPA, as well as such discharges as river or stream flow, rising groundwater, uncontaminated groundwater, waters from hydrant flushing, and other potable water sources associated with the maintenance of the water distribution system or firefighting, irrigation water, and street and pavement wash waters.

Discharges requiring a Drainage Discharge Permit include permanent subsurface drainage, non-contact cooling water, non-contact industrial process water, or waters associated with hydrological testing, groundwater treatment/remediation, and removal and installation of an underground storage tank. The Commission may deny or condition a Drainage Discharge Permit to prevent the discharge of contaminants to the storm drainage system. Failure to obtain a Drainage Discharge Permit from the Commission carries a fine of up to \$1,000 per day of violation under Sewer Use Regulations. In 2019, the Commission issued 21 Drainage Discharge Permits for discharges to storm drains.

The requirements for Drainage Discharge Permits are described in the Commission's Requirements for Site Plans, and developers and potential dischargers are informed of the requirements when they request a General Service Application for a building sewer or building storm drain connection. In addition, owners and developers are informed of the Drainage Discharge Permit requirements through comment letters submitted by the Commission to Massachusetts Environmental Policy Act (MEPA) Unit and the Boston Planning and Development Agency in response to Environmental Impact Reports.

### **3.5 DEVELOPMENT AND REDEVELOPMENT**

#### **a. Sewer Use Regulations and Site Plan Review**

The majority of the Commission's stormwater management controls are enforced through its Regulations Governing the Use of Sanitary and Combined Sewers and Storm Drains (the Sewer Use Regulations). The Sewer Use Regulations were adopted in 1983 and amended in 1989. They were amended again in 1998 to strengthen and clarify the requirements, particularly as they pertain to stormwater discharges. In 1998, the Commission also amended its Penalty Schedule by adding and increasing the fines for several Sewer Use Regulation violations.

The Commission requires that a General Service Application and a site plan be submitted for every new or reconstructed water, sewer, or storm drain service connection. The Commission's Requirements for Site Plans assist developers, builders, architects,

engineers, and others in preparing site plans that conform to the Commission's Sewer Use Regulations and to help them secure the necessary approvals from the Commission.

The site plan must be approved by the Commission's Chief Engineer before construction may begin, and it will not be approved unless it complies with the Commission's Requirements for Site Plans and Sewer Use Regulations. The site plan review provides an opportunity to review the components of the project and condition the approval on compliance with the Commission's Sewer Use Regulations, Requirements for Site Plans, and other requirements. The Commission's Requirements for Site Plans are updated as needed. In 2019, 660 site plans were approved by the Commission's Chief Engineer.

Requirements contained in the Sewer Use Regulations and Requirements for Site Plans relating to developments in Boston include the following:

*Filing Notices of Intent and Stormwater Pollution Prevention Plans*

The Commission's Requirements for Site Plans include provisions for stormwater management at Construction Sites (as defined in the Consent Decree). The Requirements for Site Plans specifically require construction site operators, where applicable, to file Notices of Intent with EPA for NPDES General Construction Permits, and they must submit to the Commission Stormwater Pollution Prevention Plans (SWPPP). Also, construction site operators, where applicable, are required to use and maintain appropriate structural and non-structural BMPs to minimize the discharge of pollutants from construction sites to the Commission's MS4. The Commission's Construction Site Inspection and Enforcement Program also requires regular updates regarding developers SWPPP activities.

*Drain Layers License:* Persons installing new building sewers and storm drains, or repairing or maintaining existing pipes must possess a Drain Layers License issued by the Commission. To obtain a Drain Layers License, persons must pass a written test given by the Commission. Test questions are typically drawn from the requirements provided in the Commission's Sewer Use Regulations, including those pertaining to illegal sanitary connections to storm drains, non-stormwater discharges, requirements for new construction and catch basin dumping. Drain Layers Licenses are renewed annually. The Drain Layers Licensing requirement provides the opportunity to educate drain layers in Boston as to the Commission's rules and regulations, including those pertaining to stormwater. Fourteen (14) new Drain Layers Licenses were issued in 2019, and 411 were renewed.

*Inspections of New Connections:* Connection of a building sewer to a storm drain is prohibited under the Commission's Sewer Use Regulations and carries a fine of up to \$5,000 per day of violation. To ensure proper connection, the Commission requires that all new, repaired or modified service connections be inspected by a Commission inspector before the services are covered over by the contractor. Failure to have the connection inspected before covering it over carries a fine of up to \$750 per day under the Commission's Sewer Use Regulations.

As an added measure, new sewer connections must be dye tested by the Commission once construction is completed. Failure to have a new sewer connection dye tested carries a fine of up to \$500 per day. The Commission may require that a repaired or modified service connection be dye tested. In 2019, the Commission performed 499 GSA related dye tests.

*On-site Retention of Stormwater:* Under the Commission's Site Plan Requirements and Sewer Use Regulations, developers of new projects are required to evaluate the feasibility of retaining stormwater on-site. On-site retainage of stormwater is required whenever site conditions permit as determined by the Commission. On-site retention of stormwater serves to limit peak discharge rates, recharge groundwater, and remove 80 percent of total suspended solids in the flow to the extent feasible. This requirement is consistent with the Department of Environmental Protection's Stormwater Management Policy which establishes standards for stormwater management for development, and the Commission's Stormwater BMP Guidance document.

In 2019, the Commission approved installations of 275 dry wells or other type of infiltration device. Table 3-4 provides the addresses of the devices approved in 2019.

*Controls for New Parking Lots:* In order to prevent oil, grease and sediments from discharging to open waterways, the Commission may require developers to install particle separators on newly constructed storm drains that serve large outdoor parking areas. The Commission may require particle separators on existing storm drains from existing outdoor parking areas, where appropriate. This requirement has been in place since 1992.

Parking lot particle separators are typically located on private property; therefore, their maintenance is the responsibility of the property owner. Design criteria for particle separators are set forth in the Commission's *Guidelines for Developers for the Installation, Operation and Maintenance of Grit and Oil Separators*, a copy of which is included in the Commission's Requirements for Site Plans.

In 2019, the Commission approved installation of 24 particle separators. Table 3-5 provides the addresses of the devices approved in 2019.

*Drainage Discharge Permits:* The Commission requires a Drainage Discharge Permit for all non-stormwater discharges to its drainage system, including construction site dewatering, permanent subsurface drainage, non-contact cooling water, non-contact industrial process water, and waters associated with hydrological testing, groundwater treatment/remediation, and removal and installation of an underground storage tank. The Commission may deny or condition a dewatering permit to prevent contaminated drainage from entering the sewer or drainage system. Failure to obtain a Drainage Discharge Permit carries a fine of up to \$1,000 a day under the Commission's Sewer Use Regulations. In 2019, the Commission issued 21 Drainage Discharge Permits for discharges to storm drains.

*Infiltration/Inflow Control:* Newly constructed and substantially renovated buildings must be constructed so as to minimize inflow and infiltration to the Commission’s wastewater system. Stormwater, including roof runoff, must be kept separate from sanitary sewage at all times, and the connection of a building storm drain to a sanitary sewer is prohibited.

The Commission has a National Pollutant Discharge Elimination System (NPDES) Permit for its combined sewer overflows and is subject to the regulations [314 CMR 12.00, section 12.04(2)(d)]. The regulations require developers installing new sewer connections with design flows exceeding 15,000 gpd to mitigate the impacts of the development by removing four gallons of infiltration and inflow (I/I) for each new gallon of wastewater flow added. In this regard the Commission requires developers to develop consistent inflow reduction plans, or they can pay a fee to the Commission in lieu of implementing an I/I reduction project. The Commission uses the fees paid to implement capital programs for I/I reduction.

*Erosion and Sedimentation Control:* Under the Sewer Use Regulations, anyone seeking to construct, repair or modify a sewer or storm drain service connection to the Commission’s system, or to discharge under a Drainage Discharge Permit, may be required to prepare and implement an Erosion and Sedimentation Control Plan to prevent the introduction of sediments into the Commission’s sewers and storm drains.

*Fuel Dispensing Areas:* Under the Commission’s Requirements for Site Plans, stormwater runoff from fuel dispensing areas not covered by a canopy or other type of roof or enclosure must discharge through a particle separator or an approved oil trap before discharging to the Commission’s storm drainage system or receiving waters.

*Catch Basin Castings:* Commission contractors are required to install metal castings with a “Don’t Dump” message on sidewalks near new or reconstructed catch basins. City of Boston contractors also install the castings when new sidewalks are installed. The castings are provided to city hired contractors by the Commission at no cost. The Commission requires that private developers install permanent “Don’t Dump” catch basin castings next to any new catch basin installed as part of their projects. The developers, as well as other parties interested in obtaining the castings may purchase them from the Commission’s vendor. In 2019, the Commission issued 1,075 catch basin castings to contractors and other parties. Of those issued, 630 were for Boston Harbor, 310 for the Charles River and 135 were for the Neponset River.

**b. Development/Redevelopment Coordination with Boston Planning and Development Agency**

The Commission’s NPDES Stormwater Permit requires the Commission to “assist, coordinate, and cooperate” with city departments and agencies to ensure that development projects within Boston are conditioned on due consideration of stormwater quality impacts, that they conform to applicable state and local stormwater requirements,

and that negative impacts to stormwater quality during the time construction is underway are prevented.

The Commission coordinates with the Boston Planning and Development Agency (BPDA) regarding reviews of Environmental Impact Reports (EIRs) and Master Plans for large projects in Boston. Comments were submitted to the BPDA and/or the MEPA Unit for 70 projects in 2019. Copies of the letters were also sent to the Boston Environment Department and to the project proponents. The project proponents were also informed of the comments by the BRA and MEPA Unit via the Scoping Determinations issued in response to the EIRs and Master Plans for the projects. The Commission refers to these comment letters when proponents come forth with their site plans for the projects.

Letters for 11 projects contained comments regarding the Commission requirements for particle separators. Letters for 48 projects contained comments about the Commission's requirement for retaining stormwater on site. Letters for 81 projects contained comments regarding the requirement for Stormwater Management Plans. Forty-seven (47) letters contained comments regarding the requirement for 4 to 1 I/I reduction. If appropriate, the letters informed the proponent that a Drainage Discharge Permit may be required for any temporary or permanent non-stormwater discharge to the drainage system.

### **3.6 CONTROLS FOR CONSTRUCTION SITES**

In compliance with its NPDES Permit and the Consent Decree, the Commission oversees stormwater discharges from construction sites. The Commission submitted to EPA a Construction Site Inspection and Enforcement Program (CSIEP) plan in 2012. The program plan set forth procedures for conducting inspection of construction sites, procedures for inspecting and monitoring stormwater Best Management Practices used at construction sites, described the means by which contractors and developers would comply with the Commission's requirements, EPA and DEP regulations and the Clean Water Act, and how the Commission would enforce its requirements. Implementation of the CSIEP commenced in December 2012.

The Commission Requirements for Site Plans specifically require construction site operators to file Notices of Intent (NOIs) with EPA for NPDES General Construction Permits, and submit to the Commission Stormwater Pollution Prevention Plans (SWPPP). Also, construction site operators, where applicable, are required to use and maintain appropriate structural and non-structural BMPs to minimize the discharge of pollutants from construction sites to the Commission's MS4.

In accordance with a 2012 Memorandum of Agreement (MOU) between the Commission and the City's Inspectional Services Department (ISD), the Commission and ISD continue to coordinate building permit issuance and site plan approval, whereby the Commission will not approve any construction site over one (1) acre unless the discharge permit has been approved. Also, ISD and the Commission continue to notify building permit and site plan applicants of the requirements to obtain NPDES Stormwater Permits for construction sites from EPA. The Commission notifies project planners of the

requirement for NOIs and SWPPP when they submit site plans for projects and refers to the EPA's website to confirm whether NOIs have been submitted. The Commission also confirms that an NOI has been submitted and a SWPPP prepared when performing construction site visits. Information pertaining to the NOI and SWPPP requirements is included in the Commission's Requirements for Site Plans and are provided on the Commission's website.

In 2019, the Commission performed 198 site inspections of construction projects in the City of Boston. Two (2) violation notices were issued to operators of construction projects for violations pertaining to proper operation or implementation of construction site BMPs or erosion controls in 2019.

### **3.7 INDUSTRIAL FACILITY STORMWATER POLLUTION PREVENTION**

In compliance with its NPDES Permit and the Consent Decree, the Commission continues to implement the IFSP Program. Under the program the Commission identifies and inspects industrial facilities that discharge stormwater to the Commission's drainage system from municipal landfills, hazardous waste treatment, storage, disposal and recovery facilities, facilities that are subject to EPCRA Title III, Section 313, facilities that hold, or are required to hold NPDES stormwater permits, and other industrial or commercial discharger that the Commission determines is contributing a substantial pollutant load to its drainage system.

A consultant (Stantec), under the direction of the Commission, initially developed and implemented the IFSP program. In 2016, the Commission's Enforcement Department within the Operations Division assumed all duties with respect to inspections, enforcement and tracking of the IFSP program. The Commission also included fees for inspection of industrial dischargers into its 2016 Rate Schedule adopted in December 2015.

Under the program the Commission maintains an inventory of industrial facilities and a database to track relevant information, including enforcement and corrective actions. In February, 2013, there were 1,760 potential industrial facilities on the inventory list. During the course of the program the list of industrial facilities has been refined. Businesses that have moved out of the city, closed, or had the incorrect Standard Industrial Classification codes have been removed from the inventory and new facilities have been added as they were discovered through research of records and site visits. The inventory continues to be refined and updated as inspection reports are evaluated.

The active number of industrial facilities on the inventory list at the end of 2019 was 188. The Commission conducted a total of 150 inspections of industrial facilities in 2019. Summaries of inspections performed, and enforcement action taken are provided in the Commission's semi-annual Consent Decree compliance reports.

### **3.8 ROADWAYS**

As contained in its Enabling Act, the Commission's authority is limited to the operation and maintenance of the water distribution system and the wastewater collection and stormwater drainage systems which serve the City of Boston. The Commission's jurisdiction does not extend to the operation and maintenance of roadways. The Commission coordinates with officials from the agencies having the responsibility for the management of city roadways (Boston Public Works Department (PWD), Department of Conservation and Recreation (DCR), and Massachusetts Department of Transportation (MassDOT) as necessary to meet the requirements of the Commission's NPDES Stormwater Permit and the Consent Decree.

#### **a. City of Boston Snow Removal and Road Deicing Practices**

Snow plowing and road deicing of most of the public roads in Boston are the responsibility of the PWD. The PWD performs some of the snow removal operations on city streets and also has snow removal contracts. Snow is plowed to the side of the streets, but is not typically removed. A sodium chloride salt/sand mixture is used as a deicing agent, and application rates vary based on temperature and precipitation. Contractors use the City's supply of salt and sand during deicing operations. PWD officials have emphasized that public safety is their primary concern in determining how much sand and salt is applied to roadways and that weather conditions dictate application levels.

#### **b. City of Boston Street Cleaning**

Sweeping of city owned streets is conducted by the PWD or by its contractors. According to the PWD, the City has two programs for street sweeping: Posted Street Cleaning and Non-posted Street Cleaning. All non-posted streets are cleaned once a week or more if necessary. The Posted Sweeping Program is separated between a Night Program and a Daily Program. Sweepers also clean up before and after special events, such as parades, road races and neighborhood festivals.

The Night Sweeping Program includes an area from Massachusetts Avenue to the Waterfront that is swept on a nightly basis year-round. The Night Sweeping Program also covers the City's major arterial routes throughout the City, which are swept once a week at night year-round.

The Daily Street Sweeping Program typically operates from April 1<sup>st</sup> through November 30<sup>th</sup>. PWD recently expanded the Daily Street Sweeping Program in the Beacon Hill, North End and South End, from March 1<sup>st</sup> through December 31<sup>st</sup>. Weather and budget conditions permitting, the program may begin earlier in the season and extend later into the fall. Each side of a posted city street on the Daily Street Cleaning Program is cleaned once every other week. Additional street sweepers may be contracted and city sweepers run more frequently during the fall leaf season.



Parking bans (signs) posted on streets serve to educate the public and to have vehicles removed on certain days so sweeping can be thorough. The parking bans are enforced by the Boston Transportation Department. If cars are not removed on designated days, owners can be fined. The fine for not removing cars on the designated days is currently \$40, plus an additional \$90 for tow, storage and fees.

Contractors are responsible for providing their own sweeping equipment and for disposal of the collected material. PWD requires its contractors to use vacuum type sweepers that have dust control systems and do not require water to operate. Because these types of sweepers don't require water, they can be operated year-round, even in freezing conditions. The vacuum sweepers are believed to be more efficient at collecting smaller grit particles and dust. The new sweepers have saved the city thousands of gallons in water usage and are in compliance with DEP regulations.

The PWD also has several small broom sweepers used to sweep small alleys and sidewalks. These sweepers are typically assigned to the more densely developed parts of the City, such as Chinatown, Downtown Crossing, and the North End.

The composition of the material swept up varies seasonally with sand and sediments from winter deicing activities being most evident in the spring, leaf litter during the fall months, and light litter predominating during the summer.

### **c. DCR/DOT Street Sweeping, Snow Removal and Road Deicing Practices**

Roads maintained by the DCR such as the Soldiers Field Road, VFW Parkway, Storrow Drive, the Riverway and the Fenway are served primarily by separate storm drains which are owned and maintained by the DCR. DCR drainage systems in Boston are subject to the EPA's Stormwater Phase 2 program. DCR's stormwater management program includes "good housekeeping" measures, such as street sweeping of parkways, cleaning street drains and associated drainage systems and using control measures to protect sensitive receiving waters. Snow removal and deicing of DCR owned roads are managed jointly by the DCR and MassDOT. Snow removal and deicing of the Massachusetts Turnpike and the Central Artery and Tunnels is the responsibility of MassDOT.

## **3.9 PESTICIDE, HERBICIDE AND FERTILIZER APPLICATION**

In 2001, the Commission completed an evaluation of existing measures to reduce the discharge of pollutants related to the application of pesticides, herbicides and fertilizers (PHFs) applied by municipal or public agencies. The Commission also evaluated the necessity to implement controls to reduce the discharge of pollutants related to the application and distribution of PHFs by commercial and wholesale distributors and applicators. The Commission performed evaluations of existing programs and data in 2001, and reported the results in the 2001 Stormwater Management Report. From the results of the evaluation, it was concluded that additional monitoring and controls for PHF use by municipal agencies and their contractors and for commercial and wholesale

distributors was not warranted. Discussion of this analysis can be found in Section 3.6 of the 2009 Stormwater Management Report.

### **3.10 OTHER NON-STRUCTURAL STORMWATER MANAGEMENT MEASURES**

#### **a. Used Motor Oil and Paint Collection Centers**

To decrease the amount of illegally disposed of paint and motor oil, the City of Boston Public Works Department hosted three (3) Saturday drop-offs for used motor oil and surplus paint from 9 AM to 1 PM in 2019, at the following locations:

- June 15, Hyde Park, Public Works Yard, 58 Dana Avenue
- July 13, Brighton, Public Works Yard, 315 Western Avenue
- August 10, East Boston, Public Works Yard, 338 East Eagle Street

The events were promoted through the City of Boston's web site, local newspapers, and on signs posted in neighborhood business centers. The Commission's May/June issue of *Currents* promoted these events. A copy of the May/June *Currents* is provided in Appendix B and on the Commission's website.

#### **b. Household Hazardous Waste Collection**

To decrease the amount of illegally disposed of household hazardous waste, the City of Boston Public Works Department hosted four (4) Saturday drop-offs for household hazardous waste from 9 AM to 1 PM in 2019, at the following locations:

- June 29, West Roxbury Public Works Yard, 315 Gardner Street
- July 20, Central Public Works Facility, 400 Frontage Road
- August 17, West Roxbury Public Works Yard, 315 Gardner Street
- September 21, Central Public Works Facility, 400 Frontage Road

The events were promoted through the City's web site, local newspapers, and on signs posted in neighborhood business centers. The Commission's May/June issue of *Currents* included information promoting the City's hazardous waste drop-off days. A copy of the May/June issue of *Currents* is provided in Appendix B and on the Commission's website.

#### **c. Yard Waste/Composting**

In 2019, the Boston Public Works Department provided curbside collection of leaves and grass clippings in the residential sections of the city between May and December. Yard waste is collected by Public Works on the same day of week that weekly recycling is picked up. The Commission's March/April issue of *Currents* promoted the 2019 collection effort. A copy of the March/April *Currents* issue is provided in Appendix B and on the Commission's website.

**d. Pet Waste**

The City's dog fouling regulation, Section 16-1.10A of the Boston City Ordinances, also called the "pooper scooper law," requires dog owners to remove and properly dispose of the waste left by their dog. Penalties under the ordinance are \$50.00 for failure to produce a means of removal and \$50.00 for failure to pick up the waste. The Animal Control Unit in the Boston Property and Construction Management Department is responsible for enforcing the dog fouling ordinance. It is also responsible for following up on reports of vicious dogs, ensuring dogs are properly licensed and leashed, and other animal control issues.

To encourage dog owners to pick up after their pets and properly dispose of the waste the Commission's May/June and November/December issues of *Currents* included information regarding proper disposal of pet waste. Copies of the *Currents* issues are provided in Appendix B and on the Commission's website at:

<https://www.bwsc.org/environment-education/green-programs/good-neighbor-initiatives>

**e. Site Cleanliness Ordinance**

To address litter and rodent control problems, the City of Boston instituted a Site Cleanliness Ordinance in 2000. Under this ordinance, all businesses and large residential establishments using bulk dumpsters, including food and beverage establishments, automotive establishments, and bulk refuse container storage lots, must obtain a Site Cleanliness License from the Boston Inspectional Services Department (ISD). The application for a license must include a site plan showing the location of the dumpster, a plan and schedule for maintenance, a copy of the solid waste disposal contract, and a copy of a rodent/pest control contract. An additional license is required from the PWD if the dumpster is located on a public way.

Inspectional Services officials perform annual inspections of establishments with any license issued by the Department, including a Site Cleanliness license. The Site Cleanliness license will not be renewed unless and until the establishment's dumpster complies with the city ordinance.

Failure to comply with the Site Cleanliness Ordinance and obtain a Site Cleanliness license may result in fines of up to \$1,000 a day. Repeated violations may result in closure of the business.

**3.11 PUBLIC EDUCATION AND OUTREACH**

On May 17, 2013, the Commission submitted a Public Education and Outreach Program (PEOP) Plan to EPA for review and approval. The document described the Commission's plans for updating its public education and outreach efforts pursuant to Paragraphs 59, 60, 61 of the Consent Decree. The PEOP Plan was approved by EPA in a letter dated April 22, 2014. Various components of the Commission's PEOP Program as they pertain to stormwater are described in this section.

**a. Commission Web Site**

In 2019 the Commission launched a new website which can be found at [www.bwsc.org](http://www.bwsc.org). The Commission continues to use its website to highlight important environmental information and events, and to encourage good environmental stewardship. The Commission website includes information on pollution prevention, Scoop the Poop, and green infrastructure.

**b. Currents/Billing Inserts**

On a bi-monthly basis in the water and sewer bills, the Commission provides customers with an informational newsletter called *Currents*. Copies are also available from the Commission's website and at neighborhood site visits. The newsletter is aimed at providing customers with useful information concerning the Commission's programs and activities. Issues of *Currents* announce upcoming events such as the Commission's community site visits and city sponsored events such as household hazardous waste, and oil and paint collections. In addition, articles feature tips on pollution prevention, and proper disposal of used motor oil, antifreeze, household hazardous materials, yard debris, pet waste and other wastes.

The Commission also inserts messages about water and sewer management into bills and it posts the inserts on its website.

Issues of *Currents* and billing inserts in 2019 featured the following items:

- March/April 2019 *Currents*
  - Spring yard waste collection
  - How to use and safely dispose of pesticides and herbicides
- April 2019 Bill Insert
  - Don't Dump! Report Illegal Dumping
- May/June 2019 *Currents*
  - Motor Oil Drop Off and Paint Swap Shop Days
  - Household Hazardous Waste Drop-Off Days
- November/December 2019 *Currents*
  - Don't Forget to Scoop the Poop
  - Adopt a Catch Basin This Fall

**c. Bill Messages**

The Commission inserts messages onto its water/sewer bills to its customers to notify them of program and information that impacts the environment. The target audience is typically owners. The following messages were inserted on bills in 2019:

#### May

- Billing Message: A sanitary sewer overflow (SSO) is an unintentional discharge of untreated sewage into the environment or a property. If you encounter a sewer overflow, call BWSC's 24 Hour Emergency Service at 617-989-7000. Visit our SSO map at [www.bwsc.org](http://www.bwsc.org).

#### June

- Billing Message: To prevent pollution of local waterways, pick up after your dogs and report illegal dumping into storm drains. If you observe someone dumping into a storm drain, report it immediately to BWSC at 617-989-7000. For more information, visit us online at [www.bwsc.org](http://www.bwsc.org).

#### September

- Billing Message: Autumn can be a rainy season. To prevent flooding in your neighborhood, clear leaves, trash, and debris from the top of storm drains.

#### October

- Billing Message: Check your vehicle for leaks. Automotive fluids can enter the storm drain system, contaminate runoff, and pollute local waterways. Visit [www.bwsc.org](http://www.bwsc.org) for more information.

#### December

- Billing Message: Avoid disposing of grease, including cooking oil and meat scraps into your plumbing system through sink drains or toilets. These items can cause sewer backups. Cool It. Can It. Trash It. Find out more about FOG prevention at [www.bwsc.org](http://www.bwsc.org).

#### **d. Social Media**

Consistent with the Commission's Public Education and Outreach Program, the Commission's social media profiles have helped to distribute its environmental effort. The Commission's Facebook page had a total of 57 "likes" and the Twitter account gained 373 followers in 2019. The Commission's Instagram account had 223 new followers in 2019, creating a total of 689 followers. The Commission also engaged frequently with users on NextDoor, a hyper-local social media platform that allows for direct and proactive communication with residents in a particular neighborhood of the city.

In coordination with its social media profiles, the Commission also maintains a YouTube channel to host its public service announcements. The following public service announcement was viewed during 2019 on YouTube:

- Keep FOG out of the pipes. Fats, Oils and Grease causes sewer backups
- Scoop the Poop

- FOG: Fats, Oils and Grease
- Keep Wipes Out of Pipes
- Where Does the Water Go
- Downspout Disconnection
- Dudley Sewer Separation Project
- Stay Connected
- The Water Cycle
- Water Ways – BWSC Catch Basins
- Boston Tea Party PSA

**e. Educational Outreach**

The Commission’s Communications Department staff includes an Educational Coordinator that goes to a number of City of Boston public schools and camps to present information to students regarding water, sewer and stormwater. Communications staff also provide education presentations to adults in elderly housing development, as part of civic groups and neighborhood organizations. Presentations are provided in English, Spanish, Italian, Haitian Creole, Portuguese Creole, Chinese, and Cantonese as needed.

In 2019, the Commission worked with tenant’s associations, Boston Housing Authority, Boston Parks Department, The New England Aquarium as well as through information shares and seminars on storm drain decaling. Staff also provided educational activities at family friendly events such as the Boston Harbor Now and Save the Harbor-Save the Bay educational cruises hosted during the summer months.

The educational coordinator also participates and spoke on stormwater at the 7<sup>th</sup> Annual Mass Water Forum at MA State House.

The Commission made presentations to the following number of groups/adults/schools/students in 2019:

- January – 304 students and 56 adults at 5 different locations
- February – 236 students and 29 adults at 4 different locations
- March - 326 students and 24 adults at 5 different locations
- April – 474 students and 64 adults at 10 different locations
- May – 189 students and 23 adults at 5 different locations
- June – 29 students and 51 adults at 3 different locations
- July– 13 groups – 13 presentations, 72 adults; 388 students – 8 locations
- August – 5 groups- 5 presentations, 39 adults; 1 Parks Dept. week summer program, 35 students– 5 locations
- September – 9 groups, 9 presentations - 3 adults; 112 students, 2 locations

- October – 5 groups, 5 presentations, 20 adults; 63 students - 7 locations
- November -- 23 groups, 23 groups, 47 adults; 3 191 students – 8 locations
- December – 6 groups, 6 presentations 11 adults; 154 students – 3 locations

**f. Environmental Events**

In 2019 the Commission was active at public events and organized environmental functions. The Commission collaborated with our partners on awareness campaigns in effort to expand the reach of our messages in common. One example was participating in the 7<sup>th</sup> Annual Environmental Research Forum at the University of Massachusetts - Boston. The event raised awareness of the impact that access to safe, clean water affects our everyday activities and the efforts that individuals and organizations can engage in to prevent pollution of these waterways. The list below details the Commission’s participation in environmental events in 2019.

January

- Participated in the New England Water Environment Association Annual Meeting. Hosted an informational table and conducted presentation to students about our water source and our Don’t Dump and FOG environmental messages
- Represented the Commission at the Neponset River Watershed meeting to discuss collective efforts in addressing stormwater management

February

- Attended the New England Aquarium Volunteer Event regarding sharing the Don’t Dump message

March

- Led a presentation at the 7<sup>th</sup> Annual Mass Water Youth Event on the prevention of stormwater pollution. Distributed pamphlets and pet waste dispensers and other environmental materials to educate participants of the importance of water source and quality
- Participated as a judge at the Mass Water Resources Authority Annual Art Contest regarding our waterways and environmental messages

April

- Hosted table and shared information at the Boston Public School and the Center for STEM Education to 200 students and participants. Distributed environmental materials regarding water quality
- Hosted a table at Nuestra Comunidad and provided bi-lingual information to 250 residents who spoke English and Spanish

May

- Attended the Josiah Quincy School Wellness Event and shared information and materials to 400 residents regarding stormwater pollution and FOG
- Hosted a table in coordination with the City of Boston Parks Department Bubble Fest attended by over 2000 families

- Hosted table and distributed grease can lids, pet waste dispensers, and informational brochures the Boston Public Schools Wellness Summit.
- Participated in the New England Water Environment Association (NEWEA) held at the Deer Island

#### June

- Conducted interactive storm drain game with youth at Boston Housing Authority Unity Day. Distributed materials and shared information about our water system
- Shared our “Don’t Dump” and other environmental messages at a Family Day held with the Boston Parks Department in the Beacon Hill neighborhood.
- Participated in Field Day with the Russell Elementary School
- In collaboration with Boston Harbor Now – conducted presentation and shared information about our waterways to participants on a cruise of the Harbor Islands

#### July

- Worked closely with the Southwest Community Development Corporation’s Environmental Green Team with installing storm drain markers in the Hyde Park Neighborhood.
- Joined the Neponset River Watershed River Fest and Boston Harbor Now for their educational Harbor cruise – table with educational brochures, children’s coloring books, and dog waste dispensers.
- Participated in a Free Fun Friday event hosted by the Edward M. Kennedy Institute for the United States Senate where over 200 pet waste dispensers and FOG brochures were distributed
- Hosted an informational table with at the Whittier Street Family Housing located in Roxbury
- Collaborated with the Boston Parks Department to conduct a week-long environmental program focused on native shellfish and the importance of maintaining our waterways.
- Worked with the East Boston Harborkeepers Neighborhood Association to hold its Second Annual Marine and Maritime Festival. Led interactive participation through engaging children to build pipes showing the water distribution system. The team also distributed brochures with tips about the hazards of FOG, Reducing Chemical Use and a grease can lid.

#### August

- Week-long Environmental Summer Program with Parks Department
- New England Aquarium LIVE BLUE volunteers installed storm drain decals in downtown Boston
- Boston Centers for Youth & Families in Dorchester and Charlestown

#### September

- Participated at the Massachusetts Audubon Society, Boston Nature Center Festival and distributed over 100 pet waste dispensers and children’s educational books while engaging children with interactive games



- Hosted a table at the Mission Hill Health and Wellness Fair and shared educational information with families. Distributed 50 packets of information on FOG and other messages to participants
- Gave presentation and hosted a table at the Upham’s Corner Art and Health Street Festival – The focus of the educational information and interactive activities conducted highlighted stormwater pollution prevention education.

October

- Participated at the Urban Farm Greenhouse opening in the Readville neighborhood of Hyde Park. Staff worked with the Operations Targeted a mailing to 573 residents in that area regarding the hazards of improper disposal of pet waste. Staff distributed flyer and information at Mayor’s event.
- Participated at the Roslindale Parade (Fallon Field) festivities – table, activity for children and family
- Distributed pet waste dispensers at Doggone Halloween Costume Parade
- Hosted a table at the University of Massachusetts -Boston, School for the Environment, Urban Planning and Community Development Program
- Joined New England Water Works Association in “Imagine a Day Without Water” social media campaign

November

- Conducted a storm drain decal activity with the New England Aquarium Live Blue Volunteers

December

- Shared our “Don’t Dump” video message and hosted an informational table in collaboration with the “Sons of Liberty’s” Re-enactment of the 246th Anniversary of the Boston Tea Party -

**g. Catch Basin Stenciling and Castings**

Public awareness regarding the connection between catch basins and water quality is promoted through the Commission’s Catch Basin Stenciling Program. Through the Catch Basin Stenciling, volunteers are mobilized to stencil “Don’t Dump” messages next to catch basins. Upon request, the Commission coordinates stenciling projects and provides instruction, stencils, paint, rollers, brooms, informational leaflets, and safety equipment.

The Catch Basin Stenciling Program is promoted through the Commission’s web site and billing inserts and through press releases, community events and outreach meetings, presentations to public schools, and through local watershed associations. In 2019 the Commission continued to work with schools and groups within the City of Boston to mark curbs in their neighborhoods with stencils and decals.

