NYC Stormwater Management Program

2022 MS4 Annual Report

Municipal Separate Storm Sewer System of New York City
SPDES Number: NY-0287890

Contents

Flushing Bay at World's Fair Marina

Humpback Whale in NY Harbor

Background

Pursuant to the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) Municipal Separate Storm Sewer System (MS4) Permit (No. NY-0287890), first issued to the City of New York (City or NYC) in 2015 and renewed as of August 1, 2022, the City implements a Stormwater Management Program (SWMP) Plan,[1] which sets forth the City's measures to reduce pollution in stormwater runoff discharging into and from the MS4.

Through proper management and increased awareness, the City works to keep our streets and facilities well-maintained to reduce the risk of stormwater runoff's contributing pollution to NYC's waterbodies. As most waterbodies in NYC receive stormwater from both the combined and separate sewer systems, the SWMP is an important component of the City's comprehensive integrated planning approach to protecting and improving our waterbodies.

New York City's iconic waterfront and beloved waterbodies are cleaner and healthier than they have been since the 1860s. Whales and seals are returning to the harbor, wetland and mussel restoration projects are thriving, and New Yorkers are enjoying recreational activities in our local waterways. These improvements are in no small part a testament to the City's substantial investments in upgrading our wastewater infrastructure over the last five decades.

Building on these investments, fourteen City agencies now implement the SWMP in the areas served by the City's MS4, which carries stormwater runoff directly to nearby waterbodies instead of to a wastewater resource recovery facility (WRRF) for treatment; water that flows on the streets and into catch basins or directly into waterbodies may carry pollution such as pathogens and debris.

Each year, the City prepares an MS4 annual report, as required by Part IV.M of the MS4 Permit, to inform NYSDEC and the public of the City's progress in implementing the SWMP and the status of its compliance with the MS4 Permit. This MS4 Annual Report, covering January 1 through December 31, 2022, includes a brief description of the SWMP activities completed during the 2022 reporting year, measurable goals, and specific reporting requirements included in the MS4 Permit. If applicable, this report also includes activities planned for the 2023 calendar year and any proposed changes to the SWMP.

1 https://www1.nyc.gov/assets/dep/downloads/pdf/water/stormwater/ms4/nyc-swmp-plan-full.pdf

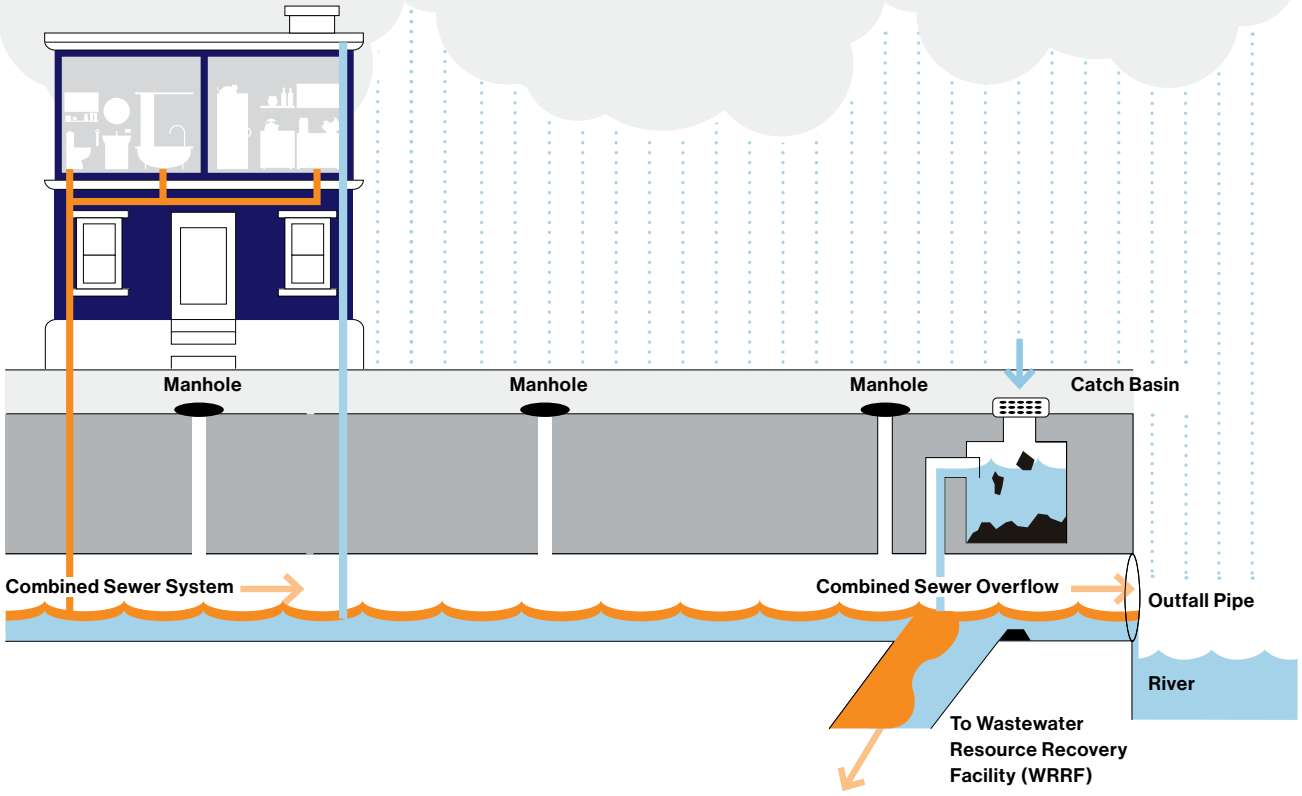
Plumb Beach, Brooklyn

Introduction

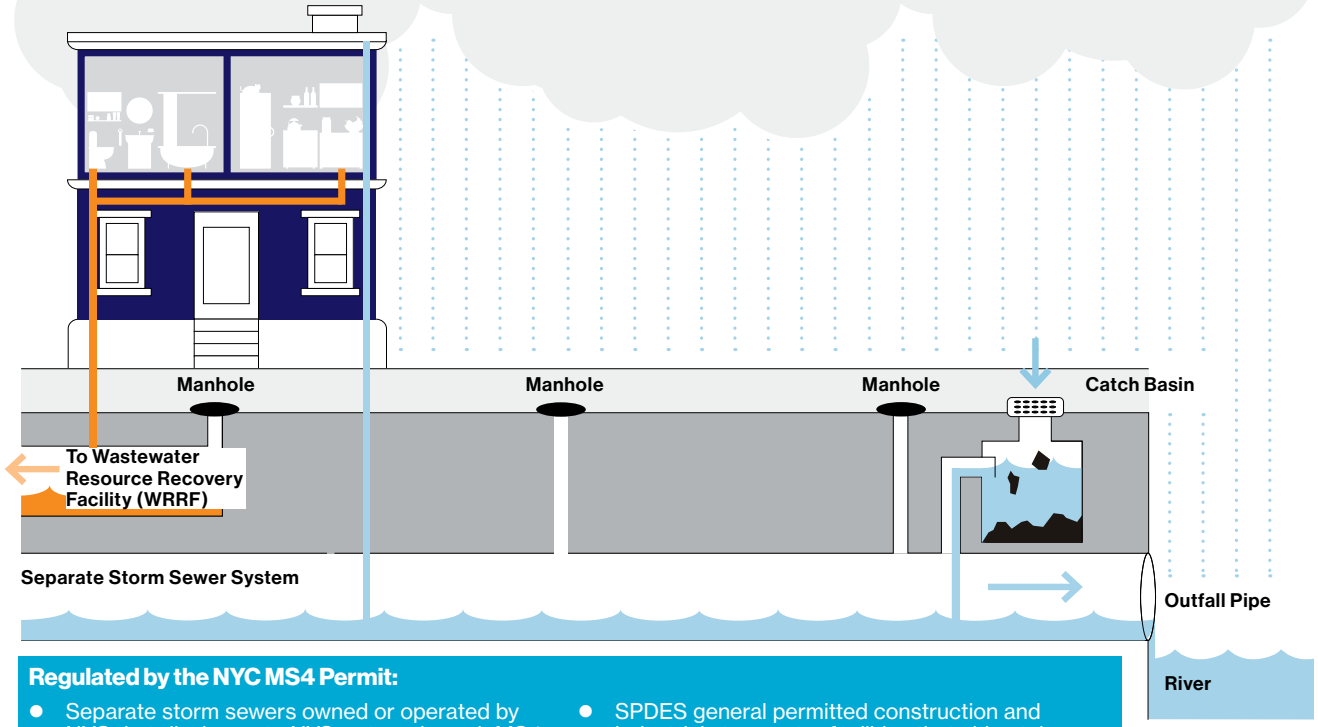
Each component of the SWMP Plan includes best management practices (BMPs) and associated measurable goals, which the City reports on annually. The City periodically refines the measurable goals based on lessons learned from implementation of the programs, interagency working groups, and public input. Continuing to refine and update the measurable goals allows the City to better quantify and more accurately represent the effectiveness of the SWMP. The City bases its assessment of the effectiveness of the SWMP on the achievement of the stated measurable goals for each program.

In the fall of 2022, the City undertook a holistic update of the SWMP to reflect the current status of program implementation and the City's compliance with the 2022 MS4 Permit. Notable revisions included updating the Illicit Discharge, Detection and Elimination (IDDE) and Pollution Prevention and Good Housekeeping (PPGH) sections to reflect changes to the MS4 Permit.

Combined Sewer System



Municipal Separate Storm Sewer System



Regulated by the NYC MS4 Permit:

- Separate storm sewers owned or operated by NYC that discharge to NYS waters through MS4 outfalls or that connect to combined sewer outflow pipes downstream of the regulator owned or operated by NYC,
- High level storm sewers and Bluebelts that ultimately discharge to waters of NYS through MS4 outfalls owned or operated by NYC,
- SPDES general permitted construction and industrial stormwater facilities that ultimately discharge to waters of NYS through MS4 outfalls and combined sewer overflow pipes downstream of the regulator owned or operated by NYC,
- NYC municipal operations and facilities that drain by overland flow to waters of NYS.

Administration of the SWMP

The individual designated to act as the liaison between the City and NYSDEC for the implementation of this permit is:

Pinar Balci, PhD

Assistant Commissioner,
Bureau of Environmental Planning and Analysis

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The New York City Department of Environmental Protection (DEP) coordinates the implementation of the SWMP with the assistance of and contributions from the Stormwater Controls Working Group. The Stormwater Controls Working Group is a team of representatives from the following New York City agencies that collaborate on MS4 programs (a subset of these agencies has obligations under the MS4 Permit):

Agencies with MS4 Permit Obligations

- Department of Citywide Administrative Services (DCAS)
- Department of City Planning (DCP)
- Department of Design and Construction (DDC)
- Department of Environmental Protection (DEP)
- Department of Buildings (DOB)
- Department of Correction (DOC)
- Department of Education (DOE)
- Department of Health and Mental Hygiene (DOHMH)
- Department of Transportation (DOT)
- Department of Parks and Recreation (Parks)
- Department of Sanitation (DSNY)
- Fire Department (FDNY)
- Police Department (NYPD)
- Small Business Services (SBS)

Collaborators

- NYC Law Department (LAW)
- Economic Development Corporation (EDC)
- Mayor's Office of Management and Budget (OMB)
- Mayor's Office of Climate and Environmental Justice (MOCEJ)

MS4 Annual Reports

Each year, the City reports on SWMP implementation and MS4 Permit compliance. Reporting years are full calendar years (January 1 to December 31). The MS4 annual reports reflect the structure of the City's MS4 Permit and the SWMP Plan, both of which are organized by program. For each program, these MS4 annual reports include the following sections:

- **Introduction**. This section includes an overview of the program and context for the activities completed within a reporting year. For more information on the programs, refer to the SWMP Plan.
- **Program assessment.** This section includes information on activities completed during the reporting year. Tables that present the measurable goals and measures of a program for the reporting year are complemented by a narrative that highlights and explains important activities.
- **Goals for the next reporting cycle.** This section includes the City's aspirations for applicable programs during the next reporting cycle.
- **Program updates.** This section includes information on SWMP updates that the City is proposing as part of refining and adapting its program. The program updates section does not appear if no changes are required for a program. The City updates the SWMP Plan text annually but implements as soon as practicable any necessary changes identified during the reporting year.

Every spring, the City publishes a draft MS4 Annual Report online for public comment and holds a public meeting during the comment period. Following the public review of the draft MS4 Annual Report, the City revises the Report, as needed, and includes responses to public comments. The final version of the Report is due to NYSDEC on September 30 of each year. The MS4 Annual Reports are available on the DEP website.[2]

2 https://www1.nyc.gov/site/dep/water/municipal-separate-storm-sewer-system.page

Launch of Harbor Protectors Program in Coney Island

Public Education and Outreach

The City implements a public education and outreach program (PEO Program) as part of its MS4 Permit obligations.[3] The PEO Program has many education and outreach initiatives that inform a broad range of stakeholders and the public about stormwater, the sources of pollutants associated with stormwater, and stormwater's potential impacts on water quality.

2022 Program Assessment

As part of the PEO Program, the City implemented 14 programs that included more than 1,700 events, 58,000 individuals, and the distribution of approximately 4,000,000 materials. These metrics are drawn from activities conducted citywide.

Program Highlights

Environmental Education. Through the NYC Department of Design and Construction's Town+Gown Program, DEP partnered with the Fashion Institute of Technology to design a new educational resource. Drippy's Water Adventure is an engaging coloring book with activities, vocabulary and concepts highlighting NYC's extensive water and wastewater infrastructure. The coloring book illustrates water use, the City's wastewater treatment system, stormwater management and green infrastructure, harbor protection and stewardship opportunities. The coloring book will be available in print and online in Spring 2023.
DEP continued to enhance, distribute, and workshop the following three educational resources, which were shared with thousands of educators citywide.

- **Understanding NYC's Water Story: A Curriculum Guide for the Classroom.** This comprehensive guide for K-8 teachers explores various content related to our shared water resources. The guide includes six units and features a variety of lessons and activities to enhance teaching styles and learning about the New York City water cycle. These lessons and activities are centered on science, technology, engineering, and math (STEM) concepts and humanity subjects, and are designed to support an interdisciplinary, hands-on approach to teaching.
- **NYC Water Virtual Tours.** Designed using ArcGIS StoryMaps, these virtual tours offer a collection of historical imagery, in-the-field footage, interactive maps, and staff interviews for a fun and easy way to discover the New York City drinking water supply, sewer system, wastewater treatment system, and harbor protection.
- **Jamaica Bay Education Resource Directory.** This updated guide provides an important teaching tool for educators and features partner organizations and educational opportunities, such as resources and program opportunities in and around the Jamaica Bay watershed.

Harbor Protectors. This innovative stewardship program recruits volunteers from schools and community groups to participate in activities such as clearing off catch basin gratings, stenciling educational/informational messages on the sidewalks near catch basins, caring for rain gardens and participating in shoreline cleanups. In addition to beautifying communities and keeping pollution out of NYC's waterways, these stewardship actions also aid DEP in its critical mission to protect and improve water quality across the five boroughs. The Harbor Protectors program hosted 2 events with 160 participants.

3 https://www.nyc.gov/site/dep/environment/education-programs.page

SAFE Disposal Events. Safe Disposal events provide a designated location for New Yorkers to dispose of waste, including harmful household products. These events help the City reduce the risk of pollution in stormwater runoff through trash management and illegal dumping prevention. The City distributed more than 4 million mailers to residents and held 10 events covering all NYC boroughs with more than 20,000 participants.

Urban Park Ranger Programs. NYC Parks Urban Park Rangers offered to more than 12,000 participants, through several programs, more than 500 events focused on ecology, stormwater, and waterbodies. These programs include The Natural Classroom: People, Place and Parks for school groups; Custom Adventures for summer camp and youth groups; and free Weekend Adventures and Pop-Up Adventures for the public. Each park in New York City is unique and is shaped by its natural features, the plants and animals that live there, and the communities it serves. Through these programs students enjoy exploring these unique urban spaces through active and engaging on-site learning experiences that highlight real-world examples of concepts, ideas, and content learned in the classroom.

During the educational tours, students investigate the diversity of parks and green spaces in the City, how these spaces improve the daily lives of New Yorkers, and how NYC Parks maintains the parks and recreational spaces. Over the years, these types of immersive, on-site outdoor environmental programs have been shown to advance academic achievement, build character, promote wellness and good health, cultivate environmental stewardship, and foster community and ecological resilience.

Goals for 2023

The City will continue to implement the programs listed as "planned" in Table 1, including Harbor Protectors, SAFE Disposal events, and various environmental education programming. DEP will also continue to collaborate with other agencies on outreach and MS4-related materials. The City will continue to develop educational materials and will increase our efforts to collaborate with stakeholders.

Table 1 lists measurable goals, measures, and the status of the City's implementation of each Public Education and Outreach BMP.

Staten Island Juvenile Eel Count

Enhanced Exhibit at Newtown Creek Visitor Center

Battery sorting at a SAFE Disposal Event

Table 1: Public Education and Outreach 2022 Status of Implementation

BMP	Measurable Goals	Measures	Status
Provide an ongoing public education and awareness program	Develop, implement, and assess an ongoing public education and outreach program	List of education and outreach programs/ events and relevant metric(s) for each (e.g., number of participants, events, or materials distributed)	• Adopt-a-Highway/Greenway (80 materials distributed) • Annual Art and Poetry Contest (3 events; 2,244 participants) • Automotive Association Outreach (1 event; 5 businesses contacted) • Community Clean-ups (360 events) • DEP Environmental Education (61 events; 6,252 participants; 15,000 materials distributed) • Parks Environmental Education (10 events; 4,550 participants) • Forgot Your Bag? (231 canine waste dispensers in the MS4 area) • Harbor Protectors (2 events, 160 participants) • Park Stewardship (347 events; 4,296 participants) • SAFE Disposal Events (10 events; 20,678 participants: 4,378,751 materials distributed) • "Trash it, Don't Flush It Outreach (7,888 households contacted) • Urban Park Rangers Natural Classroom (547 events; 12,133 participants) • Visitor Center at Newtown Creek (160 events; 4,227 participants) • Weekend, Pop-up, and Custom Adventures (274 events; 3,651 participants)
		List of planned educational and outreach programs/ activities to be undertaken in the next reporting cycle	• Annual Art and Poetry Contest • Automotive Associations Outreach • Community Clean-ups • DEP Environmental Education • Forgot Your Bag? • Harbor Protectors • Park Stewardship • SAFE Disposal Events • "Trash It, Don't Flush It" Outreach • Urban Park Rangers Natural Classroom • Visitor Center at Newtown Creek • Weekend, Pop-up and Custom Adventures
	Develop and implement educational and informational activities related to illicit discharges for businesses and the public	List of education and outreach programs/ events and relevant metric(s) for each (e.g., number of participants, events, or materials distributed)	• Annual Art and Poetry Contest (3 events; 2,244 participants) • Automotive Association Outreach (1 event; 5 businesses contacted) • Community Clean-ups (360 events) • DEP Environmental Education (61 events; 6,252 participants; 15,000 materials distributed) • Parks Environmental Education (6 events; 4,350 participants) • Forgot Your Bag? (231 canine waste dispensers in the MS4 area) • Harbor Protectors (2 events, 160 participants) • Park Stewardship (347 events; 4,296 participants) • SAFE Disposal Events (10 events; 20,678 participants: 4,378,751 materials distributed) • "Trash it, Don't Flush It" Outreach (7,888 households contacted) • Urban Park Rangers Natural Classroom (547 events; 12,133 participants) • Visitor Center at Newtown Creek (160 events; 4,227 participants) • Weekend, Pop-up, and Custom Adventures (274 events; 3,651 participants
		List of planned educational and outreach programs/ activities to be undertaken in the next reporting cycle	• Annual Art and Poetry Contest • Automotive Associations Outreach • Community Clean-ups • DEP Environmental Education • Forgot Your Bag? • Harbor Protectors • Park Stewardship • SAFE Disposal Events • "Trash It, Don't Flush It" Outreach • Urban Park Rangers Natural Classroom • Visitor Center at Newtown Creek • Weekend, Pop-up and Custom Adventures
Facilitate public reporting of illicit discharges	Promote, publicize, and facilitate public reporting of illicit discharges and potential water quality impacts	Summary of public reports received by 311	The City received 10,312 service requests for the 311 complaint types listed in this report as relevant to stormwater pollution.

* These metrics reflect activities conducted citywide.

Trout release at Cross River with Samara School, Bronx

Public Involvement and Participation

Involving the public in the implementation of the SWMP is a fundamental requirement of the City's MS4 Permit. Whether it is NYC residents who enjoy recreation in local waterbodies, real-estate developers who build in the MS4 area, groups who organize waterbody cleanups, or environmentalists who advocate for a healthier harbor, there is a wide range of stakeholders who participate in the City's efforts to improve water quality.