Commission contractors are required to install metal castings with a “Don’t Dump” message on sidewalks near new or reconstructed catch basins. City of Boston contractors also install the castings when new sidewalks are installed. The castings are provided to city hired contractors by the Commission at no cost. The Commission requires that private developers install permanent “Don’t Dump” catch basin castings next to any new catch basin installed as part of their projects. The developers, as well as other parties

interested in obtaining the castings may purchase them from the Commission's vendor. In 2019 the Commission issued 1,075 catch basin castings to contractors and other parties. Of those issued, 630 were for Boston Harbor, 310 for the Charles River and 135 were for the Neponset River.

#### **h. Water Truck**

In 2019 the Commission continued use of its water truck serving over 80,000 people at 196 events where it continues to be a popular attraction at neighborhood organizations and city sponsored programs throughout the City of Boston. The motto for the water truck is "Fill, Drink, Repeat." The goal of the water truck is to motivate residents and visitors to drink and enjoy our water, but also refill their single-use bottles, to ultimately conserve plastic bottle usage in the city. Outreach staff at the truck also have an opportunity to promote its public education messages including FOG and other messages. The Commission displayed a sandwich board with environmental messages at all events featuring the water truck, reaching residents and visitors with pollution prevention messages. Two messages displayed were: 1) Don't Dump: Storm drains flow directly to Boston Harbor and our rivers; and 2) Scoop the Poop: Walking your dog? Take a plastic bag along to pick up pet waste.

### **3.12 SUPPORT FOR WATERSHED AND ENVIRONMENTAL AGENCIES AND ORGANIZATIONS**

Each year the Commission provides funding to Watershed Associations and Environmental Organizations to support their water quality monitoring programs and public education efforts. The Charles River Watershed Association, Neponset River Watershed Association and Mystic River Watershed Association each received \$10,000 from the Commission in 2019. Boston Harbor Now received \$25,000, The Friends of Fort Point Channel received \$5,000, and the Boston Ground Water Trust received \$25,000 from the Commission in 2019.

As needed and requested the Commission shares monitoring and rain gauge data, investigates reports of illegal connections or other non-stormwater discharges to waterways, participates in planning meetings, and provides technical advice.

## **4.0 STRUCTURAL BEST MANAGEMENT PRACTICES AND GREEN INFRASTRUCTURE**

Under the Consent Decree the Commission must implement structural Stormwater Best Management Practices and Green Infrastructure (BMP/GI) measures to reduce the discharge of pollutants from the drainage system. The BMP/GI measures and activities implemented by the Commission in 2019 are described in this section.

### **4.1 STORMWATER MODEL**

On December 28, 2012, as required under the Consent Decree, the BWSC submitted a Stormwater Model Report to EPA for review and approval. The Stormwater Model Report contained evaluations of sub-catchments, including the quantification of impervious surface area, directly connected impervious area (DCIA), population density, land use classifications, pollutant loading, and availability of suitable property for the implementation of stormwater BMP/GI. The Stormwater Model Report contained a discussion of potential BMP/GI available for possible implementation. It contained a discussion as to how the BMP/GI would assure consistency with applicable TMDL wasteload allocations and the extent to which the BMP/GI would prevent BWSC discharges from causing or contributing to a violation of water quality standards. The EPA approved the Commission's Stormwater Model Report on July 14, 2015.

### **4.2 STORMWATER BMP PROPOSAL AND PHASE I BMP IMPLEMENTATION PLAN**

On February 1, 2013, as required under the Consent Decree, the Commission submitted to EPA a Stormwater BMP Proposal and Guidance Document which contained a suite of generic BMPs for implementation. Also, on May 17, 2013, the Commission submitted to EPA, DEP and CLF a Phase I BMP Implementation Plan. The Phase I BMP Implementation Plan (BMP Plan) contained recommendations and schedules for the implementation of specific BMP/GI demonstration projects at Central Square (East Boston), Audubon Circle (Beacon Street/Park Drive area), and City Hall Plaza. The Phase I BMP Plan is available from the Commission's website at [www.bwsc.org](http://www.bwsc.org).

Construction of the Central Square project was completed in 2018. Construction of the Audubon Circle was completed in 2019. In 2019, the Commission continued to coordinate with the Boston Planning and Development Agency and other parties regarding installation of Green Infrastructure at City Hall Plaza. Final design of GI for City Hall Plaza is expected to be completed in 2020.

### **4.3 BMP RECOMMENDATIONS REPORT**

Under the Consent Decree the Commission was required to submit a BMP Recommendations Report within 20 months following EPA's approval of the Commission's Stormwater Model Report. The EPA approved the Commission's Stormwater Model Report on July 14, 2015. Fifteen months later on October 12, 2016, the Commission submitted the BMP Recommendations Report (Recommendations Report) to EPA. The Recommendations Report was approved by EPA in a letter dated October 24, 2018.

The Recommendations Report is a watershed-scale stormwater management plan that evaluates systematic implementation of BMPs to cost effectively achieve water quality goals. The Recommendations Report includes plans and schedules for implementing structural BMPs/GI in Boston aimed at reducing pollutant loadings in stormwater discharges sufficient to meet applicable total maximum daily loads. The recommended BMP plan includes the following main components:

- Through the Commission's site plan review and approval process continue to require new development and redevelopment projects to incorporate priority BMPs with high pollutant removal rates to treat 1-inch of runoff from the site prior to discharging into the Commission's MS4.
- Reduce pollutant loads from roads and other large impervious areas by partnering with entities such as MassDOT and the Department of Conservation and Recreation to incorporate BMPs into major transportation projects and highways.
- Identify large impervious areas for retrofit such as parking lots with areas greater than 10,000 square feet that present BMP opportunities.
- Collaborate with the Boston Transportation Department to expand Boston's Complete Streets Initiative and to further define green design guidelines and emphasize implementation of priority BMPs with high pollutant removal efficiency.
- Continue current illicit discharge detection and elimination (IDDE) program.
- Coordinate with neighboring towns to protect and/or restore streams' natural assimilation capability for water quality improvement.
- Retrofit BMPs in large open spaces on public lands, such as those owned by the Boston Public Schools and Boston Parks and Recreation Department.
- Expand public outreach efforts to promote or incentivize implementation of BMPs on residential properties.

The plan provided in the Recommendations Report outlines an adaptive management process that is carried out in three phases over a 30-year period. Each phase adapts to the knowledge obtained from the previous phase(s) via a comprehensive monitoring program and effectiveness evaluations of the completed implementation projects.

### **4.4 GREEN INFRASTRUCTURE FOR THREE TRIBUTARY AREAS**

In 2015 the Commission contracted with three separate consultants to develop conceptual designs and prepare cost estimates for installation of BMP/GI in three areas of Boston

tributary to the Charles River. The three areas are: Canterbury Brook (1,115 acres); Lower Stony Brook (1,020 acres); and Allston/North Beacon Street (556 acres). The knowledge and experience gained pursuant to these projects will help guide Commission as it develops more detailed designs and schedules for installation of BMP/GI citywide. The Canterbury Brook and Lower Stony Brook projects were completed in 2017. The Allston/North Beacon Street project was completed in 2018.

#### **4.5 DAISY FIELD GREEN INFRASTRUCTURE**

In 2015, the Commission contracted with the University of New Hampshire Stormwater Center to conduct a feasibility analysis and prepare a conceptual design for GI at Daisy Field in Jamaica Plain. Daisy Field is owned by the City of Boston Parks and Recreation Department. The upstream tributary area and Daisy Field discharge to Leverett Pond through the Commission's outfall 18GSDO233. The project will involve installation of a subsurface gravel filter under the baseball fields and a rain garden around the perimeter of the existing parking lot. The conceptual design was completed in 2016. Coordination with the Boston Parks and Recreation Department for the project continued through 2019. Final design is expected to be completed in 2020.

#### **4.6 GREEN INFRASTRUCTURE AT FIVE BOSTON PUBLIC SCHOOLS**

In 2015, the Commission contracted with a consultant to conduct site analyses, perform feasibility assessments, and design GI for five Boston public schools. Designs for GI at the five schools were completed in 2017. Construction of GI at the Washington Irving Middle School and the Rafael Hernandez K-8 School was completed in 2018. Bids for the construction of GI at the David A. Ellis Elementary, Jackson/Mann k-8 and Edward M. Kennedy Academy for Health Careers schools were solicited in 2018, and construction was completed at all three schools in 2019.

In 2018, the Commission worked with Boston Public Schools to develop stormwater related curriculum for 5<sup>th</sup> and 7<sup>th</sup> graders. The curriculum was completed in 2018 and piloted in two 7<sup>th</sup> grade classrooms. The curriculum was designed to use the GI constructed at the schools to demonstrate various GI measures and to educate the students regarding GI benefits.

#### **4.7 OTHER BMP/GI PROJECTS AND ON-CALL BMP/GI CONTRACT**

BWSC continues to work with other city agencies, including Boston Public Works Department (PWD), Boston Parks and Recreation Department, Boston Transportation Department, Boston Planning and Development Agency, and others, to design and construct BMP/GI projects at various locations throughout the city. In cooperation with the PWD a bioretention area at the intersection of South Street and Bussey Street was constructed in 2018. GI designs for Harrison Avenue, which include enhanced stormwater tree trenches, were finalized, bid and awarded in 2018, and construction was completed in 2019.

In 2017, the Commission executed a three-year contract with a consultant to provide on-call design services for BMP/GI projects. The on-call contract is used to design BMP/GI components to be incorporated into construction plans developed by other city agencies. Current collaborative projects include bump outs with rain gardens in Codman Square, a green streets project on Coolidge Road in North Allston, and bioretention features along New England Avenue. The design plans for Codman Square are nearing completion and PWD is expected to bid the project for construction in 2020. Preparation of design plans for Coolidge Road will continue in 2020. Design plans for GI on New England Avenue were completed in 2019, and construction is expected to commence in 2020.

The 2020-2022 CIP contains a \$1,051,000 BMP/GI line item to complete BMP/GI projects in collaboration with other city departments and/or private land owners in the City of Boston as they become available.

#### **4.8 BOSTON COMPLETE STREETS INITIATIVE**

The City of Boston has developed the Complete Streets Initiative, under which incorporation of green infrastructure into street designs is required. Green infrastructure includes greenscapes, such as trees, shrubs, grasses and other landscape plantings, as well as rain gardens and vegetative swales, infiltration basins, and paving materials and permeable surfaces. The Commission supports the City in this endeavor and coordinates with the City's Transportation Department as needed to implement the initiative. Information about the Complete Streets Initiative is available on the City's website at <http://bostoncompletestreets.org/>.

## **5.0 ASSESSMENT OF STRUCTURAL CONTROLS**

Under the terms of its NPDES Stormwater Permit and to comply with the Consent Decree, the Commission must evaluate the effectiveness of structural Best Management Practices and Green Infrastructure (BMP/GI). This section describes the Commission's efforts in 2019 in that regard.

### **5.1 ASSESSMENT OF STORMWATER BMP/GI**

The Central Square, Audubon Circle and Green Schools projects (described in Section 4) include water quality sampling and monitoring to assess the effectiveness of the BMPs/GI structures installed. The City Hall Plaza and Daisy Field projects (also described in Section 4) will include water quality sampling and monitoring to assess the effectiveness of the BMP/GI structures installed. Assessments of other BMP/GI projects will be performed as the structures are installed.

### **5.2 CATCH BASINS**

The Commission relies on catch basins as the primary means for preventing the transport of sediments, debris, and other contaminants to storm drains and receiving waters. In 2019, the Commission and contract resources performed 21,373 inspections/cleanings of catch basins. Catch basin cleanings are transported to the Commission's Material Handling Facility where they are temporarily stored to de-water until transferred for proper off-site disposal/reuse at an approved disposal facility. The amount of material removed from the Commission's catch basins in 2019 was approximately 2,865 tons, as recorded at the Commission's Material Handling Facility.

In 2001 through 2004, the Commission monitored sediment levels in several catch basins to evaluate their effectiveness in capturing solids. The results of the demonstration project (described in previous annual reports) indicated that a clean and well-maintained catch basin will remove between 10 to 33 percent of the total solids from stormwater flow through the basin. The data also suggested that a catch basin's ability to remove solids diminishes as the sump of the catch basin approaches half full. These findings are consistent with the conclusions of other similar studies reported in the literature.

Under the Commission's Catch Basin Inspection and Cleaning Program the sediment depths in one hundred catch basins were monitored between January 2002 and April 2003 to determine the factors that affect how quickly catch basins become full. Variables considered in selecting the catch basins to be monitored included slope, land use and the size of the tributary area, the type of road (highly traveled road vs. back road), and tree

cover. The selected catch basins were inspected four times each on a quarterly basis and the depth of sediment measured.

No statistically significant correlation between land use and accumulation rates was observed. Similarly, no correlation was observed based on slope, drainage area, or neighborhood characteristics. Some correlation with tree cover was observed, with the catch basins located in areas of denser tree coverage demonstrating as much as 50 percent higher accumulation rates as compared to basins with little or no tree cover. The data also exhibited a seasonal correlation, with the winter months demonstrating the highest accumulation rates.

Based on the findings of the Commission's catch basin effectiveness analyses, the Commission's catch basins should continue to effectively remove sediments from stormwater runoff, provided that sediment levels are not allowed to exceed one-half of the capacity of each catch basin's sump. In 2013, the Commission modified its catch basin and cleaning frequency consistent with its CMOM program.

### **5.3 PARTICLE SEPARATORS**

The Commission currently owns 16 particle separators. All sixteen (16) particle separators were inspected in 2019. Of those, three (3) were cleaned although the amount of material removed from two (2) separators was not recorded. The recorded amount of material removed from particle separators in 2019 was 1.7 cubic yards.

Information regarding the various particle separators, including their locations, receiving waters, and amount of material removed at each cleaning between 2005 and 2019 is summarized in Table 5-1. Since 2005 a total of 79.96 cubic yards of material has been removed from the Commission's particle separators. The cleaning data indicates that there are significant differences in the amount of material removed from each separator from year to year, although the reasons were unclear. There are many variables which could affect the amount of material retained in a separator, including frequency and intensity of rain and snow storms, land use, topography and size of the area tributary to the particle separator, season during which the separator was cleaned, and design factors.

The Commission typically uses a vector truck with a vacuum hose to clean its particle separators and this equipment is not conducive to accurate quantification of material removed. The amount of material removed is estimated by the operator and not measured. Each operator may estimate the amount of material removed differently than others. For these reasons it is difficult to establish which factor(s) determine how well a particle separator removes solids, or why one particle separator appears to capture more sediment than another.



## **6.0 WATER QUALITY MONITORING**

Monitoring the quality of flows within, and discharged from the storm drainage system enables the Commission to establish water quality under existing conditions, and to evaluate changes in quality of discharges over time. This Section describes the Commission current and past water quality monitoring programs.

### **6.1 OUTFALL MONITORING**

The Commission is required to annually perform wet and dry weather field screening of its storm drain outfalls, CSO outfalls and storm drain manholes that discharge (interconnect) with other MS4 drain systems. The field screening program is described in more details in Section 2. The results of the water quality sampling performed for the screening are presented Tables 2-1 and 2-3.

### **6.2 STORMWATER MONITORING AND MODEL VALIDATION**

As described in Section 4.1, On December 28, 2012, the Commission submitted a Stormwater Model Report to the EPA, DEP and CLF, as required under the Consent Decree. As part of the Stormwater Model development, the Commission and its contractor CDM Smith performed extensive water quality sampling of the storm drain system. The Stormwater Model was used to estimate flows and loads for 13 key parameters, including nutrients, bacteria and metals. It was used to analyze a set of alternatives that aim to reduce loading of pollutants from the drain system to receiving waters. That analysis was performed as a starting point for more in-depth studies into the feasibility and expected benefits of implementing stormwater Best Management Practices and Green Infrastructure (BMP/GI) measures in the City of Boston. The Stormwater Model was used to simulate the impacts of the alternatives on the loading of phosphorus and bacteria from select watersheds draining to different receiving waters.

In December 2019, the Commission solicited a Request for Proposals for a Stormwater Monitoring and Model Validation Project. The main purpose of the project is to develop the basis for a long-term stormwater quality monitoring program and determine whether stormwater quality improvements have resulted due to BMP/GI devices installed since 2012. The project will be designed to acquire the data necessary to:

- Obtain current water quality and flow data to update and validate the Stormwater Model and determine whether recalibration of the Stormwater Model is warranted.

- Obtain baseline water quality data upon which past and future water quality data can be compared and form the basis for a long-term water quality monitoring program.
- Determine whether, and to what extent, reductions in phosphorus and bacteria have actually occurred since 2012, due to installation of BMP/GI devices and elimination of illicit connections.
- Update the Stormwater Model to represent BMP/GI devices installed by the Commission and private developers since 2012. Develop a mechanism within the Stormwater Model to allow for regular updates to represent new BMP/GI devices installed.
- Prepare updated estimates of event mean concentrations and pollutant loadings in discharges from all outfalls and estimate annual cumulative pollutant loadings from the MS4 under current conditions.

It is anticipated that this sampling and metering project will extend over a two-year period and involve wet and dry weather water quality sampling. It is anticipated that the contract for the project will be awarded in early 2020.

### **6.3 URBAN RUNOFF WATER QUALITY PROJECT**

Implementation of the Commission’s Urban Runoff Water Quality Project concluded in 2017. The project included water quality sampling from manholes, outfalls, and gutters. Samples were analyzed for bacterial indicators, Human DNA markers, Pharmaceuticals and Personal Care Products, nutrients and other commonly sampled stormwater parameters. The main purposes of the project were to explore the use and effectiveness of alternative parameters and methods for determining whether bacteria or ammonia in storm drains or outfalls are from non-human sources and to aid the Commission in determining where and to what extent non-human sources of bacteria and phosphorus may be contributing to contamination in the storm drain system. Total cost for the Project was \$581,939.

The Project included:

- 35 unique sampling locations
- Sampling during 6 dry and 6 wet weather sampling events
- 52 weekly sampling events
- 378 samples collected in total
- Up to 25 different parameters analyzed resulting in 2,362 unique sampling results

Major findings of the Project were as follows:

- The Human Marker (HF183) was detected in all sub-catchments during dry weather regardless of IDDE program status.
- Fecal Indicator Bacteria (FIB) were correlated with human marker results during dry weather, confirming the utility of FIB for dry weather outfall prioritization and screening.

- FIB were not effective in detecting human waste during wet weather, when a mixture of waste types and other FIB sources are conveyed.
- Acetaminophen, atenolol, and caffeine were correlated with the human marker in dry weather outfall flows.
- IDDE test kit parameters (ammonia, surfactants, and residual chlorine) in outfall flows were not correlated with human marker results, and were prone to false positive and false negative signals.
- Sewage (as indicated by the HM) was a significant source of TMDL pollutants (FIB and phosphorous) in discharges from storm drains during dry weather, while non-sewage sources were more significant during wet weather.

Recommendations were:

- Consider discontinuing use of wet weather FIB sampling data for sub-catchment prioritization and use only dry weather FIB data for prioritizing sub-catchments for IDDE.
- Consider collecting multiple FIB dry weather samples from each outfall and geometrically average results for prioritization.

#### **6.4 OTHER PAST WATER QUALITY MONITORING PROJECTS**

In 2010, the Commission completed the Stormwater Quality Evaluation Program. Under the Stormwater Quality Evaluation Program, the same sites monitored during the first five years of the permit were monitored. The purpose of the monitoring was to evaluate how water quality had changed over time, and to try to determine pollutant sources. The Stormwater Quality Evaluation Program was completed near the end of 2010 and the final report was completed in May 2011 and previously reported.

Other stormwater quality monitoring and demonstration programs required under the Commission NPDES Permit were completed within the Permit's first five years. Descriptions of those programs were provided in previous Stormwater Management Reports.

## **7.0 WATER QUALITY IMPROVEMENTS**

The Commission's Stormwater Management Program is a compilation of programs, activities, and best management practices aimed at preventing the discharge of pollutants to storm drains and receiving waters. Water quality improvements attributable to the Commission's Stormwater Management Program are difficult to quantify, since many of the measures the program contains are non-structural and are aimed at controlling the introduction of pollutants to the storm drain system at their sources, as opposed to end-of-pipe treatment. Therefore, the Commission typically assesses water quality improvements based on measures that are quantifiable, such as how much wastewater is removed from the drainage system when an illegal connection is eliminated, and how much sediment is removed from stormwater runoff by structural devices.

### **7.1 STORMWATER MONITORING AND MODEL VALIDATION PROJECT**

As described in Section 4.1 and 6.2, the Commission used its Stormwater Model to analyze a set of alternatives aimed at reducing loading of pollutants from the drain system to receiving waters. The analysis was performed as a starting point for more in-depth studies into the feasibility and expected benefits of implementing Stormwater Best Management Practices and Green Infrastructure (BMP/GI) in the City of Boston.

Alternatives considered included expansion of existing programs and policies, new BMP/GI installations, street sweeping, baseline adjustments for illicit discharge removal, and combinations of various options. The alternatives modeling indicated that expansion of current programs and policies would measurably help the Commission comply with its NPDES Permit and meet the terms of the Total Maximum Daily Loads (TMDL) governing receiving waters. However, additional load reductions beyond what the existing programs and policies could achieve would be necessary.

The data and results of the Stormwater Model analysis were included in the Stormwater Model Report submitted to EPA for review and approval in December 2012. The EPA approved the Commission's Stormwater Model Report on July 14, 2015.

The 2012 Stormwater Model has the capability to evaluate pollutant loading reductions that result from the installation of stormwater BMP/GI. However, the 2012 Stormwater Model has not been updated to include pollutant reductions resulting from GI/LID installed since March 2012.

In December 2019, the Commission solicited a Request for Proposals for a Stormwater Monitoring and Model Validation Project. The main purpose of the project is to develop the basis for a long-term stormwater quality monitoring program and determine whether stormwater quality improvements have resulted due to Stormwater Best Management Practices and Green Infrastructure (BMP/GI) devices installed since 2012. The Stormwater Monitoring and Model Validation Project is described further in section 4.

Since 2015, the Commission has been maintaining a database of public and private BMPs/GI installed city-wide since March 2012. The database currently contains about 2,585 public and private BMP/GI features located throughout the city. Many of these BMP/GI project locations contain multiple GI/LID devices. Pollutant removal estimates are tabulated for each GI/LID location in the database as they are installed. Pollutant reduction estimates from the database will be incorporated into the Commission's Stormwater Model, which will enable the Commission to evaluate water quality benefits resulting from the installation of BMP/GI installed since 2012.

## **7.2 POLLUTANT LOADINGS AND REDUCTIONS**

In 2012, the Storm Drain Model was used to estimate mean annual loads for 13 water quality constituents, including nutrients, bacteria and metals. The annual loads were based on field data collected in 2011 and 2012. Table 7-1 presents the mean annual total loads for the Commission's 27 sub-drainage areas (referred to as "reporting areas"), as they were calculated in 2012.

The Storm Drain Model has been used as the basis to estimate reductions in bacteria and phosphorus resulting from the elimination of illicit discharges each year since 2013. Tables 7-2 through 7-6 present the annual load reductions for each of the 27 reporting areas described in the 2012 Stormwater Model Report. Table 7-2 presents the load reduction for each reporting area as December 31, 2013, with the load reduction encompassing illicit discharge removal activities throughout 2012 and 2013. Table 7-3 presents the load reduction for each reporting area as of December 31, 2014, with the load reduction encompassing illicit discharge removal activities throughout 2014. Table 7-4 presents the load reduction for each reporting area as of December 31, 2015, with the load reduction encompassing illicit discharge removal activities throughout 2015. Table 7-5 presents the load reduction for each reporting area as of December 31, 2016, with the load reduction encompassing illicit discharge removal activities throughout 2016. Table 7-6 presents the load reduction for each reporting area as of December 31, 2017, with the load reduction encompassing illicit discharge removal activities throughout 2017. Table 7-7 presents the phosphorus load reduction for each reporting area as of December 31, 2018, with the load reduction encompassing illicit discharge removal activities throughout 2018. Table 7-8 presents phosphorus load reduction for each reporting area as of December 31, 2019, with the load reduction encompassing illicit discharge removal activities throughout 2019. In these tables the total phosphorus values presented are the difference that can be attributed to illicit discharge removal in those years.

Table 7-9 presents the annual phosphorus loads by reporting area, based on conditions as of December 31, 2019. The numbers in Table 7-9 incorporate all phosphorus reductions due to illicit discharge removals in 2012 through 2019. It is noted that these tables do not incorporate reductions from illicit discharges removed from combined sewer areas downstream of regulators, as those areas are not included in the Commission's storm drain model.

### **7.3 ILLICIT DISCHARGE ELIMINATION**

The Commission believes that eliminating illicit discharges to storm drains is the most environmentally beneficial and cost-effective means of improving water quality. The 2012 Drain Model report demonstrated that removing illicit discharges has a significant impact on water quality, especially bacteria and phosphorus loadings.

In 2019, the Commission eliminated illicit discharges at 54 locations, thereby eliminating the discharge of an estimated 49,479 gallons per day (gpd) of wastewater to the drainage system and receiving waters. Between 1986, when the Commission first began correcting illicit discharges, and the end of 2019, the Commission removed 1,854 illicit discharges, thereby eliminating the discharge of an estimated total of 857,271 gallons of wastewater per day to the storm drainage system and receiving waters.

### **7.4 SEWER, DRAIN, CATCH BASIN AND PARTICLE SEPARATOR CLEANING**

Cleaning of catch basins and particle separators helps to maintain their sediment removal effectiveness, and cleaning of storm drains helps to maintain their hydraulic capacity. In 2019, the Commission and its contractors removed an estimated 2,865 tons of material from the Commission's catch basins and particle separators that might have otherwise ended up in local rivers and waterways.

### **7.5 BMPS ON PRIVATE PROPERTY**

Under the Commission's Sewer Use Regulations and Requirements for Site Plans there are several provisions requiring the installation of structural BMPs by private entities. These are described below.

#### **a. Privately Owned Retention/Infiltration Devices**

On-site retainage and infiltration of stormwater is required for new and redevelopment projects, whenever site conditions permit, as determined by the Commission. Project developers are required to include a feasibility assessment for on-site retention of stormwater with the site plan submitted to the Commission for the project. On-site retention of stormwater serves to limit peak discharge rates, recharge groundwater, and remove 80 percent of total suspended solids in the flow to the extent feasible. This requirement is consistent with the DEP's Stormwater Management Policy which establishes standards for stormwater management for development.

On-site retention devices are usually owned by the owner of the property where they are located; as such, the owner is responsible for cleaning and maintenance. Owners of on-site devices are not required to provide data regarding solids removal rates to the Commission. However, the devices are expected to remove solids consistent with their designs.

In 2019, the Commission approved 275 installations of dry wells or other type of infiltration devices. Table 3-4 provides the addresses of the devices approved in 2019. Since 2000, 3,359 private infiltration device installations have been approved by the Commission.

**b. Privately Owned Particle Separators**

In order to prevent oil, grease and sediments from discharging to open waterways, the Commission requires that developers install particle separators on all newly constructed storm drains that serve outdoor paved areas of 7,500 square feet in size or greater. The Commission ensures that particle separators on parking lots are included in the project design during site plan review. The Commission may require particle separators on existing storm drains from existing outdoor parking areas, where appropriate. This requirement has been in place since 1992.

Parking lot particle separators are usually owned by the owner of the property where they are located; as such the owner is responsible for their cleaning and maintenance. Owners of on-site particle separators are not required to provide data regarding solids removal rates to the Commission. However, the devices are expected to remove solids consistent with their designs.

In 2019, the Commission approved installation of 24 particle separators. The addresses of the devices approved in 2019 are listed on Table 3-5. Since 2000, 404 private particle separator installations have been approved by the Commission.

## **8.0 ENFORCEMENT**

The Commission pursues enforcement as necessary against violators of its illicit discharge regulations to remove illicit discharges and connections from the Commission's MS4 system. Enforcement commences as follows:

Once the Commission verifies that an illicit discharge must be corrected by the owner of a property, the Commission mails an initial letter of enforcement to the owner. The letter directs the owner to contact the Commission within a given time frame (typically 10 days), submit a plan for correction within a designated time period (typically 30 days), and make the correction within a given time frame (typically 60 days). If the owner fails to respond, and/or does not correct the illicit discharge within those time frames, a second notice is issued. The second notice imposes a deadline or schedule for compliance (typically 30 days), and notifies the owners of fine assessments after a certain date for failure to comply.

If the owner still fails to respond or does not correct the illicit connection within the timeline or schedule the Commission may issue a third notice. The third letter also imposes a deadline or schedule for compliance (typically 10 days), and notifies the owner of fine assessments after a certain date for failure to comply.

If the owner still fails to respond or does not correct the illicit connections within the timeline or schedule identified in the third notice the Commission may issue a "Fifteen Day Notice", pursuant to Chapter 6, Section 6.3 of the Commission Billing, Termination and Appeal regulations for "Termination of Service". Under the Fifteen Day Notice, the owner is given 15 days to correct the illicit connection and notify the Commission. If the owner fails to respond to the Fifteen Day Notice and/or fails to correct the illicit discharge, the Commission mails to the owner, and posts on the premises of the illicit connection, a "Final Notice and Demand". If the owner fails to correct the internal connection within ten (10) days after the posting of the Final Notice and Demand, the Commission may issue fines to the owner and terminate water service.

In 2019, the Commission sent a total of 108 enforcement letters to 42 properties regarding illicit connections and discharges. Of the 108 letters, 37 were regarding direct illicit connections, and 71 were for verified leaking sewer laterals.



In 2019, the Commission responded to 32 reports of a potential spill, leak, or report of illicit dumping. Table 3-3 lists the incidences to which the Commission responded in 2019. No violation/enforcement notices or fines were issued for spills, leaks or dumping in 2019.

In 2019, the Commission performed 198 site inspections of construction projects in the City of Boston. Two (2) violation notices were issued to operators of construction projects for violations pertaining to proper operation or implementation of construction site BMPs or erosion controls in 2019.

## **9.0 FINANCING STORMWATER MANAGEMENT**

The Commission's Enabling Act empowers the Commission to independently set rates and charges for the services that it provides. The Commission is required to establish fees, rates, rents, assessments, and other charges at a level and amount at least sufficient to pay the principal, premium, and interest on bonds issued by the Commission; to maintain its reserve funds as stipulated by its General Bond Resolution; to provide funds for paying the cost of all necessary repairs, replacements, and renewals of the water and sewer systems; and to pay any and all other amounts which the Commission, by law or by contract, is obligated to pay.

The Commission has sufficient funds and equipment to carry out the stormwater management programs and activities required under the NPDES Stormwater Permit. A major portion of the Commission's Stormwater Management Program and NPDES Stormwater Permit compliance activities are achieved using existing in-house staff and resources. Staffing and equipment are budgeted under the Commission's Current Expense Budget (CEB), which is updated annually. Larger sewer and drain projects are funded under the Commission's Capital Improvement Program Plan (CIP). The Commission's three-year CIP is updated annually.

### **9.1 CURRENT EXPENSE BUDGET**

The 2019 Current Expense Budget totaled \$386.1 million in revenues, which was offset by an equal amount of expenses. The amount represented a 4.9% increase as compared to the 2018 budget.

Of the total budgeted for 2019, \$77.1 million was for direct expenses. The remaining funds were budgeted for the assessment by the Massachusetts Water Resources Authority (\$236.6 million), Debt Service (\$52.9 million), Capital Improvements (\$16.6 million), Contractual Funding Obligations (\$2.7 million), and the Safe Drinking Water Act Assessment (\$0.2 million).

In general, stormwater programs and activities are managed in-house by the Commission's Engineering and Operations Divisions. The Engineering Division consists of the sub-divisions of Planning and Sustainability, Engineering Design and Construction. Approximately \$34.26 million or 44 percent of the Commission's 2019 direct expense budget was for the Engineering and Operations Divisions. Of the Engineering and Operations Division's direct expense budget, about \$19.9 million was

for sewer and storm drain related operations. Thus, sewer and drain related work represented about 26 percent of the Commission's total direct expense budget.

The Current Expense Budget for 2020 had not been finalized as of the writing of this report but is expected to be similar to the 2019 budget.

Stormwater related programs and activities funded under the Current Expense Budget include:

- Illegal connection investigations and corrections
- Illegal connection prevention
- Illegal dumping and spill response
- SSO and spill response and remediation
- CMOM implementation
- Planning, designing and constructing capital improvements
- Green infrastructure planning and design
- Industrial facility pollution prevention program management
- Construction site pollution prevention inspections
- Sewer and storm drain maintenance and general repair
- Catch basin and particle separator cleaning and maintenance
- Site plan review
- New service inspections and dye tests
- Issuing drain layers licenses
- Issuing Drainage Discharge Permits
- System evaluations and Master Planning
- Infiltration and inflow identification and reduction
- Reviewing Environmental Notification Forms and Environmental Impact Reports
- Public education
- Rain data collection
- Enforcement of the Commission's Rules and Regulations

## **9.2 CAPITAL EXPENDITURES**

The 2019-2021 CIP included \$100.7 million for sewer, drain and stormwater related projects, of which \$37.0 million was earmarked for 2019.

The Commission's 2020-2022 CIP identifies \$118.6 million for sewer, drain and stormwater related projects, of which \$47.8 million is earmarked for 2020. The complete 2020-2022 CIP plan is available on the Commission's website at [www.bwsc.org](http://www.bwsc.org).

These costs do not include the cost of CSO separation projects that are funded by the MWRA under the MWRA's CSO Control Plan. However, they do include the Commission's costs for water and sewer work relating to the MWRA's CSO Control Plan that is not eligible for MWRA funding.

Programmatic activities covered under the 20209-2022 CIP include the following:

- Design and construction of stormwater BMPs and Green Infrastructure at City Hall Plaza
- Evaluating implementing a stormwater fee
- Design and construction of a constructed wetland in Jamaica Plain
- Development of an inundation model to identify areas that may experience flooding during extreme weather events
- Design GI/Stormwater detention structures for low lying areas
- Evaluation of a stormwater storage facility on the Fort Point Channel
- Design of a stormwater retention facility in the Arnold Arboretum
- Coastal stormwater impact analysis
- CSO Public Notification Program
- Citywide Illegal Connection Investigation Program
- Elimination of illicit discharges to storm drains
- CCTV of sewers/drains for CMOM and illicit discharge investigations
- System-wide Infiltration and Inflow analysis of the sewer system
- Implement improvements to the Union Park Pumping Station
- Metering and modeling of the Dorchester Interceptor
- Installation of tide gates on storm drain outfalls
- Replace and rehabilitate sewers and drains citywide
- South Boston and East Boston sewer separation
- Sewer separation of flows along Massachusetts Avenue in Lower Roxbury/North Dorchester
- Sewer separation in the Dudley Square area
- Stormwater monitoring and stormwater model validation
- Downspout disconnect programs
- Projects relating to sewer separation projects that are not eligible for funding by the MWRA. These include renewal and replacement of existing sewers and drains in the areas being separated, rehabilitation or relay of water mains in the areas and associated paving costs.

## **10.0 PROGRAM MODIFICATIONS**

With the lodging of the Consent Decree in August 2012, the Commission has undertaken a number of remedial measures to improve and update its Stormwater Management Program, such as updating its IDDE methodology and practices, establishing a schedule for completing IDDE investigations of sub-catchments, enhanced SSO reporting and tracking, developing an SSO Emergency Response (ERP) plan, developing a Construction Site Inspection Program, developing an Industrial Facility Pollution Prevention Program, executing intergovernmental agreements, and other actions.

No formal modifications to the Commission's Stormwater Management Program were made in 2019 or are being requested at this time. Modifications made in prior years were described in previous annual Stormwater Management Reports.

## **APPENDIX A: TABLES**

**Table 1-1. BWSC Stormwater Outfalls**

OUTFALL NUMBER		LOCATION	NEIGHBORHOOD	SIZE (INCHES)	RECEIVING WATER
01E024	MAJOR	EASEMENT/LAKESIDE	HYDE PARK	15	SPRAGUE POND/NEPONSET RIVER
01F031	MAJOR	EASEMENT/MILLSTONE RD	HYDE PARK	48X24	NEPONSET RIVER
02E086 (02E005)	NON MAJOR	WEST MILTON STREET	HYDE PARK	24	UNAMED WETLANDS
02F085	NON MAJOR	LAWTON STREET	HYDE PARK	12	NEPONSET RIVER RESERVATION
02F093	NON MAJOR	EASEMENT/SIERRA RD	HYDE PARK	15	NEPONSET RIVER
02F120	MAJOR	EASEMENT/WOLCOTT CT/HYDE PARK AVE EXT	HYDE PARK	54	NEPONSET RIVER
03E185	MAJOR	NORTON ST	HYDE PARK	2-18	WETLANDS/NEPONSET RIVER
03E186	NON MAJOR	RIVER STREET	HYDE PARK	24	MILL POND/MOTHER BROOK
03E207	NON MAJOR	RIVER STREET	HYDE PARK	UNKNOWN	MILL POND/MOTHER BROOK
04E064	NON MAJOR	ALVARDO AVE/RIVER ST BRIDGE	HYDE PARK	12	MILL POND/MOTHER BROOK
04E069	MAJOR	KNIGHT ST DAM	HYDE PARK	36	MOTHER BROOK
04F001	NON MAJOR	RESERVATION ROAD	HYDE PARK		MOTHER BROOK
04F016	NON MAJOR	EASEMENT RIVER ST	HYDE PARK	30	MOTHER BROOK/NEPONSET RIVER
04F118	NON MAJOR	MASON STREET EXT.	HYDE PARK	18	NEPONSET RIVER
04F119	MAJOR	EASEMENT/HYDE PARK AVE/RESERVATION RD	HYDE PARK	24	NEPONSET RIVER
04F189	MAJOR	RESERVATION RD	HYDE PARK	36	MOTHER BROOK/NEPONSET RIVER
04F203	NON MAJOR	GLENWOOD AVE	HYDE PARK	28	NEPONSET RIVER
04F204	MAJOR	TRUMAN HWY/CHITTICK ST	HYDE PARK	36	NEPONSET RIVER
05C110	MAJOR	EASEMENT/PLEASANTDALE ST EXT	WEST ROXBURY	60	CHARLES RIVER
05E180	NON MAJOR	GEORGETOWN DRIVE	HYDE PARK	12	NONE SHOWN/CHARLES RIVER
05E181	NON MAJOR	GEORGETOWN DRIVE	HYDE PARK	12	NONE SHOWN/CHARLES RIVER
05E182	NON MAJOR	DEDHAM STREET	HYDE PARK	21	UNNAMED STREAM/CHARLES RIVER
05E183	NON MAJOR	GEORGETOWN PLACE/DEDHAM ST	HYDE PARK	12	UNNAMED STREAM
05E184	NON MAJOR	TURTLE POND PARKWAY	HYDE PARK	21	UNAMED WETLANDS
05F117	MAJOR	EASEMENT/TRUMAN HWY/WILLIAMS AVE	HYDE PARK	33	NEPONSET RIVER
05F244	NON MAJOR	HYDE PARK AVE BRIDGE	HYDE PARK	20	MOTHER BROOK/NEPONSET RIVER
05F245	NON MAJOR	HYDE PARK AVE	HYDE PARK	33	MOTHER BROOK/NEPONSET RIVER
05F253	MAJOR	EASEMENT/BUSINESS ST, NEAR BUSINESS TER	HYDE PARK	48X24	MOTHER BROOK/NEPONSET RIVER
05F254	NON MAJOR	DANA AVENUE	HYDE PARK	12	NEPONSET RIVER
05G112	MAJOR	EASEMENT/RR ROW/WATER ST EXT	HYDE PARK	30	NEPONSET RIVER
05G115	MAJOR	FAIRMOUNT AVE BRIDGE (NORTH BANK)	HYDE PARK	24	NEPONSET RIVER
05G116	NON MAJOR	FAIRMOUNT AVE BRIDGE (SOUTH BANK)	HYDE PARK	24	NEPONSET RIVER
05G116A	NON MAJOR	WARREN AVENUE	HYDE PARK	24	NEPONSET RIVER
06D057	NON MAJOR	CEDAR CREST CIRCLE	WEST ROXBURY	21	CHARLES RIVER
06D083	NON MAJOR	MARGARETTA DRIVE	WEST ROXBURY	15	WETLANDS/CHARLES RIVER
06D084	NON MAJOR	EASEMENT/MARGARETTA DRIVE	WEST ROXBURY	12	WETLANDS/CHARLES RIVER
06D085	NON MAJOR	GEORGETOWN DRIVE	WEST ROXBURY	12	WETLANDS/CHARLES RIVER
06D086	NON MAJOR	GEORGETOWN DRIVE	WEST ROXBURY	10	WETLANDS/CHARLES RIVER
06D091	NON MAJOR	GEORGETOWN DRIVE	WEST ROXBURY	10	WETLANDS/CHARLES RIVER
06D184	NON MAJOR	GEORGETOWN DRIVE	WEST ROXBURY	18	WETLANDS/CHARLES RIVER
06D187	MAJOR	EASEMENT/GROVE ST	WEST ROXBURY	36	BROOK GROVE ST CEMETERY
06F233	NON MAJOR	MOUNT ASH ROAD	HYDE PARK	UNKNOWN	WETLAND - STONY BROOK RESERVATION
06G108	MAJOR	EASEMENT/WEST OF WOOD AVE EXT	HYDE PARK	69	NEPONSET RIVER
06G109	MAJOR	RIVER TER EXT, NEAR ROSA ST	HYDE PARK	48	NEPONSET RIVER
06G110	MAJOR	EASEMENT/WEST STREET EXT	HYDE PARK	30	NEPONSET RIVER
06G111	NON MAJOR	EASEMENT/VOSE ST EXT., TRUMAN HWY	HYDE PARK	24	NEPONSET RIVER
06G165	NON MAJOR	TRUMAN HWY/METROPOLITAN AVE	HYDE PARK	10	NEPONSET RIVER
06G166	MAJOR	ABOUT 30' FROM GUARDRAIL NORTH SIDE OF TRUMAN HWY NEAR MILTON	HYDE PARK	36X36	NEPONSET RIVER
06H106	NON MAJOR	OSCEOLA STREET	HYDE PARK	24	NEPONSET RIVER
06H107	NON MAJOR	EASEMENT/BELNEL RD	HYDE PARK	24	NEPONSET RIVER
07C006	MAJOR	EASEMENT/VFW PARKWAY/BELLE AVE	WEST ROXBURY	126X126	CHARLES RIVER
07H105	MAJOR	EASEMENT/EDGEWATER/S RIVER ST	NEPONSET/MATTAPAN	102X72	NEPONSET RIVER
07H285	MAJOR	BLUE HILL AVE	NEPONSET/MATTAPAN	106X63	NEPONSET RIVER
07H346	NON MAJOR	EDGEWATER DRIVE/HOLMFIELD AVE	HYDE PARK	18	NEPONSET RIVER
07H347	NON MAJOR	EDGEWATER DRIVE/BURMAH ROAD	NEPONSET/MATTAPAN	21	NEPONSET RIVER
07H348	NON MAJOR	EDGEWATER DRIVE/TOPALIAN STREET	NEPONSET/MATTAPAN	24	NEPONSET RIVER
08B122	MAJOR	EASEMENT/NORTH OF SPRING ST.	WEST ROXBURY	30	CHARLES RIVER
08B126	NON MAJOR	SPRING STREET EXTENDED	WEST ROXBURY	30	CHARLES RIVER
08C025	MAJOR	WEDGEMERE ROAD	WEST ROXBURY	24	CHARLES RIVER
08C026	NON MAJOR	WEDGEMERE ROAD	WEST ROXBURY	24	CHARLES RIVER
08E031	NON MAJOR	TURTLE POND PARKWAY	WEST ROXBURY	18	TURTLE POND
08E033	NON MAJOR	TURTLE POND PARKWAY	WEST ROXBURY	UNKNOWN	TURTLE POND
08E035	NON MAJOR	WASHINGTON STREET	WEST ROXBURY	15	TURTLE POND
08F001	NON MAJOR	SHERRIN STREET	HYDE PARK	24	WETLANDS/CHARLES RIVER
08I153	NON MAJOR	DUXBURY ROAD	NEPONSET/MATTAPAN	15	NEPONSET RIVER
08I154	NON MAJOR	EASEMENT/RIVER ST/GLADESIDE AVE	NEPONSET/MATTAPAN	18	NEPONSET RIVER
08I155	NON MAJOR	EASEMENT/RIVER ST/MAMELON CIR	NEPONSET/MATTAPAN	24	NEPONSET RIVER
08I156	NON MAJOR	EASEMENT/RIVER ST/MAMELON CIR	NEPONSET/MATTAPAN	24	NEPONSET RIVER
08I158	NON MAJOR	EASEMENT/RIVER ST/FREMONT ST	NEPONSET/MATTAPAN	18	NEPONSET RIVER
08I207	NON MAJOR	MEADOWBANK AVE EXT	NEPONSET/MATTAPAN	15	NEPONSET RIVER

**Table 1-1. BWSC Stormwater Outfalls**

OUTFALL NUMBER		LOCATION	NEIGHBORHOOD	SIZE (INCHES)	RECEIVING WATER
08I209	NON MAJOR	MEADOWBANK AVE EXT	NEPONSET/MATTAPAN	12	NEPONSET RIVER
08J041	NON MAJOR	RIVER STREET	DORCHESTER	18	NEPONSET RIVER
08J102	NON MAJOR	ADAMS STREET	DORCHESTER	15X15	NEPONSET RIVER
08J103	NON MAJOR	EASEMENT/CENTRAL AVE BRIDGE	DORCHESTER	30	NEPONSET RIVER
08J49/50	MAJOR	DESMOND RD	DORCHESTER	2-18&24	NEPONSET RIVER
08K049	NON MAJOR	BEARSE AVENUE	DORCHESTER	12	NEPONSET RIVER
09B049	MAJOR	EASEMENT/RIVERMOOR ST	WEST ROXBURY	30	COW ISLAND POND/CHARLES RIVER
09E229	NON MAJOR	GRANDVIEW STREET	WEST ROXBURY	12	NONE SHOWN
09E243	NON MAJOR	BLUE LEDGE TR/EASEMENT	WEST ROXBURY	30	UNNAMED STREAM
09K016	NON MAJOR	EASEMENT/BEARSE AVE EXT	DORCHESTER	15	NEPONSET RIVER
09K100	MAJOR	EASEMENT/MELLISH RD	DORCHESTER	34X24	NEPONSET RIVER
09K101	NON MAJOR	EASEMENT/HUNTOON ST EXT	DORCHESTER	24	NEPONSET RIVER
09L095	MAJOR	GRANITE AVENUE	DORCHESTER	36X48	NEPONSET RIVER
10B015	MAJOR	EASEMENT/CHARLES RIVER ROAD	WEST ROXBURY	21	COW ISLAND POND/CHARLES RIVER
10L094	MAJOR	EASEMENT/GALLIVAN BLVD	DORCHESTER	74X93	NEPONSET RIVER VIA DAVENPORT BROOK
10L096	MAJOR	HILLTOP & LEXONDALE STS	DORCHESTER	36	NEPONSET RIVER
11B123	MAJOR	EASEMENT/EAST OF BAKER ST EXT.	WEST ROXBURY	72	BROOK FARM BROOK/CHARLES RIVER
11G344 (11G318@MH11G247)	NON MAJOR	CULVERT UNDER WALK HILL STREET	ROSLINDALE	24	CANTERBURY BROOK
11G344 (11G319@MH11G246)	NON MAJOR	CULVERT UNDER WALK HILL STREET	ROSLINDALE	18	CANTERBURY BROOK
11I577	MAJOR	HARVARD ST	NEPONSET/MATTAPAN	102X102	CANTERBURY BROOK
11M093	MAJOR	NEPONSET AVE AT NW END OF NEPONSET AVE BRIDGE	DORCHESTER	48	NEPONSET RIVER
12B010	NON MAJOR	BAKER STREET	WEST ROXBURY	15	BROOK FARM BROOK
12B014	NON MAJOR	BAKER STREET	WEST ROXBURY	12	BROOK FARM BROOK
12B033	NON MAJOR	EASEMENT/BAKER STREET	WEST ROXBURY	18	BROOK FARM BROOK
12B124	MAJOR	EASEMENT/LAGRANGE STREET	WEST ROXBURY	120	BROOK FARM BROOK
12F305	NON MAJOR	EASEMENT/ARBOROUGH ROAD	ROSLINDALE	12	UNAMED WETLANDS
12E418	NON MAJOR	EASEMENT/WALTER STREET (renumbered from 12F322)	ROSLINDALE	18	NONE SHOWN
12H001 (12H085@MH12H26)	NON MAJOR	MORTON STREET	ROSLINDALE	15	CANTERBURY BROOK
12H001 (12H087@MH12H27)	NON MAJOR	MORTON STREET	ROSLINDALE	15	CANTERBURY BROOK
12H092	MAJOR	AMERICAN LEGION HIGHWAY	WEST ROXBURY	24	CANTERBURY BROOK
12L092	MAJOR	PINE NECK CREEK/TENEAN ST WEST OF LAWLEY	DORCHESTER	72	NEPONSET RIVER
12M091	MAJOR	ERICSSON/WALNUT ST	NEPONSET/MATTAPAN	36	NEPONSET RIVER
13B011	NON MAJOR	LAGRANGE STREET	WEST ROXBURY	12	UNNAMED STREAM
13D077	MAJOR	WEST ROXBURY PKY/VFW PKY	WEST ROXBURY	60	BUSSEY BROOK
13D078	MAJOR	WEST ROXBURY PKY/VFW PKY	WEST ROXBURY	60	BUSSEY BROOK
13E174	NON MAJOR	EASEMENT/VFW PARKWAY	ROSLINDALE	24	BUSSEY BROOK
13E175	MAJOR	EASEMENT/VFW PKY	ROSLINDALE	108X86	BUSSEY BROOK
13E176	NON MAJOR	EASEMENT/WELD ST	ROSLINDALE	15	NONE SHOWN
13F011	NON MAJOR	ALLANDALE STREET	ROSLINDALE	24	BUSSEY BROOK
13F093 (13F012)	NON MAJOR	WALTER STREET	ROSLINDALE	15	BUSSEY BROOK
13F095	NON MAJOR	EASEMENT/BUSSEY STREET	ROSLINDALE	12	BUSSEY BROOK
13F096	NON MAJOR	SOUTH STREET	ROSLINDALE	12	BUSSEY BROOK
13F097	NON MAJOR	SOUTH STREET	ROSLINDALE	6	BUSSEY BROOK
13L090	MAJOR	VICTORY RD. 200 FT SOUTH	DORCHESTER	144X180	DORCHESTER BAY
14C009	MAJOR	EASEMENT/WESTGATE RD	WEST ROXBURY	36	UNNAMED WETLANDS
15F288	MAJOR	ARNOLD ARBORETUM/MURRAY CIRCLE	JAMAICA PLAIN	54	GOLDSMITH BROOK
15L088	MAJOR	FREEMPT WAY EXTENDED	DORCHESTER	2-78"	DORCHESTER BAY
15L089	MAJOR	FOX POINT RD EXTENDED	DORCHESTER	2-90X82"	DORCHESTER BAY
16L097	NON MAJOR	EASEMENT/OFF SAVIN HILL AVE	DORCHESTER	24	PATTEN'S COVE
16L122	MAJOR	MORRISSEY BLVD DRAIN	DORCHESTER	TWIN 9X8	DORCHESTER BAY
17F012	NON MAJOR	FRANCIS PARKMAN DRIVE	JAMAICA PLAIN	15	JAMAICA POND
17M033	MAJOR	HARBOR POINT PARK (RELOCATED MT VERNON ST DRAIN)	DORCHESTER	72	OLD HARBOR
18G233	NON MAJOR	X-COUNTRY BTN WILLOW POND RD AND JAMAICAWAY	JAMAICA PLAIN	18	MUDDY RIVER-LEVERETT POND
19G043	MAJOR	HUNTINGTON AVE	ROXBURY/MISSION HILL	45X45	MUDDY RIVER
19G194	MAJOR	SOUTH HUNTINGTON AVE	ROXBURY/MISSION HILL	24	MUDDY RIVER
19G199	NON MAJOR	JAMAICA WAY	ROXBURY/MISSION HILL	10	MUDDY RIVER
20G161	MAJOR	EASEMENT/BROOKLINE AVE	ROXBURY/MISSION HILL	36	MUDDY RIVER
20G163	NON MAJOR	EASEMENT/RIVERWAY	ROXBURY/MISSION HILL	20	MUDDY RIVER
20G164	NON MAJOR	BROOKLINE AVENUE	ROXBURY/MISSION HILL	36	MUDDY RIVER
21C212	NON MAJOR	EASEMENT/LAKE SHORE ROAD	ALLSTON/BRIGHTON	30	CHANDLER POND
21H001	MAJOR	BROOKLINE AVENUE	FENWAY/KENMORE		MUDDY RIVER
21H002	MAJOR	BROOKLINE AVENUE	FENWAY/KENMORE		MUDDY RIVER
21H048	NON MAJOR	EASEMENT/FENWAY/EVANS WAY	FENWAY/KENMORE	15	MUDDY RIVER
21K069	MAJOR	125' NORTH OF W.FOURTH STREET (RELOCATED BY CA/T)	BOSTON PROPER	48	FORT POINT CHANNEL
21M010	MAJOR	D STREET EXTENDED	SOUTH BOSTON	30	RESERVED CHANNEL
21M050	MAJOR	SUMMER STREET	SOUTH BOSTON	72	RESERVED CHANNEL
22C384	MAJOR	EASEMENT/LAKE SHORE RD	ALLSTON/BRIGHTON	36	CHANDLER POND
22L580	MAJOR	NECCO STREET EXTENDED	SOUTH BOSTON	54	FORT POINT CHANNEL
23G132	MAJOR	EASEMENT/MASS TURNPIKE/WEST OF BU BRIDGE	ALLSTON/BRIGHTON	60	CHARLES RIVER
23H040	NON MAJOR	RALEIGH STREET EXT	BOSTON PROPER	24	CHARLES RIVER



**Table 1-1. BWSC Stormwater Outfalls**

OUTFALL NUMBER		LOCATION	NEIGHBORHOOD	SIZE (INCHES)	RECEIVING WATER
23H042	MAJOR	DEERFIELD ST	BOSTON PROPER	116X120	CHARLES RIVER
23L015	NON MAJOR	NORTHERN AVE	SOUTH BOSTON	24	BOSTON INNER HARBOR
23L074	NON MAJOR	SUMMER ST BRIDGE	SOUTH BOSTON	15	FORT POINT CHANNEL
23L075	MAJOR	CONGRESS ST BRIDGE	SOUTH BOSTON	54	FORT POINT CHANNEL
23L164	MAJOR	CONGRESS ST BRIDGE	BOSTON PROPER	48	FORT POINT CHANNEL
23L195	MAJOR	NORTHERN AVE	SOUTH BOSTON	36	BOSTON INNER HARBOR
23L196	MAJOR	NEW NORTHERN AVE BRIDGE	SOUTH BOSTON	36	FORT POINT CHANNEL
23L202	MAJOR	NORTHERN AVE	SOUTH BOSTON	36	BOSTON INNER HARBOR
24C039	NON MAJOR	NEWTON ST	ALLSTON/BRIGHTON	21	CHARLES RIVER
24C174	NON MAJOR	EASEMENT/NEWTON STREET	ALLSTON/BRIGHTON	24	CHARLES RIVER
24D032	MAJOR	N OF BEACON ST, ABOUT 800' E OF PARSONS ST	ALLSTON/BRIGHTON	119X130	CHARLES RIVER
24D150	MAJOR	SOLDIERS FIELD PLACE	ALLSTON/BRIGHTON	36	CHARLES RIVER
24G034	MAJOR	SOLDIERS FIELD ROAD, S OF CAMBRIDGE ST	ALLSTON/BRIGHTON	36	CHARLES RIVER
24G035	MAJOR	SOLDIERS FIELD ROAD/BABCOCK ST	ALLSTON/BRIGHTON	90X84	CHARLES RIVER
24L022	MAJOR	COURTHOUSE WAY	SOUTH BOSTON	48	BOSTON HARBOR
24L233	MAJOR	ROWE'S WHARF/ATLANTIC AVE	BOSTON PROPER	42	BOSTON HARBOR
25D040	MAJOR	ABOUT 390' N OF INTERSECTION OF SOLDIERS FIELD & WESTERN AVE	ALLSTON/BRIGHTON	36	CHARLES RIVER
25E037	MAJOR	EASEMENT/TELFORD ST	ALLSTON/BRIGHTON	66	CHARLES RIVER
25G041	NON MAJOR	SOLDIERS FIELD RD/NORTH OF WESTERN AVE BRIDGE	ALLSTON/BRIGHTON	24	CHARLES RIVER
25L058	MAJOR	CHRISTOPHER COLUMBUS PARK-WATERFRONT	BOSTON PROPER	84	BOSTON INNER HARBOR
25L144	NON MAJOR	CLARK STREET	BOSTON PROPER	12	BOSTON INNER HARBOR
25M006	MAJOR	MARGINAL ST EXT	EAST BOSTON	36	BOSTON INNER HARBOR
25M007	MAJOR	MARGINAL ST EXT (NEAR ORLEANS ST)	EAST BOSTON	42	BOSTON INNER HARBOR
26F038	MAJOR	HARVARD ST EXT	ALLSTON/BRIGHTON	36	CHARLES RIVER
26G001	MAJOR	SOLDIERS FIELD ROAD/EAST OF HARVARD UNIVERSITY	ALLSTON/BRIGHTON	36	CHARLES RIVER
26J049	MAJOR	NASHUA STREET	BOSTON PROPER	60	CHARLES RIVER
26J052	NON MAJOR	MONSIGNOR O'BRIEN HWY	BOSTON PROPER	12	CHARLES RIVER
26J101 (replaced 26J055)	MAJOR	LEVERETT CIRCLE	BOSTON PROPER	36	BOSTON INNER HARBOR
26K035	MAJOR	BEVERLY STREET NEAR WARREN BRIDGE	BOSTON PROPER	48X72	CHARLES RIVER
26K050	MAJOR	NASHUA STREET	BOSTON PROPER	36	CHARLES RIVER
26K052	NON MAJOR	COMMERCIAL STREET AT CHARTER ST.	BOSTON PROPER	16X24	CHARLES RIVER
26K099	MAJOR	WARREN ST EXT (FORMERLY CHELSEA ST/JOINER EXT)	CHARLESTOWN	84	CHARLES RIVER
26K254	MAJOR	NORTH WASHINGTON ST BRIDGE	CHARLESTOWN	36	BOSTON HARBOR
26L106	MAJOR	NEAR BATTERY WHARF	BOSTON PROPER	24X24	BOSTON INNER HARBOR
26L070	MAJOR	HANOVER ST EXT	BOSTON PROPER	36	BOSTON INNER HARBOR
26L084	MAJOR	LEWIS STREET	EAST BOSTON	18	BOSTON INNER HARBOR
27J001	MAJOR	EASEMENT/INTERSTATE 93	CHARLESTOWN	72	MILLERS RIVER
27J044	MAJOR	PRISON POINT BRIDGE	CHARLESTOWN	15	MILLERS RIVER
27J096	MAJOR	EASEMENT/INTERSTATE 93	CHARLESTOWN	54	MILLERS RIVER
27L020/22	MAJOR	PIER 4 EASEMENT - NAVY YARD	CHARLESTOWN	2-20&24	BOSTON INNER HARBOR
28K010	MAJOR	OLD LANDING WAY EXT	CHARLESTOWN	42	LITTLE MYSTIC CHANNEL
28K061	MAJOR	EASEMENT/MEDFORD ST/OLD IRONSIDE	CHARLESTOWN	42	LITTLE MYSTIC CHANNEL
28K386	MAJOR	EASEMENT/TERMINAL ST	CHARLESTOWN	30	LITTLE MYSTIC CHANNEL
28L073	NON MAJOR	EASEMENT/5TH AVE - NAVY YARD	CHARLESTOWN	6	LITTLE MYSTIC CHANNEL
28L074/075/076	MAJOR	16TH ST/5TH AVE - NAVY YARD	CHARLESTOWN	3-30	LITTLE MYSTIC CHANNEL
28L077	NON MAJOR	EASEMENT/16TH ST - NAVY YARD	CHARLESTOWN	10	LITTLE MYSTIC CHANNEL
28N156	NON MAJOR	COLERIDGE ST EXT	EAST BOSTON	12	BOSTON HARBOR
28N207	MAJOR	MOORE ST	EAST BOSTON	54X57	BOSTON HARBOR
28O025	NON MAJOR	COLERIDGE/WADSWORTH ST. EXT	EAST BOSTON	30	BOSTON HARBOR
28P001	NON MAJOR	EASEMENT/NANCIA STREET	EAST BOSTON	12	BOSTON HARBOR
29J029	NON MAJOR	ALFORD STREET/RYAN PLGD	CHARLESTOWN	15	MYSTIC RIVER
29J129	MAJOR	ALFORD STREET SOUTH	CHARLESTOWN	15	MYSTIC RIVER
29J212	MAJOR	EASEMENT/MEDFORD ST(NEXT TO CSO 017)	CHARLESTOWN	72	MYSTIC RIVER
29M049	MAJOR	CONDOR STREET	EAST BOSTON	48	CHELSEA RIVER
29N015	MAJOR	CHELSEA STREET	EAST BOSTON	42X44.5	CHELSEA RIVER
29N135	MAJOR	ADDISON ST	EAST BOSTON	30X30	CHELSEA RIVER
29O001	MAJOR	BENNINGTON ST (CONSTITUTION BEACH)	EAST BOSTON	66	BOSTON HARBOR NEAR CONSTITUTION BEACH
29P005	NON MAJOR	SARATOGA STREET	EAST BOSTON	12	BOSTON HARBOR
29P044	NON MAJOR	SHAWSHEEN ST	EAST BOSTON	12	BOSTON HARBOR
30J006	MAJOR	EASEMENT/ALFORD ST/EVERETT	CHARLESTOWN	18	MYSTIC RIVER
30J019	MAJOR	ALFORD ST/NORTH	CHARLESTOWN	15	MYSTIC RIVER
30J030	MAJOR	EASEMENT/ARLINGTON AVE	CHARLESTOWN	42	MYSTIC RIVER
30P062	NON MAJOR	PALERMO AVE EXT	EAST BOSTON	12	WETLANDS
30P107	NON MAJOR	WALDEMAR AVENUE	EAST BOSTON	15	WETLANDS
31O004	NON MAJOR	EASEMENT/WALDEMAR AVE	EAST BOSTON	15	CHELSEA RIVER
31P084	NON MAJOR	EASEMENT/BENNINGTON ST	EAST BOSTON	30	BELLE ISLE INLET, REVERE

**Table 1-2. BWSC Interconnections**

INTERCONNECTION	INTERCONNECT- ING MANHOLE NUMBER	LOCATION	NEIGHBORHOOD	RECEIVING WATER
DCR 02F099	02FMH120	NEPONSET VALLEY PARKWAY	HYDE PARK	DCR DRAIN TO NEPONSET
DCR 03F159	03FMH056	WAKEFIELD AVENUE	HYDE PARK	DCR DRAIN TO NEPONSET
DCR 03F162	04FMH090	FARADAY STREET	HYDE PARK	DCR DRAIN TO NEPONSET
Dedham Drains	06CMH117	WASHINGTON ST NEAR MESHAKA ST	WEST ROXBURY	INTO DEDHAM
Dedham Drains	06DMH097	EDGEMERE RD. EXTENDED	WEST ROXBURY	INTO DEDHAM
DCR 11B028	11BMH049	VFW PKWY @ GLENHAM ST	WEST ROXBURY	DCR DRAIN TO CHARLES
DOT 12L296	12LMH374	CONLEY STREET	DORCHESTER	DCR DRAIN TO DORCHESTER BAY
DCR 13L137	12LMH304	TENEAN STREET	DORCHESTER	DCR DRAIN TO DORCHESTER BAY
Brookline Drains	14EMH036	PAYSON ROAD @ HACKENSACK ROAD	WEST ROXBURY	TO BROOKLINE DRAINS
Brookline Drains	20DMH019	PRENDERGAST AVE (BC/CHESTNUT HILL RESERVOIR)	BRIGHTON	TO BROOKLINE DRAINS
Brookline Drains	20DMH055	VILLAGE BROOK-STRATHMORE	BRIGHTON	BROOKLINE DRAINS TO VILLAGE BROOK
Brookline Drains	20DMH062	VILLAGE BROOK-ENGLEWOOD AT KILSYTH	BRIGHTON	BROOKLINE DRAINS TO VILLAGE BROOK
Brookline Drains	21DMH319	VILLAGE BROOK-KILSYTH	BRIGHTON	BROOKLINE DRAINS TO VILLAGE BROOK
Brookline Drains	21EMH064	TANNERY BROOK	BRIGHTON	BROOKLINE DRAINS TO TANNERY BROOK
Brookline Drains	21EMH086	VILLAGE BROOK-CUMMINGS	BRIGHTON	BROOKLINE DRAINS TO VILLAGE BROOK
Newton Drains	23BMH089	HUNNEWELL AVENUE	BRIGHTON	TO NEWTON DRAINS
DCR 23I019	23HMH081	BEACON STREET	BACK BAY	DCR DRAIN TO MUDDY RIVER
Somerville Drains	28IMH015	ROLAND STREET	CHARLESTOWN	TO SOMERVILLE DRAINS

**Table 1-3. Combined Sewer Overflow Outfalls**

<b>CSO OUTFALL NUMBER</b>	<b>STREET LOCATION</b>	<b>NEIGHBORHOOD</b>	<b>RECEIVING WATERS</b>
18LCSO086	Day Blvd @ Carson Beach Bath House	SOUTH BOSTON	BOSTON HARBOR/DORCHESTER BAY
19LCSO084	Day Blvd @ H St	SOUTH BOSTON	BOSTON HARBOR/DORCHESTER BAY
19LCSO085	Day Blvd @ Babe Ruth Park Dr	SOUTH BOSTON	BOSTON HARBOR/DORCHESTER BAY
19MCSO082	Day Blvd @ N St	SOUTH BOSTON	BOSTON HARBOR/DORCHESTER BAY
19MCSO083	Day BLVD @ N St	SOUTH BOSTON	BOSTON HARBOR/DORCHESTER BAY
19NCSO081	Day Blvd @ Farragut Rd	SOUTH BOSTON	BOSTON HARBOR/DORCHESTER BAY
21KCSO070	West 4th Street	SOUTH BOSTON	BOSTON HARBOR/FORT POINT CHANNEL
21LCSO076	Pappas Way	SOUTH BOSTON	BOSTON HARBOR/RESERVED CHANNEL
21MCSO078	East First Street	SOUTH BOSTON	BOSTON HARBOR/RESERVED CHANNEL
21MCSO079	Summer St	SOUTH BOSTON	BOSTON HARBOR/RESERVED CHANNEL
21NCSO080	Conley Marine Terminal	EAST BOSTON	BOSTON HARBOR/RESERVED CHANNEL
22KCSO065	25 Dorchester Ave	SOUTH BOSTON	BOSTON HARBOR/FORT POINT CHANNEL
22KCSO068	Fort Point Channel North of Broadway Bridge	CENTRAL	BOSTON HARBOR/FORT POINT CHANNEL
22KCSO072	Dorchester Avenue	SOUTH BOSTON	BOSTON HARBOR/FORT POINT CHANNEL
22LCSO073	1 Gillette Pk	SOUTH BOSTON	BOSTON HARBOR/FORT POINT CHANNEL
23LCSO062	Under Seaport Blvd Bridge	CENTRAL	BOSTON HARBOR/FORT POINT CHANNEL
23LCSO064	245 Summer St	CENTRAL	BOSTON HARBOR/FORT POINT CHANNEL
24LCSO060	Long Wharf/Aquarium	CENTRAL	BOSTON HARBOR/INNER HARBOR
24NCSO003	Harborside Drive near Hyatt	EAST BOSTON	BOSTON HARBOR/INNER HARBOR
25LCSO057	Eastern Ave	CENTRAL	BOSTON HARBOR/INNER HARBOR
25MCSO005	Sumner Street/Porzio Park	EAST BOSTON	BOSTON HARBOR/INNER HARBOR
25NCSO004	Maverick Street	EAST BOSTON	BOSTON HARBOR/INNER HARBOR
26LCSO009	Sumner St at New St	EAST BOSTON	BOSTON HARBOR/INNER HARBOR
27LCSO010	141 Border St	EAST BOSTON	BOSTON HARBOR/INNER HARBOR
28LCSO012	Border St at Middle School	EAST BOSTON	BOSTON HARBOR/INNER HARBOR
28LCSO019	Chelsea St at 16th St	CHARLESTOWN	BOSTON HARBOR/INNER HARBOR
29JCSO017	545 Medford St	CHARLESTOWN	MYSTIC RIVER
29MCSO013	Under Meridian St Bridge	EAST BOSTON	CHELSEA CREEK
29NCSO014	Chelsea St. at East Eagle	EAST BOSTON	CHELSEA CREEK
21HCSO046	The Fenway	FENWAY	CHARLES VIA MUDDY RIVER







TABLE 2.6. 2020 REVISED PRIORITY RANKING AND SCHEDULE FOR COMPLETION

Table with columns for 2012 Dry Weather, 2012 Wet Weather, 2013 Dry Weather, 2013 Wet Weather, 2014 Dry Weather, 2014 Wet Weather, 2015 Dry Weather, 2015 Wet Weather, 2016 Dry Weather, 2016 Wet Weather, 2017 Dry Weather, 2017 Wet Weather, 2018 Dry Weather, 2018 Wet Weather, 2019 Dry Weather, 2019 Wet Weather. Rows include project names like 'BOSTON ST/CLARK ST INTERCHANGE', 'CLARK ST STRENGTHENING', 'WATER MAINS REPLACEMENT', etc.