2022 Program Assessment

The City continued to engage the public using virtual platforms, including on SWMP implementation. DEP published the draft 2021 MS4 Annual Report (which covered activities completed in 2021) on the DEP website and hosted the 2021 MS4 Annual Report meeting as a webinar in May 2022. The public was encouraged to provide comments on the draft MS4 Annual Report. These comments were addressed in Appendix 1 of the final 2021 MS4 Annual Report submitted to NYSDEC on September 30, 2022 and published on the DEP website.

Goals for 2023

The City plans to continue engaging with local stakeholder groups and participating in community events. In compliance with MS4 Permit requirements, the City also plans to publish, present, and respond to comments on this Annual Report.

Table 2 lists measurable goals, measures, and the status of the City's implementation of Public Involvement and Participation BMPs.

The City published this draft MS4 Annual Report on the DEP website on June 2, 2023. This report covers SWMP implementation for the 2022 calendar year. The City hosted the MS4 Annual Report meeting at 4:00 pm on June 13, 2023. The public was encouraged to submit comments from June 2, 2023, through July 13, 2023, by email to MS4@dep.nyc.gov.

Table 2. Public Involvement and Participation 2022 Status of Implementation

BMP	Measurable Goals	Measures	Status
Provide and promote the opportunity to report and receive stormwater information	Identify mechanism for public to report and request stormwater-related information including contact process to receive and respond to requests	Summary of public reports and requests received by MS4@dep.nyc.gov	The City responded to inquiries on various SWMP activities including construction/ post-construction permitting, potential construction projects, USWR and general stormwater discharge inquiries.
Provide public opportunity to participate in SWMP implementation	Seek public input on SWMP implementation and provide public access to Annual Reports	Date and location of draft Annual Report posted for public review and comment period	On May 23, 2022, the City posted on the DEP website the draft 2021 MS4 Annual Report, which was available for public comment through July 1, 2022.
		Date and time of draft Annual Report stake-holder meeting and number of participants	June 1, 2022, at 4:00 pm. Approximately 80 individuals registered. (This was a webinar per COVID restrictions.)
		Summary of comments received on draft Annual Report and City responses	See Appendix 1 of 2021 MS4 Annual Report
		List of involvement and participation activi-ties (e.g., programs, events, key stakeholder meetings)	• 2021 MS4 Annual Report (1 event, 80 participants) • Stormwater Construction Permit Implementation (1 event, 47 participants) • USWR Briefing (1 event, 4 participants) • USWR Outreach for HPD (1 event, 30 participants) • USWR Outreach for Contractors (AGCNYS) (1 event, 40 participants) • Community Clean-ups (360 events) • Park Stewardship (347 events; 4,296 participants)
		Status and location of final Annual Report and the SWMP Plan	The SWMP Plan and final MS4 Annual Reports are available at www. nyc.gov/dep/ms4
		List of planned participation and involvement programs/ activities to be undertaken in next reporting cycle	• Presentation of this 2022 MS4 Annual Report • Community Clean-ups • Park Stewardship

311 is New York City's main source of government information and non-emergency services.

It provides the public with quick, easy access to all New York City government services and information. The public may connect with 311 24 hours a day, 7 days a week, 365 days a year by:

- Visiting 311 online at nyc.gov/311;
- Calling 311 or (212) NEW-YORK, (212) 639-9675, from outside New York City;
- Texting 311-692;
- Downloading the NYC 311 mobile app for Apple or Android devices; or
- Tweeting to @nyc311

311 is accessible to non-English speakers, available online in over 50 languages and by phone in over 170 languages.

311 facilitates transparency and accountability. Service requests and agency responses are available to the public as open data online.

Currently, the public can use 311 to access information on many topics relevant to stormwater pollution and water quality. The public is also encouraged to use 311 to report information relevant to stormwater pollution. Through 311, the public can report:

- **Waterway Complaint.** Report floatables, trash, oil, gasoline, sewage, or an unusual color in a waterway; report a potential illicit discharge from an MS4 outfall.
- **Dry Weather Sewage Discharge Complaint.** Report water flowing through a sewer outfall pipe during dry weather.
- **Dumping in Catch Basin or Sewer.** Report grease, gasoline, natural gas, cement, oil, sewage, chemicals, or other liquids going into a sewer or catch basin.
- **Oil Spill.** Report an oil spill.
- **Illegal Dumping Complaint.** Report the dumping of large amounts of trash.
- **Catch Basin Complaint.** Report a storm drain that is missing its cover, clogged, sunken, raised, damaged, or defective.

Mapping

The City maintains a GIS-based map of the urbanized area and its MS4 outfalls. The map includes each of the requirements listed in the 2022 MS4 Permit (see IV. Stormwater Management Program Requirements (C) (2) (a-h)). The City has several programs that document and map important information about NYC, including all of its outfalls and drainage areas. Much of the information gathered by these programs is available to the public through NYC Open Data at opendata.cityofnewyork.us.

As required by the 2015 MS4 Permit, the City submitted with the SWMP Plan the Preliminary MS4 Map, which showed the MS4 drainage areas and outfalls known as of August 1, 2018. The 2015 MS4 Permit further required the City to update and submit, along with supplemental information relevant to stormwater management, the final MS4 map of the permit cycle on August 1, 2020. The next update of the MS4 map will be due on August 1, 2027, 5 years from the effective date of the current 2022 MS4 permit.

Program Assessment

The current MS4 Map (as submitted to NYSDEC on August 1, 2020) is available to the public in an interactive format at www.nyc.gov/dep/ms4map. The Map includes 764 outfalls, more specifically 693 MS4 outfalls and 71 CSO outfalls with MS4 connections.

As stated in the SWMP Plan, GIS datasets are dynamic and change over time as updates are received and processed. As a result, the MS4 Map may be periodically updated as new information becomes available.

Table 3: Mapping Program 2022 Status of Implementation lists measurable goals and measures with the implementation status of the City's Mapping BMPs.

Wildlife in Jamaica Bay

Table 3. Mapping Program 2022 Status of Implementation

BMP	Measurable Goals	Measures	Status
Map the MS4 area	Final Map required by 2015 MS4 Permit submitted August 1, 2020	Status and location of the MS4 Map	The MS4 Map is online and available to the public at nyc.gov/dep/ms4map
		Number and percent of MS4 outfalls mapped	764 outfalls mapped; 93%
	Update MS4 Map 5 years from EDP	Date of latest updated MS4 Map	Current map dated 8/1/20; updated map due August 1, 2027

2020 MS4 Drainage Areas and Outfalls

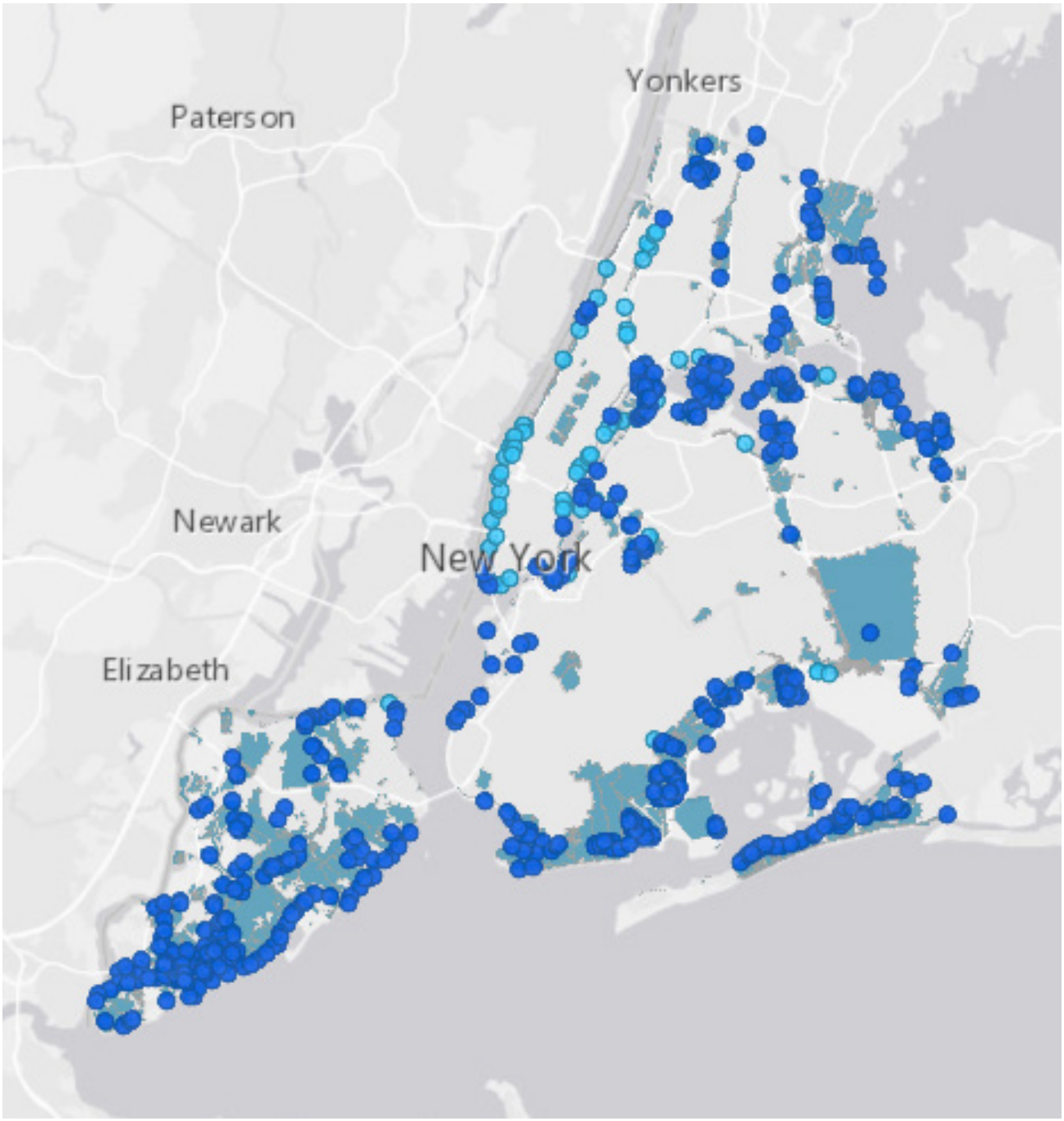
The information shown on this map is the best available information as of August 1, 2020.

MS4 Outfalls

- MS4 Outfall
- CSO with MS4 Connection

MS4 Drainage Areas

- City
- Unknown



Illicit Discharge Detection and Elimination (IDDE)

Illicit discharges are non-stormwater, unauthorized discharges into and from the MS4. Examples include sanitary pipes illegally connected to storm sewers and substances like oils dumped into catch basins. The City has longstanding, effective programs for detecting, identifying, and eliminating illicit discharges citywide. These include the Shoreline Survey, Sentinel Monitoring Program, Harbor Survey Program, and Emergency Response Units. City agencies also detect and abate illicit discharges discovered and confirmed to be originating from their properties.

The City has PEO programs for the public, businesses, and City employees on the hazards of improper disposal of materials and actions to take to reduce the risk of an illicit discharge. City employees working off-site and the public are encouraged to call 311 if they see a potential illicit discharge.

Typically, once the City identifies a potential illicit discharge, it initiates a trackdown to find the source and then takes steps to abate the discharge, if confirmed to be illicit. The trackdown process may include a series of complex steps both in the office and in the field. Each trackdown investigation is unique; some can take a few hours, while others can take days or months depending on the location, the number of sources, the logistics and the complexity of the drainage area.

2022 Program Assessment

During this reporting period, the City continued to implement its citywide IDDE Program: characterizing outfalls, sampling receiving waterbodies, source tracking, and eliminating illicit discharges. The City detected illicit discharges and eliminated them citywide through the DEP Response and Compliance Units; Sentinel Monitoring and Shoreline Survey programs; and agency actions at their municipal facilities in the MS4 area. The City is working to investigate the illicit discharges that are within the City's jurisdiction that were detected in 2022 but not eliminated within the calendar year. Some illicit discharges reported as detected will not have an accompanying abatement record because of circumstances such as an investigation's resulting in the determination that the discharge was not illicit or that the matter should be turned over to NYSDEC.

Non-stormwater discharges (e.g., water line flushing potable water, AC unit condensate, water from crawl spaces, dechlorinated swimming pool discharges) into the MS4 are generally considered illicit. However, some non-stormwater discharges are allowed, including those from firefighting activities and discharges determined by DEP not to be significant contributors of pollutants. DEP makes the determination on a case-by-case basis. To obtain DEP approval to discharge non-stormwater into the MS4, email DEP at MS4@dep.nyc.gov with the subject line Non-stormwater Discharge Inquiry.

Under the Shoreline Survey Program, DEP conducts an outfall reconnaissance inventory (ORI), surveying 100 percent of shoreline outfalls every 10 years.[4] MS4 outfalls are not evenly distributed throughout the shoreline; therefore, the percentage of outfalls DEP inventories each year depends on the area of shoreline inventoried.[5] In 2022, DEP inventoried approximately 43% of MS4 outfalls included in the Shoreline Survey and sent to NYSDEC an updated list of the DEP-owned CSO and MS4 outfalls. Under the 2022 MS4 permit, each City agency will be responsible for ORI of its own outfalls.

Established as an enhancement to the Shoreline Survey, the DEP Sentinel Monitoring Program entails the regular monitoring and sampling of waterbodies throughout NYC. The purpose of the program is to detect continuous, intermittent, and/or transitory illicit discharges. Using a set list of Global Positioning System (GPS) coordinates, DEP goes to sentinel stations quarterly, collects water for samples, and analyzes the samples for pathogens. DEP may also use Harbor Survey data for this effort. The results of the mini-shoreline investigations and sampling are included in the Integrated Sentinel Monitoring Reports.

4 As required in the shoreline in the 14 WRRF SPDES permits, DEP conducts the Shoreline Survey Program by surveying 50 percent of the shoreline every five years so that 100 percent of shoreline is completed every 10 years, as required by the MS4 permit. DEP may also re-visit target drainage areas due to anticipated or identified changes to outfalls.

5 The most recent Shoreline Survey report covered the 2018-2022 period (report submitted March 2023). The 2013-2022 period represented the ten-year period during which 100% of MS4 outfalls were surveyed in compliance with the MS4 permit.

Program Highlights

Elimination of Illicit Discharge to Outfall TI-008. TI-008 is an outfall discharging to Alley Creek that receives over 2 MGD of flow from Oakland Lake via a connection downstream of the regulator. Water samples for bacteria were consistently low in Oakland Lake, but higher than expected at the mouth of outfall TI-008. Through sampling, CCTV investigations, and interior investigations by walking the sewer lines, DEP discovered the bacteria source from a parallel sanitary line infiltrating downstream of the regulator. In 2021, DEP completed the repair of the sanitary sewer adjacent to TI-008 and eliminated one infiltration of sanitary sewer to the storm sewer tributary to TI-008. Subsequent sampling at TI-008 indicated other possible infiltrations to the storm sewer. DEP will continue to investigate in 2023.

Microbial Source Tracking Study. In 2020, DEP partnered with the US Geological Survey (USGS) on a microbial source tracking (MST) study to identify the source(s) and relative host contributions of bacterial contamination in Alley Creek. The object of the study was to analyze water samples for markers using the quantitative polymerase chain reaction (qPCR) method to characterize the various sources of fecal contamination (humans, waterfowl, and canines) in addition to microbiological and chemical constituents associated with human sewage. In 2021, DEP and the USGS completed sample collection for the study and conducted intensive sampling at the outfall TI-024[6] to investigate the area for illicit discharges.

Results indicated that human MST markers were detected in 27 of the 28 samples collected at the three outfall sites along Alley Creek during dry- and wet-weather conditions and regardless of tidal conditions; canine Bacteroides and waterfowl-associated Helicobacter markers were less prevalent.

Because neither Oakland Lake nor groundwater was identified by this study as a significant source of fecal indicator bacteria (FIB) to Alley Creek, it was determined that they could not be the source of the high concentration of human MST markers. However, sampling during low tide, revealed influence of a damaged sanitary sewer line parallel to the combined sewer connecting to Oakland Lake; this condition resulted in elevated FIB concentrations and human and canine MST markers. Repairs to the sewer line that were completed toward the end of the study resulted in a substantial decrease in FIB and MST marker concentrations.

The USGS published the final report in July 2022.[7] DEP continues to assess the area by taking samples, walking the sewer, and eliminating any illegal discharge, if found.

Table 4 lists measurable goals and measures with the status of the City's implementation of IDDE BMPs and represents citywide metrics.

Goals for 2023

The City will continue its IDDE program, including the Shoreline Survey, Harbor Survey, Sentinel Monitoring, Emergency Response Units, and responding to issues discovered on-site at municipally owned facilities. DEP will continue assessing the areas around outfalls TI-008 and TI-684 (formerly designated as TI-024) in Alley Creek.

6 TI-024 has been redesignated as TI-684.

7 Assessment of Fecal Contamination Sources to Alley Creek, Queens County, New York, August 2020–June 2021 https://pubs.er.usgs.gov/publication/sir20225068

DEP conducts dye test to track down illicit discharge

Table 4. IDDE Program 2022 Status of Implementation

BMP	Measurable Goals	Measures	Status
Detect and eliminate illicit discharges	Detect and eliminate illicit discharges including illegal dumping	Number of illicit discharges detected	1053*
		Number of illicit discharges abated	1047*
		Number of and type of enforcement actions and penalties issued	DEP issued 82 summonses, $45,080 in penalties and 296 Commissioner's Orders; DSNY issued 2,525 summonses†
	Conduct an outfall reconnaissance inventory with 100% completed every 10 years	Updated outfall spreadsheet submitted to NYSDEC	Appendix 2 – SPDES outfall listing‡
		Percent of MS4 outfalls for which an outfall reconnaissance inventory (ORI) has been performed	43%
Prepare reports	Prepare a Special Report for waterbodies with fecal coliform above 200 colonies/100 ml and for unauthorized non-stormwater discharges within 3 years of August 1, 2015 and annually thereafter.	Status and location of Integrated Sentinel Monitoring Report submitted to NYSDEC	Available on the DEP website under the header Sentinel Monitoring Program: https://www1.nyc.gov/site/dep/water/harbor-water-quality.page
Provide an ongoing public education and awareness program	Implement a public education program on potential hazards of illicit discharges	List of education activities for public employees	PP/GH agency staff training
		List of education & outreach programs/ events and relevant metric(s) for each (e.g., number of participants, events, or materials distributed)	• Automotive Association Outreach (1 event; 5 businesses contacted) • Community Clean-ups (360 events) • DEP Environmental Education (61 events; 6,252 participants; 15,000 materials distributed) • Parks Environmental Education (6 events; 4,350 participants) • Forgot Your Bag? (231 canine waste dispensers in the MS4 area) • Harbor Protectors (2 events, 160 participants) • Park Stewardship (347 events; 4,296 participants) • SAFE Disposal Events (10 events; 20,678 participants: 4,378,751 materials distributed) • "Trash it, Don't Flush It" Outreach (7,888 households contacted) • Urban Park Rangers Natural Classroom (547 events; 12,133 participants) • Visitor Center at Newtown Creek (160 events; 4,227 participants)
		List of planned educational and outreach programs/activities to be undertaken in the next reporting cycle	• Automotive Associations Outreach • Community Clean-ups • DEP Environmental Education • Forgot Your Bag? • Park Stewardship • SAFE Disposal Events • "Trash It, Don't Flush It" Outreach • Urban Park Rangers Natural Classroom • Visitor Center at Newtown Creek
Provide training for staff	Implement a staff training program on IDDE	Number of staff training opportunities/events	9 events
		Number of DEP staff trained on IDDE	49 participants total§

* Number includes illicit discharges detected/abated by DEP citywide and illicit discharges detected/abated by City agencies on-site at municipal facilities in the PP/GH Inventory. The total number of illicit discharges detected may not be counted by the City as abated if the resolution action includes transferring a case to DEC.

† Excludes cases DEP referred to NYSDEC; DSNY summons are for vehicle spillage and the extrusion of noxious liquids.

‡ The spreadsheet is a full listing of DEP CSO and MS4 outfalls.

§ Participant total includes those who attended multiple training events.

Construction and Post-Construction

NYSDEC requires development or redevelopment projects disturbing an acre or more of soil to obtain coverage for stormwater discharges under the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-020-001) (CGP).

The City's Construction and Post-Construction (C/PC) Program complements the NYSDEC CGP program in the NYC MS4 area[8] by reviewing and approving stormwater pollution prevention plans (SWPPPs) and inspecting construction sites both for stormwater impacts and for operation of post-construction stormwater management practices (SMPs). The C/PC Program also requires developers to install adequate controls to ensure no net increase (NNI) of a pollutant of concern (POC) causing the impairment of an impaired waterbody without a total maximum daily load (TMDL). As part of the C/PC Program, DEP issues two types of stormwater permits for covered development projects: the Stormwater Construction Permit and the Stormwater Maintenance Permit.