Legend for 2015 wet weather planning was identical based on 2014 dry weather existing data.  
Legend for 2016 wet weather planning was identical based on 2015 dry weather existing data.  
Legend for 2017 wet weather planning was identical based on 2016 dry weather existing data.  
Legend for 2018 wet weather planning was identical based on 2017 dry weather existing data.  
Legend for 2019 wet weather planning was identical based on 2018 dry weather existing data.

Table 2-7. Sub-Catchment Area Investigation Status by Manholes

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period
Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)
No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total # Storm Drain + Common Manholes	Total # Storm Drain + Common Manhole Inspections Performed <sup>2</sup>		Total # Storm Drain + Manholes Investigated/Completed <sup>f</sup>		% Investigated/Complete by Manholes	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>
06F233*	SDO	0	0	0	0	0	0%	100%
07H105	SDO	486	2	245	0	486	0%	100%
07H285	SDO	344	18	278	0	344	0%	100%
08B122	SDO	61	1	48	0	61	0%	100%
08J102	SDO	26	0	4	0	26	0%	100%
09K101	SDO	34	0	17	0	34	0%	100%
10B015	SDO	52	6	20	0	52	0%	100%
10L094	SDO	849	0	466	0	849	0%	100%
11I577	SDO	1354	7	792	0	1354	0%	100%
12F418 (aka 12E418)	SDO	20	1	8	0	20	0%	100%
13L090 (B)	SDO	982	6	438	0	982	0%	100%
15F288	SDO	200	0	102	0	200	0%	100%
16L097	SDO	23	0	9	0	23	0%	100%
16L122	SDO	254	0	94	0	254	0%	100%
17M033	SDO	145	5	11	0	145	0%	100%
19G043	SDO	80	0	78	0	80	0%	100%
19G194	SDO	58	2	35	0	58	0%	100%
20DMH19	Interconr	106	2	30	0	106	0%	100%
20DMH62	Interconr	15	2	13	0	15	0%	100%
20DNP140 (20DMH55)	Interconr	55	18	85	0	55	0%	100%
20G161	SDO	62	0	45	0	62	0%	100%
20G164*	SDO	0	0	0	0	0	0%	100%
21DMH319	Interconr	66	8	101	0	66	0%	100%
21EMH64	Interconr	83	2	53	0	83	0%	100%
21LCSO076DR	CSO	3	0	0	0	3	0%	100%
21MCSO079DR	CSO	1	0	0	0	1	0%	100%
22LCSO073DR	CSO	44	1	8	0	44	0%	100%
23H040	SDO	23	0	11	0	23	0%	100%
23H042	SDO	314	38	146	0	314	0%	100%
24D032	SDO	1037	0	698	0	1037	0%	100%
24G035	SDO	338	4	194	0	338	0%	100%
24L233	SDO	58	4	28	0	58	0%	100%
24LCSO060DR	CSO	58	0	9	0	58	0%	100%
24NCSO003DR	CSO	740	6	32	0	740	0%	100%
25E037	SDO	424	10	296	0	424	0%	100%
25LCSO057	CSO	14	2	2	0	14	0%	100%
26J055 (aka 26JSDO101)	SDO	20	0	4	0	20	0%	100%
26K035	SDO	48	0	0	0	48	0%	100%
27J001	SDO	140	1	59	0	140	0%	100%
27J096	SDO	191	0	1	0	191	0%	100%
29MCSO013DR	CSO	12	1	6	0	12	0%	100%
29N015	SDO	11	2	4	0	11	0%	100%
30J006	SDO	20	2	3	0	20	0%	100%
Stony Brook-Lower (21HCSO046)	CSO	521	1	7	0	521	0%	100%
Stony Brook-Middle (-SB areas)	CSO	1851	184	686	24	1851	1%	100%
01E024	SDO	12	0	7	0	12	0%	100%
01F031	SDO	30	0	5	0	30	0%	100%
02E086 (aka 02E005)	SDO	9	0	6	0	9	0%	100%
02F085	SDO	4	0	2	0	4	0%	100%
02F093	SDO	6	0	6	0	6	0%	100%



Table 2-7. Sub-Catchment Area Investigation Status by Manholes

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period
Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)
No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total # Storm Drain + Common Manholes	Total # Storm Drain + Common Manhole Inspections Performed <sup>2</sup>		Total # Storm Drain + Manholes Investigated/Completed <sup>5</sup>		% Investigated/Complete by Manholes	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>
02F120	SDO	39	0	22	0	39	0%	100%
2FMH120 (DCR 2FSDO99)	Interconr	11	0	2	0	11	0%	100%
03E185	SDO	61	0	41	0	61	0%	100%
03E186	SDO	13	0	6	0	13	0%	100%
3FMH56 (DCR 3FSDO159)	Interconr	27	0	17	0	27	0%	100%
04E064	SDO	3	0	3	0	3	0%	100%
04E069	SDO	41	0	18	0	41	0%	100%
04F016	SDO	17	0	4	0	17	0%	100%
04F118	SDO	9	0	5	0	9	0%	100%
04F119	SDO	15	0	2	0	15	0%	100%
04F189	SDO	31	0	12	0	31	0%	100%
04F204	SDO	74	0	151	0	74	0%	100%
4FMH90 (DCR 3FSDO162)	Interconr	20	0	20	0	20	0%	100%
05E182	SDO	13	0	7	0	13	0%	100%
05E183*	SDO	0	0	0	0	0	0%	100%
05E184 (aka 05E120)	SDO	79	0	31	0	79	0%	100%
05F117	SDO	52	0	34	0	52	0%	100%
05F244	SDO	25	0	5	0	25	0%	100%
05F245	SDO	28	0	10	0	28	0%	100%
05F253	SDO	43	0	14	0	43	0%	100%
05G112	SDO	27	0	27	0	27	0%	100%
05G115	SDO	17	0	4	0	17	0%	100%
05G116	SDO	25	0	6	0	25	0%	100%
05G116A	SDO	61	0	18	0	61	0%	100%
06C110 (aka 05C110)	SDO	55	0	13	0	55	0%	100%
06D057	SDO	12	0	6	0	12	0%	100%
06D085	SDO	2	0	4	0	2	0%	100%
06D091*	SDO	0	0	0	0	0	0%	100%
06D187	SDO	81	0	105	0	81	0%	100%
6DMH97	Interconr	189	0	47	0	189	0%	100%
06G108	SDO	189	0	157	0	189	0%	100%
06G109	SDO	31	0	19	0	31	0%	100%
06G110	SDO	46	0	32	0	46	0%	100%
06G111	SDO	17	0	14	0	17	0%	100%
06G165	SDO	6	0	9	0	6	0%	100%
06G166	SDO	15	0	12	0	15	0%	100%
06H106	SDO	15	0	5	0	15	0%	100%
06H107	SDO	17	0	17	0	17	0%	100%
07C006	SDO	495	0	360	0	495	0%	100%
07H346	SDO	5	0	2	0	5	0%	100%
07H347	SDO	5	0	1	0	5	0%	100%
07H348	SDO	10	0	6	0	10	0%	100%
08B126	SDO	22	0	7	0	22	0%	100%
08C025/026	SDO	22	0	1	0	22	0%	100%
08E031	SDO	65	0	30	0	65	0%	100%
08E035	SDO	3	0	0	0	3	0%	100%
08I153	SDO	4	0	3	0	4	0%	100%
08I154	SDO	38	0	16	0	38	0%	100%
08I155	SDO	3	0	1	0	3	0%	100%
08I156	SDO	42	0	32	0	42	0%	100%
08I158	SDO	16	0	2	0	16	0%	100%
08I207	SDO	10	0	10	0	10	0%	100%

Table 2-7. Sub-Catchment Area Investigation Status by Manholes

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period
Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)
No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total # Storm Drain + Common Manholes	Total # Storm Drain + Common Manhole Inspections Performed <sup>2</sup>		Total # Storm Drain + Manholes Investigated/Completed <sup>f</sup>		% Investigated/Complete by Manholes	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>
08I209	SDO	6	0	5	0	6	0%	100%
08J036/041	SDO	13	0	10	0	13	0%	100%
08J050/049	SDO	77	0	30	0	77	0%	100%
08J103	SDO	32	0	32	0	32	0%	100%
08K049	SDO	3	0	1	0	3	0%	100%
09E229	SDO	2	0	2	0	2	0%	100%
09K016	SDO	16	0	4	0	16	0%	100%
09K100	SDO	26	0	10	0	26	0%	100%
09L095	SDO	29	0	13	0	29	0%	100%
10L096	SDO	22	0	21	0	22	0%	100%
11B123	SDO	132	0	84	0	132	0%	100%
11BMH49 (DCR 11BSDO28)	Interconr	12	0	0	0	12	0%	100%
11G344	SDO	64	0	7	0	64	0%	100%
11M093	SDO	76	0	15	0	76	0%	100%
12B010*	SDO	0	0	0	0	0	0%	100%
12B014	SDO	4	0	4	0	4	0%	100%
12B124	SDO	497	0	298	0	497	0%	100%
12F305	SDO	13	0	4	0	13	0%	100%
12H085	SDO	17	0	0	0	17	0%	100%
12L092 (B)	SDO	163	0	33	0	163	0%	100%
12LMH304 (DCR 13LSDO137)	Interconr	12	0	7	0	12	0%	100%
12LMH374 (DCR 12LSDO296)	Interconr	38	0	17	0	38	0%	100%
12M091	SDO	10	0	10	0	10	0%	100%
13B011	SDO	4	0	0	0	4	0%	100%
13D077/078	SDO	169	0	152	0	169	0%	100%
13E174	SDO	74	0	69	0	74	0%	100%
13E175	SDO	22	0	6	0	22	0%	100%
13E176	SDO	5	0	9	0	5	0%	100%
13F011 (aka 13F185)	SDO	48	0	23	0	48	0%	100%
13F012 (aka 13F093)	SDO	9	0	1	0	9	0%	100%
14C009	SDO	4	0	7	0	4	0%	100%
14EMH36	Interconr	6	0	1	0	6	0%	100%
15L088 (B)	SDO	465	0	176	0	465	0%	100%
15L089 (B)	SDO	73	0	20	0	73	0%	100%
17F012	SDO	5	0	0	0	5	0%	100%
18G233	SDO	87	0	100	0	87	0%	100%
19G199	SDO	1	0	1	0	1	0%	100%
19LCSO084DR	CSO	13	0	0	0	13	0%	100%
19LCSO085DR	CSO	47	0	0	0	47	0%	100%
19MCSO082DR	CSO	8	0	3	0	8	0%	100%
19MCSO083DR	CSO	4	0	0	0	4	0%	100%
19NCSO081DR	CSO	10	0	2	0	10	0%	100%
21C212	SDO	15	0	6	0	15	0%	100%
21EMH86	Interconr	17	0	18	0	17	0%	100%
21H047	SDO	145	0	84	0	145	0%	100%
21K069	SDO	98	0	34	0	98	0%	100%
21KCSO070DR	CSO	369	0	0	0	369	0%	100%
21M010	SDO	17	0	8	0	17	0%	100%
21M050	SDO	28	0	7	0	28	0%	100%
21NCSO080DR	CSO	10	0	0	0	10	0%	100%
22C384	SDO	13	0	0	0	13	0%	100%
22KCSO065DR	CSO	78	0	0	0	78	0%	100%

Table 2-7. Sub-Catchment Area Investigation Status by Manholes

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period
Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)
No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total # Storm Drain + Common Manholes	Total # Storm Drain + Common Manhole Inspections Performed <sup>2</sup>		Total # Storm Drain + Manholes Investigated/Completed <sup>f</sup>		% Investigated/Complete by Manholes	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>
22KCSO072DR	CSO	11	0	0	0	11	0%	100%
22L580	SDO	44	0	16	0	44	0%	100%
23BMH89	Interconr	11	0	18	0	11	0%	100%
23G132	SDO	67	0	23	0	67	0%	100%
23L074	SDO	5	0	0	0	5	0%	100%
23L075	SDO	61	0	39	0	61	0%	100%
23L164	SDO	37	0	12	0	37	0%	100%
23L195	SDO	21	0	0	0	21	0%	100%
23L196	SDO	15	0	0	0	15	0%	100%
23L202	SDO	25	0	1	0	25	0%	100%
23LCSO062DR	CSO	4	0	0	0	4	0%	100%
23LCSO064DR	CSO	9	0	0	0	9	0%	100%
24C174	SDO	54	0	8	0	54	0%	100%
24CMH014 (24CSDO039)	SDO	16	0	18	0	16	0%	100%
24D150	SDO	6	0	0	0	6	0%	100%
24G034	SDO	73	0	3	0	73	0%	100%
25D040	SDO	27	0	15	0	27	0%	100%
25G041	SDO	19	0	3	0	19	0%	100%
25L058	SDO	157	0	0	0	157	0%	100%
25L144	SDO	5	0	0	0	5	0%	100%
25M006	SDO	19	0	6	0	19	0%	100%
25M007	SDO	25	0	7	0	25	0%	100%
25MCSO005DR	CSO	0	0	1	0	0	0%	100%
26F038	SDO	34	0	3	0	34	0%	100%
26G001	SDO	198	0	78	0	198	0%	100%
26J049	SDO	157	0	0	0	157	0%	100%
26J052	SDO	2	0	0	0	2	0%	100%
26K050	SDO	23	0	0	0	23	0%	100%
26K052	SDO	1	0	0	0	1	0%	100%
26K099	SDO	206	0	53	0	206	0%	100%
26K254	SDO	7	0	0	0	7	0%	100%
26L055 (aka 26LSDO106)	SDO	4	0	0	0	4	0%	100%
26L070	SDO	6	0	0	0	6	0%	100%
26L084	SDO	6	0	2	0	6	0%	100%
26LCSO009	CSO	24	0	6	0	24	0%	100%
27L020/22	SDO	91	0	37	1	91	1%	100%
27LCSO010	CSO	17	0	3	0	17	0%	100%
28IMH15	Interconr	9	0	0	0	9	0%	100%
28K010	SDO	26	0	18	0	26	0%	100%
28K061	SDO	98	0	41	0	98	0%	100%
28K386	SDO	5	0	0	0	5	0%	100%
28L073	SDO	1	0	0	0	1	0%	100%
28L074/076	SDO	92	0	42	0	92	0%	100%
28LCSO012DR	CSO	16	0	0	0	16	0%	100%
28LCSO019	CSO	12	0	2	0	12	0%	100%
28N156 (B)	SDO	3	0	6	0	3	0%	100%
28N207 (B)	SDO	82	0	73	0	82	0%	100%
28O025 (B)	SDO	22	0	28	0	22	0%	100%
28P001 (B)	SDO	9	0	10	0	9	0%	100%
29J129	SDO	6	0	0	0	6	0%	100%
29J212	SDO	166	0	38	0	166	0%	100%
29JCSO017	CSO	12	0	0	0	12	0%	100%

Table 2-7. Sub-Catchment Area Investigation Status by Manholes

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period
Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)
No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total # Storm Drain + Common Manholes	Total # Storm Drain + Common Manhole Inspections Performed <sup>2</sup>		Total # Storm Drain + Manholes Investigated/Completed <sup>5</sup>		% Investigated/Complete by Manholes	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>
29M049	SDO	22	0	4	0	22	0%	100%
29N135	SDO	9	0	2	0	9	0%	100%
29O001 (B)	SDO	282	0	360	0	282	0%	100%
29P044 (B)	SDO	11	0	21	0	11	0%	100%
30J019	SDO	10	0	1	0	10	0%	100%
30J030	SDO	23	0	5	0	23	0%	100%
30P062	SDO	11	0	6	0	11	0%	100%
30P107	SDO	11	0	4	0	11	0%	100%
31O004	SDO	32	0	8	0	32	0%	100%
31P084	SDO	17	0	4	0	17	0%	100%
Stony Brook-Upper	SDO	3158	0	124	0	3158	0%	100%
03E207*	SDO	0	0	0	0	0	0%	100%
04F001*	SDO	0	0	0	0	0	0%	100%
04F203	SDO	1	0	0	0	1	0%	100%
05E180*	SDO	0	0	0	0	0	0%	100%
05E181*	SDO	0	0	0	0	0	0%	100%
05F254	SDO	1	0	0	0	1	0%	100%
6CMH117	Intercon	9	0	0	0	9	0%	100%
06D083	SDO	1	0	0	0	1	0%	100%
06D084	SDO	4	0	0	0	4	0%	100%
06D086*	SDO	0	0	0	0	0	0%	100%
06D184	SDO	2	0	0	0	2	0%	100%
09B049	SDO	1	0	0	0	1	0%	100%
09E243	SDO	35	0	0	0	35	0%	100%
12B033	SDO	3	0	0	0	3	0%	100%
12H087	SDO	38	0	0	0	38	0%	100%
12H092	SDO	80	0	0	0	80	0%	100%
13F095	SDO	2	0	0	0	2	0%	100%
13F096	SDO	2	0	2	0	2	0%	100%
13F097*	SDO	0	0	0	0	0	0%	100%
18LCSO086DR	CSO	14	0	0	0	14	0%	100%
20G163	SDO	13	0	0	0	13	0%	100%
21H048	SDO	3	0	0	0	3	0%	100%
21MCSO078DR	CSO	0	0	0	0	0	0%	100%
22KCSO068DR	CSO	28	0	0	28	28	100%	100%
23HMH81 (DCR 23ISDO019)	Intercon	4	0	0	0	4	0%	100%
23L015	SDO	30	0	0	0	30	0%	100%
24L022 (aka 23LSDO022)	SDO	13	0	0	0	13	0%	100%
25NCSO004DR	CSO	23	0	0	0	23	0%	100%
27J044	SDO	6	0	1	0	6	0%	100%
28L077*	SDO	0	0	0	0	0	0%	100%
29J029*	SDO	0	0	0	0	0	0%	100%
29NCSO014DR	CSO	1	0	0	0	1	0%	100%
29P005	SDO	3	0	3	0	3	0%	100%

<sup>1</sup>(B) indicates a highest priority beach area; \* indicates that there are no storm drain or common manholes located in the sub-catchment area.

<sup>2</sup>Total number of manholes performed includes all dye test records for manholes. Some manholes may have been inspected more than once.

<sup>3</sup>Reporting Period is July 1, 2019 through December 31, 2019

<sup>4</sup>To Date includes data from 11/10/2004 through the end of the reporting period 12/31/2019.

**Table 2-7. Sub-Catchment Area Investigation Status by Manholes**

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period
Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)
No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total # Storm Drain + Common Manholes	Total # Storm Drain + Common Manhole Inspections Performed <sup>2</sup>		Total # Storm Drain + Manholes Investigated/Completed <sup>5</sup>		% Investigated/Complete by Manholes	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>

<sup>5</sup>Total number of manholes investigated/completed is based on a manual review process which analyzes the number of manholes that fall within areas designated as complete, therefore it includes manholes that are inferred to be void of contamination based on downstream manhole inspections and/or dye tests.

<sup>6</sup>The % complete estimate for the reporting period is calculated as the % complete to date minus the % complete calculated based on manual review conducted for the Compliance Report for the period of January 1, 2019 through June 30, 2019.

<sup>7</sup>The % complete estimate to date is calculated as the total number of storm drain and common manholes investigated/completed to date divided by the total number of storm drain and common manholes within each drainage area.

Table 2-8. Sub-Catchment Area Investigation Status by Storm Drain Pipe

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period

Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)

No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total Linear Feet of Storm Drain Pipe	Total Linear Feet of Storm Drain Pipe Inspections Performed <sup>2</sup>		Total Linear Feet of Storm Drain Pipe Investigated/Completed <sup>5</sup>		% Investigated/Complete by Storm Drain Pipe	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>
06F233*	SDO	49	49	49	0	49	0%	100%
07H105	SDO	73,303	0	16,907	0	73,303	0%	100%
07H285	SDO	61,129	3,417	27,486	16	61,129	0%	100%
08B122	SDO	11,538	220	6,543	0	11,538	0%	100%
08J102	SDO	3,447	0	898	0	3,447	0%	100%
09K101	SDO	5,245	0	2,508	0	5,245	0%	100%
10B015	SDO	7,123	1,306	4,002	0	7,123	0%	100%
10L094	SDO	127,791	0	34,910	0	127,791	0%	100%
11I577	SDO	238,332	1,158	115,792	0	238,332	0%	100%
12F418 (aka 12E418)	SDO	3,052	0	804	0	3,052	0%	100%
13L090 (B)	SDO	154,041	843	72,475	0	154,041	0%	100%
15F288	SDO	29,831	0	12,331	0	29,831	0%	100%
16L097	SDO	2,973	0	1,386	0	2,973	0%	100%
16L122	SDO	40,954	0	13,476	0	40,954	0%	100%
17M033	SDO	15,162	52	396	0	15,162	0%	100%
19G043	SDO	11,554	0	5,645	0	11,554	0%	100%
19G194	SDO	9,044	40	3,355	0	9,044	0%	100%
20DMH19	Interconnection	18,600	287	4,011	0	18,600	0%	100%
20DMH62	Interconnection	1,542	482	1,484	0	1,542	0%	100%
20DNP140 (20DMH55)	Interconnection	8,749	2,422	7,662	63	8,749	1%	100%
20G161	SDO	7,913	0	4,085	0	7,913	0%	100%
20G164*	SDO	73	73	73	0	73	0%	100%
21DMH319	Interconnection	9,847	351	10,122	0	9,847	0%	100%
21EMH64	Interconnection	11,041	306	2,600	0	11,041	0%	100%
21LCSO076DR	CSO	818	502	502	0	818	0%	100%
21MCSO079DR	CSO	174	0	0	0	174	0%	100%
22LCSO073DR	CSO	7,859	199	684	0	7,859	0%	100%
23H040	SDO	3,379	0	1,309	0	3,379	0%	100%
23H042	SDO	49,657	4,411	17,445	191	49,657	0%	100%
24D032	SDO	160,361	211	72,187	0	160,361	0%	100%
24G035	SDO	56,096	362	20,536	0	56,096	0%	100%
24L233	SDO	5,504	353	2,027	0	5,504	0%	100%
24LCSO060DR	CSO	5,154	0	739	0	5,154	0%	100%
24NCSO003DR	CSO	92,876	815	5,621	0	92,876	0%	100%
25E037	SDO	64,936	1,391	21,538	31	64,936	0%	100%
25LCSO057	CSO	1,219	127	127	0	1,219	0%	100%
26J055 (aka 26JSDO101)	SDO	2,094	0	497	0	2,094	0%	100%
26K035	SDO	4,792	0	0	0	4,792	0%	100%
27J001	SDO	18,240	0	7,779	0	18,240	0%	100%
27J096	SDO	15,671	0	0	0	15,671	0%	100%
29MCSO013DR	CSO	1,541	43	602	0	1,541	0%	100%
29N015	SDO	1,297	144	292	0	1,297	0%	100%
30J006	SDO	2,148	162	205	0	2,148	0%	100%
Stony Brook-Lower (21HCSO046)	CSO	72,563	0	0	0	72,563	0%	100%
Stony Brook-Middle (-SB areas)	CSO	271,072	26,710	105,291	4,211	271,072	2%	100%
01E024	SDO	2,155	0	1,143	0	2,155	0%	100%
01F031	SDO	5,710	0	2,209	0	5,710	0%	100%
02E086 (aka 02E005)	SDO	2,334	0	1,085	0	2,334	0%	100%
02F085	SDO	682	0	418	0	682	0%	100%
02F093	SDO	991	0	971	0	991	0%	100%

Table 2-8. Sub-Catchment Area Investigation Status by Storm Drain Pipe

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period

Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)

No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total Linear Feet of Storm Drain Pipe	Total Linear Feet of Storm Drain Pipe Inspections Performed <sup>2</sup>		Total Linear Feet of Storm Drain Pipe Investigated/Completed <sup>5</sup>		% Investigated/Complete by Storm Drain Pipe	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>
02F120	SDO	7,389	0	0	0	7,389	0%	100%
2FMH120 (DCR 2FSDO99)	Interconnection	2,748	0	0	0	2,748	0%	100%
03E185	SDO	10,917	0	7,957	0	10,917	0%	100%
03E186	SDO	2,051	0	948	0	2,051	0%	100%
3FMH56 (DCR 3FSDO159)	Interconnection	4,749	0	3,674	0	4,749	0%	100%
04E064	SDO	253	0	159	0	253	0%	100%
04E069	SDO	8,768	0	6,447	0	8,768	0%	100%
04F016	SDO	2,134	0	272	0	2,134	0%	100%
04F118	SDO	1,294	0	655	0	1,294	0%	100%
04F119	SDO	2,569	0	0	0	2,569	0%	100%
04F189	SDO	4,938	0	1,893	0	4,938	0%	100%
04F204	SDO	14,453	0	20,853	0	14,453	0%	100%
4FMH90 (DCR 3FSDO162)	Interconnection	4,638	0	4,749	0	4,638	0%	100%
05E182	SDO	2,445	0	1,143	0	2,445	0%	100%
05E183*	SDO	58	0	0	0	58	0%	100%
05E184 (aka 05E120)	SDO	11,125	0	4,267	0	11,125	0%	100%
05F117	SDO	7,703	0	911	0	7,703	0%	100%
05F244	SDO	3,043	0	471	0	3,043	0%	100%
05F245	SDO	4,254	0	1,807	0	4,254	0%	100%
05F253	SDO	6,757	0	3,334	0	6,757	0%	100%
05G112	SDO	3,671	0	3,357	0	3,671	0%	100%
05G115	SDO	1,853	0	601	0	1,853	0%	100%
05G116	SDO	3,623	0	1,233	0	3,623	0%	100%
05G116A	SDO	11,234	0	2,942	0	11,234	0%	100%
06C110 (aka 05C110)	SDO	9,579	0	2,695	0	9,579	0%	100%
06D057	SDO	2,418	0	1,873	0	2,418	0%	100%
06D085	SDO	236	0	121	0	236	0%	100%
06D091*	SDO	63	0	0	0	63	0%	100%
06D187	SDO	11,280	0	9,196	0	11,280	0%	100%
6DMH97	Interconnection	29,408	0	10,113	0	29,408	0%	100%
06G108	SDO	30,068	0	11,592	0	30,068	0%	100%
06G109	SDO	4,716	0	3,035	0	4,716	0%	100%
06G110	SDO	6,695	0	4,604	0	6,695	0%	100%
06G111	SDO	4,292	0	3,526	0	4,292	0%	100%
06G165	SDO	807	0	1,460	0	807	0%	100%
06G166	SDO	2,201	0	1,444	0	2,201	0%	100%
06H106	SDO	2,278	0	985	0	2,278	0%	100%
06H107	SDO	2,453	0	2,378	0	2,453	0%	100%
07C006	SDO	81,391	0	22,378	0	81,391	0%	100%
07H346	SDO	705	0	527	0	705	0%	100%
07H347	SDO	519	0	279	0	519	0%	100%
07H348	SDO	743	0	735	0	743	0%	100%
08B126	SDO	3,474	0	1,542	0	3,474	0%	100%
08C025/026	SDO	3,152	0	416	0	3,152	0%	100%
08E031	SDO	10,096	0	3,675	0	10,096	0%	100%
08E035	SDO	899	0	0	0	899	0%	100%
08I153	SDO	425	0	228	0	425	0%	100%
08I154	SDO	5,740	0	2,589	0	5,740	0%	100%
08I155	SDO	399	0	101	0	399	0%	100%
08I156	SDO	5,764	0	3,508	0	5,764	0%	100%
08I158	SDO	1,963	0	476	0	1,963	0%	100%
08I207	SDO	1,400	0	1,210	0	1,400	0%	100%

Table 2-8. Sub-Catchment Area Investigation Status by Storm Drain Pipe

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period
Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)
No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total Linear Feet of Storm Drain Pipe	Total Linear Feet of Storm Drain Pipe Inspections Performed <sup>2</sup>		Total Linear Feet of Storm Drain Pipe Investigated/Completed <sup>5</sup>		% Investigated/Complete by Storm Drain Pipe	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>
08I209	SDO	820	0	906	0	820	0%	100%
08J036/041	SDO	2,439	0	1,643	0	2,439	0%	100%
08J050/049	SDO	12,006	0	5,567	0	12,006	0%	100%
08J103	SDO	6,382	0	6,799	0	6,382	0%	100%
08K049	SDO	513	0	258	0	513	0%	100%
09E229	SDO	322	0	80	0	322	0%	100%
09K016	SDO	2,062	0	555	0	2,062	0%	100%
09K100	SDO	4,330	0	2,025	0	4,330	0%	100%
09L095	SDO	4,789	0	2,498	0	4,789	0%	100%
10L096	SDO	2,893	0	3,428	0	2,893	0%	100%
11B123	SDO	20,303	0	17,340	0	20,303	0%	100%
11BMH49 (DCR 11BSDO28)	Interconnection	2,130	0	0	0	2,130	0%	100%
11G344	SDO	9,122	0	1,273	0	9,122	0%	100%
11M093	SDO	9,956	0	3,354	0	9,956	0%	100%
12B010*	SDO	16	0	0	0	16	0%	100%
12B014	SDO	717	0	589	0	717	0%	100%
12B124	SDO	80,035	0	22,666	0	80,035	0%	100%
12F305	SDO	2,175	0	674	0	2,175	0%	100%
12H085	SDO	2,963	0	0	0	2,963	0%	100%
12L092 (B)	SDO	25,084	0	5,828	0	25,084	0%	100%
12LMH304 (DCR 13LSDO137)	Interconnection	1,617	0	358	0	1,617	0%	100%
12LMH374 (DCR 12LSDO296)	Interconnection	4,151	0	2,358	0	4,151	0%	100%
12M091	SDO	1,238	0	992	0	1,238	0%	100%
13B011	SDO	772	0	0	0	772	0%	100%
13D077/078	SDO	27,404	0	23,577	0	27,404	0%	100%
13E174	SDO	11,097	0	8,704	0	11,097	0%	100%
13E175	SDO	4,331	0	986	0	4,331	0%	100%
13E176	SDO	863	0	714	0	863	0%	100%
13F011 (aka 13F185)	SDO	6,716	0	2,359	0	6,716	0%	100%
13F012 (aka 13F093)	SDO	1,828	0	0	0	1,828	0%	100%
14C009	SDO	822	0	798	0	822	0%	100%
14EMH36	Interconnection	991	0	131	0	991	0%	100%
15L088 (B)	SDO	79,592	0	32,331	0	79,592	0%	100%
15L089 (B)	SDO	13,671	0	2,555	0	13,671	0%	100%
17F012	SDO	1,157	0	0	0	1,157	0%	100%
18G233	SDO	12,689	0	12,880	0	12,689	0%	100%
19G199	SDO	230	0	0	0	230	0%	100%
19LCSO084DR	CSO	1,766	0	0	0	1,766	0%	100%
19LCSO085DR	CSO	5,550	0	0	0	5,550	0%	100%
19MCSO082DR	CSO	1,283	0	637	0	1,283	0%	100%
19MCSO083DR	CSO	535	0	0	0	535	0%	100%
19NCSO081DR	CSO	2,039	0	518	0	2,039	0%	100%
21C212	SDO	2,494	0	805	0	2,494	0%	100%
21EMH86	Interconnection	3,263	0	377	0	3,263	0%	100%
21H047	SDO	18,874	0	8,537	0	18,874	0%	100%
21K069	SDO	14,839	0	5,296	0	14,839	0%	100%
21KCSO070DR	CSO	50,657	0	0	0	50,657	0%	100%
21M010	SDO	4,053	0	1,335	0	4,053	0%	100%
21M050	SDO	4,070	0	1,177	0	4,070	0%	100%
21NCSO080DR	CSO	552	0	0	0	552	0%	100%
22C384	SDO	2,193	0	0	0	2,193	0%	100%
22KCSO065DR	CSO	8,188	0	0	0	8,188	0%	100%



Table 2-8. Sub-Catchment Area Investigation Status by Storm Drain Pipe

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period
Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)
No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total Linear Feet of Storm Drain Pipe	Total Linear Feet of Storm Drain Pipe Inspections Performed <sup>2</sup>		Total Linear Feet of Storm Drain Pipe Investigated/Completed <sup>5</sup>		% Investigated/Complete by Storm Drain Pipe	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>
22KCSO072DR	CSO	549	0	0	0	549	0%	100%
22L580	SDO	5,861	0	2,527	0	5,861	0%	100%
23BMH89	Interconnection	1,807	0	3,176	0	1,807	0%	100%
23G132	SDO	9,997	0	2,254	0	9,997	0%	100%
23L074	SDO	624	0	0	0	624	0%	100%
23L075	SDO	8,734	0	4,590	0	8,734	0%	100%
23L164	SDO	3,305	0	1,053	0	3,305	0%	100%
23L195	SDO	2,899	0	0	0	2,899	0%	100%
23L196	SDO	1,397	0	0	0	1,397	0%	100%
23L202	SDO	2,434	0	207	0	2,434	0%	100%
23LCSO062DR	CSO	82	0	0	0	82	0%	100%
23LCSO064DR	CSO	1,227	0	0	0	1,227	0%	100%
24C174	SDO	12,066	0	925	0	12,066	0%	100%
24CMH014 (24CSDO039)	SDO	2,236	0	1,214	0	2,236	0%	100%
24D150	SDO	872	0	0	0	872	0%	100%
24G034	SDO	13,437	0	873	0	13,437	0%	100%
25D040	SDO	5,390	0	2,379	0	5,390	0%	100%
25G041	SDO	2,794	0	728	0	2,794	0%	100%
25L058	SDO	15,960	0	0	0	15,960	0%	100%
25L144	SDO	619	0	0	0	619	0%	100%
25M006	SDO	2,198	0	852	0	2,198	0%	100%
25M007	SDO	3,629	0	1,883	0	3,629	0%	100%
25MCSO005DR	CSO	0	0	0	0	0	0%	100%
26F038	SDO	7,803	0	0	0	7,803	0%	100%
26G001	SDO	36,612	0	15,640	0	36,612	0%	100%
26J049	SDO	20,940	0	0	0	20,940	0%	100%
26J052	SDO	559	0	0	0	559	0%	100%
26K050	SDO	2,336	0	0	0	2,336	0%	100%
26K052	SDO	303	0	0	0	303	0%	100%
26K099	SDO	23,733	0	8,446	0	23,733	0%	100%
26K254	SDO	1,096	0	0	0	1,096	0%	100%
26L055 (aka 26LSDO106)	SDO	451	0	0	0	451	0%	100%
26L070	SDO	670	0	0	0	670	0%	100%
26L084	SDO	616	0	154	0	616	0%	100%
26LCSO009	CSO	2,476	0	1,046	0	2,476	0%	100%
27L020/22	SDO	12,358	0	6,315	505	12,358	4%	100%
27LCSO010	CSO	2,960	0	1,122	0	2,960	0%	100%
28IMH15	Interconnection	1,207	0	0	0	1,207	0%	100%
28K010	SDO	4,212	0	3,930	0	4,212	0%	100%
28K061	SDO	14,489	0	8,343	0	14,489	0%	100%
28K386	SDO	997	0	0	0	997	0%	100%
28L073	SDO	242	0	0	0	242	0%	100%
28L074/076	SDO	13,535	0	6,924	0	13,535	0%	100%
28LCSO012DR	CSO	3,279	0	0	0	3,279	0%	100%
28LCSO019	CSO	1,367	0	211	0	1,367	0%	100%
28N156 (B)	SDO	376	0	1,040	0	376	0%	100%
28N207 (B)	SDO	11,631	0	13,028	0	11,631	0%	100%
28O025 (B)	SDO	2,428	0	3,203	0	2,428	0%	100%
28P001 (B)	SDO	1,826	0	998	0	1,826	0%	100%
29J129	SDO	1,478	0	0	0	1,478	0%	100%
29J212	SDO	23,313	0	7,461	0	23,313	0%	100%
29JCSO017	CSO	611	0	0	0	611	0%	100%

Table 2-8. Sub-Catchment Area Investigation Status by Storm Drain Pipe

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period
Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)
No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total Linear Feet of Storm Drain Pipe	Total Linear Feet of Storm Drain Pipe Inspections Performed <sup>2</sup>		Total Linear Feet of Storm Drain Pipe Investigated/Completed <sup>5</sup>		% Investigated/Complete by Storm Drain Pipe	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>
29M049	SDO	4,237	0	764	0	4,237	0%	100%
29N135	SDO	1,460	0	0	0	1,460	0%	100%
29O001 (B)	SDO	47,076	0	35,885	0	47,076	0%	100%
29P044 (B)	SDO	2,508	0	3,454	0	2,508	0%	100%
30J019	SDO	1,084	0	0	0	1,084	0%	100%
30J030	SDO	3,145	0	1,549	0	3,145	0%	100%
30P062	SDO	1,841	0	1,056	0	1,841	0%	100%
30P107	SDO	2,018	0	652	0	2,018	0%	100%
31O004	SDO	4,791	0	1,819	0	4,791	0%	100%
31P084	SDO	2,974	0	723	0	2,974	0%	100%
Stony Brook-Upper	SDO	515,603	0	14,101	0	515,603	0%	100%
03E207*	SDO	0	0	0	0	0	0%	100%
04F001*	SDO	0	0	0	0	0	0%	100%
04F203	SDO	78	0	0	0	78	0%	100%
05E180*	SDO	99	0	0	0	99	0%	100%
05E181*	SDO	52	0	0	0	52	0%	100%
05F254	SDO	210	0	0	0	210	0%	100%
6CMH117	Interconnection	720	0	0	0	720	0%	100%
06D083	SDO	200	0	0	0	200	0%	100%
06D084	SDO	694	0	0	0	694	0%	100%
06D086*	SDO	64	0	0	0	64	0%	100%
06D184	SDO	149	0	0	0	149	0%	100%
09B049	SDO	135	0	0	0	135	0%	100%
09E243	SDO	6,318	0	0	0	6,318	0%	100%
12B033	SDO	729	0	0	0	729	0%	100%
12H087	SDO	6,747	0	0	0	6,747	0%	100%
12H092	SDO	21,371	0	0	0	21,371	0%	100%
13F095	SDO	205	0	0	0	205	0%	100%
13F096	SDO	117	0	117	0	117	0%	100%
13F097*	SDO	0	0	0	0	0	0%	100%
18LCSO086DR	CSO	2,143	0	0	0	2,143	0%	100%
20G163	SDO	1,433	0	0	0	1,433	0%	100%
21H048	SDO	968	0	0	0	968	0%	100%
21MCSO078DR	CSO	0	0	0	0	0	0%	100%
22KCSO068DR	CSO	2,996	0	0	0	2,996	0%	100%
23HMH81 (DCR 23ISDO019)	Interconnection	439	0	0	0	439	0%	100%
23L015	SDO	3,977	0	0	0	3,977	0%	100%
24L022 (aka 23LSDO022)	SDO	2,096	0	0	0	2,096	0%	100%
25NCSO004DR	CSO	3,838	0	0	0	3,838	0%	100%
27J044	SDO	3,425	0	0	0	3,425	0%	100%
28L077*	SDO	602	0	0	0	602	0%	100%
29J029*	SDO	553	0	0	0	553	0%	100%
29NCSO014DR	CSO	371	0	0	0	371	0%	100%
29P005	SDO	211	0	211	0	211	0%	100%

<sup>1</sup>(B) indicates a highest priority beach area; \* indicates that there are no storm drain or common manholes located in the sub-catchment area.

<sup>2</sup>Total linear feet of pipe inspections performed includes all dye test records for pipes. Some pipes may have been inspected more than once.

<sup>3</sup>Reporting Period is July 1, 2019 through December 31, 2019.

<sup>4</sup>To Date includes data from 3/16/2009 through the end of the reporting period 12/31/2019

**Table 2-8. Sub-Catchment Area Investigation Status by Storm Drain Pipe**

Sub-Catchment Area Investigations Performed During this Reporting Period and To Date

As of 12/31/2019

Work done in reporting period
Work done during CWI1, CWI2, CWI3 and/or CWI4 (since November 2004)
No work done during CWI1, CWI2, CWI3 or CWI4 (since November 2004)

Sub-Catchment Area <sup>1</sup>	Area Type	Total Linear Feet of Storm Drain Pipe	Total Linear Feet of Storm Drain Pipe Inspections Performed <sup>2</sup>		Total Linear Feet of Storm Drain Pipe Investigated/Completed <sup>5</sup>		% Investigated/Complete by Storm Drain Pipe	
			Reporting Period <sup>3</sup>	To Date <sup>4</sup>	Reporting Period <sup>3</sup>	To Date	Reporting Period <sup>3 6</sup>	To Date <sup>7</sup>

<sup>5</sup>Total linear feet of pipe investigated/completed is based on a manual review process which analyzes the number of manholes that fall within areas designated as complete, therefore it includes manholes that are inferred to be void of contamination based on downstream manhole inspections and/or dye tests. If a pipe segment falls partially within an area designated as complete and partially within and area designated as incomplete, the entire length of pipe is considered to be incomplete.

<sup>6</sup>The % complete estimate for the reporting period is calculated as the % complete to date minus the % complete calculated based on manual review conducted for the Compliance Report for the period of January 1, 2019 through June 30, 2019.

<sup>7</sup>The % complete estimate to date is calculated as the total linear feet of storm drain pipe investigated/completed to date divided by the total linear feet of storm drain pipe within each drainage area.

Table 2-9. Direct Illicit Connections 2019

Status	Bldg Number	Address	Neighborhood	Bldg Type	Sub-Catchment Area	Subwatershed	Date Verified	Date Corrected	Days to Correct	Sewage Removed (gallons per day (gpd))	BWSC Cost*	BWSC Reimbursed to owner
Corrected under BWSC contract	10	Birchcroft Road	Mattapan	R-1	06G108 Wood Avenue	Neponset River	04/09/2019	06/24/19	76	124	\$12,560	
Corrected by Owner + Commission	15	Butler Street	Dorchester	R-2	09K101 Huntoon	Neponset River	09/13/2018	05/04/19	233	137	\$14,327	\$7,500
Corrected under BWSC contract	142	Carolina Avenue	Jamaica Plain	R-1	15GMH2315B	Charles via Stony Brook Conduit	06/07/2019	11/09/19	155	60	\$12,360	
Internal illicit corrected by owner	1476-1478	Commonwealth Avenue	Brighton	Condos	24G035 Salt Creek	Charles River	12/12/2017	04/16/19	490	918	NA	
Corrected under BWSC contract	177	Delhi Street	Mattapan	R-1	07H285 Blue Hill Ave	Neponset River	09/24/2018	02/22/19	151	91	\$15,391	
Internal illicit corrected by owner	384-376	Dorchester Avenue	South Boston	Comm	21KCS0070	Boston Harbor via Fort Point Channel	11/26/18; 12/10/18	08/28/19	261	1,644	NA	
Corrected under BWSC contract	61-63	Dorchester Avenue	South Boston	Warehouse	22KCS0072 DR	Boston Harbor	01/31/2019	08/17/19	198	23	\$33,357	
Corrected under BWSC contract	41	Edison Green	Dorchester	R-3	16L122	Boston Harbor	04/30/2019	08/03/19	95	190	\$18,249	
Corrected under BWSC contract	32	Fifth Street	Charlestown	Comm	27L020/022	Boston Harbor	07/20/2018	11/23/19	491	Not available	\$28,230	
Internal illicit corrected by owner	130-132	Jersey Street	Boston	Restaurant	23H042	Charles River	03/06/2019	07/08/19	124	61	NA	
Internal illicit corrected by owner	137	Park Drive	Boston	Apts	23H042	Charles River	08/05/2019	10/30/19	86	7	NA	
Corrected under BWSC contract	191	Park Drive	Fenway/Kenmore	Apt	23H042	Charles River	01/14/2019	03/06/19	51	1,839	\$11,653	
Corrected under BWSC contract	193-195	Park Drive	Fenway/Kenmore	Apt	23H042	Charles River	01/14/2019	03/06/19	51	1,839	\$21,390	
Corrected under BWSC contract	199	Park Drive	Fenway/Kenmore	Apt	23H042	Charles River	01/14/2019	03/06/19	51	1,526	\$17,774	
Corrected under BWSC contract	203	Park Drive	Fenway/Kenmore	Apt	23H042	Charles River	01/14/2019	03/06/19	51	1,526	\$16,877	
Corrected under BWSC contract	207	Park Drive	Fenway/Kenmore	Apt	23H042	Charles River	01/14/2019	03/06/19	51	1,526	\$19,154	
Corrected under BWSC contract	235	Park Street	West Roxbury	R-2	23I023 West Roxbury	Charles via Stony Brook Conduit	07/16/2019	07/16/19	1	151	\$0	
Corrected under BWSC contract	284	Pond Street	Jamaica Plain	R-1	15F288 Arboretum	Charles River (Stony Brook Conduit, Goldsmith Brook)	11/26/2018	01/07/19	42	233	\$12,553	
Corrected under BWSC contract	823	River Street	Hyde Park	R-2	06G108 Wood Avenue	Neponset River	04/09/2019	08/03/19	116	272	\$19,977	
Corrected under BWSC contract	21-23	Rockwood Street	Jamaica Plain	R-1	15F288 Arboretum	Charles River (Stony Brook Conduit, Goldsmith Brook)	12/26/2018	02/04/19	40	102	\$13,840	
Corrected by Owner + Commission	27	Round Hill Street	Jamaica Plain	R-1	18HMH2715B	Charles via Stony Brook Conduit	12/13/2017	11/22/19	709	201	\$14,730	\$5,500
Internal illicit corrected by owner	121	Saint Stephen Street	Fenway/Kenmore	Apt	21IMH189	Charles via Stony Brook Conduit	12/19/2019	12/24/19	5	3,675	NA	
Corrected under BWSC contract	328	Savin Hill Avenue	Dorchester	R-1	16L097	Boston Harbor	10/28/2019	12/13/19	46	187	\$4,190	
Corrected under BWSC contract	24	Seaver Street	Roxbury	Apt	18HMH2265B	Charles via Stony Brook Conduit	10/22/2019	11/09/19	18	725	\$15,738	
Corrected under BWSC contract	30	Shanely Street	Brighton	R-1	24D032 Faneuil Brook	Charles River	11/26/2018	01/08/19	43	91	\$11,884	
Corrected under BWSC contract	515	Shawmut Avenue	South End	Condos	21KCS0070	Boston Harbor via Fort Point Channel	02/25/2019	05/14/19	78	216	\$56,819	
Corrected under BWSC contract	14	Tarleton Road	West Roxbury	R-1	11B123 Baker Street	Charles River	03/04/2019	05/04/19	61	60	\$17,763	
Corrected under BWSC contract	9	Theodore Street	Dorchester	R-2	11I577 Dorchester	Charles River via Canterbury Brook to Stony Brook Conduit	08/08/2019	10/26/19	79	236	\$15,835	
Internal illicit corrected by owner	27	Vogel Street	West Roxbury	R-1	07C006 Belle Avenue	Charles River	11/27/2018	03/01/19	94	17	NA	
Corrected under BWSC contract	105	West Springfield Street	South End	R-3	21KCS0070	Boston Harbor via Fort Point Channel	02/25/2019	05/14/19	78	187	\$56,819	
Corrected under BWSC contract	99	West Springfield Street	South End	4-6 Units	21KCS0070	Boston Harbor via Fort Point Channel	02/25/2019	05/14/19	78	343	\$56,819	
Corrected under BWSC contract	96	West Springfield Street	South End	Exempt	21KCS0070	Boston Harbor via Fort Point Channel	02/25/2019	05/14/19	78	305	\$56,819	
Corrected under BWSC contract	103	West Springfield Street	South End	R-1	21KCS0070	Boston Harbor via Fort Point Channel	02/25/2019	05/14/19	78	79	\$56,819	
Corrected under BWSC contract	101	West Springfield Street	South End	4-6 Units	21KCS0070	Boston Harbor via Fort Point Channel	02/25/2019	05/14/19	78	177	\$56,819	
Corrected under BWSC contract	100-1/2	West Springfield Street	South End	R-1	21KCS0070	Boston Harbor via Fort Point Channel	02/25/2019	05/14/19	78	63	\$56,819	
Corrected under BWSC contract	97	West Springfield Street	South End	Condos	21KCS0070	Boston Harbor via Fort Point Channel	02/25/2019	05/14/19	78	179	\$56,819	
Corrected under BWSC contract	26	Worcester Street	South End	Apts	21KCS0070	Boston Harbor via Fort Point Channel	02/25/2019	05/14/19	78	11,705	\$56,819	
BWSC + Owner to Coordinate Correction	542	Dorchester Avenue	South Boston	Apts	21KCS0070	Boston Harbor via Fort Point Channel	12/08/2017					
Included under BWSC Contract	265	East Cottage Street	Dorchester	R-2	16L122	Boston Harbor	04/30/2019					
BWSC + Owner to Coordinate Correction	32	Gay Head Street	Jamaica Plain	R-2	18HMH2715B	Charles via Stony Brook Conduit	09/18/2019					
BWSC + Owner to Coordinate Correction	30	Gay Head Street	Jamaica Plain	R-3	18HMH2715B	Charles via Stony Brook Conduit	03/12/2018					
Internal illicit-owner has been notified	256	Marginal Street	East Boston	Comm	25M006	Boston Harbor	08/05/2019					
Included under BWSC Contract	29-31	South Street	Jamaica Plain	R-2	15GMH2085B	Charles via Stony Brook Conduit	08/29/2019					
Included under BWSC Contract	4	Theodore Street	Mattapan	R-3	11I577 Dorchester	Charles River via Canterbury Brook to Stony Brook Conduit	11/20/2019					
Internal illicit-owner has been notified	480	Truman Parkway	Hyde Park	R-1	06G165 Metropolitan	Neponset River	02/28/2019					
Internal illicit-owner has been notified	31	Winborough Street	Mattapan	R-1	07H105 Edgewater	Neponset River	09/13/2019					

Illicit Connection was Corrected
Correction of Illicit is Pending

Total Sewage Removed (gpd)	30,715
BWSC Cost to Correct Illicit*	\$859,203
BWSC Cost to Reimburse Owner	\$13,000
Total Cost to Correct/Reimburse*	\$872,203

Table 2-10. Indirect Illicit Discharges 2019

Status	Bldg Number	Address	Neighborhood	Bldg Type	Sub-Catchment Area	Subwatershed	Date Verified	Date Corrected	Days to Correct	Sewage Removed (gallons per day (gpd))	BWSC Cost to Plug Test Lateral to Verify Leakage*	BWSC Reimbursed to owner
Lateral Repaired by Owner	7	Bonad Road	West Roxbury	R-2	13D077/078	Charles River via Bussey Brook to Stony Brook Conduit	11/28/2018	01/10/19	43	45	\$1,936	\$4,000
Lateral Repaired by Owner	8	Bowditch Road	Jamaica Plain	R-1	15F288 Arboretum	Charles River (Stony Brook Conduit, Goldsmith Brook)	06/14/2019	08/07/19	54	23	\$1,906	\$4,000
Lateral Repaired by Owner	153	Boylston Street	Jamaica Plain	R-3	17HMH1065B	Charles via Stony Brook Conduit	10/04/2019	10/17/19	13	111	\$1,903	\$4,000
Lateral Repaired by Owner	113	Carolina Avenue	Jamaica Plain	R-2	15GMH2315B	Charles via Stony Brook Conduit	12/20/2012	02/22/19	64	56	\$1,925	\$4,000
Lateral Repaired by Owner	127	Carolina Avenue	Jamaica Plain	R-1	15GMH2315B	Charles via Stony Brook Conduit	12/20/2018	04/01/19	102	38	\$1,926	\$4,000
Lateral Repaired by Owner	137	Carolina Avenue	Jamaica Plain	R-1	15GMH2315B	Charles via Stony Brook Conduit	07/09/2019	11/14/19	128	30	\$1,915	\$3,900
Repaired - Leaking Sewer Main	321	Centre Street	Dorchester	Nursing Home	13L090 Victory Road	Neponset River/Dorchester Bay	07/24/2019	07/24/19	1	9,203	\$17,030	\$0
Lateral Repaired by Owner	12	Chilcott Place	Jamaica Plain	R-2	16HMH265B	Charles via Stony Brook Conduit	02/11/2019	05/14/19	92	26	\$1,912	\$4,000
Lateral Repaired by Owner	68	Edwin Street	Dorchester	Day Care	13L090 Victory Road	Neponset River/Dorchester Bay	05/31/2019	11/05/19	158	73	\$1,901	\$4,000
Lateral Repaired by Owner	70-72	Edwin Street	Dorchester	R-3	13L090 Victory Road	Neponset River/Dorchester Bay	05/31/2019	11/06/19	159	151	\$1,935	\$4,000
Lateral Repaired by Owner	51	Elmore Street	Roxbury	R-3	18HMH2005B	Charles via Stony Brook Conduit	02/11/2019	05/21/19	99	36	\$1,927	\$4,000
Lateral Repaired by Owner	145	Englewood Avenue	Allston/Brighton	Condos	20DMH019	Charles via Village Brook	08/23/2018	12/18/18	118	2,143	\$1,984	\$4,000
Lateral Repaired by Owner	24	Forest Hills Street	Jamaica Plain	R-3	16HMH1325B	Charles via Stony Brook Conduit	10/09/2019	11/20/19	42	85	\$1,910	\$4,000
Lateral Repaired by Owner	118	Gardner Street	West Roxbury	R-1	10B015 Charles River Rd.	Charles River	11/20/2018	02/21/19	93	53	\$1,900	\$4,000
Lateral Repaired by Owner	62	Gordon Street	Brighton	R-2	25E037 Telford	Charles River	06/27/2018	08/26/19	425	103	\$1,910	\$4,000
Lateral Repaired by Owner	47	Hampstead Road	Jamaica Plain	R-2	14GMH1305B	Charles via Stony Brook Conduit	07/09/2019	08/08/19	30	76	\$1,961	\$4,000
Lateral Repaired by Owner	103	Homestead Street	Roxbury	R-3	18HMH2265B	Charles via Stony Brook Conduit	09/19/2019	10/29/19	40	259	\$1,921	\$0
Lateral Repaired by Owner	105	Homestead Street	Roxbury	R-3	18HMH2265B	Charles via Stony Brook Conduit	09/19/2019	10/29/19	40	120	\$1,911	\$4,000
Lateral Repaired by Owner	26	Johnston Road	Dorchester	R-2	111577 Dorchester	Charles River via Canterbury Brook to Stony Brook Conduit	02/18/2019	06/22/19	124	63	\$1,944	\$4,000
Lateral Repaired by Owner	31	Johnston Road	Dorchester	R-3	111577 Dorchester	Charles River via Canterbury Brook to Stony Brook Conduit	11/15/2018	02/17/19	94	118	\$1,947	\$4,000
Lateral Repaired by Owner	44	Mallet Street	Dorchester	R-2	13L090 Victory Road	Neponset River/Dorchester Bay	05/28/2019	09/17/19	112	57	\$1,939	\$4,000
Lateral Repaired by Owner	64	North Beacon Street	Brighton	R-2	25E037 Telford	Charles River	12/12/2018	01/16/19	35	115	\$1,942	\$4,000
Lateral Repaired by Owner	8-10	Nottingham Road	Brighton	R-2	24D032 Faneuil Brook	Charles River	06/24/2019	11/20/19	149	59	\$1,923	\$4,000
Lateral Repaired by Owner	20	Old Harbor Street	South Boston	Nursing Home	21KCSO070	Boston Harbor via Fort Point Channel	12/10/2018	04/03/19	114	5,324	\$1,926	\$0
Lateral Repaired by Owner	15	Olmstead Street	Jamaica Plain	R-1	16HMH1325B	Charles via Stony Brook Conduit	12/10/2018	04/09/19	120	135	\$1,934	\$4,000
Lateral Repaired by Owner	19	Olmstead Street	Jamaica Plain	R-1	16HMH1325B	Charles via Stony Brook Conduit	10/19/2018	02/19/19	123	45	\$1,946	\$4,000
Lateral Repaired by Owner	52	Ormond Street	Mattapan	R-2	111577 Dorchester	Charles River via Canterbury Brook to Stony Brook Conduit	08/06/2018	01/30/19	177	32	\$1,935	\$4,000
Lateral Repaired by Owner	153	South Street	Jamaica Plain	R-3	14GMH2095B	Charles via Stony Brook Conduit	08/28/2018	01/14/19	149	42	\$1,952	\$4,000
Lateral Repaired by Owner	163	South Street	Jamaica Plain	R-6	14GMH1305B	Charles via Stony Brook Conduit	08/17/2018	05/23/19	279	143	\$1,952	\$4,000
Verified leaking lateral-owner has been notified	159	Boylston Street	Jamaica Plain	R-1	17HMH1065B	Charles via Stony Brook Conduit	09/19/2019					
Verified leaking lateral-owner has been notified	382	Centre Street	Jamaica Plain	R-2	18HMH2715B	Charles via Stony Brook Conduit	08/17/2018					
Verified leaking lateral-owner has been notified	16	Chilcott Place	Jamaica Plain	R-2	16HMH265B	Charles via Stony Brook Conduit	10/04/2019					
Verified leaking lateral-owner has been notified	36	Dalrymple Street	Jamaica Plain	R-4-6	17HMH1065B	Charles via Stony Brook Conduit	09/19/2019					
Verified leaking lateral-owner has been notified	264	East Cottage Street	Dorchester	R-3	16L122	Boston Harbor	11/19/2019					
Verified leaking lateral-owner has been notified	62	Harold Street	Roxbury	R-2	18HMH2005B	Charles via Stony Brook Conduit	11/19/2019					
Verified leaking lateral-owner has been notified	51	Mendum Street	Roslindale	R-1	12ESDO418	Unamed Wetlands	11/28/2018					

Leaking Lateral was Repaired
Repair of Lateral is Pending

Total Sewage Removed (gpd)	18,764
BWSC Cost to Plug Test Lateral to Verify Leakage*	\$71,053
BWSC Cost to Reimburse Owner to Repair Lateral	\$103,900
Total BWSC Cost*	\$174,953

**Table 3 - 1. Brook Inlet and Outlet Cleaning**

<b>Waterway</b>	<b>Neighborhood</b>	<b>Frequency of Cleaning</b>	<b>Equipment Used</b>
Arboretum Outfall	Jamaica Plain	Checked before/after storms; cleaned as needed	Flushing/Rodding Crew
Bussey Brook/Stony Brook Conduit/Treeland	Jamaica Plain	Checked before/after storms; cleaned as needed	Catch Basin Truck
Bussey Brook-Next to Church Of the Annunciation	West Roxbury	Checked before/after storms; cleaned as needed	Catch Basin Truck, Crane
Canterbury Brook Conduit @ American Legion Hwy	Roslindale	Checked before/after storms; cleaned as needed	Rodding/Flushing crew/ Catch Basin Truck
Canterbury Brook Outlet at Harvard Street	Mattapan	Checked before/after storms; cleaned as needed	Flushing/Rodding Crew
Centre Street/Lane	West Roxbury	Checked before/after storms; cleaned as needed	Flushing/Rodding Crew
Chandler Pond	Brighton	Checked before/after storms; cleaned as needed	Flushing/Rodding Crew
Grove Street-Wetlands (particle separator)	West Roxbury	Checked before/after storms; cleaned as needed	Catch Basin Truck, Vactor
Mother Brook	West Roxbury	Checked before/after storms; cleaned as needed	Flushing/Rodding Crew
Muddy River-Riverway and the Fenway/Grates	Boston	Checked before/after storms; cleaned as needed	Catch Basin Truck, Crane
Norton Street-intermittent stream	Hyde Park	Checked before/after storms; cleaned as needed	Flushing/Rodding Crew
American Legion Hwy near Wilmot St	Hyde Park	Checked before/after storms; cleaned as needed	Flushing/Rodding Crew

**Table 3 - 2. BWSC Particle Separator Cleaning 2019**

Location	Neighborhood	Map #	Outfall #	Receiving Water	2019 Material Removed (cubic yards) Various dates	Comments
Bussey Street/Arboretum	Jamaica Plain	13F	13F011	Bussy Brook		
Centre Lane	WROX	8C	8C025,8C026	Wetlands		
Centre Street	WROX	6C	6C110	Wetlands		
Coleridge Street	East Boston	28O	28O025	Boston Harbor		
Coniston Road	Roslindale	12E	13I023	Stony Brook Conduit		
Denny Street	Dorchester	15L	15L089 (CSO)	Malibu Beach		
Ericsson Street	Dorchester	12M	12M091	Neponset River		
Fenwood Road	Roxbury	20G	20G161	Muddy River		
Lawley Street	Dorchester	12L	12L092	Pine Neck Creek	NA	Amt removed not recorded
Martha Road	Central	26J	26J100	Charles River		
Neponset Avenue	Dorchester	11M	11M093	Neponset River	NA	Amt removed not recorded
Norton Street	Hyde Park	3E	3E185	Open Channel	1.70	
Perkins Street	Jamaica Plain	17F	17F012	Jamaica Pond		
Waldemar Avenue	East Boston	30P	30P107	Belle Isle Inlet		
Waldemar Avenue	East Boston	31O	31O004	Belle Isle Inlet		
Walter Street	Roslindale	12F	12E418	Wetlands		
<b>TOTALS</b>					<b>1.70</b>	

**Table 3-3. 2019 HAZMAT SPILL & SEWER USE VIOLATIONS**

Date	Street	Complaint	BSWC Personnel	Type	Cause of Incident / Responsible Party
1/4/2019	1190 Mass Av, NDOR	antifreeze	Coleman	antifreeze	Responded to a call from BFD about an accident causing antifreeze to spill near a CB. Checked CB 18KCB214. Antifreeze contained to CB. Cleaning company hired to clean CB. WO#1483582
1/11/2019	24 Mayfield St, NDOR	oil	Taylor	oil	Small amount of engine oil leaked onto street from a broken line in a pickup truck, owner placed sawdust on spill and will clean it up. Oil pad was placed in nearby catch basin as a precaution, did not see any oil in the catch basin, WO#1484856
1/24/2019	2 Mount Washington Ave	oil	Taylor	oil	Checked bay for signs of oil, saw small amount of oil on surface, checked Gillette parking lot, and saw some oil/fuel runoff around their snow removal equipment. Gillette personell were informed and will address the issue, WO#1487022
2/28/19	Centre St@Greenview Av, Jamaica Plain	clear liquid	Taylor/Conran	groundwater	Found construction personell pumping groundwater/rainwater from their site into a cleanout on site, informed Matt Tuttle of the situation and he will look into it WO#1490732
3/30/19	1088 Dorchester Av, North Dorchester	grease into CB	McKinnon	N/A	Upon inspection did not notice any issue with the catch basin. Nothing further to report at this time.
4/1/19	80 Mount Hope St, Roslindale	oil	Taylor/Conran	N/A	Checked area, no signs of oil spill, person may have seen street runoff from previous day's rainfall WO#1495346
4/3/19	1125 Centre St, JP	pool water	Taylor	N/A	Unchlorinated pool water is allowed to be discharged into the street per BWSC regulations WO#1495669
4/23/19	272 Newbury St, Boston	grease in rear of building	Taylor/Conran	N/A	Checked rear of building, saw no signs of illegal dumping, private catch basin looked clean, only a small shean of oil from rain hitting the grease barrel was observed WO#1497636
5/8/19	K St @ East Fifth St	Oil	Williams	N/A	Arrived to area no oil showing in street or nearby CBs. There was brick work being done at the old cemetery. WO# 1500370
5/15/19	Crescent St@Roland St, Charlestown	oil	Taylor	parking lot runoff	Checked area, saw a shean of oil in gutter, originating from limo parking lot, talked to limo manager, he will address the issue, placed spill pad in CB#3 as a precaution, will check area again in the near future WO#1501478
5/28/19	Butler St	oil	Catino	oil	Oil contained in private CB in a parking lot. BFD was on site. WO# 1503159.
6/6/19	Shattuck St	Hydraulic Fluid	Dorleans/Mcsweeney	Hydraulic Fluid	Met with BFD. Checked Storm drain and Sanitary sewer. Contractor cleaned roadway. Cleaned impacted manhole. WO# 1504515
6/12/19	260 Marginal St	Oil	Limardo	Nothing.	Met BFD. Checked Storm Drain and Sanitary Sewer. Found no evidence of oil in sewer line. Placed booms in sewer line just in case the private line is freed and residual oil impacts BWSC line. WO#1505380
7/5/19	900 Boylston St, Back Bay	oil	Taylor	small amount of oil	Checked area, small amount of engine oil on ground in bus stop, some speedy dry was placed on it, checked catch basin, no impact, will call Massport and explain the situation WO#1513710
7/25/19	420 Fenway	Mop Water	Conran	Nothing	Checked CBs on Emmanuel College for someone dumping mop water in Cbs. Observed no evidence of illegal dumping. WO# 1510707
7/31/19	186-200 Brookline Av	Mop Water	Dorleans/Mcsweeney	Nothing	Checked CBs in vicinity of the intersection of Fenway and Brookline Ave. Observed no evidence of illegal dumping. Sent resident email about incident for more information. Received photos of illegal dumping WO#1511318
8/1/19	Oxford Place, Boston	grease	Taylor/Conran	Nothing	Checked area around and behind Oxford place, no grease spills seen nor any catch basins impacted WO#1511561
8/6/19	112 Train St	Construction Debris	Conran/ Rave	Nothing	Checked CBs in front of 112 Train St for construction debris dumping. Observed no evidence of illegal dumping. WO#v 1512876
8/9/19	25 Mount Pleasant St, Rox	waste	Taylor	Rainwater	Checked area, nearby construction site had pumped rainwater onto street from their excavation, notified Matt Tuttle of situation, WO#1513399
8/19/19	492 East Broadway	Oil	Conran, Taylor, Dorleans	Oil	Observed oil in gutter, CB, and drop inlet manhole. Clean Harbors cleaned up site WO# 1514441
8/27/19	Massachusetts Ave and Southamptn St	Mop Water	Taylor, Rave	Nothing	Checked parking lot catch basins, no signs of mop water, talked to McDonalds manager and warned them to cease any dumping into their parking lot catch basins or other catch basins, WO#1516412
9/6/19	416 Commonwealth Ave	Acid/ pool chemicals	Taylor	Pool Chemicals	Met BFD, in rear of 416 Commonwealth Ave, a few gallons of pool chemicals were spilled in a drain manhole through the perforated cover, no signs of chemicals in the manhole, there was a slow flow of drain water in the manhole, all pool chemicals would be completely diluted before entering any water bodies, WO#1520011
9/9/19	484 Commonwealth Ave	mop water	Taylor	nothing	checked catch basin in rear of building, no signs of dumping and catch basin was dry, talked to building manager and he stated that they only dumped mop water in slop sink, WO#1521018
9/19/19	21 Bexley Street , Roslindale	flex/seal pavement coating	Taylor/Conran	nothing	checked all nearby catch basins, no signs of spill, nothing unusual inside nearby catch basins, WO#1524095
9/19/19	130 Emerson St, South Boston	Grease	Taylor	grease	checked area and found about 3 gallons of grease discharged into gutter and in catch basin(20MCB254), grease may have been dumped by foodcart during a street fair, impacted catch basin will be vactor clean, WO#1524196.
9/24/19	Hawley St & Milk St, Central	Paint	Taylor/Rave	Paint	Checked catch basin and found about a gallon of white paint inside the catch basin, checked adjacent MH to make sure it hasn't left the catch basin WO#1525182
10/18/19	Roland St	oil	Taylor/Conran/Dorleans	oil	Rapid Flow cleaning storm drain line and found oil in section of the downstream line going towards Somerville. Called LSP and NRC to assess and clean up site. WO#1532261.
10/22/19	1 Harbor St, South Boston	Gasoline/Oil	McKinnon	Gasoline/Oil	Nashoba Valley truck driver clipped a Garvey Transport truck's saddle tank while backing into a bay causing fuel/oil to spill out. Owner of bay, Cargo Ventures, placed speedy dry and boomed off area drains before it could enter drainage system. Drains over here are owned by EDIC. Clean Harbors to clean up site and damaged truck to be towed away. No further issues to report. WO# 1532161
10/24/19	32 Rugg Road, Brighton	Asbestos	Taylor	None	Met BFD at parking lot of 32 Rugg Road, there was a large puddle in the parking lot from the rain the previous night, BFD was concerned about the rainwater being pumped into the roof leader but there were no signs of asbestos in the puddle. WO#1532334
10/21/19	Washington St @ Montebello Rd	Cement Mix	Conran/Rave	Cement Mix	Got an email from Irene to check up construction site at Washington St @ Montebello Rd. Site was dumping cement mix into the gutter heading to a CB. Told Contractor to clean gutter and Cb
11/27/19	645 Commonwealth Ave, Brighton	Cement	Taylor	drilling clippings	Met with Jose Cruz, he found a cement like substance in the storm drain line 23MH7, substance is probably coming from the Suffolk construction site and their dewatering process. Matt Tuttle was notified and is investigating the issue.
12/10/19	River St @ Central Ave	oil sheen	Vidalis	Oil	Met with DEP, placed booms in storm drain manholes 8JMH101 & 8JMH86. Oil emmitting through the brick work. Followed up with DEP, Eversource line has a leak and is taken over for hazardous clean up.