Rules governing the C/PC Program first went into effect on June 1, 2019 and were amended in February 2022 to meet the reduced threshold identified in the Lot Size Soil Disturbance Threshold Study required by the 2015 MS4 permit. The amended rule includes reducing the area of disturbance requiring Stormwater Construction and Stormwater Maintenance Permits to 20,000 square feet of soil disturbance and adds as a trigger the creation of 5,000 square feet or more of impervious surface. The rule helps NYC reduce combined sewer overflows, decrease the amount of polluted stormwater entering waterbodies and increases capacity within city infrastructure.

2022 Program Assessment

The City reviewed 196 SWPPPs and issued 45 Stormwater Construction Permits, bringing the total of active Stormwater Construction Permits to 68. A list of active Stormwater Construction Permits is available through the Stormwater Permitting and Tracking System (SWPTS) at https://deppermits.microsoftcrmportals.com/. SWPTS is also the site for applicants to submit and track the review and approval of their SWPPPs and issuance of their permits.

The City inspected 96% of active construction sites at least once in 2022, issuing 2 stop work orders, 5 notices of non-compliance, and 13 summonses. The City issued 1 Stormwater Maintenance Permit.

Updated New York City Stormwater Manual following adoption of Unified Stormwater Rule

Of the 86 new projects received by the City, 23 met the criteria for the NNI requirement. NNI is a requirement in the Special Conditions section of the MS4 Permit (II.B.1), under which projects that discharge to waters that are impaired but do not have a TMDL allocation, must implement SMPs that negate any potential increase in pollutant loading.

The Unified Stormwater Rule (USWR), effective February 15, 2022, aligned and streamlined stormwater-related requirements throughout NYC. It expanded the C/PC program to include combined sewer system areas, lowered the soil disturbance threshold that triggers the program from one acre to 20,000 square feet, and included as an additional trigger for construction permitting the creation of 5,000 square feet of new impervious surface. For more information on the USWR, visit https://www1.nyc.gov/site/dep/water/unified-stormwater-rule.page.

Table 5 lists measurable goals and measures with the status of the City's implementation of C/PC Program BMPs.

8 The City program was extended to the combined sewer area by Local Law 91 of 2020, effective March 26, 2021.

Table 5. C/PC Program 2022 Status of Implementation

BMP	Measurable Goals	Measures	Status
Construction Site Stormwater Runoff Control	Review and approve SWPPPs	Number of SWPPPs reviewed	196
	Inspect construction sites and enforce Stormwater Construction Permits	Number of active construction sites	68
		The percentage of active Stormwater Construction Permit sites inspected once	96%
		The percentage of active Stormwater Construction Permit sites inspected more than once	43%
		Number and type of enforcement actions and penalties issued	• Stop Work Orders: 2 issued • Notice of non-compliance: 5 issued • Summons: 13 issued • Penalties: $46,500.
		Number of construction site stormwater control trainings planned or completed	• 1 completed • 1 planned
Post-Construction Stormwater Management	Inspect post-construction sites and enforce Stormwater Maintenance Permits	Number and type of enforcement actions and penalties issued	• Stop work order: 0 • Summons: 0 • Commissioner's Order: 0 • Notice of Non-Compliance: 0 • Penalties: 0
		Number of SMPs, including type of practice and contributing impervious area	• Media Filter – 3.43 Acres • Stormwater Gallery – 1.51 Acres.
		Number and type of P-C SMPs inspected	• 1 Media Filter • 1 Stormwater Gallery
		Number and type of P-C SMPs properly maintained as determined by inspections	• 1 Media Filter • 1 Stormwater Gallery
		Number of individuals trained in inspection of long-term operation and maintenance of post-construction SMP	0
		Number of flood management projects and existing flood control devices evaluated	0

Goals for 2023

DEP's Stormwater Permitting Group plans to continue outreach efforts to the construction community, to review and approve SWPPPs, and to inspect sites that have construction permits. Additionally, City staff will continue to respond to inquiries and provide applicants with information and training, as needed or requested.

Pollution Prevention/ Good Housekeeping (PP/GH) for Municipal Operations and Facilities

The City has an extensive network of municipal facilities and operations that serve New Yorkers and keep vital infrastructure functioning properly. To help reduce the potential for these facilities and operations to pollute stormwater, the City implements a comprehensive PP/GH Program, which

- maintains an inventory of municipal facilities and operations, prioritizes them for their potential to contribute pollution to stormwater runoff and assesses them on 2, 5 and 7-year cycles for high, medium and low priority, respectively;
- provides guidance on stormwater control measures (SCMs) to reduce stormwater pollution from municipal facilities and operations;
- evaluates runoff reduction techniques including green infrastructure (GI) in planned municipal upgrades (PMUs); and
- trains City staff on PP/GH practices.

The City also updates the facility inventory and priority ratings, as they are not static and can change from year to year based on new information.

2022 Program Assessment

Inventory

The facility inventory is dynamic in nature: facilities can be consolidated or separated, newly occupied or vacated, or confirmed served by the MS4 or combined sewers. The City updates the inventory annually. At the end of 2022, there were 532 facilities in the inventory: 37 high priority, 266 medium priority, and 229 low priority.

Facility and Off-site Assessments

Facility assessments evaluate stormwater controls associated with a facility's operations and assess stormwater pollution potential. Based on pollution potential, a facility may be categorized as a high, medium, or low priority site. The City assessed 65 facilities including sites owned or operated by DSNY, DOE, DCAS, Parks, NYPD, DOT, and DOC.

The City also assessed off-site operations. Off-site operations are municipal activities generally performed in the right of way (ROW), including, but not limited to, pavement cleaning, road repairs, and catch basin cleaning. The off-site operations are assessed against the potential risk of impacts to stormwater runoff due to activities associated specifically with the operations. Typically, this assessment includes evaluation of waste-generating activities and their management, as well as stormwater controls. In 2022, the City completed and reported on the assessment of the "Citywide Spill Response in Public Right of Way" and DOHMH Pest Control and Vector Control Operations.

DEP catch basin cleaning

DSNY salt spreader in the snow

NYPD and Parks care for trees

Facility and off-site assessments continued with assessors observing safety protocols such as wearing masks and maintaining social distancing.

Stormwater Control Practices

City agencies continued to implement stormwater control practices such as cleaning catch basins, sweeping pavement and practicing proper storage of materials. Because of COVID-19, however, DSNY reduced some street sweeping activities in residential areas until July 2022.

Agencies also continued to look for ways to implement stormwater control practices:

- NYPD partnered with NYC Parks and the City Clean Up Corps to spread mulch at two NYPD facilities in the MS4 area. Spreading mulch helps increase water retention and soil health, which helps support healthy trees. NYPD also marked its catch basins and drains in high traffic areas with “No Dumping” tags, contracted cleaning crews to use water recovery systems when cleaning parking lots and conducted three sewer mapping efforts at facilities to confirm their sewer system layout.

Green Infrastructure

Agencies are required to consider, and if cost-effective, incorporate runoff reduction techniques and GI during PMUs. The City implemented GI at 6 PMU projects, all of which were green roofs constructed by Parks.

Pollution Prevention Training

The City continued to administer the PP/GH Training in both classroom (held in-person and virtually), and computer-based environments. More than 10,000 municipal employees received PP/GH training through DEP virtual, classroom-based sessions and through their agencies.

Table 6 lists measurable goals and measures with the status of the City’s implementation of PP/GH Program BMPs.

Goals for 2023

The City will continue to assess facilities and off-site operations based on their priority status; refine the facility and off-site operation inventory; and administer staff trainings.

Table 6. PP/GH Program 2022 Implementation Status

BMP	Measurable Goals	Measures	Status
Provide program for pollution prevention and good housekeeping for municipal operations and facilities	Maintain an inventory of municipal operations and facilities	Number of facilities, by priority	High – 37 Medium – 266 Low – 229
		Number of off-site operations, by priority	Med - 16 Low - 3
	Implement the PP/GH Program	Acres of parking lot swept	9,161*
		Miles of street swept	857,369*
		Number of catch basins inspected	12,351†
		Number of catch basins cleaned	6,025†
		Number of catch basins maintained	671†
		Miles of storm sewers inspected	529‡
		Miles of storm sewers cleaned	529‡
		Number of self-assessments conducted, high priority facilities	9
		Number of self-assessments conducted, medium priority	50
		Number of self-assessments conducted, low priority	7
Provide for staff training	Implement a PP/GH Training Program	Number of staff trained in-person	7,301
		Number of staff trained computer-based	4,018
Consider runoff reduction and green infrastructure	Consider runoff reduction techniques and green infrastructure in PMUs	Number of runoff reduction/green infrastructure opportunities implemented	6

* Based on citywide numbers for ROW, arterial highways, bridge roadways, tunnels, and underpasses, and work done by agencies at their facilities listed in the inventory.
† Data include the DEP ROW catch basin program based on the 2020 MS4 map and work done by agencies at their facilities listed in the inventory.
‡ Based on work done by DEP for all sewers citywide and work done by agencies at their facilities listed in the inventory.

Industrial and Commercial Stormwater Sources

NYSDEC requires certain industrial facilities to obtain coverage for stormwater discharges under the State Pollution Discharge Elimination System (SPDES) Multi-Sector General Permit for Stormwater Discharge from Industrial Activities (GP-0-17-004) (MSGP). While NYSDEC issues the MSGP, DEP is responsible for the associated inspections and enforcement of the MSGP at privately owned MSGP-covered facilities in the MS4 area. DEP also assesses unpermitted industrial and commercial facilities in the MS4 area and sends its observations to NYSDEC to facilitate NYSDEC's determination of the facilities' potential need for SPDES permit coverage. DEP maintains a list of these permitted and unpermitted facilities, referred to as the I/C Facility Inventory.

DEP and Stantec assess an unpermitted recycling facility for MSGP applicability

2022 Program Assessment

Unpermitted Facility Assessments

DEP continued assessing for SPDES applicability the remaining unpermitted facilities from its original inventory and added to its inventory newly identified unpermitted facilities. Altogether, DEP assessed 37 unpermitted facilities for SPDES permit applicability. Of those 37 facilities, DEP identified 16 for referral to NYSDEC for potential MSGP no-exposure, full MSGP or other SPDES permitting. The remaining 21 facilities did not meet the criteria for referral and have been classified as "no further action."

DEP also identified an additional 7 facilities that were inactive (i.e., out of business), classified them as "no further action" and removed them from the inventory. DEP determined that an additional 286 facilities were located outside of the MS4 area, classified them as "no further action" and removed them from the inventory.

Since the start of the I/C Program, DEP has assessed 1099 unpermitted facilities. In 2022 DEP assessed 44 unpermitted sites and 66 sites from the total inventory remain to be inspected.

Table 7 summarizes the results of unpermitted assessments performed during this reporting period.

Permitted Facility Inspections

The City inspected 10 MSGP-permitted facilities. Table 8 summarizes the MSGP-permitted site inspections completed during this reporting period. Findings from these inspections will be memorialized in inspection reports and associated enforcement (corrective action letters) to be completed after the reporting period. Inspection frequencies dictated by the MS4 permit were met during this reporting period.

Table 7. Unpermitted Assessment Summary

Assessment Results	Number of Facilities in Reporting Period (2022)	Cumulative Number of Facilities to Date (2019-2022)
Unpermitted facilities with no further action needed*	28	959
Unpermitted facilities to be referred to NYSDEC for SPDES Permit Determination†	16	140
Total	**44**	**1099**

* Includes inventory listings deemed inactive or where no industrial activity was observed; and inventory listings that did not meet criteria for SPDES permitting referral.
† Includes facilities that may be eligible for MSGP coverage, may qualify for no exposure waiver, or may need an individual SPDES permit.

Complaint-Driven Inspections

By calling 311, the public may make a variety of complaints related to industrial activity. DEP evaluated for I/C program applicability 34 facilities that were the subject of complaints (DEP I/C team responds only to complaints against sites active in the I/C inventory). The I/C team's inspection of one of the 34 facilities resulted in an enforcement action. The complaints against the other 33 facilities were evaluated/addressed, as appropriate, by DEP Division of Emergency Response and Technical Assessment (DERTA).

Enforcement

DEP issued 28 Commissioner's Orders (COs) to facilities in the I/C inventory. A CO is an order issued by DEP to enforce its rules for the use of and discharges to the MS4; the Order explains the nature of the violation and provides a deadline for taking corrective action.

Of the 28, 9 COs were issued to unpermitted facilities. The remaining 19 COs were issued to permitted facilities. There were several categories of COs issued: the majority, considered "precautionary" COs, prohibited non-stormwater discharges to the street and sidewalk; some COs related to IDDE investigation and elimination; one CO required a recipient to clean up the street and sidewalk of waste discharged from the site; and several COs were related to MSGP compliance deficiencies.

DEP sent 29 formal corrective action letters to MSGP-permitted facilities. These letters directed facilities to make improvements to SWPPPs and/or housekeeping practices. 26 of the letters were linked to inspections conducted during the prior reporting period (2021). An additional 7 corrective action letters, stemming from inspections conducted in 2022, are still pending final completion and are expected to be completed in 2023.

While performing MSGP compliance inspections and unpermitted facility assessments, DEP did not observe any active, unauthorized non-stormwater discharges to the MS4. Therefore, the City issued no enforcement actions with penalties (e.g., summonses) for observed, active, illicit discharges.

Table 8 lists measurable goals and measures with the status of the City's implementation of the I/C Program BMPs.

Goals for 2023

DEP plans to continue the assessment of unpermitted facilities and inspection of permitted facilities. In addition, DEP plans to finalize SPDES assessment report referrals from the prior year and take any necessary enforcement actions stemming from assessments and inspections done in 2022.

Table 8. I/C Program 2022 Implementation Status

BMP	Measurable Goals	Measures	Status
Provide an industrial and commercial pollution control program	Implement an inspection and assessment program for unpermitted industrial and commercial sources	Status of the inspection program and stormwater controls for unpermitted industrial and commercial facilities	DEP performed 44 unpermitted facility assessments. 16 of these facilities will be referred to NYSDEC for SPDES coverage. DEP issued 9 Commissioner's Orders to unpermitted facilities.
	Implement an inspection program for MSGP Permit holders based on priority and evaluate stormwater controls	Number of SPDES MSGP facilities inspected, high priority	8
		Number of SPDES MSGP facilities inspected, medium priority	1
		Number of SPDES MSGP facilities inspected, low priority	1
		Number of non-compliant SPDES MSGP facilities	4
		Number of repeat non-compliant SPDES MSGP facilities	6
		Number and type of enforcement actions completed and penalties issued	29 completed formal letters to permittees identifying deficiencies & associated corrective actions. A portion of these were tied to inspections completed during the prior reporting period. DEP issued 19 Commissioner's Orders to permitted facilities. 7 formal letters in progress to permittees identifying deficiencies & associated corrective actions. 2 Commissioner's Orders are in progress to permittees with repeat non-compliance.

Control of Floatable and Settleable Trash and Debris

Stormwater runoff can transport trash and debris from streets and sidewalks into local waterbodies. Once waterborne, these materials are referred to as floatables. The SWMP relies on many existing programs to control trash and debris stemming from the MS4 area. Key programs to control trash and debris and to intercept materials that could potentially discharge via storm sewer through outfalls include street sweeping, catch basin hooding and maintenance, and catch basin inspection. The City also implements booming, netting, and skimming to collect floatables in waterbodies. Public education, outreach, involvement, and participation are also important parts of the City's efforts to control floatables. A variety of programs encourage the public to help manage trash and debris, including a suite of stewardship programs (e.g., Parks Community Cleanups) and 311, which enables New Yorkers to report to the City dirty conditions they observe.

2022 Program Assessment

During this reporting period, the City implemented the floatables control programs described in the Plan. These programs included sweeping 857,369 miles of streets citywide, inspecting 12,351 catch basins and cleaning 6,025 catch basins. DEP maintained 23 in-water floatable containment facilities. Some reductions in DSNY street sweeping as well as in education and outreach programs conducted by various agencies continued in 2022. DEP is working closely with DSNY to share and review street sweeping information as an important floatables control measure.

Loading Rate Study

The City developed a study to determine the loading rate of trash and debris from the MS4 to floatables-impaired waterbodies. The City's Floatables Loading Rate Study implemented a hybrid approach that combined field measurements with statistical analysis to account for different factors affecting generation, interception, and discharge or loads of floatables in the MS4 area. When selecting catch basins to monitor, DEP considered for each catch basin factors including street litter level, street sweeping frequency, catch basin hood status, drainage area and curb length.

DEP, in coordination with other City agencies such as DOT and Parks, as appropriate, identified monitoring locations, distributed throughout Staten Island, Brooklyn, and Queens, for specific land use types including highways and parks. For a 7-month period from May to November 2021, DEP measured trash and debris discharged from 69 catch basins that were representative of City catch basins and site characteristics. Sample metrics such as surface area, total count, weight, and volume of floatables were recorded.

Measuring debris in catch basin for Loading Rate Study

Staten Island Bluebelt Cleanup

DEP began the analysis of the monitoring data in 2022. The data collected at the monitored catch basin locations are being evaluated and used to estimate total floatables loads, on an annual volume basis, from the City's MS4 area to floatables-impaired waterbodies. DEP is computing the loading rates in order to investigate the relationships among the loading rates, the factors affecting loads (described above), and additional predictors or variables such as land use. These relationships will be used in a statistical analysis to predict the corresponding floatables loads at unmonitored catch basin locations within the MS4.

Finally, these predicted floatables loading rates at each catch basin will be aggregated to quantify typical total loading rates for MS4 outfalls discharging to floatables-impaired waterbodies.

Table 9 lists measurable goals and measures with the status of the City's implementation of the Control of Floatable and Settleable Trash and Debris program BMPs.

Goals for 2023

The City plans to continue its key floatables control programs, including public education and outreach, street sweeping, catch basin inspections and cleaning, and DEP's boom and netting program.

The City also plans to continue its review of the floatables loading rate information that resulted from the field measurements and statistical analysis. Floatables loading rate information will also be applied to the Urban Stormwater Quality (USWQ) modeling effort currently being piloted to assess the effectiveness of different stormwater BMPs including floatables controls (see the Monitoring section for more information on USWQ modeling).

The MS4 Permit requires the Floatables Loading Rate Study to be completed by August 1, 2025. DEP will then use information from the Floatables Loading Rate Study to propose, before the end of the permit term in 2027, a methodology for selecting, sizing, and siting floatables controls to reduce trash and debris that discharges to the City's waterbodies.

Table 9. Control of Floatable and Settleable Trash and Debris 2022 Status of Implementation

BMP	Measurable Goals	Measures	Status
Provide a Floatable and Settleable Trash and Debris Management Program	Determine Loading Rate of Floatable Trash and Debris discharged from MS4 to waterbodies impaired for floatables	Status of Loading Rate Study	Data analysis in progress
	Continue DEP's Catch Basin Inspection, Cleaning, and Hood Replacement Program	Number of catch basins inspected, cleaned, and retrofitted†	12,351 catch basins inspected, 6,025 catch basins cleaned, and 0‡ catch basins retrofitted
		Number of catch basin hoods repaired, installed, or replaced†	0 catch basin hoods repaired, and 509 catch basin hoods installed, or replaced
	Continue DEP's boom and netting program	Status and location of Combined Sewer Overflows Best Management Practices Annual Report with Floatables Control Program results	The most recent Combined Sewer Overflows Best Management Practices Annual Report is online and available to the public at https://www1.nyc.gov/site/dep/water/combined-sewer-overflows.page
	Implement a public education program on floatables	List of education & outreach programs/events and relevant metric(s) for each (e.g., number of participants, events, or materials distributed)	• Adopt-a-Highway (80 materials distributed) • Automotive Association Outreach (1 event; 5 businesses contacted) • Community Clean-ups (360 events) • Harbor Protectors (2 events, 160 participants) • Park Stewardship (347 events; 4,296 participants) • SAFE Disposal Events (10 events; 20,678 participants: 4,378,751 materials distributed) • "Trash it, Don't Flush It" Outreach (7,888 households contacted)

† Data include the DEP ROW catch basin program based on the MS4 map and work done by agencies at their facilities listed in the PP/GH inventory.
‡ As of 2010, DEP completed its program of retrofitting those catch basins that required such repairs before a hood could be installed.

Monitoring and Assessment of Controls

To assess the quality of stormwater runoff from the MS4, the City developed and implemented an MS4 Outfall Monitoring Program that combines data collected from existing monitoring programs with additional water quality and flow data collected in manholes upstream of select outfalls. An important goal for the MS4 Outfall Monitoring Program is to collect and analyze water quality data to determine whether a relationship exists between land use type and pollutant concentrations in the City's stormwater. The City collected water quality and flow data during wet weather events to assess the influence of land use on stormwater discharge and pollutant concentrations. The MS4 outfall sampling locations are representative of six land use types within NYC: mixed; high-density residential; low-density residential; industrial; open space; and highway. The wet weather events during which the City sampled had to meet the criteria for a "qualifying rain event:"

- no storm equal to or greater than 0.1 inch occurred in the outfall catchment area within 48 hours preceding the rain event;
- weather forecasts at least a day in advance predict rain with 80 percent probability of occurrence; and
- the event is predicted to result in at least 0.2 inches of rain.