**Table 3-4. Private Infiltration Devices Approved 2019**

PROJECT NO	ADDRESS NO	STREET	INSPECTION DATE	INFILTRATION SYSTEM TYPE
16525	586	EAST THIRD ST SBOS 27	03-Jan-19	CULTEC CHAMBER
17503	35	WALES ST ROXB 4347	03-Jan-19	CULTEC CHAMBER
17585	793	EAST SIXTH ST SBOS 25	03-Jan-19	STORMTECH CHAMBERS
17227	167	COLERIDGE ST EBOS 1061	09-Jan-19	DRYWELL
16147	41	OLDFIELDS RD ROXB 3150	10-Jan-19	CULTEC CHAMBER
14278	46	WAREHAM ST SEND 4376	14-Jan-19	PERFORATED PIPE
14461	45	L ST SBOS 2422	15-Jan-19	DRYWELL
16162	425-435	MELNEA CASS BLVD FEKE 2804	15-Jan-19	STORMTECH CHAMBERS
18243	52	HULL ST CENT 2227	15-Jan-19	CULTEC CHAMBER
17402	167-175	POPLAR ST ROSL 3358	16-Jan-19	CULTEC CHAMBER
17078	213	EAST EAGLE ST EBOS 12	17-Jan-19	STORMTECH CHAMBERS
16274	410	WEST BROADWAY ST SBOS 70	18-Jan-19	DRYWELL
14345	58-90	GLENVILLE AV ALBR 1850	22-Jan-19	PERFORATED PIPE
15271	35	WARREN AV SEND 4379	22-Jan-19	PERFORATED PIPE
18025	295	BLUE HILL AV ROXB 568	23-Jan-19	LEACHING BASIN
14480	52-54	TAYLOR ST SDOR 4113	24-Jan-19	STORMTECH CHAMBERS
16257	6	TIDE ST SBOS 4176	24-Jan-19	PERFORATED PIPE
17630	274	LA GRANGE ST WROX 2426	24-Jan-19	CULTEC CHAMBER
16552	201 & 221	SOUTH HUNTINGTON AV JAPL 55	28-Jan-19	LEACHING BASIN
17551	128	COLERIDGE ST EBOS 1061	29-Jan-19	STORMTECH CHAMBERS
17428	361	BEACON ST BBBH 445	30-Jan-19	STORMTECH CHAMBERS
16242	55	EAST SPRINGFIELD ST SEND 26	31-Jan-19	DRYWELL
17532	28	NORWOOD ST SDOR 3106	07-Feb-19	DRYWELL
17266	35	COMMONWEALTH AV ALBR 1090	08-Feb-19	DRYWELL
17628	48	MAVERICK ST EBOS 2763	08-Feb-19	STORMTECH CHAMBERS
15095	150	CAMDEN ST SEND 795	12-Feb-19	STORMTECH CHAMBERS
17634	14	CORDIS ST CHAR 1132	12-Feb-19	CULTEC CHAMBER
15353	336	CHELSEA ST EBOS 947	13-Feb-19	STORMTECH CHAMBERS
17215	1664	DORCHESTER AV CENT 1356	20-Feb-19	CULTEC CHAMBER
18385	29	CORDIS ST CHAR 1132	20-Feb-19	CULTEC CHAMBER
17570	40	BEACON ST BBBH 445	21-Feb-19	CULTEC CHAMBER
17361	65-67	BORDER ST EBOS 588	28-Feb-19	PERFORATED PIPE
17453	158	ATHENS ST SBOS 333	28-Feb-19	CULTEC CHAMBER
16544	31	BURBANK ST FEKE 736	01-Mar-19	CULTEC CHAMBER
17489	77	WARREN AV SEND 4379	01-Mar-19	STORMTECH CHAMBERS
18004	429	CHELSEA ST EBOS 947	01-Mar-19	STORMTECH CHAMBERS
18473	23	CUMBERLAND ST BBBH 1207	01-Mar-19	STORMTECH CHAMBERS
18292	69-71	MAVERICK SQ EBOS 2762	05-Mar-19	DRYWELL
16375	30-30A	MILTON AV SDOR 2863	14-Mar-19	LEACHING BASIN
17118	263	LEXINGTON ST EBOS 2537	14-Mar-19	CULTEC CHAMBER
17130	123	HAMILTON ST HYDE 1989	14-Mar-19	DRYWELL
18124	338	MERIDIAN ST EBOS 2824	14-Mar-19	CULTEC CHAMBER
18309	772	EAST SIXTH ST SBOS 25	14-Mar-19	CULTEC CHAMBER
17085	92	RUSSELL ST CHAR 3719	15-Mar-19	CULTEC CHAMBER
16386	92-94	CORNELL ST ROSL 1144	18-Mar-19	CULTEC CHAMBER
16582	156	TUDOR ST SBOS 4232	18-Mar-19	CULTEC CHAMBER
14378	80	PIERS PARK LN EBOS 6445	19-Mar-19	RAIN GARDEN
18074	179-181	AMORY ST JAPL 239	19-Mar-19	STORMTECH CHAMBERS
17201	15-17	CALLENDER ST MATP 781	20-Mar-19	CULTEC CHAMBER
18168	58	STARBIRD AV ROSL 3994	20-Mar-19	LEACHING BASIN
18331	47-53	HARVEST ST NDOR 2058	22-Mar-19	STORMTECH CHAMBERS
17324	21	RUTLAND SQ SEND 3728	25-Mar-19	STORMTECH CHAMBERS
17184	256	GOLD ST SBOS 1862	27-Mar-19	DRYWELL
17391	105-107	WEST THIRD ST SBOS 107	27-Mar-19	DRYWELL
17602	23	METROPOLITAN AV ROSL 2834	28-Mar-19	DRYWELL
16154	75	BORDER ST EBOS 588	29-Mar-19	PERFORATED PIPE
16361	78-106	LIVERPOOL ST EBOS 2573	29-Mar-19	PERFORATED PIPE
17196	25-29	ISABELLA ST CENT 2283	04-Apr-19	DRYWELL
17541	40	RAYNOR CIR ROXB 3528	04-Apr-19	LEACHING BASIN
18308	47	MANSFIELD ST ALBR 2676	04-Apr-19	STORMTECH CHAMBERS
15363	627	COLUMBUS AV SEND 1077	05-Apr-19	PERFORATED PIPE
17562	42	WEST EAGLE ST EBOS 80	08-Apr-19	DRYWELL
18098	36	HALL ST JAPL 1978	08-Apr-19	DRYWELL
18623	719-721	EAST SECOND ST SBOS 23	08-Apr-19	STORMTECH CHAMBERS
16044	132	CHESTNUT HILL AV ALBR 970	10-Apr-19	CULTEC CHAMBER
16535	14	LAWNWOOD PL CHAR 2474	10-Apr-19	CULTEC CHAMBER
16572	7	BURROUGHS ST JAPL 750	12-Apr-19	STORMTECH CHAMBERS
18115	498	SUMNER ST EBOS 4062	16-Apr-19	STORMTECH CHAMBERS
18225	150	ALFORD ST CHAR 179	16-Apr-19	PERFORATED PIPE

**Table 3-4. Private Infiltration Devices Approved 2019**

PROJECT NO	ADDRESS NO	STREET	INSPECTION DATE	INFILTRATION SYSTEM TYPE
16387	19-23	DUMAS ST MATP 1393	17-Apr-19	LEACHING BASIN
17025	527	EAST BROADWAY SBOS 4976	18-Apr-19	CULTEC CHAMBER
16135	279	MARLBOROUGH ST BBBH 2715	19-Apr-19	PERFORATED PIPE
17062	5	MCBRIDE ST JAPL 2776	19-Apr-19	CULTEC CHAMBER
17221	77	WARREN ST ALBR 4383	19-Apr-19	PERFORATED PIPE
19055	92	LAWRENCE AV ROXB 2475	19-Apr-19	STORMTECH CHAMBERS
18203	9	GREENWOOD AV HYDE 1930	22-Apr-19	LEACHING BASIN
17154	301	WARREN ST ROXB 4385	23-Apr-19	STORMTECH CHAMBERS
18073	2	BELLFLOWER ST NDOR 488	23-Apr-19	CULTEC CHAMBER
18279	101	MILTON AV HYDE 2861	23-Apr-19	CULTEC CHAMBER
17076	530	WESTERN AV ALBR 4469	25-Apr-19	LEACHING BASIN
17147	5	JOY ST BBBH 2342	26-Apr-19	CULTEC CHAMBER
16338	300	PIER 4 BLVD SBOS 8819	29-Apr-19	PERFORATED PIPE
17510	194	TRENTON ST EBOS 4220	29-Apr-19	CULTEC CHAMBER
18294	60	STARBUCK AV ROSL 3994	30-Apr-19	LEACHING BASIN
18252	44	WEST EAGLE ST EBOS 80	02-May-19	DRYWELL
18112	37-39	JUNIPER ST 518C	06-May-19	CULTEC CHAMBER
18435	666	DORCHESTER AV SBOS 1359	06-May-19	STORMTECH CHAMBERS
15432	33	CONGRESS ST CENT 1103	10-May-19	TANK/INJECTION WELLS
17372	131	SAINT BOTOLPH ST BBBH 3743	10-May-19	STORMTECH CHAMBERS
18125	1824-1826	RIVER ST HYDE 3603	10-May-19	CULTEC CHAMBER
13322	1008	TREMONT ST ROXB 4216	13-May-19	STORMTECH CHAMBERS
15406	57	SEATTLE ST ALBR 3836	13-May-19	PERFORATED PIPE
16562	32	CAMBRIDGE ST CHAR 790	13-May-19	PERFORATED PIPE
16565	80	WALNUT PARK ROXB 4358	13-May-19	CULTEC CHAMBER
17422	422	WEST THIRD ST SBOS 107	13-May-19	DRYWELL
18167	258	WEST NEWTON ST BBBH 90	13-May-19	STORMTECH CHAMBERS
18314	163	DEVON ST ROXB 1328	13-May-19	CULTEC CHAMBER
18369	2	CAZENOVE ST SEND 849	13-May-19	CULTEC CHAMBER
15465	605	TREMONT ST SEND 4217	14-May-19	STORMTECH CHAMBERS
17309	145	STOUGHTON ST NDOR 4024	14-May-19	STORMTECH CHAMBERS
17599	735-745	TRUMAN PKWY HYDE 4227	14-May-19	CULTEC CHAMBER
17197	306	WEST THIRD ST SBOS 107	17-May-19	STORMTECH CHAMBERS
17539	600	MELNEA CASS BLVD ROXB 2805	17-May-19	LEACHING BASIN
18464	80	COTTAGE ST EBOS 1154	17-May-19	CULTEC CHAMBER
14254	680-920	EAST FIRST ST SBOS 15	22-May-19	STORMTECH CHAMBERS
17623	13	MONTROSE ST ROXB 2906	22-May-19	STORMTECH CHAMBERS
17355	23R	CHICKATAWBUT ST SDOR 975	24-May-19	STORMTECH CHAMBERS
17205	511	EAST FIFTH ST SBOS 14	28-May-19	LEACHING BASIN
17226	139	MARCELLA ST ROXB 2693	28-May-19	DRYWELL
18277	29	GOLDSMITH ST JAPL 1864	28-May-19	STORMTECH CHAMBERS
15079	1865	COLUMBUS AV ROXB 1076	29-May-19	CULTEC CHAMBER
17492	966	HYDE PARK AV HYDE 2249	29-May-19	CULTEC CHAMBER
17461	102-110	SAVIN HILL AV NDOR 3801	30-May-19	STORMTECH CHAMBERS
17084	85-87	WILLOWWOOD ST MATP 4554	04-Jun-19	DRYWELL
17146	4	JOY ST BBBH 2342	04-Jun-19	CULTEC CHAMBER
17487	15	BULLARD ST SDOR 729	04-Jun-19	DRYWELL
14014	58-64	HARVARD AV HYDE 2045	05-Jun-19	CULTEC CHAMBER
16200	6	WEST BROADWAY SBOS 71	05-Jun-19	MULTIPLE
17189	46	GENEVA ST EBOS 1801	05-Jun-19	CULTEC CHAMBER
17252	7	HAYNES ST EBOS 2088	05-Jun-19	DRYWELL
17505	148	WEST NINTH ST SBOS 92	05-Jun-19	STORMTECH CHAMBERS
17563	9	HAYNES ST EBOS 2088	05-Jun-19	DRYWELL
17564	11	HAYNES ST EBOS 2088	05-Jun-19	DRYWELL
18093	11	TILESBO RO ST SDOR 4177	05-Jun-19	STORMTECH CHAMBERS
18366	4	ALBION PL CHAR 165	05-Jun-19	STORMTECH CHAMBERS
18471	58	NEPONSET AV SDOR 3020	05-Jun-19	STORMTECH CHAMBERS
16475	742-744	COLUMBUS AV SEND 1077	06-Jun-19	PERFORATED PIPE
18082	21	SENATOR BOLLING CIR MATP 5783	10-Jun-19	PERFORATED PIPE
18176	47	SENATOR BOLLING CIR MATP 5783	10-Jun-19	PERFORATED PIPE
17407	46	CLARENDON ST SEND 1009	11-Jun-19	CULTEC CHAMBER
17159	31	NORTH BEACON ST ALBR 29	12-Jun-19	CULTEC CHAMBER
17635	280-282	MERIDIAN ST EBOS 2824	13-Jun-19	CULTEC CHAMBER
16028	365	E ST SBOS 1421	14-Jun-19	CULTEC CHAMBER
17071	42-48	WOODLEY AV WROX 4619	14-Jun-19	CULTEC CHAMBER
19107	2	BRIGHAM ST EBOS 671	14-Jun-19	DRYWELL
19016	162	HAMILTON ST HYDE 1989	17-Jun-19	LEACHING BASIN
13107	63	EDGEMERE RD WROX 1444	18-Jun-19	CULTEC CHAMBER
17547	502	EAST THIRD ST SBOS 27	18-Jun-19	DRYWELL

**Table 3-4. Private Infiltration Devices Approved 2019**

PROJECT NO	ADDRESS NO	STREET	INSPECTION DATE	INFILTRATION SYSTEM TYPE
18235	9	INGLESIDE ST ROXB 2266	18-Jun-19	STORMTECH CHAMBERS
18295	62	STARBIRD AV ROSL 3994	18-Jun-19	LEACHING BASIN
18494	8-10	LORING PL HYDE 2601	18-Jun-19	STORMTECH CHAMBERS
17049	1-1A	LAMSON CT EBOS 2441	19-Jun-19	CULTEC CHAMBER
16202	74	FREEPOR ST SDOR 1743	21-Jun-19	BIO SWALE
16230	585	COMMERCIAL ST CENT 1082	21-Jun-19	STORMTECH CHAMBERS
18244	63-65	SEDGWICK ST JAPL 3844	21-Jun-19	CULTEC CHAMBER
18426	53R	BAILEY ST SDOR 379	21-Jun-19	CULTEC CHAMBER
16333	31-47	HANSBOROUGH ST MATP 2006	24-Jun-19	LEACHING BASIN
18363	7	CLOVER ST SDOR 1045	24-Jun-19	STORMTECH CHAMBERS
19058	280	CHARLES ST CENT 909	24-Jun-19	MULTIPLE
17200	27-29	CALLENDER ST MATP 781	26-Jun-19	CULTEC CHAMBER
17444	125	SUMNER ST EBOS 4062	26-Jun-19	PERFORATED PIPE
16494	60	SAINT THOMAS MORE RD ALBR 3770	27-Jun-19	STORMTECH CHAMBERS
18285	162	WEST BROOKLINE ST SEND 72	28-Jun-19	CULTEC CHAMBER
18418	367	WESTERN AV ALBR 4469	28-Jun-19	MULTIPLE
18163	9-11	BELMONT ST CHAR 491	02-Jul-19	CULTEC CHAMBER
17559	118-122	TREMONT ST ALBR 4210	08-Jul-19	DRYWELL
18048	167	WEST NEWTON ST SEND 91	08-Jul-19	STORMTECH CHAMBERS
18508	231	NORTHAMPTON ST SEND 3095	08-Jul-19	MULTIPLE
16508	461	MASSACHUSETTS AV SEND 2746	09-Jul-19	LEACHING BASIN
17560	4-10	CUFFLIN ST ALBR 1205	09-Jul-19	DRYWELL
18229	27-29	DWIGHT ST SEND 1418	09-Jul-19	CULTEC CHAMBER
17113	3,5, & 7	COTTAGE CT ROXB 1151	10-Jul-19	CULTEC CHAMBER
17108	696	CENTRE ST JAPL 882	12-Jul-19	CULTEC CHAMBER
18174	32	SENATOR BOLLING CIR MATP 5783	24-Jul-19	PERFORATED PIPE
18161	11	BELLFLOWER ST NDOR 488	25-Jul-19	CULTEC CHAMBER
16177	319	ATHENS ST SBOS 333	26-Jul-19	STORMTECH CHAMBERS
17260	20	ISABELLA ST CENT 2283	26-Jul-19	CULTEC CHAMBER
18475	30	WARREN ST ALBR 4383	26-Jul-19	MULTIPLE
18503	2-4	BELGRADE AV ROSL 478	26-Jul-19	NONE
17472	214	MARKET ST ALBR 2713	29-Jul-19	CULTEC CHAMBER
16418	75	LEYDEN ST EBOS 2538	30-Jul-19	LEACHING BASIN
19116	46	BROOKSDALE RD ALBR 702	30-Jul-19	CULTEC CHAMBER
13381	141	WEST SECOND ST SBOS 101	31-Jul-19	CULTEC CHAMBER
18341	53	QUINT AV ALBR 3496	31-Jul-19	CULTEC CHAMBER
18640	2	ROSECLAIR ST NDOR 3671	02-Aug-19	CULTEC CHAMBER
18518	56	ARBOROUGH RD ROSL 275	05-Aug-19	CULTEC CHAMBER
18504	55-57	BYRON ST EBOS 770	06-Aug-19	CULTEC CHAMBER
14137	3	AKRON ST ROXB 150	07-Aug-19	RAIN GARDEN
17229	108	DORCHESTER ST SBOS 1361	07-Aug-19	STORMTECH CHAMBERS
18290	7A-7B	SPARHAWK ST ALBR 3953	07-Aug-19	DRYWELL
15247	235	NEWBURY ST BBBH 3050	08-Aug-19	LEACHING BASIN
17369	235	WESTERN AV ALBR 4469	08-Aug-19	CULTEC CHAMBER
16331	60	EVERETT ST EBOS 1578	12-Aug-19	CULTEC CHAMBER
17373	311	GALLIVAN BLVD MATP 1770	12-Aug-19	DRYWELL
18291	7-9	SPARHAWK ST ALBR 3953	12-Aug-19	DRYWELL
18480	45-55	BRIGHTON AV ALBR 672	13-Aug-19	MULTIPLE
16068	115-117	GLADSTONE ST EBOS 1826	19-Aug-19	CULTEC CHAMBER
17057	921	EAST FOURTH ST SBOS 16	19-Aug-19	MULTIPLE
17243	536	EAST EIGHTH ST SBOS 13	19-Aug-19	STORMTECH CHAMBERS
19018	271	HANCOCK ST NDOR 2000	19-Aug-19	STORMTECH CHAMBERS
17099	480	RUTHERFORD AV CHAR 3725	20-Aug-19	MULTIPLE
18143	8	RUTLAND SQ SEND 3728	21-Aug-19	STORMTECH CHAMBERS
19036	161	WEST BROOKLINE ST SEND 72	22-Aug-19	CULTEC CHAMBER
14151	750	ALBANY ST SEND 160	23-Aug-19	PERFORATED PIPE
18342	168	BIGELOW ST ALBR 526	23-Aug-19	CULTEC CHAMBER
18460	888	METROPOLITAN AV HYDE 2833	23-Aug-19	CULTEC CHAMBER
19132	11-19	FLINT ST MATP 1675	23-Aug-19	PERFORATED PIPE
16355	123	CUMMINS HWY ROSL 1213	27-Aug-19	CULTEC CHAMBER
17065	22-26	PLAINFIELD ST JAPL 3323	27-Aug-19	CULTEC CHAMBER
18018	67	LUBEC ST EBOS 2622	27-Aug-19	DRYWELL
19044	43-45	WAVERLY ST ROXB 4413	27-Aug-19	DRYWELL
19198	201	BAY STATE RD FEKE 436	27-Aug-19	CULTEC CHAMBER
18205	29	CARRUTH ST SDOR 826	28-Aug-19	DRYWELL
16540	240	TREMONT ST CENT 4211	29-Aug-19	TANK/INJECTION WELLS
16519	70-72	MOUNT PLEASANT AV ROXB 2952	17-Sep-19	CULTEC CHAMBER
18133	79	LINDEN ST ALBR 2558	24-Sep-19	DRYWELL
18490	5	SPARHAWK ST ALBR 3953	26-Sep-19	DRYWELL

**Table 3-4. Private Infiltration Devices Approved 2019**

PROJECT NO	ADDRESS NO	STREET	INSPECTION DATE	INFILTRATION SYSTEM TYPE
16484	19	DAWES ST NDOR 1274	30-Sep-19	STORMTECH CHAMBERS
16514	362-364	WEST BROADWAY SBOS 71	03-Oct-19	CULTEC CHAMBER
18080	136-138	NEPONSET AV SDOR 3020	03-Oct-19	STORMTECH CHAMBERS
16060	27	H ST SBOS 1960	09-Oct-19	CULTEC CHAMBER
17145	3	JOY ST BBBH 2342	09-Oct-19	CULTEC CHAMBER
15446	64-66	GOVE ST EBOS 1881	11-Oct-19	STORMTECH CHAMBERS
16262	15	JUNE ST ROSL 2351	11-Oct-19	DRYWELL
18147	91	STANDARD ST MATP 3983	11-Oct-19	MULTIPLE
18043	86-88	F ST SBOS 1587	16-Oct-19	CULTEC CHAMBER
19015	27	LAWRENCE ST SEND 2479	16-Oct-19	CULTEC CHAMBER
18583	42	THOMPSON ST HYDE 4162	18-Oct-19	CULTEC CHAMBER
19093	158	WEST CANTON ST BBBH 73	23-Oct-19	STORMTECH CHAMBERS
17394	5	ACORN ST BBBH 122	28-Oct-19	DRYWELL
18194	375	MAVERICK ST EBOS 2763	28-Oct-19	CULTEC CHAMBER
18221	9	CEDAR ST ROXB 858	28-Oct-19	MULTIPLE
15339	38	PORT NORFOLK ST SDOR 3359	31-Oct-19	STORMTECH CHAMBERS
14165	210	ENDICOTT ST CENT 1533	01-Nov-19	STORMTECH CHAMBERS
16487	61	HEATH ST JAPL 2094	01-Nov-19	PERFORATED PIPE
18144	229	EAST EAGLE ST EBOS 12	01-Nov-19	DRYWELL
18629	41	WINTHROP ST ROXB 4586	01-Nov-19	CULTEC CHAMBER
18086	33	JOHNSWOOD RD ROSL 2336	05-Nov-19	CULTEC CHAMBER
18220	5	CEDAR ST ROXB 858	05-Nov-19	MULTIPLE
18352	38	ARMANDINE ST SDOR 305	05-Nov-19	STORMTECH CHAMBERS
18632	44	WAVERLY ST ALBR 4412	05-Nov-19	STORMTECH CHAMBERS
18641	478	WESTERN AV ALBR 4469	07-Nov-19	LEACHING BASIN
17278	3-5	LAMSON CT EBOS 2441	15-Nov-19	CULTEC CHAMBER
17445	283	OLD COLONY AV SBOS 3144	15-Nov-19	CULTEC CHAMBER
18379	75	BROOKLEY RD JAPL 696	15-Nov-19	STORMTECH CHAMBERS
18489	18	MURDOCK ST ALBR 2976	15-Nov-19	DRYWELL
16464	530-532	DORCHESTER AV SBOS 1359	18-Nov-19	DRYWELL
17155	1750	SOLDIERS FIELD RD ALBR 3927	19-Nov-19	STORMTECH CHAMBERS
14234	8	SPRING ST WROX 3967	21-Nov-19	CULTEC CHAMBER
15093	32	DERNE ST BBBH 1320	21-Nov-19	CULTEC CHAMBER
17555	217	PARIS ST EBOS 3203	21-Nov-19	DRYWELL
17569	75	BEACON ST CENT 446	21-Nov-19	FILTRATION BASINS
17272	163	NEWBURY ST BBBH 3050	22-Nov-19	CULTEC CHAMBER
17467	377	WEST FIRST ST SBOS 83	22-Nov-19	DRYWELL
18119	39	SENATOR BOLLING CIR MATP 5783	22-Nov-19	PERFORATED PIPE
19226	6	LINWOOD SQ ROXB 2565	26-Nov-19	CULTEC CHAMBER
17358	152	BROOKSIDE AV JAPL 703	03-Dec-19	CULTEC CHAMBER
17546	210	BOWDOIN ST SDOR 609	03-Dec-19	STORMTECH CHAMBERS
18184	33-93	WEST MAIN ST MATP 4460	03-Dec-19	MULTIPLE
18209	212	COMMONWEALTH AV BBBH 1091	03-Dec-19	DRYWELL
19337	809	EAST BROADWAY SBOS 4976	03-Dec-19	STORMTECH CHAMBERS
16314	352	MARLBOROUGH ST BBBH 2715	03-Dec-19	CULTEC CHAMBER
17241	416	HARVARD ST SDOR 2055	05-Dec-19	DRYWELL
17379	232-248	WALDEMAR AV EBOS 4341	05-Dec-19	PERFORATED PIPE
17557	13 & 17	ROGERS PARK AV ALBR 3659	10-Dec-19	STORMTECH CHAMBERS
18078	55	HUTCHINGS ST ROXB 2247	10-Dec-19	STORMTECH CHAMBERS
18249	19-21	EVERETT AV NDOR 1574	10-Dec-19	LEACHING BASIN
18493	608	SHAWMUT AV SEND 3868	10-Dec-19	STORMTECH CHAMBERS
15206	42	DENNIS ST ROXB 1313	12-Dec-19	PERFORATED PIPE
17440	3521	WASHINGTON ST JAPL 4395	12-Dec-19	PERFORATED PIPE
18288	105	CALL ST JAPL 778	12-Dec-19	CULTEC CHAMBER
18367	334-336	BUNKER HILL ST CHAR 733	12-Dec-19	CULTEC CHAMBER
19168	286	SUMNER ST EBOS 4062	12-Dec-19	STORMTECH CHAMBERS
17231	577	BAKER ST WROX 384	13-Dec-19	STORMTECH CHAMBERS
17477	76	STONLEY RD JAPL 4019	13-Dec-19	LEACHING BASIN
18055		SARGENT CWY OTHR 3795	17-Dec-19	STORMTECH CHAMBERS
18264	14-18	NEW ENGLAND AV SDOR 3036	23-Dec-19	STORMTECH CHAMBERS
18015	10	SPRING GARDEN ST NDOR 3968	24-Dec-19	PERFORATED PIPE
16596	510	DORCHESTER AV SBOS 1359	27-Dec-19	DRYWELL
17275	1465	COMMONWEALTH AV ALBR 1090	27-Dec-19	PERFORATED PIPE
17441	53	SILVER ST SBOS 3909	27-Dec-19	CULTEC CHAMBER
18158	109	STANWOOD ST ROXB 3992	27-Dec-19	CULTEC CHAMBER
18226	6	LONG TER WROX 5311	27-Dec-19	STORMTECH CHAMBERS
18456	86	CHESTNUT ST BBBH 964	27-Dec-19	CULTEC CHAMBER
18546	185	SAVANNAH AV MATP 3798	27-Dec-19	CULTEC CHAMBER

**Table 3-5. Privately Owned Grit Chambers Approved 2019**

PROJECT NO	ADDRESS NO	STREET NAME	NEIGHBORHOOD	SIGNATURE_DATE
18356	40	RUGG RD	ALBR	30-Jan-19
18415	80	BRAINTREE ST	ALBR	30-Jan-19
18555	67-91	GUEST ST	ALBR	21-Feb-19
18406	64	ALPINE ST	ROXB	27-Feb-19
18128	500	RUTHERFORD AV	CHAR	05-Apr-19
18320	151	RESERVATION RD	HYDE	10-Apr-19
17099	480	RUTHERFORD AV	CHAR	16-Apr-19
17320	321	HARRISON AV	SEND	25-Apr-19
18208	99	SUMNER ST	EBOS	26-Apr-19
18532	10	FAN PIER BLVD	SBOS	23-May-19
14476	120	BROOKLINE AV	FEKE	20-Jun-19
18296	41	WOODVILLE ST	ROXB	25-Jun-19
19064	1420-1440	SOLDIERS FIELD RD	ALBR	25-Jun-19
16500	130-140	WESTERN AV	ALBR	25-Jul-19
17275	1465&1465A	COMMONWEALTH AV	ALBR	25-Jul-19
18438	135	WILLIAM T MORRISSEY BLVD	NDOR	05-Aug-19
17369	235	WESTERN AV	ALBR	06-Aug-19
19189	1545-1555	VFW PKWY	WROX	11-Sep-19
19181	6	COPPERSMITH WY	EBOS	15-Oct-19
18492	144	ADDISON ST	EBOS	25-Oct-19
18264	17	MALLARD AV	SDOR	04-Nov-19
19010	129	LAKE ST	ALBR	21-Nov-19
19432	325	RESERVOIR RD	ALBR	21-Nov-19
19476	21-35	WEST SECOND ST	SBOS	27-Nov-19