2022 Program Assessment

NYC MS4 Outfall Monitoring Program

Sampling for the MS4 Outfall Monitoring Program began in 2019 and was completed in June 2022. The timing, variability, and unpredictability of the weather extended the sampling program from the originally anticipated 24 months to 41 months. A total of 64 samples were collected during the monitoring period. Table 10 shows the number of samples collected from each sampling location during each year of the monitoring period.

Analysis of water quality laboratory results and collected flow metering data began in July 2022. To characterize and assess the quality of stormwater discharges, the City is conducting multiple statistical tests to determine the data distribution across the sampling events for each monitored outfall location and whether there are significant differences among the outfalls.

USWQ Hydrologic and Hydraulic (H&H) Model

The City initiated a pilot to develop an USWQ model for the MS4 areas of the Tallman Island WWRF sewershed. Existing H&H models developed under the Citywide Stormwater Engineering Analysis and Planning (CSEAP) project are being used to add a water quality modeling component. These models will then be used to assess the build-up and wash-off of POCs identified in the MS4 Permit and the effectiveness of different structural and non-structural BMPs. The City expanded the H&H model network for the Tallman Island sewershed based on the 2020 MS4 Map, updated the hydrology approach within the model and performed a hydraulic recalibration of the model network.

Table 10. Number of samples collected from sampling locations

Outfall	Borough	Land Use	Total Samples 2019	Total Samples 2020	Total Samples 2021	Total Samples 2022
HP-640	Bronx	Mixed	3	3	2	1
HP-627	Bronx	Open Space	3	2	3	1
TI-604	Queens	Highway	3	2	2	2
TI-633	Queens	High-Density Residential	3	3	1	2
TI-658	Queens	Low-Density Residential	3	3	2	1
NCQ-632	Queens	Industrial	3	3	2	1
OH-607†	Brooklyn	Industrial	1	0	0	0
OB-722	Staten Island	Low-Density Residential	3	2	2	2
		Total	22	18	14	10

† Sampling at OH-607 was discontinued after only one sampling event because of a reconfiguration of the sewer system during the monitoring period.

Harbor Survey Trend Analysis

The City also initiated the development of the Harbor Survey Trends Analysis toward its goal of evaluating long-term water quality trends. The planned Harbor Survey Trends Analysis will utilize data from the Harbor Survey, which tracks a variety of metrics that generally speak to the overall condition of water quality in NYC. The City will develop an initial data analysis for the 5-year period prior to the implementation of the SWMP (i.e., 2014 to 2018) to establish baseline water quality conditions for the POCs identified in the MS4 Permit. Then, going forward, in order to track water quality trends, the analysis will be updated with subsequent Harbor Survey data and evaluated every 5 years.

Table 11 lists measurable goals and measures with the status of the City's implementation of the Monitoring Program BMPs.

Goals for 2023

DEP will continue to analyze MS4 Outfall Monitoring Program data and summarize data analysis, results, and conclusions in a comprehensive report. Stormwater concentration data from the MS4 Outfall Monitoring Program will also be used to calibrate USWQ models as model development continues throughout 2023.

The City will develop an approach for performing the initial five-year Harbor Survey Trends Analysis of water quality conditions. The City will review and evaluate Harbor Survey data, including parameters, depths and recording times, from 195 monitoring stations. The initial data analysis will be completed by August 2024, as required by the MS4 Permit.

Table 11. MS4 Monitoring Program 2022 Implementation Status

BMP	Measurable Goals	Measures	Status
Monitoring and Assessment Program	Conduct wet weather sampling from outfalls/manholes	Results of monitoring data collected and analyzed	Outfall monitoring continued through 2022 with collection of 10 water quality samples.
	Evaluate long-term trends in receiving water quality	Analyze 5 years of Harbor Survey data to establish baseline conditions prior to SWMP implementation (2014-2018)	Due 8/1/24
	Develop urban stormwater quality models	Report on progress annually	1st report due 8/1/24

Special Conditions for Impaired Waters

In addition to the City-administered programs and practices to reduce or remove pollutants in stormwater runoff throughout the MS4 area, there are special conditions for specific impaired waterbodies:

- Impaired waters without TMDLs
- Impaired waters with NYSDEC-approved CSO LTCPs that have identified stormwater as a significant contributor to the impairment

Information on impaired waters without TMDLs is included in the Construction and Post-Construction section of this report. Impaired waters with approved CSO LTCPs that do not predict compliance with applicable water quality standards, and where stormwater contributions from the MS4 are expected to be a significant contributor to the impairment, require the City to implement enhanced BMPs. In 2022, Coney Island Creek (CIC) was the only waterbody to meet these criteria. In January 2023, DEC approved the Jamaica Bay and Tributaries LTCP. Accordingly, Thurston Basin, Bergen Basin and Fresh Creek will likewise now meet the criteria, requiring the City to determine, for those waterbodies, the priority source categories for the POCs causing the impairments; what additional or customized non-structural BMPs should be implemented and on what schedule; and any opportunities for implementing cost-effective and feasible green infrastructure projects and other structural retrofits. Future annual reports will include information on the City's progress in implementing the program in these additional waterbodies.

For Coney Island Creek, the MS4 Permit lists pathogens (fecal coliform) and floatables (garbage and refuse) as the POCs causing impairments. Table 12 shows a summary of the source categories of the POCs and the City's proposed control measures for Coney Island Creek.

Harbor Protectors stencil catch basin in Coney Island

2022 Program Assessment

The City implements enhanced BMPs in the Coney Island Creek watershed. Table 13 provides status updates on the enhanced BMPs the City included in the SWMP Plan.

Table 12. Source Categories Of POCS Proposed Control Measures For Coney Island Creek

Pollutant of Concern	Targeted MS4 Source Categories	Proposed Control Measures and Projects for CIC
Floatables	• Highly impervious area (littering)	• Catch basin marking • Source control • Public education and outreach
Pathogens	• Illicit discharges • Pet waste	• Catch basin marking • Sentinel Monitoring • Source tracking and control • Public education and outreach

Table 13. Special Conditions Program Status Updates

Program	Description	Update
Pet waste management	Maintain pet waste bag dispensers and signage as part of Parks' "Forgot Your Bag?" Program, to minimize the presence of exposed pet waste.	Parks continued to maintain the pet waste bag dispensers and signage in both Calvert Vaux and Kaiser Parks.
Catch basin marking	Include a "no dumping" message on the iron curb piece on new and replaced catch basins in the MS4 area. Provide catch basin stenciling opportunities for local organizations.	The City continued to include a "no dumping" message on newly installed catch basin curb pieces throughout the City. DEP administers a Harbor Protectors Program in Coney Island Creek, providing 4 different stencil designs and guidance to the local community.
Monitoring and Source Tracking	Explore modifications to existing sampling programs to allow the City to refine its source trackdown efforts in Coney Island Creek.	DEC approved the addition of a new Sentinel Monitoring station at Coney Island Creek (DEP began implementation of the modified program in April 2020).
Public education and outreach	Conduct education and outreach in the Coney Island Creek Community on pollution source controls.	On October 27, 2022, DEP Harbor Protectors Program participated in a "Day of Service" for the Superstorm Sandy Anniversary in Coney Island at Mermaid Ave from 17th St to 35th St, Neptune Ave from 33rd St to 35th St with more than 100 students from PS 188, PS 329, and PS 288, who cleaned and stenciled more than 60 catch basins. Harbor Protectors are DEP volunteers (students or community groups) who engage in stewardship activities in their neighborhoods. These activities help keep our communities clean and pollution out of our waterways. Volunteers participate in one or more activities that support stormwater management: • Clean Catch Basins: New York City has more than 144,000 catch basins! Catch basins collect rainwater that flows down streets and sidewalks. Harbor Protectors remove litter and leaves that can cover catch basins causing flooding and pollution in nearby waterways. • Stencil Catch Basins: Sometimes people pour oils or dump garbage down catch basins. Those oils and debris can end up as pollution in nearby waterways. Harbor Protectors stencil an educational message on the sidewalk near a catch basin to remind their neighbors not to dump anything there. • Care for Rain Gardens: Rain Gardens are built in City sidewalks and are designed to collect rainwater before it gets to the catch basins. Harbor Protectors care for rain gardens by removing litter and debris, clearing inlets and outlets, and helping City maintenance staff care for plants. In 2022, DEP also reached out to 5 automotive businesses in Coney Island on proper waste disposal and had literature translated into Spanish and Russian. On June 4, 2022, Parks attended the My Estuary Day event in Coney Island at Kaiser Park for a beach Clean-up. Parks Stewardship and the Coney Island Beautification Project hosted the event. Urban wetlands provide a variety of benefits including improved water quality and storm water retention. They also serve as critical habitat for native wildlife. 150 students were in attendance.
Green infrastructure	Identify potential GI opportunities in Coney Island Creek MS4 areas by prioritizing City-owned sites based on their potential to capture runoff.	DEP identified 4 schools suitable for SMP projects. • K095: Gravesend – subsurface retention practice • K238: Anne Sullivan – bioretention practice and subsurface retention practice • K234: W. A. Cunningham – subsurface stormwater chamber • K212 Lady Deborah Moody – synthetic turf practice with subsurface stone storage Construction is nearly complete at K238, and construction will be starting at K095 and K234 by Summer 2023. For the fourth school, K212 Lady Deborah Moody, synthetic turf practice with subsurface stone storage will be included in a separate construction contract with other synthetic turf projects.

Recordkeeping and Reporting

Each year, the City prepares an MS4 Annual Report documenting the status of compliance activities related to the MS4 Permit. The City submits the MS4 Annual Report to NYSDEC by September 30 following each reporting year. The public can also request information related to the SWMP by emailing MS4@dep.nyc.gov.

This report documents activities related to MS4 Permit compliance for the 2022 reporting period and serves as the Annual Effectiveness Assessment required by the permit. The City assesses SWMP effectiveness through its achievement of the measurable goals included in the BMP tables. In addition, the annual report includes a narrative highlighting and explaining important activities conducted during the reporting year. The City also periodically refines its measurable goals with information gained from program planning and implementation, interagency working groups, and public input. Continuing to refine and update the measurable goals allows the City to better quantify and accurately represent the effectiveness of each one. Table 14 shows the 2022 recordkeeping and reporting implementation status.

Table 14. Recordkeeping and Reporting 2022 Implementation Status

BMP	Measurable Goals	Measures	Status
Provide annual reports to document compliance with the MS4 permit	Develop Annual Report due September 30 following each reporting year.	Summary of annual effectiveness assessment	• See effectiveness assessment of each program under pertinent sub-sections of this report.
		Municipal Compliance Certification submission	• Appendix 3 – Municipal Compliance Certification (City to include with final draft)

Installation of New Catch Basins for Willowbrook/Westerleigh

Clason Point Park

Related Initiatives

NYC Green Infrastructure Program

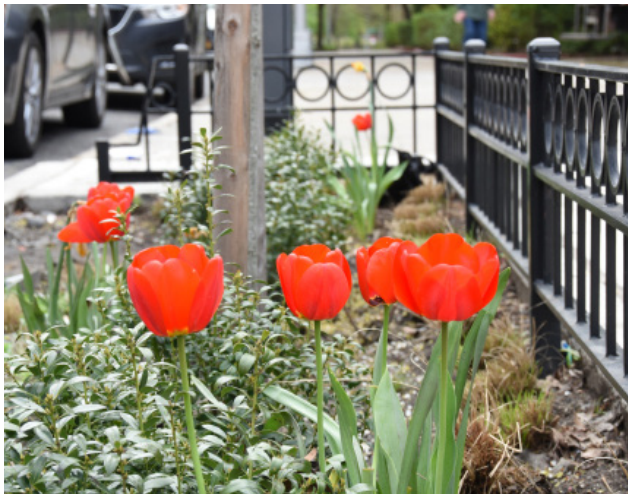
Building upon the successes and lessons of earlier efforts, in 2011, the City established the NYC Green Infrastructure Program (GI Program) in areas of the City served by the combined sewer system. GI practices such as green roofs and rain gardens collect, treat, and infiltrate stormwater runoff. The goal of the GI Program is to reduce CSOs into the waterbodies of NYC by using GI technologies to manage stormwater from impervious surfaces. DEP works with partner agencies to design, construct, and maintain GI on city streets and sidewalks, and on other public property.

The GI Program also offers grants to private property owners to design and construct green roof retrofits citywide (including in separately sewered areas of NYC), and an incentive program that funds the design and construction of site-level green infrastructure practices on private properties.

The GI Program includes a research and development effort, which reviews GI performance over time, ensures performance-based maintenance and operations, and conducts cost-benefit analyses of various GI designs. The data analysis supports the City's water quality-related compliance programs and fills data gaps that DEP has identified through previous monitoring activities. This work is critical to the success of GI implementation in both combined and separate sewer areas of NYC.

For more information on the NYC Green Infrastructure Program, visit the DEP website https://www1.nyc.gov/site/dep/water/green-infrastructure.page or see the 2022 GI annual report https://www.nyc.gov/assets/dep/downloads/pdf/water/stormwater/green-infrastructure/gi-annual-report-2022.pdf.

NYC rain garden in bloom



Rockaway Median Project

Rockaway Median Project (Beach-67th Street Project)

The Beach 67th-Green Street Median Project (between Thursby Avenue and Almeda Avenue) was designed to minimize major street and local area flooding using the existing street median assets and incorporating Green Infrastructure elements such as bioretention and detention structures.

Some of the key construction elements of this project include:

- Rehabilitation of the existing three street medians between Thursby and Almeda Avenues and incorporation of GI/LID elements such as bioretention and detention structures.
- Reconstruction and extension of the street median along the intersection of Beach 67th Street and Almeda Avenue.
- Pavement resurfacing along Beach 67th Street (between Thursby and Almeda Avenues).
- Pedestrian ramp improvements for ADA compliance at the intersections of Beach 67th Street and Almeda Avenue and Beach 67th Street and Thursby Avenue.
- Landscape work along Beach 67th Street (between Thursby and Almeda Avenues).

The City completed this project in 2022.

Southeast Queens and Cloudburst Pilot Projects

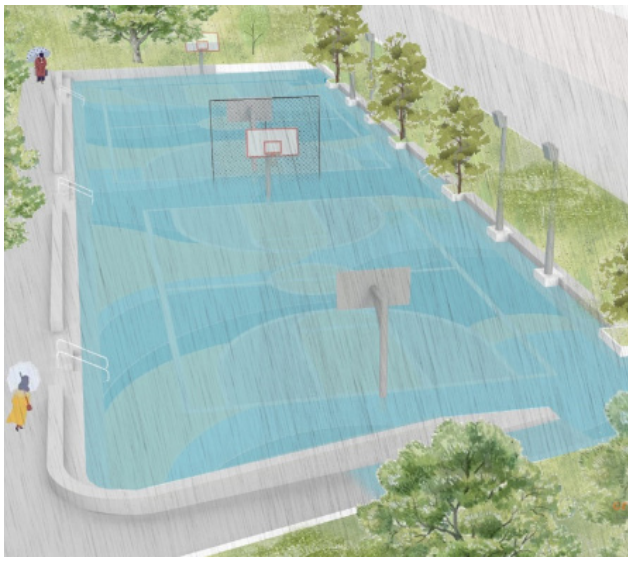
New York City has already seen flooding events caused by extreme rain and is anticipating that flooding may become worse with climate change. In Southeast Queens, flooding has been a chronic issue for more than 70 years and has been exacerbated by increasing rainfall, loss of permeable surfaces, and reduced groundwater. Over the past ten years, Queens Community Boards 12 and 13 have had more flooding complaints than any other areas of New York City. DEP's 10-Year Capital Budget allocates $1.5 billion to plan and initiate full sewer build-out and to provide short-term relief wherever possible. Full build-out requires completion over many years of approximately 450 miles of new storm sewer, and upgrades to 260 miles of sanitary sewer and 30 miles of combined sewer.

To complement storm sewer and GI work in Southeast Queens, DEP identified two pilot projects to help demonstrate the feasibility of implementing the cloudburst approach. These projects aim to supplement ongoing sewer buildouts and act as a buffer for storms that are not captured by sewers due to the size of the storm or the lack of fully built-out storm sewer infrastructure. This effort would reduce flooding in areas where grey infrastructure takes longer to implement and would alleviate chronic flooding of upstream areas.

The Cloudburst Program has already begun work in three neighborhoods: South Jamaica and St. Albans in Queens and East Harlem in Manhattan. Selection of the areas was led by DEP in partnership with Parks, DOT, and DDC. The selection process used a framework that examined historic and future stormwater flooding hotspots, existing city projects, environmental justice areas, and social factors that may increase vulnerability to stormwater flooding.

DEP is currently in design phases for two cloudburst pilot projects in Southeast Queens. One of these projects is in St. Albans, which is prone to frequent flooding, particularly at the low-point near the intersection of 177th Street and 112th Avenue. During heavy rain events, the pumping station cannot manage street runoff outside of the Direct Tributary Drainage Area, so runoff bypasses existing catch basins (street drains), leading to additional runoff at the intersection. The cloudburst demonstration project proposed involves a combination of GI and roadway changes, including depressed gutters. In addition to helping prevent flooding, this project will also help roadway safety, making conditions safer for pedestrians and vehicles. As of September 2022, design for this project was underway.

Rendering of cloudburst infrastructure during dry weather



Rendering of cloudburst infrastructure during wet weather

A second project will be located at the South Jamaica Houses, a NYCHA campus, which includes eight city blocks in South Jamaica and is home to approximately 2,600 residents. South Jamaica Houses were chosen to provide relief upstream to allow for more flow to enter the sewer system downstream to reduce flooding. This climate resiliency project will maximize stormwater capture for up to 2.3 inches of rainfall per hour. Aside from flood mitigation, another focus of this pilot is to show how cloudburst infrastructure can go beyond just managing stormwater and offer many co-benefits by reimagining the urban fabric of communities. As of September 2022, this project reached 100% design and was proceeding to construction.

In January 2023, the NYC Mayor announced an expansion of the city's Cloudburst Program to four new sites as part of ongoing resiliency efforts to better prepare for intense rain events. Supported with nearly $400 million in capital funds, these specially designed, built, and engineered infrastructure projects will protect residents and property in Corona and Kissena Park, Queens, Parkchester, Bronx, and East New York, Brooklyn from future extreme weather brought about by climate change. These locations were selected considering physical vulnerability, social and economic factors, and below ground conditions. There will be more locations to come as funding is secured.

Definitions

Annual Report: The City publishes, by September 30 of each calendar year, a report on SWMP implementation. The report summarizes activities performed throughout the reporting period (January 1 to December 31) by all agencies with obligations under the MS4 Permit; and reports on BMPs, measurable goals and their measures, as detailed in each chapter of the Plan and in Part IV.M of the MS4 Permit.

Applicant: The term "applicant" means the person filing the online application for Stormwater Permitting. This person may be the owner, developer, qualified professional, or other registered user in the online application system.

Best Management Practice (BMP): Schedules, activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements (if determined necessary by DEP), operating procedures, and practices to control runoff, spillage, and leaks; sludge or waste disposal; or drainage from areas that could contribute pollutants to stormwater discharges. BMPs are referred to in EPA fact sheets and other materials. BMPs are also referred to as "activities" or "management practices" throughout the MS4 permit.

Combined Sewer Overflow (CSO): Sometimes, during heavy rain and snowstorms, a combined sewer system receives higher than normal flows. WRRFs are unable to handle flows that are greater than twice their design capacity, and, when such a flow occurs, a mix of excess stormwater and untreated wastewater discharges directly into the City's waterway at certain outfalls to prevent upstream flooding. This discharge is called a combined sewer overflow (CSO).

Combined Sewer System: A sewer system used to convey both wastewater and stormwater in a single pipe to the WRRF. During times of heavy precipitation, the combined sewer system may discharge into surface waters. See also Combined Sewer Overflow.

Covered development project: The term "covered development project" means development activity, private or public, that involves or results in an amount of soil disturbance greater than or equal to 20,000 square feet; or creation of 5,000 square feet or more of impervious surface; or is a covered maintenance activity (roadway maintenance that involves 20,000 square feet or more).[9] Such term includes development activity that is part of a larger common plan of development or sale involving or resulting in soil disturbance area greater than or equal to 20,000 square feet; or creation of 5,000 square feet or more of impervious surface. Such term includes all development activity that requires a SWPPP pursuant to the New York State Department of Environmental Conservation (NYSDEC) construction general permit.

CSO Outfall: The physical point where a municipally-owned or -operated combined sewer discharges to surface waters of the state.

CSO Regulator: A flow control structure in a combined sewer system that diverts a controlled portion of flow from the collection system to an intercepting sewer and allows the remaining flow to discharge to nearby waters as a combined sewer overflow.

Floatables: Manmade materials, such as plastics, papers, or other products which, when disposed of onto streets or into catch basins, can ultimately find their way to waterbodies and may create nuisance conditions with regard to aesthetics, recreation, navigation, and waterbody ecology.