TABLE 5-1. Particle Separator Cleaning-Material Removed 2005-2019

Location	Neighborhood	Receiving Water	2005-Material Removed (cubic yards)	2006-Material Removed (cubic yards)	2007-Material Removed (cubic yards)	2008-Material Removed (cubic yards)	2009-Material Removed (cubic yards)	2010 Material Removed (cubic yards) Misc. dates	3/10/2010	4/13/2010	5/25/2010	6/13/2010	7/20/2010	9/16/2010	10/21/2010	10/29/2010	2011 Material Removed (cubic yards) Various dates	2012 Material Removed (cubic yards) Various dates	2013 Material Removed (cubic yards) Various dates	2014 Material Removed (cubic yards) Various dates	2015 Material Removed (cubic yards) Various dates	2016 Material Removed (cubic yards) Various dates	2017 Material Removed (cubic yards) Various dates	2018 Material Removed (cubic yards) Various dates	2019 Material Removed (cubic yards) Various dates	TOTAL MATERIAL REMOVED (cubic yards)	
Bussey St./Arboretum	Jamaica Plain	Bussy Brook	1.00	2.50	0.25	1.00	3.00										1.50	0.50	0.50	Cleaning not needed	0.50	0.50	1.20	0.20		12.65	
Centre Lane	WROX	Wetlands	0.25	0.25	0.75	0.25	0.10	0.25									0.05	0.00	Cleaning not needed	Cleaning not needed	Cleaning not needed	0.25	0.00	0.10		2.25	
Centre St.	WROX	Wetlands	0.50	0.50	0.50	0.00	0.50	0.00									0.25	NA	0.25	Cleaning not needed	Cleaning not needed	0.25	0.20	0.10		3.05	
Coleridge St.	East Boston	Boston Harbor	0.25	0.25	0.50	2.00	0.25	2.50									0.01	0.00	0.50	2.00	Cleaning not needed	0.50	0.10	0.20		9.06	
Coniston Rd.	Roslindale	Stony Brook Conduit	0.25	0.50	0.00	0.00	0.00	0.00									0.00	0.00	Cleaning not needed	Cleaning not needed	Cleaning not needed	Cleaning not needed	Amt removed not recorded	Amt removed not recorded		0.75	
Denny St.	Dorchester	Malibu Beach	0.25	0.75	1.00	0.00	1.00	0.12									0.15	0.00	Cleaning not needed	0.25	Cleaning not needed	Cleaning not needed	Cleaning not needed	Separator needs repair	Separator needs repair		3.52
Ericsson St.	Dorchester	Neponset River	0.25	0.25	0.25	0.00	0.25	0.15									0.20	0.00	Cleaning not needed	Cleaning not needed	Cleaning not needed	0.25	Amt removed not recorded	0.20		1.80	
Fenwood Rd.	Roxbury	Muddy River	2.00	4.00	0.50	0.25	2.25	0.25	0.02	1.50	0.15	0.15				0.12	0.25	0.00	0.25	Cleaning not needed	Cleaning not needed	0.25	0.20	0.30		12.44	
Lawley St.	Dorchester	Pine Neck Creek	0.25	0.25	0.15	0.03	0.25	0.50									0.01	0.00	Cleaning not needed	Cleaning not needed	Cleaning not needed	0.25	Amt removed not recorded	Amt removed not recorded	Amt removed not recorded	1.69	
Martha Rd.	Central	Charles River															0.25	0.25	Cleaning not needed	Cleaning not needed	Cleaned but amount not recorded	0.10	Amt removed not recorded			0.60	
Neponset Ave.	Dorchester	Neponset River	2.00	2.75	1.50	0.50	1.50	2.00									0.50	0.00	Cleaning not needed	Cleaning not needed	Cleaning not needed	Cleaning not needed	0.50	0.20	Amt removed not recorded	11.45	
Norton St.	Hyde Park	Open Channel	0.25	0.50	0.50	0.03	0.13	0.25									0.00	0.00	Cleaning not needed	Cleaning not needed	Cleaning not needed	Cleaning not needed	0.20	0.20	1.70	3.76	
Perkins St.	Jamaica Plain	Jamaica Pond	0.25	0.25	1.50	0.00	1.50	2.00									0.00	0.00	0.50	Cleaning not needed	Cleaning not needed	0.50	0.20	Amt removed not recorded		6.70	
Waldemar Ave.	East Boston	Belle Isle Inlet	1.00	0 or not	0.25	0.25	0.10	0.12									0.00	0.00	Cleaning not needed	Cleaning not needed	Cleaning not needed	Cleaning not needed	0.10	0.20		2.02	
Waldemar Ave.	East Boston	Belle Isle Inlet	1.00	0 or not	0.50	0.25	0.75	1.00									0.01	0.00	Cleaning not needed	Cleaning not needed	Cleaning not needed	0.25	2.00	Amt removed not recorded		5.76	
Walter St.	Roslindale	Wetlands	0.25	1.00	0.50	0.01	0.25	0.15	0.25	0.01		0.10	0.01	0.10			0.00	0.25	0.25	Cleaning not needed	0.25	0.00	Amt removed not recorded	0.10		2.48	
TOTALS			8.75	11.25	10.90	3.81	9.83	11.89	0.40	0.25	0.03	1.50	0.25	0.16	0.10	0.12	2.92	1.00	2.50	2.25	0.75	3.00	4.80	1.80	1.70	79.96	

Table 7-1. 2012 Stormwater Model - Mean Annual Pollutant Loads for Boston's 27 Reporting Areas

Reporting Area Name	Drainage Area	Mean Flow	BOD 5	COD	TKN	Nitrate-Nitrite as N	Ammonia as N	Total Phosphorus	Ortho-phosphate as P	Total Copper	Total Zinc	TSS	E Coli	Enterococcus	Fecal Coliform
	Acres	CFS/yr	lb/yr										10 <sup>9</sup> CFU/yr		
West Roxbury	889	2.37	14,028	63,894	2,215	7,695	679	308	82	19	63	29,427	115,093	73,017	99,765
Sawmill Brook	1277	6.12	25,223	111,598	4,610	21,366	1,481	689	194	35	107	53,139	169,381	111,714	147,072
<b>Mid-Charles total</b>	<b>2166</b>	<b>8.49</b>	<b>39,251</b>	<b>175,492</b>	<b>6,824</b>	<b>29,061</b>	<b>2,160</b>	<b>998</b>	<b>276</b>	<b>54</b>	<b>170</b>	<b>82,566</b>	<b>284,474</b>	<b>184,731</b>	<b>246,837</b>
Upper Stony	1832	4.76	25,517	116,162	4,537	11,003	1,462	610	176	35	108	56,961	195,192	118,118	163,714
Canterbury Brook	1889	7.01	102,193	376,759	16,955	21,891	9,627	2,812	909	74	234	145,004	635,362	295,512	890,923
Roslindale Branch	1199	2.09	38,913	165,714	5,930	5,686	2,677	835	249	36	113	70,307	306,891	140,819	314,951
Bussey Brook	839	1.13	6,704	17,754	1,031	2,313	405	148	45	7	15	9,885	18,068	13,573	21,458
Goldsmith Brook	746	1.36	13,530	64,412	2,085	4,068	651	295	69	18	58	30,010	109,971	68,121	87,133
Lower Stony	2165	5.54	72,827	277,964	11,330	16,228	6,266	1,803	601	76	268	110,565	420,530	179,517	491,573
<b>Stony Brook total</b>	<b>8670</b>	<b>22</b>	<b>259,685</b>	<b>1,018,765</b>	<b>41,866</b>	<b>61,189</b>	<b>21,088</b>	<b>6,502</b>	<b>2,051</b>	<b>245</b>	<b>797</b>	<b>422,733</b>	<b>1,686,014</b>	<b>815,660</b>	<b>1,969,753</b>
Village Brook Boston	787	2.65	14,590	50,106	2,390	8,624	1,206	450	130	14	47	20,440	95,024	63,473	139,033
Village Brook Brookline	2061	5.53	47,587	211,867	7,861	18,837	3,231	1,053	339	52	157	90,411	372,252	179,473	317,679
Other Muddy River	1785	7.95	82,671	270,542	12,683	7,733	6,658	2,600	645	99	362	120,510	344,192	212,280	365,787
<b>Muddy River total</b>	<b>4633</b>	<b>16</b>	<b>144,847</b>	<b>532,515</b>	<b>22,935</b>	<b>35,195</b>	<b>11,096</b>	<b>4,103</b>	<b>1,114</b>	<b>165</b>	<b>565</b>	<b>231,362</b>	<b>811,468</b>	<b>455,225</b>	<b>822,499</b>
Faneuil Brook	1316	2.66	40,450	186,467	6,960	7,030	2,750	990	264	47	152	88,573	336,100	169,342	294,366
Shepard Brook	415	1.25	22,114	106,379	3,116	2,876	911	591	90	29	117	48,529	199,314	130,916	152,862
Smelt Brook	846	1.64	32,776	175,163	4,911	4,035	1,168	834	117	47	170	81,245	331,610	211,548	206,479
Allston-Brighton	796	2.30	22,684	80,263	2,767	6,195	1,330	499	133	26	104	33,812	125,438	94,630	165,449
Millers River	208	1.57	15,716	65,888	1,891	3,732	575	383	60	18	76	29,967	119,979	88,372	95,414
<b>Other Lower Charles total</b>	<b>3581</b>	<b>9</b>	<b>133,740</b>	<b>614,159</b>	<b>19,645</b>	<b>23,868</b>	<b>6,734</b>	<b>3,297</b>	<b>664</b>	<b>167</b>	<b>619</b>	<b>282,126</b>	<b>1,112,441</b>	<b>694,808</b>	<b>914,570</b>
<b>Lower Charles Basin total</b>	<b>19050</b>	<b>56</b>	<b>577,523</b>	<b>2,340,931</b>	<b>91,270</b>	<b>149,313</b>	<b>41,078</b>	<b>14,900</b>	<b>4,105</b>	<b>632</b>	<b>2,152</b>	<b>1,018,788</b>	<b>3,894,397</b>	<b>2,150,425</b>	<b>3,953,659</b>
Mother Brook	441	0.89	10,303	40,028	1,604	2,757	775	239	75	9	27	16,586	72,716	39,695	88,018
Hyde Park	1766	3.68	47,075	224,150	7,358	10,903	2,528	1,030	256	54	187	101,006	388,464	213,159	304,092
Oakland Brook	519	1.78	18,211	79,542	2,951	5,882	1,254	407	127	19	57	33,949	149,837	71,668	150,633
Mattapan Brook	304	0.77	13,478	55,661	2,064	2,195	991	286	93	12	40	23,194	99,823	45,419	109,388
Lower Neponset	843	2.24	26,315	115,997	4,100	6,813	1,579	606	159	29	96	51,052	210,044	118,935	192,551
Tenean Creek	873	2.13	106,614	399,865	16,800	5,670	10,123	2,379	897	65	202	149,087	679,235	228,744	895,467
Davenport Creek	712	1.49	24,295	117,246	3,733	4,141	1,267	545	123	29	97	52,691	216,336	116,075	171,873
<b>Neponset River total</b>	<b>5458</b>	<b>11</b>	<b>221,995</b>	<b>915,243</b>	<b>34,877</b>	<b>34,220</b>	<b>17,250</b>	<b>4,946</b>	<b>1,606</b>	<b>187</b>	<b>609</b>	<b>374,873</b>	<b>1,600,119</b>	<b>717,619</b>	<b>1,740,148</b>
Charlestown	556	2.25	69,573	382,135	10,563	5,066	2,619	1,962	255	103	386	174,040	776,735	516,956	512,302
East Boston	438	1.51	43,225	223,062	6,964	4,154	2,250	1,102	214	54	185	99,394	431,965	251,732	313,268
Downtown	473	2.18	58,292	220,832	7,871	3,242	4,004	1,487	360	46	228	90,824	395,945	216,214	484,454
Dorchester	1124	3.79	84,325	372,297	12,981	10,311	5,532	2,303	520	88	334	158,255	689,410	400,141	684,621

Table 7-2. Annual<sup>1</sup> Load Reduction Based on Illicit Discharges Removed in 2012/2013

Reporting Area Name	Drainage Area	Number Illicits Removed	Flow Removed	Total Phosphorus Removed	E Coli Removed	Enterococcus Removed	Fecal Coliform Removed
	Acres		gpd	lb/yr	10 <sup>9</sup> CFU/yr		
West Roxbury	889	4	349	9	2,119	316	3,864
Sawmill Brook	1,277	11	698	20	2,732	355	5,160
<b>Mid-Charles total</b>	<b>2,166</b>	<b>15</b>	<b>1047</b>	<b>28</b>	<b>4,851</b>	<b>671</b>	<b>9,024</b>
Upper Stony	1,832	20	1888	47	10,946	1,444	20,486
Canterbury Brook	1,889	16	12853	324	70,155	9,206	131,071
Roslindale Branch	1,199	17	1438	77	17,647	2,318	32,952
Bussey Brook	839	3	106	19	3,345	443	6,147
Goldsmith Brook	746	6	524	10	1,676	161	3,332
Lower Stony	2,165	4	1723	114	0	1,701	0
<b>Stony Brook total</b>	<b>8,670</b>	<b>66</b>	<b>18532</b>	<b>591</b>	<b>103,769</b>	<b>15,273</b>	<b>193,988</b>
Village Brook Boston	787	0	0	0	0	0	0
Village Brook Brookline	2,061	2	217	4	943	0	2,037
Other Muddy River	1,785	7	712	13	0	669	0
<b>Muddy River total</b>	<b>4,633</b>	<b>9</b>	<b>929</b>	<b>17</b>	<b>835</b>	<b>659</b>	<b>1,288</b>
Faneuil Brook	1,316	21	1739	51	12,378	1,765	22,730
Shepard Brook	415	2	657	16	3,755	462	7,092
Smelt Brook	846	8	904	25	5,911	737	11,097
Allston-Brighton	796	2	185	4	928	108	1,752
Millers River	208	1	27	1	316	32	607
<b>Other Lower Charles total</b>	<b>3,581</b>	<b>34</b>	<b>3512</b>	<b>98</b>	<b>23,287</b>	<b>3,104</b>	<b>43,279</b>
<b>Lower Charles Basin total</b>	<b>19,050</b>	<b>124</b>	<b>24020</b>	<b>734</b>	<b>132,742</b>	<b>19,707</b>	<b>247,578</b>
Mother Brook	441	2	1145	25	5,966	799	11,123
Hyde Park	1,766	17	5524	112	26,950	3,526	50,414
Oakland Brook	519	6	413	11	2,676	376	4,936
Mattapan Brook	304	7	1441	42	10,025	1,360	18,623
Lower Neponset	843	4	416	13	2,991	352	5,691
Tenean Creek	873	8	4856	109	25,112	3,238	47,097
Davenport Creek	712	3	277	9	2,021	246	3,825
<b>Neponset River total</b>	<b>5,458</b>	<b>47</b>	<b>14072</b>	<b>321</b>	<b>75,740</b>	<b>9,896</b>	<b>141,709</b>
Charlestown	556	4	486	10	2,482	389	4,484
East Boston	438	27	1840	42	10,047	1,291	18,857
Downtown	473	2	1168	32	7,548	1,007	14,071
Dorchester	1,124	2	508	14	3,193	421	5,944

Notes:

1. Based on 2007-2009 precipitation using BWSC precipitation gage network



**Table 7-3. Annual<sup>1</sup> Load Reduction Based on Illicit Discharges Removed in 2014**

Reporting Area Name	Drainage Area	Number Illicits Removed	Flow Removed	Total Phosphorus Removed	E Coli Removed	Enterococcus Removed	Fecal Coliform Removed
	Acres		gpd	lb/yr	10 <sup>9</sup> CFU/yr		
West Roxbury	889	3	53	1	322	55	564
Sawmill Brook	1,277	4	223	8	1,347	184	2,503
<b>Mid-Charles total</b>	<b>2,166</b>	<b>7</b>	<b>276</b>	<b>9</b>	<b>1,669</b>	<b>239</b>	<b>3,067</b>
Upper Stony	1,832	7	299	8	1,753	243	3,237
Canterbury Brook	1,889	10	1259	32	6,962	922	12,987
Roslindale Branch	1,199	3	115	8	2,409	293	4,682
Bussey Brook <sup>2</sup>	839	1	366	9	1,236	203	2,014
Goldsmith Brook	746	2	126	4	685	133	1,155
Lower Stony	2,165	0	0	0	0	0	0
<b>Stony Brook total</b>	<b>8,670</b>	<b>23</b>	<b>2165</b>	<b>56</b>	<b>9,888</b>	<b>1,159</b>	<b>18,558</b>
Village Brook Boston	787	0	0	0	0	0	0
Village Brook Brookline	2,061	1	602	13	3,031	329	5,815
Other Muddy River	1,785	1	265	9	1,667	118	3,333
<b>Muddy River total</b>	<b>4,633</b>	<b>2</b>	<b>867</b>	<b>22</b>	<b>2,212</b>	<b>447</b>	<b>4,478</b>
Faneuil Brook	1,316	17	1938	47	10,921	1,208	20,996
Shepard Brook	415	2	525	14	3,265	430	6,084
Smelt Brook	846	3	221	3	696	93	1,297
Allston-Brighton	796	0	0	0	0	0	0
Millers River	208	0	0	0	0	0	0
<b>Other Lower Charles total</b>	<b>3,581</b>	<b>22</b>	<b>2684</b>	<b>63</b>	<b>14,882</b>	<b>1,731</b>	<b>28,377</b>
<b>Lower Charles Basin total</b>	<b>19,050</b>	<b>54</b>	<b>5992</b>	<b>150</b>	<b>28,651</b>	<b>3,576</b>	<b>54,480</b>
Mother Brook	441	5	393	10	2,361	311	4,364
Hyde Park <sup>2</sup>	1,766	5	459	10	2,410	307	4,527
Oakland Brook	519	3	262	7	1,666	238	3,061
Mattapan Brook	304	4	447	11	2,477	284	4,737
Lower Neponset	843	2	193	4	1,012	133	1,891
Tenean Creek	873	8	776	19	4,274	526	8,084
Davenport Creek	712	0	0	0	0	0	0
<b>Neponset River total</b>	<b>5,458</b>	<b>27</b>	<b>2530</b>	<b>52</b>	<b>12,063</b>	<b>1,519</b>	<b>22,672</b>
Charlestown	556	0	0	0	0	0	0
East Boston <sup>2</sup>	438	10	465	11	2,560	316	4,840
Downtown <sup>2</sup>	473	2	32630	709	171,904	22,550	321,357
Dorchester	1,124	2	190	4	1,024	170	1,821

Notes:

1. Based on 2007-2009 precipitation using BWSC precipitation gage network

**Table 7-4. Annual<sup>1</sup> Load Reduction Based on Illicit Discharges Removed in 2015**

Reporting Area Name	Drainage Area	Number Illicits Removed	Flow Removed	Total Phosphorus	E Coli	Enterococcus	Fecal Coliform
	Acres		gpd	lb/yr	10 <sup>9</sup> CFU/yr		
West Roxbury	889	1	56	3	625	87	1,133
Sawmill Brook	1,277	8	409	20	3,047	417	5,691
<b>Mid-Charles total</b>	<b>2,166</b>	<b>9</b>	<b>465</b>	<b>22</b>	<b>3,672</b>	<b>504</b>	<b>6,824</b>
Upper Stony	1,832	4	156	10	2,171	297	4,028
Canterbury Brook	1,889	5	402	43	9,193	1,224	17,163
Roslindale Branch	1,199	6	258	19	5,084	742	9,472
Bussey Brook <sup>2</sup>	839	12	1326	35	4,317	640	7,033
Goldsmith Brook	746	1	12	4	625	62	1,214
Lower Stony <sup>3</sup>	2,165	0	0	96	15,379	1,943	28,051
<b>Stony Brook total</b>	<b>8,670</b>	<b>28</b>	<b>2154</b>	<b>207</b>	<b>36,769</b>	<b>4,908</b>	<b>66,961</b>
Village Brook Boston	787	0	0	0	0	0	0
Village Brook Brookline	2,061	1	188	17	3,925	417	7,604
Other Muddy River	1,785	3	1472	18	134	446	334
<b>Muddy River total</b>	<b>4,633</b>	<b>4</b>	<b>1660</b>	<b>35</b>	<b>4,059</b>	<b>863</b>	<b>7,938</b>
Faneuil Brook <sup>2</sup>	1,316	9	1760	84	19,929	2,388	37,832
Shepard Brook	415	0	0	0	0	0	0
Smelt Brook	846	1	43	4	985	127	1,846
Allston-Brighton	796	0	0	0	0	0	0
Millers River	208	0	0	0	0	0	0
<b>Other Lower Charles total</b>	<b>3,581</b>	<b>10</b>	<b>1803</b>	<b>89</b>	<b>20,914</b>	<b>2,516</b>	<b>39,678</b>
<b>Lower Charles Basin total</b>	<b>19,050</b>	<b>51</b>	<b>6082</b>	<b>353</b>	<b>65,414</b>	<b>8,790</b>	<b>121,400</b>
Mother Brook	441	0	0	0	0	0	0
Hyde Park	1,766	0	0	0	0	0	0
Oakland Brook	519	3	517	21	4,894	660	9,101
Mattapan Brook	304	2	36	13	2,650	329	4,986
Lower Neponset <sup>2</sup>	843	1	192	8	2,017	265	3,769
Tenean Creek	873	1	202	24	5,535	662	10,516
Davenport Creek	712	19	1536	88	20,580	2,678	38,491
<b>Neponset River total</b>	<b>5,458</b>	<b>26</b>	<b>2483</b>	<b>154</b>	<b>35,677</b>	<b>4,595</b>	<b>66,863</b>
Charlestown	556	0	0	0	0	0	0
East Boston <sup>2</sup>	438	2	4328	100	22,740	2,999	42,487
Downtown	473	2	631	83	3,552	490	6,574
Dorchester	1,124	0	0	0	0	0	0
<b>TOTAL</b>	<b>27,099</b>	<b>81</b>	<b>13,524</b>	<b>691</b>	<b>127,383</b>	<b>16,874</b>	<b>237,324</b>

Notes:

1. Based on 2007-2009 precipitation using BWSC precipitation gage network
  2. Includes additional flow not in model as summarized in Table 2.
- there is a flow split. A portion of this flow goes to the 231023 outfall in

Table 7-5. Annual<sup>1</sup> Load Reduction Based on Illicit Discharges Removed in 2016

Reporting Area Name	Drainage Area	Number Illicits Removed	Flow Removed	Total Phosphorus	E Coli	Enterococcus	Fecal Coliform
	Acres		gpd	lb/yr	10 <sup>9</sup> CFU/yr		
West Roxbury	889	1	32	1	185	27	345
Sawmill Brook	1,277	3	114	1	96	10	207
<b>Mid-Charles total</b>	<b>2,166</b>	<b>4</b>	<b>146</b>	<b>2</b>	<b>281</b>	<b>38</b>	<b>552</b>
Upper Stony	1,832	0	0	0	0	0	0
Canterbury Brook	1,889	18	4,759	118	25,498	3,329	47,675
Roslindale Branch	1,199	1	234	26	4,491	476	8,463
Bussey Brook <sup>2</sup>	839	9	654	4	2,617	349	4,837
Goldsmith Brook	746	4	365	9	2,096	324	3,786
Lower Stony	2,165	1	40	173	35,350	4,820	65,801
<b>Stony Brook total</b>	<b>8,670</b>	<b>33</b>	<b>6052</b>	<b>330</b>	<b>70,052</b>	<b>9,298</b>	<b>130,563</b>
Village Brook Boston	787	0	0	0	0	0	0
Village Brook Brookline	2,061	0	0	0	0	0	0
Other Muddy River	1,785	5	536	14	987	316	2,004
<b>Muddy River total</b>	<b>4,633</b>	<b>5</b>	<b>536</b>	<b>14</b>	<b>987</b>	<b>316</b>	<b>2,004</b>
Faneuil Brook	1,316	5	1,264	35	8,289	1,131	15,355
Shepard Brook	415	2	1,204	22	5,246	682	9,846
Smelt Brook	846	9	2,181	17	4,077	589	7,520
Allston-Brighton	796	2	632	12	2,992	383	5,612
Millers River	208	0	0	0	0	0	0
<b>Other Lower Charles total</b>	<b>3,581</b>	<b>18</b>	<b>5281</b>	<b>86</b>	<b>20,604</b>	<b>2,785</b>	<b>38,334</b>
<b>Lower Charles Basin total</b>	<b>19,050</b>	<b>60</b>	<b>12015</b>	<b>432</b>	<b>91,924</b>	<b>12,437</b>	<b>171,452</b>
Mother Brook	441	2	157	4	869	106	1,635
Hyde Park	1,766	1	63	1	331	39	630
Oakland Brook	519	2	382	4	1,005	103	1,961
Mattapan Brook	304	4	1,218	24	5,534	709	10,409
Lower Neponset	843	1	36	1	197	31	355
Tenean Creek	873	1	984	23	5,385	706	10,067
Davenport Creek <sup>2</sup>	712	15	1448	15	8,458	1,092	15,826
<b>Neponset River total</b>	<b>5,458</b>	<b>26</b>	<b>4288</b>	<b>72</b>	<b>21,780</b>	<b>2,787</b>	<b>40,882</b>
Charlestown	556	0	0	0	0	0	0
East Boston	438	1	94	2	561	74	1,045
Downtown	473	2	528	12	2,827	291	5,443
Dorchester	1,124	4	484	11	2,664	357	4,973
<b>TOTAL</b>	<b>27,099</b>	<b>93</b>	<b>17,409</b>	<b>529</b>	<b>119,755</b>	<b>15,945</b>	<b>223,795</b>

Notes:

1. Based on 2007-2009 precipitation using BWSC precipitation gage network
2. Includes additional flow not in model as summarized in Table 2.

**Table 7-6: Annual<sup>1</sup> Load Reduction Based on Illicit Discharges Removed in 2017**

Reporting Area Name	Drainage Area	Number Illicits Removed	Flow Removed	Total Phosphorus	E Coli	Enterococcus	Fecal Coliform
	Acres		gpd	lb/yr	10 <sup>9</sup> CFU/yr		
West Roxbury	889	4	379	6	1,560	243	2,830
Sawmill Brook	1,277	3	134	4	229	27	441
<b>Mid-Charles total</b>	<b>2,166</b>	<b>7</b>	<b>513</b>	<b>10</b>	<b>1,789</b>	<b>270</b>	<b>3,271</b>
Upper Stony	1,832	0	0	0	0	0	0
Canterbury Brook	1,889	4	406	17	3,730	483	6,983
Roslindale Branch	1,199	0	0	0	0	0	0
Bussey Brook <sup>2</sup>	839	2	91	1	61	9	89
Goldsmith Brook	746	3	467	10	2,060	342	3,653
Lower Stony	2,165	1	66	4	632	196	884
<b>Stony Brook total</b>	<b>8,670</b>	<b>10</b>	<b>1030</b>	<b>32</b>	<b>6,483</b>	<b>1,030</b>	<b>11,609</b>
Village Brook Boston	787	0	0	0	0	0	0
Village Brook Brookline	2,061	0	0	0	0	0	0
Other Muddy River	1,785	1	1,293	30	6,309	770	11,907
<b>Muddy River total</b>	<b>4,633</b>	<b>1</b>	<b>1293</b>	<b>30</b>	<b>6,309</b>	<b>770</b>	<b>11,907</b>
Faneuil Brook	1,316	6	459	10	2,500	577	4,003
Shepard Brook	415	5	702	10	2,459	283	4,689
Smelt Brook	846	0	0	0	0	0	0
Allston-Brighton	796	0	0	0	0	0	0
Millers River	208	0	0	0	0	0	0
<b>Other Lower Charles total</b>	<b>3,581</b>	<b>11</b>	<b>1161</b>	<b>20</b>	<b>4,959</b>	<b>860</b>	<b>8,692</b>
<b>Lower Charles Basin total</b>	<b>19,050</b>	<b>29</b>	<b>3,997</b>	<b>92</b>	<b>19,540</b>	<b>2,930</b>	<b>35,479</b>
Mother Brook	441	1	33	0	0	0	0
Hyde Park	1,766	1	162	4	904	116	1,694
Oakland Brook	519	3	219	10	2,351	311	4,387
Mattapan Brook	304	2	353	3	672	116	1,197
Lower Neponset	843	0	0	0	0	0	0
Tenean Creek	873	1	68	2	361	43	691
Davenport Creek <sup>2</sup>	712	2	180	4	949	123	1,779
<b>Neponset River total</b>	<b>5,458</b>	<b>10</b>	<b>1015</b>	<b>23</b>	<b>5,237</b>	<b>709</b>	<b>9,748</b>
Charlestown	556	0	0	0	0	0	0
East Boston	438	0	0	0	0	0	0
Downtown	473	0	0	0	0	0	0
Dorchester	1,124	0	0	0	0	0	0
<b>TOTAL</b>	<b>27,099</b>	<b>39</b>	<b>5,012</b>	<b>115</b>	<b>24,777</b>	<b>3,639</b>	<b>45,227</b>

Notes:

1. Based on 2007-2009 precipitation using BWSC precipitation gage network

**Table 7-7: Annual<sup>1</sup> Load Reduction Based on Illicit Discharges Removed in 2018**

Reporting Area Name	Drainage Area	Number Illicits Removed	Flow Removed	Total Phosphorus
	Acres		gpd	lb/yr
West Roxbury	889	7	501	11
Sawmill Brook	1,277	1	126	3
<b>Mid-Charles total</b>	<b>2,166</b>	<b>8</b>	<b>627</b>	<b>14</b>
Upper Stony	1,832	2	529	11
Canterbury Brook	1,889	1	148	3
Roslindale Branch	1,199	9	3,046	66
Bussey Brook <sup>2</sup>	839	0	0	0
Goldsmith Brook	746	8	4,348	94
Lower Stony	2,165	12	4,683	101
<b>Stony Brook total</b>	<b>8,670</b>	<b>32</b>	<b>12754</b>	<b>276</b>
Village Brook Boston	787	1	37	1
Village Brook Brookline	2,061	0	0	0
Other Muddy River	1,785	1	415	9
<b>Muddy River total</b>	<b>4,633</b>	<b>2</b>	<b>452</b>	<b>10</b>
Faneuil Brook	1,316	6	704	15
Shepard Brook	415	0	0	0
Smelt Brook	846	0	0	0
Allston-Brighton	796	0	0	0
Millers River	208	0	0	0
<b>Other Lower Charles total</b>	<b>3,581</b>	<b>6</b>	<b>704</b>	<b>15</b>
<b>Lower Charles Basin total</b>	<b>19,050</b>	<b>48</b>	<b>14,537</b>	<b>314</b>
Mother Brook	441	0	0	0
Hyde Park	1,766	0	0	0
Oakland Brook	519	0	0	0
Mattapan Brook	304	1	845	18
Lower Neponset	843	0	0	0
Tenean Creek	873	0	0	0
Davenport Creek <sup>2</sup>	712	0	0	0
<b>Neponset River total</b>	<b>5,458</b>	<b>1</b>	<b>845</b>	<b>18</b>
Charlestown	556	1	20	0
East Boston	438	1	164	4
Downtown	473	2	10,785	233
Dorchester	1,124	0	0	0
<b>TOTAL</b>	<b>27,099</b>	<b>53</b>	<b>26,351</b>	<b>570</b>

Notes:

1. Based on 2007-2009 precipitation using BWSC precipitation gage network

**Table 7-8: Annual<sup>1</sup> Load Reduction Based on Illicit Discharges Removed in 2019**

Reporting Area Name	Drainage Area	Number Illicits Removed 2019	Flow Removed 2019	Total Phosphorus Removed 2019
	Acres		gpd	lb/yr
West Roxbury	889	2	70	2
Sawmill Brook	1,277	1	60	1
<b>Mid-Charles total</b>	<b>2,166</b>	<b>3</b>	<b>130</b>	<b>3</b>
Upper Stony	1,832	0	0	0
Canterbury Brook	1,889	0	0	0
Roslindale Branch	1,199	0	0	0
Bussey Brook <sup>2</sup>	839	0	0	0
Goldsmith Brook	746	0	0	0
Lower Stony	2,165	27	6,866	148
<b>Stony Brook total</b>	<b>8,670</b>	<b>27</b>	<b>6866</b>	<b>148</b>
Village Brook Boston	787	0	0	0
Village Brook Brookline	2,061	0	0	0
Other Muddy River	1,785	8	10,467	226
<b>Muddy River total</b>	<b>4,633</b>	<b>8</b>	<b>10467</b>	<b>226</b>
Faneuil Brook	1,316	2	150	3
Shepard Brook	415	0	0	0
Smelt Brook	846	0	0	0
Allston-Brighton	796	3	1,136	25
Millers River	208	0	0	0
<b>Other Lower Charles total</b>	<b>3,581</b>	<b>5</b>	<b>1286</b>	<b>28</b>
<b>Lower Charles Basin total</b>	<b>19,050</b>	<b>43</b>	<b>18,749</b>	<b>405</b>
Mother Brook	441	0	0	0
Hyde Park	1,766	0	0	0
Oakland Brook	519	0	0	0
Mattapan Brook	304	0	0	0
Lower Neponset	843	4	624	13
Tenean Creek	873	0	0	0
Davenport Creek <sup>2</sup>	712	0	0	0
<b>Neponset River total</b>	<b>5,458</b>	<b>4</b>	<b>624</b>	<b>13</b>
Charlestown	556	1	0	0
East Boston	438	0	0	0
Downtown	473	0	0	0
Dorchester	1,124	6	9,861	213
<b>TOTAL</b>	<b>27,099</b>	<b>54</b>	<b>29,234</b>	<b>632</b>