Green Infrastructure (GI): Green infrastructure infiltrates, evapotranspires, or reuses stormwater, with significant use of soils and vegetation rather than traditional hardscape collection, conveyance, and storage structures. Common green infrastructure approaches include green roofs, trees and tree boxes, rain gardens, vegetated swales, pocket wetlands, infiltration planters, vegetated median strips, reforestation, and protection and enhancement of riparian buffers and floodplains.

Historical MS4 Map: Created prior to MS4 permit issuance in 2015, the Historical MS4 Map was unrefined and contained some inaccuracies but represented the City's best understanding of the MS4 area at that time. In developing the SWMP, the City relied upon the Historical MS4 Map to define the MS4 area. The Historical MS4 Map also served as a starting point for the process of mapping the City's MS4 drainage areas and MS4 outfalls, as required by the MS4 Permit. The Historical MS4 Map is no longer in use.

9 As of February 15, 2022, USWR lowered soil disturbance threshold from 1 acre to 20,000 square feet and added creation of 5000 or more square feet of impervious surface as triggers for Stormwater Construction permitting.

Illicit Discharge: Illicit discharge is any discharge to an MS4 that is not composed entirely of stormwater, except allowable discharges pursuant to a SPDES permit and/or to DEP rules. Examples of illicit discharges are unauthorized sanitary sewage, garage drain effluent, and waste motor oil. However, an illicit discharge could be any other unauthorized discharge, which the City or NYSDEC has determined to be a significant contributor of pollutants to the MS4.

Impaired Waters: A water is impaired if it does not meet its designated use(s), as defined by NYSDEC, generally determined by violations of state water quality standards. For purposes of this permit, "impaired" refers to waters for which Total Maximum Daily Loads (TMDLs) have been established, for which existing controls such as permits are expected to resolve the impairment, or for which a TMDL is needed. Impaired water compilations are also sometimes referred to as 303(d) lists; 303(d) lists generally include only waters for which TMDLs have not yet been developed.

Long-Term Control Plan (LTCP): An LTCP identifies appropriate CSO controls to achieve applicable water quality standards consistent with the Federal CSO Policy and Clean Water Act.

Measurable Goals: One or more statements characterizing the goals of the SWMP that reflect the needs and characteristics of the City and the areas served by its MS4. The City identified its goals, both qualitative and quantitative, using an integrated approach that addresses the requirements and intent of the provisions of the MS4 Permit.

Multi-Sector General Permit (MSGP): The Clean Water Act provides that stormwater discharges associated with industrial activity to waters of the United States (including discharges through a municipal separate storm sewer system) are unlawful, unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit. In New York, the EPA-approved State Pollutant Discharge Elimination System (SPDES) program provides that industrial facilities engaged in activities defined in 40 CFR 122.26(b) (14)(i-ix) and (xi) must obtain permit coverage for stormwater discharges to waters of the United States through the SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), unless the facilities are individually SPDES-permitted or subject to No Exposure Exclusion (that industrial activities are not exposed to stormwater).

Municipal Operations and Facilities: Any operation or facility serving a New York City governmental purpose and over which New York City has operational control.

Municipal Separate Storm Sewer System (MS4): A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- Owned or operated by a state, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, floatables control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA, that discharges to surface waters of the state;
- Designed or used for collecting or conveying stormwater;
- Which is not a combined sewer; and
- Which is not part of a Publicly Owned Treatment Works as defined at 40 CFR 122.2

MS4 Area: The term "MS4 area" means those portions of the City of New York served by separate storm sewers and separate stormwater outfalls owned or operated by the City of New York or areas served by separate storm sewers owned or operated by the City of New York that connect to combined sewer overflow pipes downstream of the regulator owned or operated by the City of New York, and areas in which municipal operations and facilities drain by overland flow to waters of the state, as determined by DEP and described on maps of the MS4 area set forth in DEP's rules and available on DEP's website.

MS4 Outfall: Defined as any point where a municipally owned or operated separate storm sewer system discharges to either surface waters of the state or to another MS4 (an MS4 owned or operated by another regulated entity). Outfalls include discharges from pipes, ditches, swales, and other points of concentrated flow. However, areas of non- concentrated (sheet) flow which drain to surface waters of the state or to another MS4 (owned or operated by another regulated entity) are not considered outfalls.

MS4 Permit: The New York State Pollutant Discharge Elimination System (SPDES) permit, issued to the City of New York, effective date August 1, 2022, that defined the requirements to discharge stormwater from the City's MS4.

Pollutants: Dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, and agricultural waste discharged into water which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 New York Code of Rules and Regulations (NYCRR) Part 750-1.2a.

Pollutant of Concern (POC): A pollutant causing the impairment of an impaired water segment listed in Appendix 1 of the 2022 MS4 Permit, including nitrogen, phosphorus, pathogens, and floatables.

Settleables: Manmade materials that may sink depending on the ambient conditions to which they are subject. Floatables include settleable materials.

Standard Operating Procedure (SOP): A set of instructions for carrying out routine operations to achieve a specific outcome.

Stormwater Construction Permit: The term "stormwater construction permit" means a permit issued by DEP which authorizes development activity on land on which there is a covered development project with an approved SWPPP.

Stormwater Controls Working Group: An interagency group formed in 2013 in accordance with the Mayor's Executive Order Number 429. This group meets quarterly or as needed to discuss all updates involving the MS4 Permit and SWMP implementation.

Total Maximum Daily Load (TMDL): A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. It is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL stipulates waste load allocations for point source discharges, load allocations for nonpoint sources, and a margin of safety.

Acronyms

ASP Alternate Side Parking

BMP Best Management Practice

CGP Construction General Permit

C/PC Construction and Post-Construction

CSO Combined Sewer Overflow

CWA Clean Water Act

GI Green Infrastructure

GIS Geographic Information System

I/C Industrial/Commercial

IDDE Illicit Discharge Detection and Elimination

LTCP Long-Term Control Plan

MS4 Municipal Separate Storm Sewer System

MSGP Multi-Sector General Permit

NNI No Net Increase

NOI Notice of Intent

NYC New York City

NYS New York State

NYSDEC New York State Department of Environmental Conservation

PMU Planned Municipal Upgrade

POC Pollutant of Concern

PP/GH Pollution Prevention/Good Housekeeping

ROW Right of Way

SAFE Solvents, Automotive, Flammables, and Electronics

SCM Stormwater Control Measure

SMP Stormwater Management Practice

SPDES State Pollutant Discharge Elimination System

SWMP Stormwater Management Program

SWPPP Stormwater Pollution Prevention Plan

SWPTS Stormwater Permitting and Tracking System

TMDL Total Maximum Daily Load

USWR Unified Stormwater Rule

WRRF Wastewater Resource Recovery Facility

Appendix 1 – Public Comments on the 2022 Annual Report

General

Comment: Will you be answering questions before the submission of the comment's due date so that we can incorporate your answers into our submission?

Response: Responses to comments are included in the final Annual Report.

Public Education and Outreach (PEO)

Comment: The Draft Report provides that the "City plans to fully resume PEO programs." Draft Report at 6. The MS4 Permit requires the inclusion of a "timeline for development and implementation" for "[g]oals for the stormwater activities the Permittee plans to undertake during the next reporting cycle." MS4 Permit, Part IV.M.4.a.iv. However, the Draft Report does not provide an estimated timeline for the implementation of this goal. Thus, the City should provide an estimated timeline for the City's full resumption of PEO programs as part of its goals for 2023.

Response: Public education and outreach (PEO) programs have resumed. They are no longer curtailed because of COVID-19 restrictions. The City has a number of ongoing PEO programs (e.g., Urban Park Rangers Programs and SAFE Disposal Events) and regularly does weekend and pop-up programming.

Comment: The coloring book is fantastic and very informative. We will disseminate the resources to our member organizations and encourage them to take advantage of them. If possible, please send us some hardcopies for outreach events.

Response: Thank you! You can contact educationoffice@dep.nyc.gov to request printed copies. The coloring book is also available for download from DEP's website.

Comment: Please include view and download counts for the public outreach and education materials you have developed and disseminated as metrics, understanding the full reach of each download may be undercounted.

Response: View and download counts include the following:

NYC virtual tours 31,500 views

NYC DEP education curriculum guide (Aug 2022- July 2023) – 153 downloads

Jamaica Bay Education resource directory (Aug 2022-July 2023) – 14 downloads

Such metrics provide some information about the traffic these resources receive, but do not provide the whole picture as to the ways they are used or their total reach. For example, one download may potentially reach hundreds of people if it is used during a class visit or at a teacher training or conference.

Comment: Has there been any analysis of the impact of the public outreach and education programs? For example, have the Harbor Protectors' stenciling catch basins resulted in less litter collected in those marked basins? If not, are there plans to use this information to inform future outreach and education programs?

Response: Through the Harbor Survey, the City tracks a variety of metrics that generally speak to the overall condition of water quality in NYC. However, many different factors contribute to water quality, making it difficult to assess the impact of any one program or initiative.

Program managers track the metrics that best reflect the efforts and reach of their education/outreach programs. Typically, these are number of events, number of participants, and number of materials distributed. These metrics are consistent with those reported by other MS4s as the appropriate indicators for assessment of public education and outreach programs.

Public Involvement and Participation

Comment: Park Stewardship and Community Clean-up events are listed as fulfilling a variety of metrics, is there a script associated with these events that is available for dissemination? Along with the number of events and participants, what other metrics were collected (e.g., number of items removed, volume removed, length of shoreline cleaned, etc.)? Where were these events held and what percentage is that of the total MS4 area in the city?

Response: Parks collects metrics for Park Stewardship and Community Clean-ups including number of events, locations/ parks, and number of participants. Parks also records number of street trees cared for, number of bags of debris removed, cubic yards of mulch provided, number of trees and shrubs planted, number of plugs planted, acreage improved, and miles of trails improved.

Comment: We understand that as of last year, you communicated through a listserv. Do you track how many times their mass emails are opened, or read? How do people join the listserv?

Response: We can track email "opens." Recipients open about one-third of the successfully sent emails.

You can sign up for the listserv here: https://nycwater.substack.com/

Comment: How many people, overall, does DEP engage with regarding its MS4 plans, permits, projects, and performance through public comments, 311 complaints, public meetings, etc.? It would be good to get a sense of the overall numbers, as is shown in the outreach section.

Response: It is not possible to fully calculate an "overall" number of people DEP engages with on MS4-related matters. In addition, other agencies with obligations under the MS4 permit do public outreach (and participation) programs.

The public was invited to comment on the draft MS4 permit before it was issued on July 15, 2022 (effective date August 1, 2022). The City does an annual public presentation of the MS4 Annual Report, and DEP keeps its MS4 website updated as to all opportunities for public input.

With respect to some specific numbers, the City received more than 10,300 311 calls/complaints related to stormwater issues and responded to them, as appropriate. The 2022 Annual Report public presentation reached 56 participants. Overall, the 2022 assessment of the City's PEO program estimated that its programming engaged approximately 58,000 individuals.

Mapping

Comment: The report indicates 7% of the outfalls are still unmapped. This percentage has increased from 2% last year, but the map was finalized in 2020 and includes the same number of mapped outfalls as last year. Is there a particular reason why these outfalls are not mapped? Are there plans to map these additional outfalls at a regular interval to inform the public, ahead of the next 2027 required map update?

Response: An updated outfall spreadsheet, which DEP must submit annually to DEC, is included in the MS4 Annual Reports as Appendix 2 – SPDES Outfall Listing. This list may change with the re-categorization, addition, and removal of outfalls as updated data are obtained from the cyclical surveys of the shoreline.

Since the 2020 MS4 Map was finalized, DEP has updated this outfall list three times, and the number of known MS4 outfalls has increased by 7%. As required by the current MS4 permit, the City will update the MS4 Map by August 1, 2027, five years from the effective date of the permit (EDP 8/1/22).

Illicit Discharge Detection and Elimination (IDDE)

Comment: The Army Corps (USACE) is proposing to install a tidal gate at Coney Island Creek, which has a CSO outfall behind it. If the tidal gate is deployed, there is potential for CSO discharges to collect in an area where the creek has flooded over onto nearby properties and streets. Is there some way that we could get special attention to remediating, fixing, and eliminating any further discharges from CSO outfall (021) in anticipation of what the Army Corps is planning?

Response: The City is working closely with the USACE and other key stakeholders on such planned and ongoing resiliency projects throughout the City. As USACE project components are further developed, a significant study of the drainage systems that are behind protection walls will be required to determine whether there may be adjustments needed to address any excess flows that accumulate behind the line of protection.

Comment: We have a serious problem in Brighton Beach. There are many fruit and vegetables vendors, often in corner stores, and they use the corner catch basins to dispose of rotten fruits and things like that. We have one particularly egregious one at 1055 Brighton Beach Ave on the corner of Brighton 12th Street and you can see on the corner quadrant evidence of grease and other types of things that end up in the catch basin there. How do we get somebody out there to inspect the catch basin and possibly even take enforcement action if necessary?

Response: The public can call 311 with such complaints. However, enforcement requires that the inspector observe the violation.

Comment: What happens when you do find somebody who has an illegal discharge connection, and you catch them? We had a big incident in Coney Island about 10 years ago. Does the money from the penalty that's levied go into some kind of an environmental fund or something along those lines or does that end up in the city's coffers and we can't use it to fix the environment?

Response: When the City identifies an illicit discharge, it will initiate an investigation to identify the source. The responsible party will be required to cease the discharge, reconnect appropriately any illegal connection and mitigate any damage. Penalties collected for the violations issued go to the City's general fund.

Comment: There are over 50 unaccounted for discharges from the MS4 into the Coney Island Creek. You have a pretty robust detection system in place, and it sounds like you're able to trace back most of the discharge points. But for some reason, they are still unaccounted for, and I was wondering if there's any special attention or consideration that could be given to eliminating those problems at the Creek.

Response: DEP is unaware of any "unaccounted for" discharges from the MS4 into Coney Island Creek. The outfalls listed by the commenter (CI-601, CI-602, CI-639, CI-640, CI-641, CI-653, CI-664, CI-665, and CI-678) were those cited in the Sentinel Monitoring Report as having had exceedances. DEP confirms that illicit discharges from these outfalls have been abated. In addition, DEP and New York City Department of Design and Construction (DDC) are planning a capital project that will further address identified issues at outfalls CI-601 and 602.

Comment: What is the time period for the full ORI? Are there any repeat visits for outfalls with chronic issues?

Response: The MS4 permit requires the City to address 100% of the outfalls at least once every 10 years, with reasonable progress each year. If there are any issues such as potential illicit discharges discovered during the ORI, City agencies will follow procedures in the IDDE Plan to track down the source and ensure mitigation or abatement by the responsible party.

Construction and Post-Construction

Comment: The Draft Report indicates that no construction site stormwater control training was completed during the reporting period and that only one training is planned. Draft Report at 17. It further provides that no individuals were "trained in inspection of long-term operation and maintenance of post-construction SMP." Id. However, the MS4 Permit requires New York City to implement and enforce a program ensuring that individual(s) performing inspections and construction managers/site operators are adequately trained. MS4 Permit Part IV.E. Additionally, the permittee must "implement a training program for all individuals whose job duties include inspection of long-term operation and maintenance of post-construction stormwater management practices." MS4 Permit Part IV.F. It's unclear from the Draft Report whether individuals performing inspections and construction managers/site operators are adequately trained; thus, the City should provide this information in the Final Annual Report.

Response: The draft Annual Report incorrectly indicated that no construction site stormwater control training was provided during 2022. With respect to the requirement to ensure adequate training of individuals performing inspections and construction managers/site operators, DEP trained 37 individuals in Erosion and Sediment Control. SW Construction permitting staff received 240-hours of training on plan review and inspections. The Report will be revised to reflect these corrected metrics.

Numbers of employees trained on long-term operation and maintenance of post-construction stormwater management practices (SMPs), is a new metric required under the 2022 permit. As with other new metrics required by the 2022 permit, City agencies responsible for long-term operation and maintenance of SMPs began maintaining records of the training they provide to their staffs in January 2023. These metrics will be reported for the calendar year 2023 in the MS4 Annual Report due in 2024.

Comment: Staffing level for the reviews remains a concern. What actions have been taken to address staffing needs and consultant support? What changes to the review process have occurred as a result? How will DEP address the possibility of higher volume of applications due to the full implementation of the Unified Stormwater Rule?

Response: Staffing levels have increased considerably. Nine new engineers have been hired and are being trained for review of applications/SWPPPs and inspection of construction sites. IT staff vacancies have been filled to help with the online permitting system; two additional support personnel have been hired to assist in the dissemination of information and in answering general inquiries.

One posted position for an engineer remains open, and DEP will be requesting additional positions for "review and inspection" personnel.

Pollution Prevention Good Housekeeping (PPGH)

Comment: The Draft Report provides that the "City implemented GI [green infrastructure] at 6 PMU projects, all of which were green roofs constructed by Parks." Draft Report at 19. Save the Sound strongly supports the City's implementation of GI, as this infrastructure is vital to reducing polluted stormwater discharges and mitigating flooding and other environmental hazards. Accordingly, Save the Sound encourages the incorporation of a broad range of GI, including not only green roofs but rain gardens, trees, bioswales, and green streets. Additionally, Save the Sound urges New York City to focus on the equitable implementation of GI to reduce the environmental hazards in environmental justice communities – e.g., low-wealth communities and communities of color that face disproportionate exposure to environmental hazards.

Response: NYC continues to evaluate planned municipal upgrade (PMU) projects for feasible and cost-effective green infrastructure (GI), not limited to green roofs. In addition, because of the reduction (to 20,000 square feet) in the threshold for Stormwater Construction permitting, many of those PMUs will be subject to that program and require Stormwater Maintenance permitting and installation of post-construction SMPs/GI.

DEP's GI program, which has to date implemented a broad program in the combined sewer areas of NYC, is now expanding to the MS4 areas. Please see also the response to Question 23 below.

The Annual Report also describes the Cloudburst Program, for which the selection process uses a framework that examines historic and future stormwater flooding hotspots, existing city projects, environmental justice areas, and social factors that may increase vulnerability to stormwater flooding.

Comment: The Draft Report states that the City's goals for 2023 are to "assess facilities and off-site operations based on their priority status; refine the facility and off-site operation inventory; and administer staff trainings." Draft Report at 19. Save the Sound urges New York City also to consider and equitably incorporate GI during PMU as a goal for 2023.

Response: As noted in the response above, it is expected that most PMUs that would have to do this assessment under the PPGH program will now require post-construction SMPs under the Stormwater Construction permitting program.

Comment: The report states that, "Agencies are required to consider, and if cost-effective, incorporate runoff reduction techniques and GI during PMUs." What is the basis for evaluating cost effectiveness and how would a restructuring of the water rate to appropriately value stormwater change this calculus?

Response: To determine cost-effectiveness of a GI project as part of a PMU, agencies evaluate construction costs as well as life cycle costs including planning, design, installation, operation and maintenance, and replacement.

DEP is currently awaiting the report on a study of its rate structure that will analyze water, wastewater and stormwater rate structure options and customer assistance and credit programs. For more information on the rate study: https://www.nyc.gov/site/dep/whats-new/sustainable-rate-structure-analysis.page

Comment: In this report and reports moving forward in Table 6, please separate out the catch basins and sewer miles cleaned as part of the PP/GH program versus the program as a whole that includes the ROW.

Response: Through the implementation of the PP/GH Program, the City assesses its ongoing programs such as cleaning of sewers and catch basins and enhances or improves those programs/operations, as necessary. There is no separable work attributable to the PP/GH program only.

Green Infrastructure

Comment: New Cloudburst Project site: On May 31, 2023, the Department of Parks & Recreation held a public scoping meeting for a project funded by the local Councilmember to rehabilitate the "Sports Courts" at the Brighton 2nd Street Playground. They are still welcoming ideas at this time as they transition into the design phase of their work. They are expecting to have draft designs in hand to return to the public this Fall. There are three full-sized basketball courts included in this project. It would appear that the same design approach used in the South Jamaica Houses Cloudburst Project (on pp 31-32), using recessed basketball court surfaces to temporarily store stormwater and keep it from entering the system, could be applied to this project as well. It's exciting to think that we may still be able to get this design treatment used in time for the Brighton 2nd Street Playground. This looks like delicious low-hanging fruit.

Response: NYC Parks is determining the feasibility of including GI at the Brighton 2nd Street Playground by evaluating site and soil characteristics as well as cost effectiveness.

Comment: Opportunities for Green Infrastructure Expansion: Using the Rockaway Median Project described in the MS4 report as a source of inspiration (on page 31), please find attached to this correspondence a list of various traffic triangles, medians, and other right-of-way parcels which could be evaluated and potentially re-engineered into green infrastructure to assist with stormwater management throughout Southern Brooklyn. Green infrastructure can potentially play a vital role not only raising community awareness about stormwater management, flood risks, etc., but when designed correctly such sites can also beautify our streetscapes.

To ensure that improved function and form are the long-term outcomes of expanded green infrastructure, it cannot be stressed enough how important it is as a design consideration to minimize the need for ongoing maintenance. In general, the city has a poor track record of being available after the fact to maintain its infrastructure. My neighbors and I don't want something that works well and looks good today to become an eyesore a year, or two, or even ten years from now. It would be most helpful if the department would engage the public early in discussions over potential green infrastructure expansion sites. The list provided is in no way intended to be exhaustive, and some of the parcels may be used by the public in ways that would preclude their conversion to green infrastructure. In the meantime, if you have already evaluated any of these locations or are planning to do so, would you kindly share that information at your earliest convenience?

Response: DEP's in-house design team responsible for the medians is assessing the feasibility of such a project at Coney Island.

Comment: How are bioswale locations chosen? Who maintains them?

Response: Most of our bioswale locations have been chosen based on a priority ranking of CSO outfalls. Our green infrastructure program kicked off in 2011 as a CSO reduction program, and to date, the more than 10,000 rain gardens across the city have been implemented in combined sewer areas. We will be expanding our program to the MS4 areas and looking at different types of GI that can have multiple benefits including improved water quality and flood mitigation.

All rain gardens funded and implemented by DEP in the ROW are maintained by DEP.

Comment: Have there been modifications to these bioswales/rain gardens? I have seen containers on the ground where there isn't a rain garden installed but instead just a cistern.

Response: Over the years, we have expanded the GI toolbox that we implement within the right of way (ROW) and throughout NYC. You might be referring to infiltration basins. Infiltration basins are designed to match the existing sidewalk conditions (either with a concrete or grass strip); they are the preferred alternative in high-density residential, industrial, or commercial areas where sidewalk space is limited, and plants may not thrive. These newer tools have allowed us to increase the number of GI installations across the city.

Comment: In the past, we have requested bioswales, but they said the water table was too high. I'm hearing now that you have these modified bioswales. Can we get them now?

Response: The presence of high groundwater is still a limiting factor for green infrastructure implementation even with expanded typologies.

Comment: How deep do these infiltration basins have to be?

Response: Infiltration basins are typically 5 feet deep.

Comment: How deep is the Far Rockaway median?

Response: The Beach 67th Street median ranges in depth generally from 4-6 feet.

Industrial/Commercial

Comment: The Draft Report provides that "DEP plans to finalize SPDES assessment report referrals from the prior year and take any necessary enforcement actions stemming from assessments and inspections done in 2022." Draft Report at 22. The MS4 Permit requires the inclusion of a "timeline for development and implementation" of "[g]oals for the stormwater activities the Permittee plans to undertake during the next reporting cycle." MS4 Permit, Part IV.M.h.ix. The Draft Report does not provide an estimated timeline for the implementation of DEP's plan to finalize SPDES assessment report referrals and take necessary enforcement actions; thus, the City should provide this information in the Final Annual Report.

Response: There are several steps/actions that may be necessary prior to finalization of a facility assessment report. The Inspection Team initially meets with DEP program leads to discuss the findings from the facility inspection and then again to discuss any comments on the final inspection reports. Issuance of a final report may also require additional information from the facility. The Inspection Team and/or DEP may require additional guidance/clarification from DEC. If there is to be enforcement at a facility, Industrial/Commercial staff may need to consult with DEP Legal or the Law Department. When the Report is finalized, DEP will refer to DEC for SPDES permitting, as appropriate, and take any necessary enforcement action.

During the CY2022 reporting period, DEP identified 16 facilities for referral to DEC for SPDES coverage. DEP formally issued those 16 inspection reports by September 1, 2023.

Comment: What measures are in place to address repeat non-compliant SPDES MSGP facilities? What happens when Commissioner's Orders are issued? Are there increasing deterrents in place to help enforce compliance, particularly for repeat offenders? If so, please describe.

Response: The City's Enforcement Response Plan (see Appendix 1.1 in the SWMP), developed pursuant to requirements in the MS4 permit, sets forth possible enforcement actions to address various levels of non-compliance: verbal warnings, written summonses, citations with civil and administrative penalties, criminal penalties, "stop work" orders, "cease and desist" orders, and withholding or suspension/revocation of permits. When taking enforcement action, the City considers the violator's history, and the violation's severity and type. For persistent non-compliance, repeat, or escalating violations, the City issues progressively stricter responses.

Floatables

Comment: All along the Coney Island Brighton Beach shoreline, it is loaded with pet waste bags because people throw them into the corner storm drains thinking it's the sewer. Education is not enough. Where is the enforcement?

Response: Enforcement can only be undertaken when the violating behavior is observed by the issuing agent. Inspectors cannot be stationed for long periods in the numerous places experiencing such violations.

Comment: The Draft Report provides that 12,351 catch basins were inspected, and 6,025 catch basins were cleaned. Draft Report at 24. The MS4 Permit requires the permittee to inspect each catch basin in the NYCDEP MS4 system a minimum of once every three years and to clean these catch basins as needed. MS4 Permit Part.IV.I.3. The Draft Report does not indicate whether New York City is on track with meeting the requirement to inspect all catch basins once every three years, as it does not indicate how many catch basins are within the NYCDEP MS4 system.2 Additionally, the Draft Report not indicate how many catch basins needed to be cleaned. Thus, there needs to be more information in the MS4 annual report to determine whether New York City is complying with the MS4 Permit. The City should provide information indicating (a) whether the City is on track with meeting the requirement to inspect all catch basins once every three years and (b) the number of catch basins that have required cleaning during this reporting cycle in the Final Annual Report.

Response: The Draft Report provides the metrics required by the MS4 Permit, i.e., that 12,351 catch basins were inspected, and 6,025 catch basins were cleaned. The total number of catch basins inspected and cleaned includes both DEP ROW catch basins and catch basins on municipal properties.

In addition, the number reported includes catch basins inspected/ cleaned both proactively and in response to complaints; accordingly, the numbers reported can reflect re-inspections or repeat cleaning of some catch basins during a reporting year.

DEP is responsible for approximately 150,000 catch basins citywide, which are regularly inspected, and if necessary, cleaned or repaired. DEP inspects all these catch basins at least once every three years and in response to 311 complaints. DEP is on track to meet the 3-year inspection requirement in the MS4 area and citywide.

DEP also reports annually in the Mayor's Management Report (MMR), the percent of catch basins inspected and number of catch basins cleaned citywide. Please note that the MMR reports metrics on a fiscal year basis (the MS4 Annual Report covers the calendar year).

Comment: Most of the activities, while worthwhile, are retroactive, meaning collecting litter right before it enters the sewer system or the waterway. Notable exceptions are the new plastic straws law and plastic bag ban. These policy level changes will actually lead to reductions in plastic litter. Has the DEP noticed any changes to the types of plastic floatables as the result of the policy changes? Is the DEP exploring interagency collaboration to consider other policy level prevention measures to floatables?

Response: Many such policy level measures may require State legislation. For example, DEP has advocated for an update to NYS's Bottle Bill. States that have higher bottle deposit fees have higher rates of bottle redemption. More bottle redemption means less potential litter (it has been estimated that the current NYS Bottle Bill reduces roadside litter by 70% per year), and less roadside litter means fewer floatables in NYC's waterways. DEP has proposed updating the Bottle Bill to include more types of bottles and to increase the bottle deposit.

Comment: What is the current status of the Floatables Loading Rate Study, and which actions remain? Could the study be completed prior to its 2025 MS4 permit designated deadline, thereby expediting the revision and implementation of improved methodologies for selecting, sizing, and siting floatables controls?

Response: The Floatables Loading Rate Study field data collection and much of the initial data analysis were complete by the end of 2022. DEP is working on the Study report now. The Study will be completed by July 2025.

Monitoring

Comment: I am District Manager for Community Board 15 – Manhattan Beach – Gerritsen Beach and Sheepshead Bay – how often are our waters tested? How often are floatables addressed? We have had Manhattan Beach swimming closed because of water issues. Can you advise? I'd like to have some solid information on why these beaches get closed and what we can do to stop that. We have outfalls in the district, so I'd like more detailed information.

Response: The NYC Harbor Survey program performs weekly testing from May to October and monthly testing from November to April. The Harbor Survey program primarily measures five parameters related to water quality: Dissolved Oxygen, Bacteria (fecal coliform, enterococcus), Secchi Transparency, Chlorophyll a, and Nitrogen. The Sentinel Monitoring program performs quarterly testing for fecal coliform year-round.

The Harbor Survey report, which contains user-friendly data, is available on the DEP website (https://www.nyc.gov/site/dep/water/harbor-water-quality.page). The results of the Harbor Survey and Sentinel Monitoring tests are not used for determining beach closures.

Floatables are addressed by the DEP Bureau of Wastewater Treatment Marine Section. The Marine Section performs one-day cleanups at the end of Sheepshead Bay (near Holocaust Memorial Park) at the beginning of the summer (late May) and again in late summer. It has also responded to requests from elected officials or the public to do cleanups in the open water (e.g., when there have been "fish kills").

DOHMH performs the testing which determines beach closures. If water quality test results do not meet the criteria for a beach to be open for swimming and wading, the City will issue a beach advisory or closure. These notifications must be posted by beach facilities.

When water has high levels of bacteria, the Health Department issues an advisory. This means swimming and wading are not recommended, but the beach is open (the advisory states that contact with contaminated water may cause vomiting, diarrhea, respiratory illness or infections and that children, pregnant women, the elderly and the chronically ill are at higher risk of getting sick).

An advisory may be issued based on water quality concerns due to 1) presence of floatable debris, medical or infectious waste, toxic contaminants, petroleum products or other contamination; or 2) sewage and wastewater discharge following heavy rainfall. At Manhattan Beach, 1.5-2.5 inches of rainfall can result in a 12-hour advisory and more than 2.5 inches, in a 24-hour advisory.

City beaches may be closed for swimming and wading when samples show that beach water quality does not meet established standards; there have been a high number of illnesses or complaints about illness or injury; there are hazardous amounts of contaminants present; or sewage/wastewater discharge have lowered the water quality.

For more information on beach classifications, see https://www.nyc.gov/site/doh/health/health-topics/beach-class.page.

Comment: When you look at MS4 form, it mentions water quality testing. Can you talk a little about this water quality testing and which entities are doing this? Thanks.

Response: See response to Question 34 and use this link for details regarding DEP's Harbor Survey and Sentinel Monitoring programs: https://www.nyc.gov/site/dep/water/harbor-water-quality.page.

As noted in the response to Question 34, DOHMH also performs beach surveillance and monitors water quality at all permitted City beaches.

Comment: Which parameters are measured in the MS4 Monitoring Program? We would appreciate your listing the parameters in the report.

Response: The City measured the following parameters through the MS4 Outfall Monitoring Program: Temperature, Salinity, Dissolved Oxygen, pH, Fecal Coliform, Enterococci, Metals (Cd, Cr, Cu, Pb, Ni, As, Zn, Hg), Nitrate-nitrite (as N), Ammonia (as N), Total Kjeldahl Nitrogen, Total Phosphorus, Dissolved Phosphorus, Total Dissolved Solids, Total Suspended Solids, Oil and Grease.

Comment: Are pathogens, dissolved oxygen and floatables considered pollutants of concern for all waterways or just for "impaired" waterways as listed in the 303(d) list?

Response: Pollutant of Concern (POC), as defined in the MS4 permit, is a "pollutant causing the impairment of an impaired water segment listed in Appendix I [of the permit], including nitrogen, phosphorus, pathogens, and floatables." Appendix I includes NYC waterways, as listed in the 303(d) list.

"Special Conditions" Waterbodies

Comment: Thank you for your recent report which suggests that the Coney Island Creek is an impaired waterbody. And thank you for setting up certain goals designed to reduce the impact of litter and dog waste which ends up polluting the creek. However, since DEP is not responsible for the enforcement of litter and dog waste and since Sanitation Enforcement is, and since Sanitation Enforcement isn't included in your plan, I strongly encourage you to include them. Without enforcement in the plan, its effectiveness will be limited.

Response: Fourteen City agencies have obligations under the MS4 permit and have partnered in many programs that benefit from their particular expertise. DSNY has actively participated in the plan to implement enhanced BMPs at Coney Island Creek (CIC). DSNY sent 749 trucks to service corner waste baskets during calendar year 2022. To address floatable debris and illegally dumped or improperly disposed of items on sidewalks and roadways, DSNY deployed mechanical brooms and two-person trucks in the CIC area, 1158 times and 727 times, respectively.

Because enforcement requires the inspector to observe the violating behavior, enforcement of prohibitions against littering and failure to clean up after pets is challenging. However, DSNY did issue, in the CIC area, 194,068 summonses related to cleanliness/quality of life violations.

Comment: We continue to express our concern that waterways such as Westchester Creek and Hutchinson River are not included in the Special Conditions although the CSO LTCPs for these waterbodies expect non-attainment of primary contact water quality criteria. In Westchester Creek, the LTCP does not make any investments beyond what was planned under the waterbody/ watershed facilities plan, because of the significant contribution from the MS4. Can you clarify the thresholds of what is considered a "significant" contribution to water quality impairment by the MS4, and how this was assessed for each water body in question?

Response: The MS4 is not considered a significant contributor to the impairment of either Westchester Creek (which is largely impacted by certain physical characteristics) or the Hutchinson River (impacted by non-NYC-controlled sources). In addition, upon completion of LTCP work, both waterbodies will comply with applicable water quality standards based on seasonal attainment.

Multiple modeling tools provide information about how stormwater runoff and sanitary wastewater flows move and consequently discharge into waterbodies, providing information as to how water quality could be impacted.

For more information about the related LTCPs, please go to the following link: nyc.gov/dep/ltcp.

Comment: Could you include maps or tables as an appendix depicting relevant water bodies and keyed to a legend showing which criteria are met by each, and which are then eligible for Special Conditions Programs?

Response: Appendix I of the MS4 Permit contains a list of waterbodies and their pollutants of concern. For more information about waterbodies and their impairments, please see the following link: https://www.dec.ny.gov/docs/water_pdf/section303d2018.pdf.

The waterbodies that currently meet the criteria for enhanced BMPs are listed in the "Special Conditions for Impaired Waters" section of the Annual Report.

Appendix 2 – SPDES Outfalls

26th Ward

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
26W-001	26TH WARD WRRF OUTFALL	40	39	3	73	53	37	10' X 6'	HENDRIX CREEK				
26W-003	WILLIAMS AVE (REG #2)	40	38	57	73	53	26	180" X 120"	FRESH CREEK BASIN	REG #2		YES	YES
26W-004	HENDRIX CREEK & HENDRIX ST	40	39	17	73	52	49	4BL 11' X 7'6"	HENDRIX CREEK	REG #1	YES		YES
26W-005	SPRING CREEK AUXILIARY W.P.C.P	40	39	26	73	52	43	72BL 7'6" X 2'5"	OLD MILL CREEK	REG #3, JAM REG #2			YES (ON 3 & JAM REG #2)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
26W-601	HENDRIX CREEK & 575' S/O FOUNTAIN ST	40	38	57	73	52	31	42" DIA	HENDRIX CREEK
26W-602	375' S/O FOUNTAIN ST	40	39	5	73	53	36	66" DIA	HENDRIX CREEK
26W-603	FOUNTAIN ST	40	39	27	73	52	47	78" DIA	OLD MILL CREEK
26W-604	BORDER AVE	40	38	27	74	7	12	8' X 4'	FRESH CREEK BASIN
26W-605	800' E/O SITE DRIVE (GATEWAY MALL)	40	38	60	74	7	48	42" DIA	Belt Parkway/Shore Parkway
26W-606	E/O SITE DRIVE (GATEWAY MALL)	40	39	2	74	7	52	36" DIA	Belt Parkway/Shore Parkway
26W-607	W/O SITE DRIVE (GATEWAY MALL)	40	39	5	73	52	3	30" DIA	BELT PARKWAY / SHORE PARKWAY
26W-608	320' S/O FLATLANDS AVE AND WILLIAMS AVENUE	40	38	58	73	53	25	11' X 4' 6"	FRESH CREEK BASIN

Bowery Bay

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
BB-001	BOWERY BAY WRRF OUTFALL	40	46	51	73	54	31	90" DIA	EAST RIVER				
BB-002	45TH ST (REG # 2)	40	46	46	73	54	33	9' X 9' FT	BOWERY BAY	REG #2			
BB-003	HAZEN ST (REG # 13)	40	46	35	73	53	29	10' 6" X 5' 9" FT	BOWERY BAY	REG #3			YES
BB-004	BORDEN AVE	40	44	21	73	57	31	6' 6" X 3' 3"	DUTCH KILLS	REG #L-3, L-41			
BB-005	E/O 81ST ST (REG # 14)	40	46	25	73	53	21	14' 7" X 8' FT	BOWERY BAY	REG #4	YES		
BB-006	114TH ST (REG # 10, 12 & 13)	40	45	37	73	51	17	4BL 10' 6" X 9' 2"	EAST RIVER	REG #10, 12, 13	YES		
BB-007	E/O 27TH AVE (REG # 5)	40	45	59	73	52	45	11' X 7'	EAST RIVER	REG #5			
BB-008	31ST DRIVE (REG # 6, 7, 8, 9)	40	45	45	73	52	32	DBL 13' 9" X 8'	EAST RIVER	REG #6, 7, 8, 9	YES		YES (ON 6 & 9)
BB-009	HUNTERS POINT AVE (REG # L-3B, L-37, L-38, L-41, L-3A)	40	44	27	73	56	25	11' X 4' 6"	DUTCH KILLS	REG #L-3B, L-37, L-38, L-41, L-3A			
BB-010	QUEENS-MIDTOWN EXPRESSWAY (REG # L-3C)	40	44	22	73	56	29	30" DIA	DUTCH KILLS	REG #L-3C			
BB-011	GREENPOINT AVE BRIDGE (REG # L-1)	40	44	1	73	56	24	24" DIA	NEWTOWN CREEK	REG #L-1			
BB-012	35TH ST (REG # L-2)	40	44	4	73	56	25	24" DIA	NEWTOWN CREEK	REG #L-2			
BB-013	11TH ST (REG # L-8)	40	44	23	73	57	10	72" DIA	NEWTOWN CREEK	REG #L-8			
BB-014	VERNON BOULEVARD (REG # L-9)	40	44	23	73	57	18	22" DIA	NEWTOWN CREEK	REG #L-9			
BB-015	5TH ST (REG # L-10)	40	44	22	73	57	28	15" DIA	NEWTOWN CREEK	REG #L-10			
BB-017	50TH AVE (REG # L-12)	40	44	38	73	58	35	15" DIA	EAST RIVER	REG #L-12			
BB-018	49TH AVE (REG # L-12A)	40	44	40	73	58	32	16" DIA	EAST RIVER	REG #L-12A			
BB-021	47TH AVE (REG # L-15)	40	44	47	73	58	32	48" DIA	EAST RIVER	REG #L-15			
BB-022	5TH ST (REG # L-16)	40	44	53	73	57	17	18" DIA	EAST CHANNEL	REG #L-16			
BB-023	44TH DRIVE (REG # L-17)	40	44	59	73	57	20	66" DIA	EAST CHANNEL	REG #L-17			
BB-024	43RD AVE (REG # L-18)	40	45	13	73	57	8	7' 8" X 7' 7" ARCH	EAST CHANNEL	REG #L-18			
BB-025	41ST AVE (REG # L-19)	40	45	26	73	57	57	57" DIA	EAST CHANNEL	REG #L-19			
BB-026	BETWEEN 28TH & 29TH ST. (REG # L- (4, 39, 40 & 42)	40	44	35	73	56	21	9' X 4' 6"	DUTCH KILLS	REG #L-4, L-39, L-40, L-42			YES (ON L-4)