**1. Does not include reductions due to removal of illicits downstream of regulators because storm drain model does not include those areas**

**Table 7-9: Annual<sup>1,2</sup> Loads as of End 2019 Subsequent to Illicit Discharge Removal**

Reporting Area Name	Drainage Area	Total Phosphorus Load End 2018
	Acres	lb/yr
West Roxbury	889	278
Sawmill Brook	1,277	635
<b>Mid-Charles total</b>	<b>2,166</b>	<b>913</b>
Upper Stony	1,832	534
Canterbury Brook	1,889	2,275
Roslindale Branch	1,199	638
Bussey Brook	839	90
Goldsmith Brook	746	164
Lower Stony	2,165	1,472
<b>Stony Brook total</b>	<b>8,670</b>	<b>5,173</b>
Village Brook Boston	787	449
Village Brook Brookline	2,061	1,018
Other Muddy River	1,785	2,508
<b>Muddy River total</b>	<b>4,633</b>	<b>3,975</b>
Faneuil Brook	1,316	751
Shepard Brook	415	530
Smelt Brook	846	785
Allston-Brighton	796	483
Millers River	208	382
<b>Other Lower Charles total</b>	<b>3,581</b>	<b>2,931</b>
<b>Lower Charles Basin total</b>	<b>19,050</b>	<b>12,992</b>
Mother Brook	441	200
Hyde Park	1,766	903
Oakland Brook	519	354
Mattapan Brook	304	175
Lower Neponset	843	581
Tenean Creek	873	2,202
Davenport Creek	712	428
<b>Neponset River total</b>	<b>5,458</b>	<b>4,843</b>
Charlestown	556	1,763
East Boston	438	1,029
Downtown	473	418
Dorchester	1,124	2,274
<b>TOTAL</b>	<b>27,099</b>	<b>23,319</b>

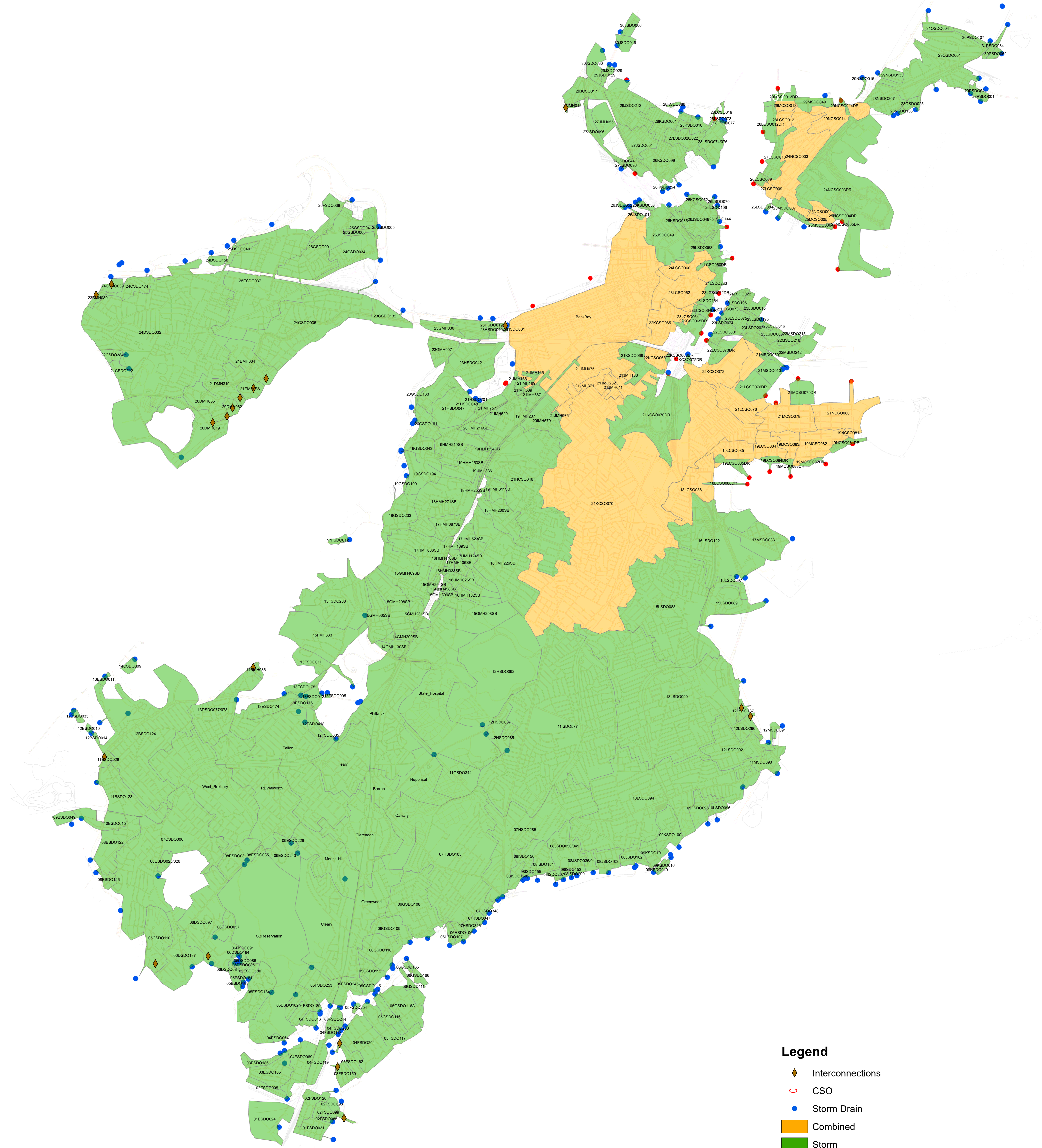
1. Based on 2007-2009 precipitation using BWSC precipitation gage network






2. Does not include reductions due to removal of illicit downstream of regulators because storm drain model does not include those areas

## **APPENDIX B: FIGURES**

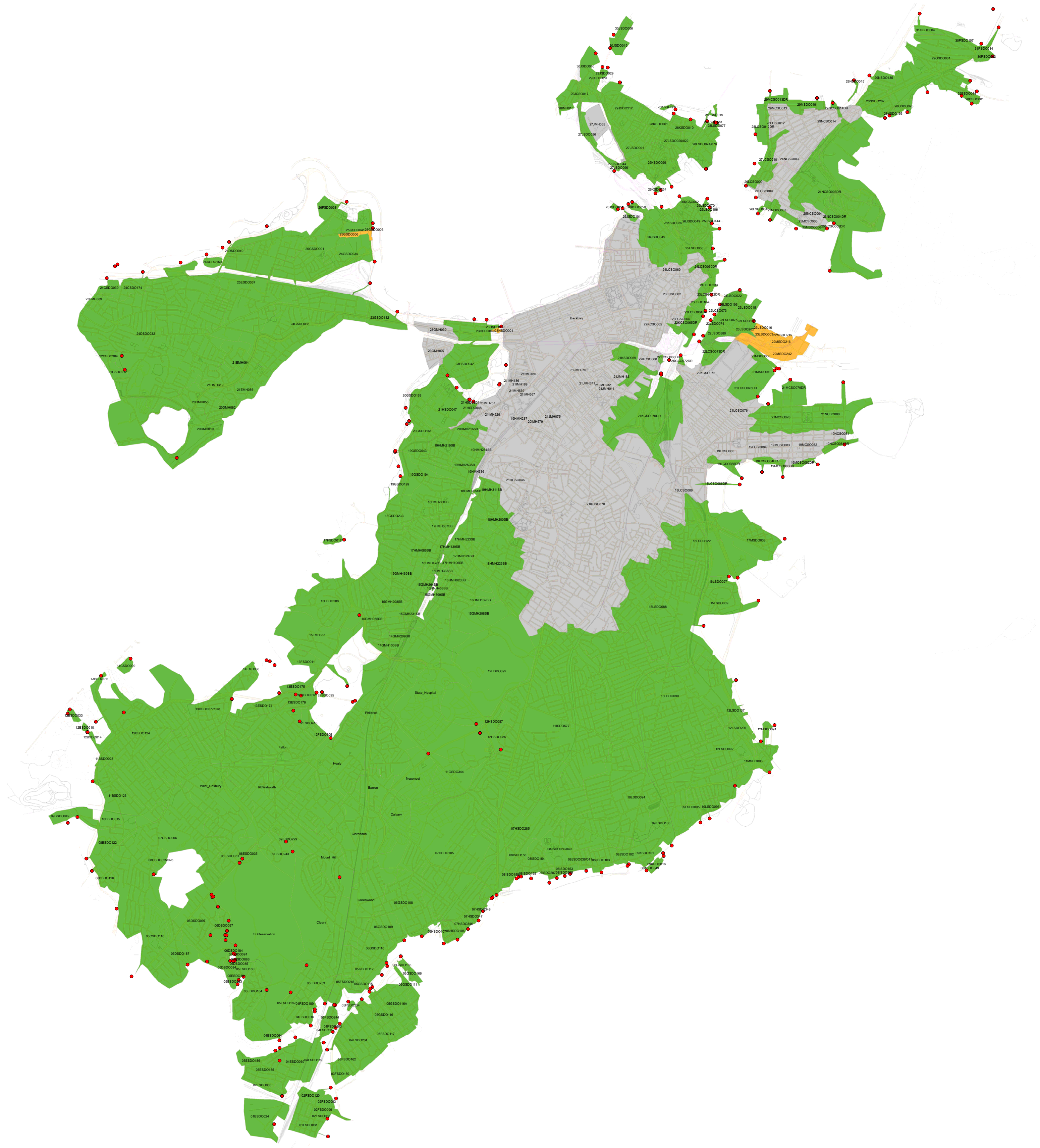
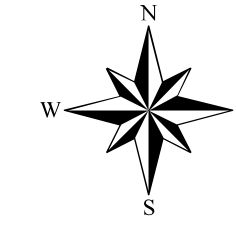


Figure 1: Location of Outfalls and Sub-Catchment Areas



- Legend**
-  Interconnections
  -  CSO
  -  Storm Drain
  -  Combined
  -  Storm

# Boston Water and Sewer Commission - IDDE Priority Ranking - January 2020



**Prioritization  
IDDE Catchments**

- <all other values>
- Complete
- Combined
- Non-BWSC

# Currents

NEWS FROM BOSTON WATER AND SEWER COMMISSION  
March - April 2019

Martin J. Walsh, Mayor

Henry F. Vitale, CPA, Executive Director/ Treasurer

## BWSC@Work


### The Commission's New Website Has Launched!

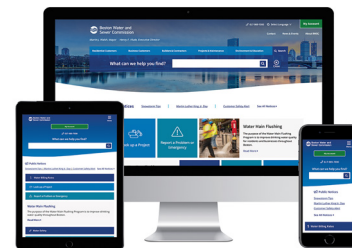
BWSC launched a new website with enhanced features to improve your overall experience.

- Easier Navigation
- Quick access to billing and account information
- Find projects in your neighborhood with ease

Same address, more functions: [www.bwsc.org](http://www.bwsc.org)

### BWSC Construction Season to Begin

As warm weather returns, Boston residents can expect to see BWSC construction crews resuming improvements to the city's water and sewer infrastructure. Want to know what's happening in your neighborhood? Log on to our website at [www.bwsc.org](http://www.bwsc.org) and click on "Projects and Maintenance". Also, join Nextdoor to receive updates and notifications on improvements in your neighborhood. 



BWSC's new website is accessible on screens large and small.



BWSC projects include improvements to sewer lines in the South End.

### Fix A Leak Week - March 18-24, 2019

Did you know the average household leak can amount to thousands of gallons of water wasted each year and cause higher bills? BE PROACTIVE - CHECK FOR LEAKS, our water conservation kit is a good start!



### Request a Water Conservation Kit

Boston residents can call or visit us online to request a free water conservation kit. BWSC water conservation kits consist of:

- bathroom and kitchen faucet aerators to maintain flow while reducing usage
- a low-flow replacement showerhead
- a flow meter bag to measure water usage
- dye tablets to check for toilet leaks



Residents can call us at 617-989-7000, or visit us online at [www.bwsc.org/environment-education/green-programs/conservation-tips-kits](http://www.bwsc.org/environment-education/green-programs/conservation-tips-kits)

### Environmental Events this Spring:

World Water Day - March 22, 2019

Earth Day - April 22, 2019



Boston Water and Sewer Commission

Headquarters is open:

Monday - Friday, 8 AM - 5 PM

Wednesdays, 8 AM - 7 PM

980 Harrison Avenue, Boston, MA 02119



(617) 989-7000



[www.bwsc.org](http://www.bwsc.org)

**WE ARE ALL CONNECTED**

Let's Protect Boston's Waterways



# Spring Showers

March 20th kicks off the Spring Season. Spring usually brings showers: storm drains collect rainwater and direct it to nearby waterways such as the Neponset, Mystic, Muddy, and Charles Rivers. The runoff ends up in the Boston Harbor. You can help protect Boston's waterways.

Do your part to keep these waterways clean by keeping neighborhood catch basins clear of leaves and debris. This will help to ensure proper drainage, prevent local flooding and reduce stormwater pollution.



For more information on stormwater maintenance, visit our website at [www.bwsc.org](http://www.bwsc.org).

## Prevent Stormwater Pollution:

### Dispose of pesticides and herbicides properly

Insecticides and fertilizers help a garden grow and flourish. When used correctly, these chemicals can protect plants. However, if disposed of improperly, chemicals can pollute stormwater runoff and ultimately contaminate our waterways. If you use fertilizers and pesticides, you will need to know the do's and don'ts of their use.

- Follow label instructions carefully and only use the specified amount.
- Avoid watering plants right after applying unless instructions say to do so.
- Don't use chemicals in wind or rain. Excess chemicals can wash into waterways.

Bring any remaining chemicals to a Boston Household Hazardous Waste Drop-off Day site for proper disposal. Visit [www.boston.gov/trash-and-recycling-guide](http://www.boston.gov/trash-and-recycling-guide) for more info. Never dispose of these chemicals in the trash.



# Spring Yard Waste Collection



Leaf and Yard Waste collection begins **May 6, 2019**. Bag, barrel, or tie yard waste for curbside collection on your regular recycling day. Visit [www.boston.gov/trash-and-recycling-guide](http://www.boston.gov/trash-and-recycling-guide) for more details.

## Neighborhood Site Locations

- Pay your water bill with a check or money order -- no cash.
- Talk about any problems you may have with your bill or service.
- Find out how much water is being used on your property.
- Plan to make payments on bills that are past due.
- Receive help applying for a senior or disabled persons' discount.

### Allston/Brighton

#### Child & Family Service Center

406 Cambridge St  
Thursdays,  
10 AM - 12 PM  
3/21 & 4/25

### Charlestown

#### Golden Age Center

382 Main Street  
Tuesdays,  
11 AM - 1 PM  
3/26 & 4/30

### Chinatown

#### CCBA

90 Tyler Street  
Thursdays,  
11 AM - 1 PM  
3/14 & 4/11

### Dorchester -

#### Uphams Corner Municipal Building

500 Columbia Road  
Fridays,  
10 AM - 12 PM  
3/8 & 4/12

### East Boston

#### APAC

21 Meridian Street  
Wednesdays,  
10 AM - 1 PM  
3/6, 3/13 & 4/3, 4/10

### Fields Corner

#### Kit Clark Senior Center

1500 Dorchester Ave  
Mondays,  
10 AM - 12 PM  
3/25 & 4/29

### Hyde Park

#### Municipal Building

1179 River Street  
Tuesdays,  
10 AM - 1 PM  
3/5, 3/19 & 4/9, 4/23

### Jamaica Plain

#### Public Library

30 South Street  
Mondays,  
10 AM - 12 PM  
3/11 & 4/22

### Mattapan

#### Public Library

1350 Blue Hill Ave  
Fridays,  
10 AM - 12 PM  
3/1 & 4/5

### North End

#### Public Library

25 Parmenter Street  
Thursdays,  
10 AM - 12 PM  
3/7 & 4/4

### Greater Roslindale

#### Medical & Dental Center

4199 Washington St  
Tuesdays,  
10 AM - 1 PM  
3/12 & 4/2

### South Boston

#### APAC

424 West Broadway  
Wednesdays,  
10 AM - 1 PM  
3/27 & 4/24

### West Roxbury

#### Roche Community Center

1716 Centre Street  
Fridays,  
10 AM - 1 PM  
3/29 & 4/26

### South End & Roxbury

Residents of the South End and Roxbury are invited to use BWSC Headquarters as their neighborhood site.



# Currents

NEWS FROM BOSTON WATER AND SEWER COMMISSION  
May - June 2019

Martin J. Walsh, Mayor

Henry F. Vitale, CPA, Executive Director/ Treasurer

## BWSC@Work

### Spring is Here - Scoop the Poop!

When walking your dog, please remember to –“Scoop the Poop”. Help keep Boston streets and waterways clean and clear by picking up after your pet. Pet waste carries harmful bacteria which will pollute our waterways if dumped in catch basins. Dispose of pet waste in the trash, not in or near a catch basin. Our marine life will appreciate your effort!

### May is Older Americans Month

BWSC proudly offers a 30% discount on the water portion of the bill to seniors and disabled homeowners. Have you signed up yet? Check to see if you or a loved one qualifies: Meet with our community service representative at one of our Neighborhood Site locations listed on the back. Call (617) 989-7000 to speak with a customer service representative.

### Changes To Our Billing System

Stay tuned for new customer service options coming soon! For more information visit [www.bwsc.org](http://www.bwsc.org) and check out our News and Events section!

### May 5-11 is Drinking Water Week!

While we enjoy safe and refreshing drinking water all year long, May is when we celebrate Boston’s great drinking water source. Did you know the Quabbin and Wachusett Reservoirs are the most abundant and high quality water supplies in the world? These reservoirs deliver water not only to Boston, but to 51 cities and towns! To learn



more about the Quabbin and Wachusett water system, visit [www.bwsc.org](http://www.bwsc.org) or [www.mwra.com](http://www.mwra.com).

The Quabbin Reservoir is located 65 miles outside of Boston and is a beautiful place to visit, learn and explore.



Picking up after our pets and disposing the waste properly is one of many ways we can keep Boston streets and waterways clean.

THE  
ELDERLY  
COMMISSION  
IS NOW

AGE  
STRONG  
COMMISSION

Boston has a new name for its commission supporting older Bostonians. Learn more at [www.boston.gov/departments/age-strong-commission](http://www.boston.gov/departments/age-strong-commission).



Boston Water and  
Sewer Commission

Headquarters is open:

Monday - Friday, 8 AM - 5 PM

Wednesdays, 8 AM - 7 PM

980 Harrison Avenue, Boston, MA 02119

(617) 989-7000  [www.bwsc.org](http://www.bwsc.org)



WE ARE ALL CONNECTED

Let's Protect Boston's Waterways



# City of Boston

## 2019 Drop Off Days

Household Hazardous Waste Days and Motor Oil and Paint Drop Off Days listed below

Help protect the environment by properly disposing of hazardous household products

\*Proof of Boston Residency required. No commercial waste accepted. For more info call 617-635-4900

### Household Hazardous Waste Drop-Off days

Saturdays 9am-1pm

June 29 - West Roxbury  
West Roxbury DPW  
315 Gardner Street

Aug 17 - West Roxbury  
West Roxbury DPW  
315 Gardner Street

July 20 - Boston  
Central DPW Facility  
400 Frontage Road

September 21 - Boston  
Central DPW Facility  
400 Frontage Road

### How does proper disposal of hazardous waste protect Boston's waterways?

Hazardous waste products, such as motor oil, paint and other chemicals cause pollution if dumped into catch basins. They drain directly to local waterways.



### Motor Oil Drop-Off & Paint Swap Shop Days

All paint and motor oil accepted.

Saturdays 9am-1pm

June 15 - Hyde Park  
Hyde Park DPW  
58 Dana Avenue

Aug 10 - East Boston  
East Boston DPW  
338 East Eagle Street

July 13 - Brighton  
Brighton DPW  
315 Western Avenue



Motor oil & oil-based paint accepted. No latex or acrylic paint.

## Neighborhood Site Locations

- Pay your water bill with a check or money order -- no cash.
- Talk about any questions you may have with your bill or service.
- Find out how much water is being used on your property.
- Plan to make payments on bills that are past due.
- Receive help applying for a senior or disabled persons' discount.

### Allston/Brighton Child & Family Service Center

406 Cambridge St  
Thursdays,  
10 AM - 12 PM  
5/16 & 6/27

### Charlestown Golden Age Center

382 Main Street  
Tuesdays,  
11 AM - 1 PM  
5/29\* (Wed) & 6/25

### Chinatown CCBA

90 Tyler Street  
Thursdays,  
11 AM - 1 PM  
5/9 & 6/13

### Dorchester - Uphams Corner Municipal Building

500 Columbia Road  
Fridays,  
10 AM - 12 PM  
5/10 & 6/14

### East Boston APAC

21 Meridian Street  
Wednesdays,  
10 AM - 1 PM  
5/1, 5/8 & 6/5, 6/12

### Fields Corner Kit Clark Senior Center

1500 Dorchester Ave  
Mondays,  
10 AM - 12 PM  
5/20 & 6/17

### Hyde Park Municipal Building

1179 River Street  
Tuesdays,  
10 AM - 1 PM  
5/7, 5/21 &  
6/4, 6/18

### Jamaica Plain\* Public Library

30 South Street\*  
Mondays,  
10 AM - 12 PM  
5/13 & 6/10

### Mattapan Public Library

1350 Blue Hill Ave  
Fridays,  
10 AM - 12 PM  
5/3 & 6/7

### North End Public Library

25 Parmenter Street  
Thursdays,  
10 AM - 12 PM  
5/2 & 6/6

### Greater Roslindale Medical & Dental Center

4199 Washington St  
Tuesdays,  
10 AM - 1 PM  
5/14 & 6/11

### South Boston APAC

424 West Broadway  
Wednesdays,  
10 AM - 1 PM  
5/22 & 6/26

### West Roxbury Roche Community Center

1716 Centre Street  
Fridays,  
10 AM - 1 PM  
5/31 & 6/28

### South End & Roxbury

Residents of the South End and Roxbury are invited to use BWSC Headquarters as their neighborhood site.

\* - Location change



# Currents

BWSC News

Nov/Dec 2019

## Know How to Dispose of FOG (Fats, Oils, and Grease)

This time of year is the best time to bake, roast, and prepare many special seasonal meals. With the holiday season approaching, there is one rule that every cook should remember:

Don't dump Fats, Oils, or Grease (FOG) down the drain! Instead, **Cool It! Can It! Trash It!**

Where does FOG come from? FOG is found in many foods such as:

- Cooking oil
- Butter and margarine
- Lard
- Sauces
- Food scraps
- Dairy products



FOG is an unavoidable part of cooking but knowing how to dispose of FOG is key. Excess Fats, Oils, and Grease should never be poured down the sink, or flushed down the toilet. FOG that's poured into the sink or toilet will harden in the pipes. This can cause backups in your plumbing and Boston's sewer lines.

### Disposing of FOG is easy

All you need to do is **Cool It! Can It! Trash It!**

After cooking, let FOG cool in the pan. Once cooled, pour or scoop FOG into a can. Cover the can with a BWSC Grease Lid and store it in the freezer. When the can is full, remove the lid for reuse, and put the can into the trash on your regular trash collection day.



Boston residents can request a **FREE BWSC Grease Lid!** Call BWSC at 617-989-7599, or request one online at [www.bwsc.org](http://www.bwsc.org). Lids are also available at our neighborhood sites upon request.



### Find Us at Stop & Shop This Holiday Season

Visit our informational table on November 22, 23 and 24 at the South Bay Stop & Shop, located at 1100 Massachusetts Avenue, to pick up a free BWSC Grease Lid. Get your free lid and learn about how to prevent clogged pipes and sewer lines, all while shopping for your holiday groceries.



## Don't Forget to Scoop the Poop!

Catch Basins connect to storm drains that discharge runoff without treatment to the nearest waterway. Dumping pet waste into a catch basin pollutes waterways. As with other refuse, the proper place to dispose of pet waste is in the trash. Pet waste is harmful to our waterways.



## Adopt a Catch Basin This Fall

Help to keep leaves and debris from catch basins by adopting one near you and clearing off anything that accumulates. Check out our catch basin map at [BWSC.org](http://BWSC.org) to find one in your area. Clearing catch basins will prevent flooding in your neighborhood and reduce pollution of Boston's waterways.

## Neighborhood Site Locations November - December 2019

			November	December
<b>Brighton</b>	Allston Brighton Child and Family Service Center, 406 Cambridge Street	Thursdays 10am-12pm	21	19
<b>Charlestown</b>	Golden Age Center, 382 Main Street	Tuesdays 11am-1pm	26	24
<b>Chinatown</b>	CCBA, 90 Tyler Street	Thursdays 11am-1pm	14	12
<b>Dorchester</b>	Uphams Corner Municipal Building, 500 Columbia Road	Fridays 10am-12pm	15	13
<b>East Boston</b>	East Boston APAC, 21 Meridian Street	Wednesdays 10am-1pm	6 13	4 11
<b>Fields Corner</b>	Kit Clark Senior Center, 1500 Dorchester Avenue	Mondays 10am-12pm	18	16
<b>Hyde Park</b>	Hyde Park Municipal Building, 1179 River Street	Tuesdays 10am-1pm	5 19	3 17
<b>Jamaica Plain</b>	Jamaica Plain Public Library, 30 South Street	Mondays 10am-12pm	4	2
<b>Mattapan</b>	Mattapan Public Library, 1350 Blue Hill Ave	Fridays 10am-12pm	1	6
<b>North End</b>	North End Public Library, 25 Parmenter Street	Thursdays 10am-12pm	7	5
<b>Roslindale</b>	Great Roslindale Medical and Dental Center, 4199 Washington Street	Tuesdays 10am-1pm	12	10
<b>South Boston</b>	South Boston APAC, 424 West Broadway	Wednesdays 10am-1pm	20	18
<b>West Roxbury</b>	Roche Community Center, 1716 Centre Street	Fridays 10am-1pm	22	20
<b>South End &amp; Roxbury</b>	BWSC Headquarters, 980 Harrison Avenue	Monday-Friday 8a -5p & Wednesdays 8a-7p		





# Don't Dump!

Help protect our  
water resources.



Most catch basins in Boston connect to storm drains that discharge the runoff to the nearest brook, river or Boston Harbor. Substances carelessly spilled or dumped onto our streets or directly into a catch basin can **pollute Boston Harbor and the Charles, Neponset and Mystic Rivers.**



# Report Illegal Dumping

The dumping of any substance into a catch basin is illegal in Boston. Prohibited substances include household chemicals, fertilizers, insecticides, automotive fluids, oils, paints, pet waste and commercial waste. Anything dumped into a catch basin can travel through storm drains to local streams, rivers, and into Boston Harbor. These pollutants harm water quality and can kill aquatic life.

To report an illegal dumping incident, contact the Boston Water and Sewer Commission immediately at 617-989-7000



# Properly Dispose of Pet Waste

- Take a plastic bag with you when taking your dog for a walk to pick up pet waste. Be sure to place the bag directly into a trash can.
- Never dispose of pet waste in catch basins.
- Remember that dog waste cannot be used as fertilizer.
- Never place dog waste near a tree or in soil because the bacteria in pet waste is potentially harmful.



# Scoop the Poop!

Prevent contamination of our local waterways, parks and Boston Harbor by picking up after your dog. Dog waste should be placed into a trash can or receptacle. It should never be placed into catch basins in the street, as these lead into Boston's storm drain system and flow directly to Boston Harbor and other local waterways.

The City of Boston's dog fouling ordinance requires that dog owners remove and properly dispose of all pet waste. This includes waste on sidewalks, streets, parks, and neighbors' lawns.



Martin J. Walsh, *Mayor* | Henry F. Vitale, CPA, *Executive Director/Treasurer*



Boston Water and Sewer Commission | 980 Harrison Avenue, Boston, MA 02119 | [www.bwsc.org](http://www.bwsc.org) | (617) 989-7000



Let's Protect Boston's Waterways

## Como Desechar Apropriadamente los Desechos Fecales de su Perro

- Cuando saque a pasear su perro lleve una bolsa de plástico y eche allí sus desechos fecales. Tire esa bolsa directamente en un contenedor de basura.
- Nunca eche esos desechos en los drenajes públicos en la calle.
- Los desechos fecales de perro no pueden ser utilizados como fertilizante.
- Nunca eche esos desechos cerca de un árbol o en el suelo porque las bacterias en esos desechos son potencialmente perjudiciales para el medio ambiente y para nuestra salud.



Martin J. Walsh, *Alcalde* | Henry F. Vitale, CPA, *Director Ejecutivo/Tesorero*



Boston Water and Sewer Commission | 980 Harrison Avenue, Boston, MA 02119 | [www.bwsc.org](http://www.bwsc.org) | (617) 989-7000



Let's Protect Boston's Waterways

# Recoja los Desechos Fecales de su Perro (*Scoop the Poop*)

Prevenga la contaminación de nuestros ríos, canales, parques, y el Puerto de Boston recogiendo los desechos fecales de su perro.

Eche esos desechos en un recipiente específicamente diseñado para ello. Nunca los eche en los drenajes públicos en la calle porque eventualmente llegaran al Puerto de Boston y a otros ríos y canales locales.

La ley de la ciudad de Boston (“Pooper Scooper Law”), requiere que los dueños de perros recojan sus desechos fecales de los andenes, calles, parques, y del césped de sus vecinos. El que viole esta ley será multado por cada infracción.



Martin J. Walsh, *Alcalde* | Henry F. Vitale, CPA, *Director Ejecutivo/Tesorero*



Boston Water and Sewer Commission | 980 Harrison Avenue, Boston, MA 02119 | [www.bwsc.org](http://www.bwsc.org) | (617) 989-7000



Let's Protect Boston's Waterways

# Report SSOs

A **Sanitary Sewer Overflow** is an unintentional discharge of untreated sewage into the environment or onto property.



If you encounter a sewer overflow, call BWSC 24 Hour Emergency Service Line at **617-989-7000**



**Boston Water and Sewer Commission**



Let's Protect Boston's Waterways



**WWW.BWSC.ORG**

# Obstructed Catch Basins Cause Flooding and Pollution

During storm events, rainwater flows into the catch basins in the street and into the storm drain system, which transports rainwater directly to local waterways.

Debris on top of catch basins, including trash, can prevent rainwater from flowing into the storm drain system, causing streets to flood. Debris can also travel with rainwater through the storm drain system and pollute local waterways.



 Boston Water and Sewer Commission • 980 Harrison Avenue, Boston MA 02119 • (617) 989-7000

## Keep Catch Basins in your Neighborhood Clear

 **To prevent street flooding and pollution from debris on top of catch basins:**

- ▶ Clear leaves from the catch basins and dispose of leaves with yard waste. For more information on proper disposal of yard waste, go to [www.cityofboston.gov/publicworks/wastereduction/yardwaste.asp](http://www.cityofboston.gov/publicworks/wastereduction/yardwaste.asp).
- ▶ Clear debris from the top of catch basins and place into a trash receptacle.
- ▶ Sweep up debris from sidewalks and driveways and place into a trash receptacle. Do not sweep debris into catch basins.



 Boston Water and Sewer Commission • 980 Harrison Avenue, Boston MA 02119 • (617) 989-7000



## **ATTENTION READVILLE RESIDENTS**

During recent maintenance of the drainage system in the Readville area, BWSC observed an abundance of **PET WASTE BAGS** in the drainage ditch that discharges directly to area wetlands and Mill Pond.

In response to this concern BWSC has made concerted efforts to clean catch basins in Readville in effort to improve street drainage during wet weather. BWSC requests that pet owners assist us by properly disposing of their pet waste.

Catch Basins connect to storm drains that discharge runoff without treatment to the nearest waterway. Dumping pet waste into a catch basin pollutes waterways and is illegal. As with other refuse, the proper place to dispose of pet waste is in the trash.

BWSC appreciates your help as we work to improve the performance of the drainage system in your neighborhood and minimize pollutants in our precious waterways.



# 請緊急回報 下水道滿溢(SSOs)！

下水道滿溢(Sanitary Sewer Overflow)，是未經處理過的污水液體，不經意的從下水道，滿溢到我們的日常生活環境或是物業裏。

如果您發現下水道滿溢的情形，  
請立即撥打我們的**24小時**

**緊急服務專線：**

**617-989-7000**



**BWSC.ORG**



**Boston Water and  
Sewer Commission**

**WE ARE ALL CONNECTED**  
Let's Protect Boston's Waterways

# Report SSOs

A Sanitary Sewer Overflow is an unintentional discharge of untreated sewage into the environment or onto property.

If you encounter a sewer overflow, call BWSC 24 Hour Emergency Service Line **617-989-7000**.



[BWSC.ORG](http://BWSC.ORG)



Boston Water and  
Sewer Commission



Let's Protect Boston's Waterways