Bowery Bay (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
BB-027	38TH AVE (REG # L-20)	40	45	36	73	57	49	72" DIA	EAST CHANNEL	REG #L-20			
BB-028	37TH AVE (REG # L-21)	40	45	41	73	57	45	DBL 12' X 8' 2"	EAST CHANNEL	REG #L-21			YES
BB-029	BROADWAY(REG # L-22)	40	46	7	73	56	16	14' 6" X 8' 10" FT	EAST CHANNEL	REG #L-22			YES
BB-030	30TH ROAD (REG # L-23)	40	46	16	73	56	6	DBL 9' 6" X 6'	EAST CHANNEL	REG #L-23			YES
BB-032	MAIN AVE (REG # L-29 A, # MH-15)	40	46	28	73	56	16	48" DIA	EAST RIVER	REG #L-29, L-29A, MH-15			
BB-033	27TH AVE (REG # L-27)	40	46	33	73	56	13	15" DIA	EAST RIVER	REG #L-27			
BB-034	HOYT AVE (REG # L-30)	40	46	37	73	56	42	10' 8" X 7' 4" ARCH	EAST RIVER	REG #L-30			YES
BB-035	DITMARS BLVD (REG # L-31)	40	46	58	73	55	12	18" DIA	EAST RIVER	REG #L-31			
BB-036	21ST AVE (REG # L-32)	40	47	3	73	55	2	24" DIA	EAST RIVER	REG #L-32			
BB-037	20TH AVE	40	47	10	73	55	56	48" DIA	EAST RIVER	REG #L-33			
BB-040	49TH AVE (REG # L-5)	40	44	27	73	56	27	24" DIA	DUTCH KILLS	REG #L-5			
BB-041	19TH AVE (REG # 1)	40	46	49	73	54	8	66" DIA	LUYSTER CREEK	REG #1			
BB-042	W/O 27TH ST (REG # L-6)	40	44	20	73	57	35	12" DIA	DUTCH KILLS	REG #L-6			
BB-043	11TH ST (REG # L-7)	40	44	22	73	57	8	54" DIA	NEWTOWN CREEK	REG #L-7			
BB-045	9TH ST (REG # L-25)	40	46	34	73	56	47	18" DIA	EAST RIVER	REG #L-25			
BB-053	SHORE BLVD AND 20 AVE	40	47	10	73	55	56	48"	EAST RIVER	N/A			
BB-054	ROOSEVELT ISLAND NORTH PUMPING STATION	40	46	7	73	57	32	18" DIA	EAST CHANNEL	ROOSEVELT ISL. P.S.			
BB-055	ROOSEVELT ISLAND MIDDLE PUMPING STATION	40	45	57	73	57	42	30" DIA	EAST CHANNEL	ROOSEVELT ISL. P.S.			
BB-056	ROOSEVELT ISLAND SOUTH PUMPING STATION	40	45	10	73	57	26	24" DIA	EAST CHANNEL	ROOSEVELT ISL. P.S.			
BB-057	BORDEN AVE (REG #L-11)	40	44	33	73	57	40	48" DIA	EAST RIVER	REG #L-11			

Bowery Bay (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
BB-601	127TH ST	40	45	46	73	51	41	60" DIA	EAST RIVER
BB-602	126TH ST	40	45	41	73	51	49	60" DIA	EAST RIVER
BB-603	STEINWAY ST	40	46	54	73	54	43	7' X 6' 6" FT	EAST RIVER
BB-606	49TH AVE	40	44	40	73	58	32	60" DIA	EAST RIVER
BB-607	47TH ROAD	40	44	45	73	58	30	36" DIA	EAST RIVER
BB-608	70TH ROAD	40	43	30	73	50	8	60" X 24"	MEADOW LAKE
BB-609	S/O 28TH STS	40	44	35	73	56	23	48" DIA	DUTCH KILLS
BB-610	BETWEEN 28TH & 29TH STS	40	44	35	73	56	23	48" DIA	DUTCH KILLS
BB-611	CENTER BLVD & BORDERN AVE	40	44	33	73	57	40	42" DIA	EAST RIVER
BB-612	CENTER BLVD & 54 AVE	40	44	28	73	57	40	42" DIA	EAST RIVER
BB-613	26TH AVE	40	46	38	73	56	9	48" DIA	EAST RIVER

Coney Island

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
CI-001	CONEY ISLAND WRRF OUTFALL	40	33	58	73	56	51	96" DIA	ROCKAWAY INLET				
CI-002	CONEY ISLAND WRRF OUTFALL	40	33	58	73	56	51	72" DIA	ROCKAWAY INLET				
CI-004	FLATLANDS AVE (REG # 5, TG # 5)	40	37	54	73	55	3	DBL 10' X 9'	PAERDEGAT BASIN	TG #5	YES		YES (ON TG-5)
CI-005	FLATLANDS AVE (REG # 1-4)	40	37	55	73	55	1	5BL 12' 0" X 9' 0"	PAERDEGAT BASIN	REG #1, 2, 3, 4	YES		YES (ON 4)
CI-006	RALPH AVE (REG # 6)	40	37	52	73	55	2	DBL 84" DIA	PAERDEGAT BASIN	REG #6	YES		YES
CI-008A	RALPH AVE (PAERDEGAT BASIN CSORF OVERFLOW)	40	37	48	73	54	57	3BL 10' x 6'	PAERDEGAT BASIN	PAERDEGAT BASIN CSORF OVERFLOW			
CI-008B	RALPH AVE (PAERDEGAT BASIN CSORF OVERFLOW)	40	37	48	73	54	57	3BL 10' x 6'	PAERDEGAT BASIN	PAERDEGAT BASIN CSORF OVERFLOW			
CI-008C	RALPH AVE (PAERDEGAT BASIN CSORF OVERFLOW)	40	37	48	73	54	57	3BL 10' x 6'	PAERDEGAT BASIN	PAERDEGAT BASIN CSORF OVERFLOW			
CI-008D	RALPH AVE (PAERDEGAT BASIN CSORF OVERFLOW)	40	37	48	73	54	57	3BL 10' x 6'	PAERDEGAT BASIN	PAERDEGAT BASIN CSORF OVERFLOW			

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
CI-601	W 28TH ST	40	34	48	73	60	44	5' X 4'	CONEY ISLAND CREEK
CI-602	W 33RD ST	40	34	53	74	0	3	6' 6" X 4'	CONEY ISLAND CREEK
CI-603	DOVER ST	40	34	56	73	57	0	72" DIA	SHEEPSHEAD BAY
CI-605	SHORE BLVD (140' N/O WEST END AVE PIER)	40	34	57	73	57	12	14' X 7'	SHEEPSHEAD BAY
CI-607	E 21ST ST (UNDER PIER 1)	40	35	1	73	57	51	12" DIA	SHEEPSHEAD BAY
CI-608	E 22ND ST (10' W/O PIER 3)	40	35	1	73	57	47	12" DIA	SHEEPSHEAD BAY
CI-610	E 27TH ST	40	35	0	73	56	29	DBL 13' X 7' 6"	SHEEPSHEAD BAY
CI-611	DEVON AVE	40	35	30	73	56	50	36" DIA	SHELL BANK CREEK
CI-612	EVERETT AVE	40	35	24	73	56	49	36" DIA	SHELL BANK CREEK
CI-613	FLATBUSH AVE	40	36	13	73	55	54	DBL 10' 6 "X 8'	MILL BASIN
CI-614	E/O E 58TH ST	40	36	49	73	55	59	60" DIA	MILL BASIN

Coney Island (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
CI-615	E 61ST ST	40	36	53	73	55	53	8' X 8' FT	MILL BASIN
CI-616	STRICKLAND AVE	40	36	26	73	55	60	4' X 4' FT	MILL BASIN
CI-617	E 64TH ST	40	36	19	73	55	54	48" DIA	MILL BASIN
CI-618	DAKOTA PLACE	40	36	23	73	54	30	42" DIA	MILL BASIN
CI-619	INDIANA PLACE	40	36	18	73	54	17	30" DIA	MILL BASIN
CI-620	BASSET AVE	40	36	30	73	54	7	4' X 4' FT	EAST MILL BASIN
CI-621	UTAH WALK	40	36	41	73	54	13	3' X 3' FT	EAST MILL BASIN
CI-622	OHIO WALK	40	36	51	73	54	24	4' X 4'	EAST MILL BASIN
CI-623	STRICKLAND AVE	40	36	57	73	55	32	4' X 4' FT	EAST MILL BASIN
CI-624	E 68TH ST	40	37	2	73	55	31	7' X 7'	EAST MILL BASIN
CI-625	AVE V	40	37	1	73	54	28	5' X 5' FT	EAST MILL BASIN
CI-626	AVE W	40	36	55	73	54	22	4' X 4' FT	EAST MILL BASIN
CI-627	AVE X	40	36	49	73	54	15	4' X 4' FT	EAST MILL BASIN
CI-628	AVE L	40	37	44	73	55	45	66" DIA	PAERDEGAT BASIN
CI-629	PAERDEGAT 4TH ST	40	37	47	73	55	42	6' 6" X 6' 6"	PAERDEGAT BASIN
CI-630	PAERDEGAT 7TH ST	40	37	43	73	55	33	6' 6" X 6' 6"	PAERDEGAT BASIN
CI-631	PAERDEGAT 10TH ST	40	37	39	73	54	24	5' X 5' FT	PAERDEGAT BASIN
CI-632	PAERDEGAT 13TH ST	40	37	35	73	54	15	6' 6" X 6' 6"	PAERDEGAT BASIN
CI-633	CANARSIE ROAD	40	37	43	73	53	8	9' 6" X 7'	JAMAICA BAY
CI-634	AVE N	40	38	29	73	53	57	6' 6" X 6' 6"	FRESH CREEK BASIN
CI-636	AVE L	40	38	40	73	53	11	6' 6" X 6' 6"	FRESH CREEK BASIN
CI-637	AVE K	40	38	46	73	53	18	6' X 6'	FRESH CREEK BASIN
CI-639	W 12TH ST	40	34	47	73	59	47	108"	CONEY ISLAND CREEK

Coney Island (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
CI-641	25' S/O SHORE PARKWAY (HEAD OF CREEK)	40	34	57	73	58	29	12' X 5' 6"	CONEY ISLAND CREEK
CI-653	W 8TH ST	40	34	53	73	59	34	7' 6" X 6'	CONEY ISLAND CREEK
CI-654	BRAGG COURT	40	34	59	73	56	58	84" DIA	SHEEPSHEAD BAY
CI-655	AVE Y	40	35	33	73	56	54	10' X 8'	SHELL BANK CREEK
CI-656	GERRITSEN AVE (HEAD OF SHELL BANK CANAL)	40	35	28	73	55	27	15" DIA	SHELL BANK CREEK
CI-657	GARLAND COURT	40	35	41	73	56	55	18" DIA	SHELL BANK CREEK
CI-659	SHORE BLVD	40	34	57	73	57	12	9' 6" X 7'	SHEEPSHEAD BAY
CI-660	E 66TH ST	40	36	15	73	55	50	2' 6" X 2' 6" FT	MILL BASIN
CI-661	SEAVIEW AVE	40	38	23	73	53	51	66" DIA	FRESH CREEK BASIN
CI-662	W 32ND ST	40	34	17	73	60	52	42" DIA	ATLANTIC OCEAN
CI-663	W 23RD ST	40	34	19	73	59	21	42" DIA	ATLANTIC OCEAN
CI-664	W 15TH ST	40	34	58	73	59	3	5' X 4'	CONEY ISLAND CREEK
CI-665	W. 21ST ST	40	34	44	73	59	18	13' 3" X 7' 6"	CONEY ISLAND CREEK
CI-666	N/O WEST END AVE PIER	40	34	56	73	57	12	72" DIA	SHEEPSHEAD BAY
CI-668	CHANNEL AVE	40	35	37	73	56	48	3' 6" X 3' 6" FT	SHELL BANK CREEK
CI-669	FLORENCE AVE	40	35	21	73	56	44	36" DIA	SHELL BANK CREEK
CI-670	BARTLETT PLACE	40	35	18	73	56	39	3' X 3' FT	SHELL BANK CREEK
CI-671	CYRUS AVE	40	35	14	73	56	36	3' X 3' FT	SHELL BANK CREEK
CI-672	SEBA AVE	40	35	10	73	56	32	3' X 3' FT	SHELL BANK CREEK
CI-673	LOIS AVE	40	35	9	73	55	22	2' 6" X 2' 6" FT	PLUM BEACH CHANNEL
CI-674	GERRITSEN AVE	40	35	12	73	55	5	3' 6" X 3' 6" FT	PLUM BEACH CHANNEL
CI-676	56TH DRIVE	40	36	14	73	55	33	24" DIA	MILL BASIN
CI-677	OCEAN AVE	40	35	1	73	57	54	DBL 8' 7" X 8'	SHEEPSHEAD BAY

Coney Island (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
CI-678	W 35TH ST	40	34	53	74	0	7	60" DIA	GRAVESEND BAY
CI-679	OXFORD ST	40	34	52	73	56	17	36" DIA	SHEEPSHEAD BAY
CI-680	MACKENZIE ST	40	34	52	73	56	25	48" DIA	SHEEPSHEAD BAY
CI-681	KENSINGTON ST	40	34	52	73	57	32	24" DIA	SHEEPSHEAD BAY
CI-682	BIJOU AVE	40	35	40	73	56	51	3' X 3'	SHELL BANK CREEK
CI-683	HASTINGS STREET	40	34	53	74	3	18	60"" DIA	SHEEPSHEAD BAY
CI-684	FALMOUTH STREET	40	34	54	74	3	11	24"" DIA	SHEEPSHEAD BAY
CI-685	SHEEPSHEAD BAY SHORELINE	40	34	56	74	2	53	24"" DIA	SHEEPSHEAD BAY
CI-686	Dooley Street	40	35	1	74	3	18	12"" DIA	SHEEPSHEAD BAY
CI-688	CYRUS AVENUE	40	35	14	74	4	23	10"" DIA	SHELL BANK CREEK
CI-687	E 23RD STREET	40	35	0	74	3	22	12"" DIA	SHEEPSHEAD BAY
CI-689	LANDIS PLACE	40	35	16	74	4	22	18"" DIA	SHELL BANK CREEK
CI-690	MERIT COURT	40	35	15	74	4	22	18"" DIA	SHELL BANK CREEK
CI-691	KEEN COURT	40	35	14	74	4	24	18"" DIA	SHELL BANK CREEK
CI-692	LESTER COURT	40	35	13	74	4	25	18"" DIA	SHELL BANK CREEK
CI-693	MELBA COURT	40	35	12	74	4	26	18"" DIA	SHELL BANK CREEK
CI-694	Nova Court	40	35	11	74	4	27	18"" DIA	SHELL BANK CREEK
CI-695	Seba Avenue	40	35	10	74	4	28	18"" DIA	SHELL BANK CREEK
CI-696	s/o Post Court	40	35	8	74	4	31	18"" DIA	PLUM BEACH CHANNEL
CI-697	MADOC AVENUE	40	35	10	74	4	33	18"" DIA	PLUM BEACH CHANNEL
CI-698	Frank Court	40	35	10	74	4	45	18"" DIA	PLUM BEACH CHANNEL
CI-699	Canton Court	40	35	10	74	4	47	18"" DIA	PLUM BEACH CHANNEL
CI-700	BEACON COURT	40	35	10	74	4	52	18"" DIA	PLUM BEACH CHANNEL
CI-701	ABBEY COURT	40	35	11	74	35	53	18"" DIA	PLUM BEACH CHANNEL

Hunts Point

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
HP-001	HUNTS POINT WRRF OUTFALL	40	48	8	73	53	57	84" DIA	EAST RIVER				
HP-002	TIFFANY ST (REG # 9, 9A)	40	48	19	73	53	23	DBL 5' 6" X 9'	EAST RIVER	REG #9, 9A			YES (ON 9)
HP-003	FARRAGUT ST (REG # 10)	40	48	5	73	52	29	DBL 12' X 9' 5-3/4"	EAST RIVER	REG #10	YES		YES
HP-004	WEST FARM ROAD	40	50	18	73	53	46	8' X 8'	BRONX RIVER	CSO-28, 28A	YES		
HP-005	HOLLARS AVE (PUMP STATION)	40	53	13	73	49	13	12" DIA	EASTCHESTER BAY	HOLLERS AVE P.S.			
HP-006	BARTOW AVE (CO-OP CITY SOUTH PS)	40	52	8	73	49	18	15' 0" X 8' 6"	EASTCHESTER BAY	CO-OP CITY SOUTH P.S., ELY AVE PS			
HP-007	E 177TH ST (CSO-27,27A)	40	50	20	73	53	43	DBL 11' 6" X 6' 6"	BRONX RIVER	CSO-27, 27A	YES		
HP-008	LAFAYETTE AVE & COLGATE AVE	40	49	8	73	53	53	54" DIA	BRONX RIVER	CSO-26			
HP-009	RANDALL AVE & METCALF AVE (REG #13)	40	48	52	73	52	15	14' X 8'	BRONX RIVER	REG #13			YES
HP-010	LACOMBE AVE	40	48	48	73	52	11	9' X 6'	BRONX RIVER	CSO-25			
HP-011	WHITE PLAINS ROAD (REG #5)	40	48	16	73	51	15	DBL 13' X 9'	EAST RIVER	REG #5, 6, 7	YES		YES (ON 5 & 6)
HP-012	LAFAYETTE AVE (CSO-23A)	40	49	27	73	50	27	12' X 8'	WESTCHESTER CREEK	CSO-23A			
HP-013	NEWMAN AVE (CSO-24)	40	48	52	73	51	19	12' X 8'	PUGSLEY'S CREEK	CSO-24			
HP-014	E.TREMONT AVE (CSO-29, 29A)	40	50	22	73	50	24	DBL 14' X 8' 6"	WESTCHESTER CREEK	CSO-29, 29A			
HP-015	LATTING ST (CSO-22)	40	50	15	73	50	22	4' 9" X 4'	WESTCHESTER CREEK	CSO-22			
HP-016	BRUCKNER EXPRESSWAY (REG #4)	40	49	42	73	51	32	10' X 8'6"	WESTCHESTER CREEK	REG #4			YES
HP-017	EMERSON AVE (REG #11)	40	48	41	73	50	35	14' X 8'	EAST RIVER	REG #11			YES
HP-018	ROBINSON AVE (REG #12)	40	48	43	73	49	28	6' 4" X 4'	EAST RIVER	REG #12			YES
HP-019	CALHOUN AVE (REG #3)	40	48	49	73	49	1	7' X 5' 6"	EAST RIVER	REG #3			YES
HP-020	THROGS NECK BOULEVARD (REG #2A)	40	48	46	73	49	39	8' X 6' 6"	EAST RIVER	REG #2A			
HP-021	PENNYFIELD AVE (REG #2)	40	48	31	73	48	14	6' 3" X 6' 6"	EAST RIVER	REG #2			YES
HP-022	E 177TH ST (REG #1)	40	48	56	73	48	52	8' X 8'	LONG ISLAND SOUND	REG #1			YES
HP-023	CONNOR ST (REG #15)	40	52	50	73	49	17	12'0" X 6'6"	EASTCHESTER BAY	REG #15, CONNOR ST.PS			

Hunts Point (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
HP-024	E. 233RD ST (REG #15A)	40	53	16	73	49	27	12' 6" X 10'	EASTCHESTER BAY	REG #15A			
HP-025	TRUXTON ST (REG # 8)	40	48	23	73	54	32	11' 6" X 7' 3"	EAST RIVER	REG #8			YES
HP-026	ELLESWORTH AVE (REG #14)	40	49	27	73	49	50	9' X 8'	LONG ISLAND SOUND	REG #14			YES
HP-028	OUTLOOK AVE (CSO #20)	40	50	35	73	49	52	12" DIA	EASTCHESTER BAY	CSO-20			
HP-029	WATT AVE (CSO #21)	40	50	55	73	49	55	15" DIA	EASTCHESTER BAY	CSO-21			
HP-031	BELLAMY LOOP (NORTH)	40	52	26	73	49	25	72" DIA	EASTCHESTER BAY	CSO-32, CO-OP CITY N. P.S.			
HP-032	RIKERS ISLAND NORTH PUMPING STATION	40	47	51	73	53	10	14" DIA	EAST RIVER	RIKER'S ISLAND N. P.S.			
HP-033	S/O BRUCKNER BLVD & E/O ZEREGA AVE (CSO-23)	40	49	41	73	51	34	DBL 16' X 5'	WESTCHESTER CREEK	CSO-23			
HP-034	NEWBOLD AVE (COMMERCE ST PS)	40	50	6	73	50	23	60" DIA	WESTCHESTER CREEK	COMMERCE AVE P.S.			
HP-037	ORCHARD BEACH PUMPING STATION	40	52	1	73	48	5	15" DIA	LAGOON	ORCHARD BEACH P.S.			
HP-039	N/O HUNTS POINT	40	48	15	73	52	11	72" DIA	EAST RIVER	HUNT'S PONT MARKET P.S.			

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
HP-602	LAFAYETTE AVE	40	50	0	73	49	59	36" DIA	LONG ISLAND SOUND
HP-608	S/O E. FORDHAM RD (BOTANICAL GDNS)	40	51	18	73	53	40	18" DIA	BRONX RIVER (W)
HP-626	242ND ST	40	54	26	73	51	18	36" DIA	BRONX RIVER
HP-627	S/O 233RD ST	40	53	40	73	52	46	36" DIA	BRONX RIVER
HP-631	RANDALL AVE	40	49	48	73	49	51	48" DIA	LONG ISLAND SOUND
HP-632	BEACH ST (CITY ISLAND)	40	51	6	73	47	25	15" DIA	LONG ISLAND SOUND
HP-634	E. TREMONT AVE	40	50	22	73	50	23	3' X 7' 4"	WESTCHESTER CREEK
HP-635	RANDALL AVE	40	49	11	73	50	20	30" DIA	WESTCHESTER CREEK
HP-636	UNDER BOSTON ROAD BRIDGE	40	53	17	73	49	26	48" DIA	EASTCHESTER BAY

Hunts Point (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
HP-637	PEARTREE AVE	40	52	46	73	49	18	72" DIA	EASTCHESTER BAY
HP-638	BELLAMY LOOP (SOUTH)	40	52	20	73	49	25	36" DIA	EASTCHESTER BAY
HP-639	N/O BARTOW AVE	40	52	12	73	49	25	66" DIA	EASTCHESTER BAY
HP-640	EINSTEIN LOOP NORTH	40	51	54	73	49	12	48" DIA	EASTCHESTER BAY
HP-641	ERSKINE PLACE	40	51	46	73	49	10	42" DIA	EASTCHESTER BAY
HP-648	LAYTON AVE	40	50	10	73	49	57	16' X 6'	LONG ISLAND SOUND
HP-650	ABBOTT ST (BRADELEY ST)	40	54	23	73	51	20	30" DIA	BRONX RIVER
HP-651	50' E/O CASTLE HILL AVE	40	48	42	73	51	46	24" DIA	WESTCHESTER CREEK
HP-652	ERSKINE PLACE	40	51	46	73	49	10	30" DIA	EASTCHESTER BAY
HP-653	SUTHERLAND ST (CITY ISLAND)	40	51	23	73	47	19	2' 6" X 1' 7"	LONG ISLAND SOUND
HP-655	WILCOX AVE	40	49	37	73	49	50	30" DIA	LONG ISLAND SOUND
HP-656	SE/O HUTCHINSON RIVER PARKWAY (E)	40	52	3	73	49	14	30" DIA	EASTCHESTER BAY
HP-657	KILROE ST	40	51	18	73	47	19	18" DIA	LONG ISLAND SOUND
HP-658	AGAR PLACE	40	50	20	73	49	55	42" DIA	LONG ISLAND SOUND
HP-659	CITY ISLAND AVE	40	50	15	73	47	58	18" DIA	LONG ISLAND SOUND
HP-660	SCHOFIELD ST AND LANDING WAY	40	50	45	73	47	57	60''	LONG ISLAND SOUND
HP-661	BUTLER PL & FERRIS PL	40	50	18	73	50	24	24" DIA	WESTCHESTER CREEK
HP-662	BEACH ST & KING AVE	40	51	9	73	47	12	30" DIA	LONG ISLAND SOUND
HP-663	ZEREGA AVE & LACOMBE AVE	40	49	3	73	50	32	5' X 3' 2"	WESTCHESTER CREEK
HP-664	CORNELL AVE	40	48	29	73	50	59	24" DIA	EAST RIVER
HP-665	SCHLEY AVE	40	48	59	73	50	24	36" DIA	WESTCHESTER CREEK

Jamaica

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
JAM-001	JAMAICA WRRF OUTFALL	40	37	52	73	48	54	84" DIA	GRASSY BAY				
JAM-003	123RD ST (REG # 3)	40	39	44	73	49	7	DBL 8' X 9'	BERGEN BASIN	REG #3	YES		YES
JAM-003A	123RD ST (REG # 14)	40	39	44	73	49	7	DBL 13' 6" X 9'	BERGEN BASIN	REG #14	YES		YES
JAM-005	230TH ST (REG # 6, 7, 8 & 9)	40	38	52	73	45	18	4BL 16' X 8'	THURSTON BASIN	REG #6, 7, 8, 9	YES		YES (ON 9)
JAM-006	155TH AVE (JAMAICA WRRF SECONDARY OUTFALL & REG # 1)	40	39	38	73	49	40	3BL 19' X 9'	BERGEN BASIN	REG #1, 4, 10, SECONDARY PLANT EFFLUENT	YES		YES (ON 1 & 10)
JAM-007	HEAD OF THURSTON BASIN (REG # 6, 7, 8 & 9)	40	38	52	73	45	17	4BL 17' X 6'	THURSTON BASIN	REG #6, 7, 8, 9	YES		YES (ON 9)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
JAM-601	165TH AVE	40	38	57	73	50	13	36" DIA	SHELLBANK BASIN
JAM-602	164TH AVE	40	39	3	73	50	14	30" DIA	SHELLBANK BASIN
JAM-603	163RD AVE	40	39	9	73	50	15	84" DIA	SHELLBANK BASIN
JAM-604	162ND AVE	40	39	15	73	50	17	33" DIA	SHELLBANK BASIN
JAM-605	161ST AVE	40	39	21	73	50	18	36" DIA	SHELLBANK BASIN
JAM-606	160TH AVE	40	39	27	73	50	20	8' X 5' 6"	SHELLBANK BASIN
JAM-607	158TH AVE	40	39	39	73	50	23	10' X 5' 6"	SHELLBANK BASIN
JAM-609	158TH AVE	40	39	40	73	50	19	6' 6" X 6' FT	SHELLBANK BASIN
JAM-629	164TH AVE	40	39	6	73	50	54	12" DIA	HAWTREE BASIN
JAM-630	159TH AVE (REG # TG-12)	40	39	33	73	50	21	42" DIA	SHELLBANK BASIN
JAM-631	160TH AVE	40	39	28	73	50	17	12" DIA	SHELLBANK BASIN
JAM-632	162ND AVE	40	39	16	73	50	14	12" DIA	SHELLBANK BASIN
JAM-633	163RD AVE	40	39	10	73	50	12	12" DIA	SHELLBANK BASIN
JAM-634	164TH AVE	40	39	4	73	50	11	12" DIA	SHELLBANK BASIN

Jamaica (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
JAM-635	100TH ST	40	39	29	73	50	58	18" DIA	HAWTREE BASIN
JAM-636	161ST AVE	40	39	24	73	50	59	12" DIA	HAWTREE BASIN
JAM-637	162ND AVE	40	39	18	73	50	57	12" DIA	HAWTREE BASIN
JAM-638	164TH DRIVE	40	39	3	73	50	48	18" DIA	HAWTREE BASIN
JAM-640	147TH AVE & 184TH ST	40	39	35	73	46	48	24" DIA	SPRINGFIELD PARK
JAM-648	S/O 137TH AVE	40	40	15	73	44	14	15" DIA	LAURELTON
JAM-649	HUXLEY ST	40	38	57	73	44	13	13' 6" X 7' 0"	HOOK CREEK
JAM-652	WELLER LANE	40	38	60	73	44	2	30" DIA	HOOK CREEK
JAM-653	256TH ST	40	39	0	73	44	59	36" DIA	HOOK CREEK
JAM-654	257TH ST	40	39	1	73	44	56	12" DIA	HOOK CREEK
JAM-655	HOOK CREEK BLVD	40	39	6	73	44	37	54" DIA	HOOK CREEK
JAM-656	101ST ST	40	39	30	73	50	55	18" DIA	HAWTREE BASIN
JAM-657	163RD AVE & PEDESTRIAN BRIDGE	40	39	12	73	50	56	24" DIA	HAWTREE BASIN
JAM-659	OPPOSITE OF 65TH AVE	40	45	8	73	45	33	36" DIA	ALLEY CREEK
JAM-660	125' N/O LONG ISLAND WB EXIT 31S RAMP NEAR CROSS ISLAND PARKWAY	40	45	18	73	45	43	30" DIA	ALLEY CREEK
JAM-661	259TH ST	40	39	2	73	44	49	54" DIA	HOOK CREEK
JAM-662	119TH AVE	40	40	48	73	47	13	24" DIA	BAISLEY POND
JAM-663	ARTHUR ST	40	39	50	73	46	38	54" DIA	BAY/OCEAN
JAM-664	ROCKAWAY BLVD AND 183RD ST	40	39	16	73	45	49	16'6" x 5'0"	Stream wider than 8 feet
JAM-665	119 DR & LAKEVIEW BLVD E	40	40	48	73	47	5.801	42" DIA	BAISLEY POND
JAM-666	BROOKEVILLE BLVD & 140' S/O 133RD AVE	40	40	30	73	43	57	4'6" X 2'10"	LAURELTON
JAM-667	BROOKEVILLE BLVD & 200' S/O 128TH RD	40	40	50	73	43	41	24" DIA	LAURELTON
JAM-668	BROOKEVILLE BLVD & 129TH AVE	40	40	47	73	43	43	24" DIA	LAURELTON
JAM-669	BROOKVILLE PARK	40	39	27	73	44	49	10 FT DIA	Hook Creek

Newtown Creek

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
NCB-001	NEWTOWN CREEK WRRF OUTFALL	40	43	54	73	58	56	144" DIA	EAST RIVER				
NCB-002	NEWTOWN CREEK WRRF SECONDARY OUTFALL	40	44	4	73	57	48	3BL 7' X 8'	WHALE CREEK	WRRF OVERFLOW			
NCB-003	GREENPOINT AVE (REG # B-11)	40	43	46	73	58	40	24" DIA	EAST RIVER	REG #B-11			
NCB-004	QUAY ST (REG # B-10)	40	43	33	73	58	42	66" DIA	EAST RIVER	REG #B-10			
NCB-006	NORTH 12TH ST (REG # B-9)	40	43	31	73	58	43	13' X 13'	EAST RIVER	REG #B-9		YES	YES
NCB-007	NORTH 5TH ST (REG # B-8)	40	43	12	73	58	52	36" DIA	EAST RIVER	REG #B-8			
NCB-008	METROPOLITAN AVE (REG # B-7)	40	43	6	73	58	58	60" DIA	EAST RIVER	REG #B-7			
NCB-010	GRAND ST (REG # B-6A)	40	42	59	73	58	2	12" DIA	EAST RIVER	REG #B-6A			
NCB-012	SOUTH 5TH ST (REG # B-6)	40	42	46	73	58	6	144" DIA	EAST RIVER	REG #B-6			YES
NCB-013	DIVISION AVE (REG # B-5)	40	42	25	73	58	9	10' X 8'	WALLABOUT CHANNEL	REG #B-5	YES		YES
NCB-014	KENT AVE (REG # B-4)	40	42	22	73	58	9	DBL 13' 6" X 11' 6"	WALLABOUT CHANNEL	REG #B-3, B-4	YES		YES (ON B-4)
NCB-015	JOHNSON AVE (REG # B-1)	40	42	31	73	56	49	16' X 10'	ENGLISH KILLS	REG #B-1	YES		YES
NCB-019	METROPOLITAN AVE (REG B-2)	40	42	51	73	55	26	36" DIA	NEWTOWN CREEK	REG #B-2	YES		
NCB-021	MCGUINESS BOULEVARD	40	44	20	73	57	10	36" DIA	NEWTOWN CREEK	CSO NEXT TO B-17			
NCB-022	MCGUINESS BOULEVARD (REG # B-17)	40	44	20	73	57	11	6' 3" X 4' 6"	NEWTOWN CREEK	REG #B-17			
NCB-024	DUPONT ST (REG # B-15)	40	44	8	73	58	40	18" DIA	EAST RIVER	REG #B-15			
NCB-025	FREEMAN ST (REG # B-14)	40	44	2	73	58	44	24" DIA	EAST RIVER	REG #B-14			
NCB-026	GREEN ST (REG # B-13)	40	43	59	73	58	44	2' X 2' 6"	EAST RIVER	REG #B-13			
NCB-027	HURON ST (REG # B-12)	40	43	57	73	58	43	84" DIA	EAST RIVER	REG #B-12			
NCB-082	SOUTH 8TH ST (REG # B-6)	40	42	36	73	58	11	36" DIA	WALLABOUT CHANNEL	REG #B-5A			
NCB-083	METROPOLITAN AVE / SCOTT AVE	40	42	51	73	55	27	11' X 10'	NEWTOWN CREEK	DB OC			
NCB-084	COMMERCIAL ST (REG # B-16)	40	44	13	73	57	35	24" DIA	NEWTOWN CREEK	REG#B-16			
NCM-005	N/O E 63RD ST (REG # M-51)	40	45	40	73	57	21	24" DIA	EAST RIVER	REG #M-51			

Newtown Creek (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
NCM-011	E 48TH ST (REG # M-47A)	40	45	6	73	58	53	4' X 2' 8" EGG	EAST RIVER	REG #M-47A			
NCM-016	E 46TH ST (REG # M-46)	40	45	1	73	58	57	4' X 4' FT	EAST RIVER	REG #M-46			
NCM-017	E 42ND ST (REG # M-45A)	40	44	53	73	58	4	4' X 2' 8"	EAST RIVER	REG #M-45A			
NCM-018	E 41ST ST (REG # M-45)	40	44	50	73	58	6	4' X 2' 8" FT	EAST RIVER	REG #M-45			
NCM-020	E HOUSTON ST (REG # M-31)	40	43	7	73	58	25	6' X 4' 6" FT	EAST RIVER	REG #M-31			
NCM-028	DELANCY ST (REG # M-28)	40	42	54	73	59	30	4' X 4' FT	EAST RIVER	REG #M-28			
NCM-030	E 71ST ST (REG # M-51C)	40	45	55	73	57	6	3' X 2' EGG	EAST RIVER	REG #M-51C			
NCM-031	E 70TH ST (REG # M-51B)	40	45	52	73	57	8	3' X 2' EGG	EAST RIVER	REG #M-51A, M-15B			
NCM-032	E 61ST ST (REG # M-50)	40	45	34	73	57	27	DBL 6' 6" X 5'	EAST RIVER	REG #M-50			YES
NCM-033	E 57TH ST (REG # M-49)	40	45	25	73	58	35	4' X 2' 4" FT	EAST RIVER	REG #M-49			
NCM-034	E 54TH ST (REG # M-48)	40	45	18	73	58	41	5' X 4' FT	EAST RIVER	REG #M-48			
NCM-035	E 53RD ST (REG # M-48A)	40	45	17	73	58	44	4' X 2' 4" FT	EAST RIVER	REG #M-48A			
NCM-036	E 49TH ST (REG # M-47)	40	45	8	73	58	51	54" DIA	EAST RIVER	REG #M-47			YES
NCM-037	E 41ST ST (REG # M-44)	40	44	50	73	58	6	9' X 7' FT	EAST RIVER	REG #M-44			YES
NCM-038	E 38TH ST (REG # M-43B)	40	44	44	73	58	12	5' X 4' FT	EAST RIVER	REG #M-43B			
NCM-038A	E 38TH ST (REG # M-43B)	40	44	44	73	58	12	5' X 4' FT	EAST RIVER	REG #M-43B			
NCM-039	E 37TH ST (REG # M-43A)	40	44	42	73	58	13	5' 6" X 2' 8" FT	EAST RIVER	REG #M-43A			
NCM-040	E 36TH ST (REG # M-43)	40	44	40	73	58	15	5' 6" X 2' 8" FT	EAST RIVER	REG #M-43			
NCM-041	E 33RD ST (REG # M-42)	40	44	33	73	58	18	DBL 8' X 6'	EAST RIVER	REG #M-42			YES
NCM-042	BROOME ST (REG # M-27)	40	42	49	73	59	32	4' X 4' FT	EAST RIVER	REG #M-27			
NCM-043	E 30TH ST (REG # M-41)	40	44	24	73	58	20	4' X 2' 4" FT	EAST RIVER	REG #M-41			
NCM-044	E 29TH ST (REG # M-41A)	40	44	22	73	58	21	5' 6" X 4' FT	EAST RIVER	REG #M-41A			
NCM-045	E 26TH ST (REG # M-40)	40	44	13	73	58	21	DBL 6' 6" X 6'	EAST RIVER	REG #M-40			YES

Newtown Creek (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
NCM-046	E 24TH ST (REG # M-39)	40	44	7	73	58	22	48" DIA	EAST RIVER	REG #M-39, M-39A			
NCM-047	E 23RD ST (REG # M-38B)	40	44	7	73	58	28	5' X 4' FT	EAST RIVER	REG #M-38B			
NCM-048	E 21ST ST (REG # M-38)	40	43	59	73	58	25	54" DIA	EAST RIVER	REG #M-38			
NCM-049	E 18TH ST (REG # M-37)	40	43	53	73	58	25	6' X 8' FT	EAST RIVER	REG #M-37			YES
NCM-051	OLD SLIP (REG # M-12)	40	42	11	74	0	28	48" DIA	EAST RIVER	REG #M-12			
NCM-052	E 14TH ST (REG # M-36)	40	43	36	73	58	18	DBL 6' X 7'	EAST RIVER	REG #M-36			YES
NCM-053	E 11TH ST (REG # M-35)	40	43	28	73	58	20	5' X 8' 9" FT	EAST RIVER	REG #M-35			
NCM-054	E 8TH ST (REG # M-34)	40	43	21	73	58	21	6' 6" X 5' FT	EAST RIVER	REG #M-34			
NCM-055	E 6TH ST (REG # M-33)	40	43	17	73	58	22	5' 6" X 4' FT	EAST RIVER	REG #M-33			
NCM-056	E 3RD ST (REG # M-32)	40	43	8	73	58	25	6' 6" X 6' FT	EAST RIVER	REG #M-32			
NCM-057	STANTON ST (REG # M-30)	40	43	2	73	58	27	5' 6" X 5' FT	EAST RIVER	REG #M-30			
NCM-058	IRVINGTON ST (REG # M-29)	40	42	57	73	58	28	5' 6" X 5' FT	EAST RIVER	REG #M-29			
NCM-059	50' S/O GRAND ST (REG # M-26)	40	42	45	73	59	34	6' X 3' FT	EAST RIVER	REG #M-26			
NCM-060	S/O CORLEARS HOOK PARK (REG # M-25)	40	42	38	73	59	41	5' X 4' FT	EAST RIVER	REG #M-25			
NCM-061	JACKSON ST (REG # M-23)	40	42	37	73	59	50	4' X 3' EGG	EAST RIVER	REG #M-23			
NCM-062	GOVERNEUR SLIP E (REG # M-22)	40	42	35	73	59	59	48" DIA	EAST RIVER	REG #M-22			
NCM-063	JEFFERSON ST (NORTH SIDE) (REG # M-21)	40	42	33	73	59	18	48" DIA	EAST RIVER	REG #M-21			YES
NCM-064	MARKET SLIP (REG # M -20)	40	42	33	73	60	38	54" DIA	EAST RIVER	REG #M-20			
NCM-065	S/O CATHERINE ST (REG # M-18)	40	42	32	73	60	47	4' 6" X 4' FT	EAST RIVER	REG #M-18			
NCM-066	ROBERT F WAGNER PLACE (REG # M -17)	40	42	29	73	60	56	48" DIA	EAST RIVER	REG #M-17			
NCM-067	MAIDEN LANE (REG # M -13A)	40	42	18	74	0	16	6' X 6' FT	EAST RIVER	REG #M-13			
NCM-068	COENTIES SLIP (REG # M -11)	40	42	7	74	1	34	4' 6" X 3' 8"	EAST RIVER	REG #M-11			
NCM-069	BROAD ST (REG # M-10)	40	42	5	74	1	40	5' X 4' FT	EAST RIVER	REG #M-10			YES

Newtown Creek (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
NCM-070	BATTERY PLACE (S/O PIER - A) (REG # M-9)	40	42	15	74	1	3	84" DIA	HUDSON RIVER	REG #M-9			
NCM-071	RECTOR ST (REG # M-6, M-7)	40	42	35	74	1	6	96" DIA	HUDSON RIVER	REG #M-6, M-7			
NCM-072	VESEY ST (REG # M-5)	40	42	54	74	1	3	96" DIA	HUDSON RIVER	REG #M-5			
NCM-073	DUANE ST (REG # M-4)	40	43	7	74	1	0	54" DIA	HUDSON RIVER	REG #M-4			
NCM-074	VESTRY ST (REG # M-3)	40	43	23	74	1	44	5' X 3' 8"	HUDSON RIVER	REG #M-3			
NCM-075	N/O WATTS ST (REG # M-2)	40	43	29	74	1	43	66" DIA	HUDSON RIVER	REG #M-2			YES
NCM-076	CLARKSON ST (REG # 1)	40	43	48	74	1	51	12' X 6' 3" FT	HUDSON RIVER	REG #M-1			YES
NCM-078	N/O DOVER ST (REG # M -16)	40	42	28	73	60	58	12' X 6'	EAST RIVER	REG #M-16			YES
NCM-080	N/O VANDAM ST (REG # TG-2)	40	43	38	74	1	41	48" DIA	HUDSON RIVER	REG #TG-2			
NCM-081	S/O CHARLES ST (REG # TG-1)	40	44	0	74	1	39	5' X 4'	HUDSON RIVER	REG #TG-1			
NCM-087	E 22ND ST (REG # M-38A)	40	44	4	73	58	27	5' X 3' 6" FT	EAST RIVER	REG #M-38A			
NCQ-029	43RD ST (REG # Q-2)	40	43	36	73	56	38	66" DIA	NEWTOWN CREEK	REG #Q-2			
NCQ-077	49TH ST (REG # Q-1)	40	43	25	73	55	13	DBL 11' X 7'	MASPETH CREEK	REG #Q-1	YES		

Newtown Creek (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
NCB-629	SCHOLES ST	40	42	38	73	56	52	60" DIA	ENGLISH KILLS
NCB-630	MEEKER ST & GARDNER AVE	40	43	41	73	56	57	DBL 16" DIA	NEWTOWN CREEK
NCB-631	N/O HENRY ST	40	44	10	73	57	39	90" DIA	NEWTOWN CREEK
NCB-635	10' S/O GRAND ST BRIDGE	40	42	51	73	56	51	42" DIA	ENGLISH KILLS
NCB-636	5' N/O GRAND ST BRIDGE	40	42	52	73	56	54	60" DIA	ENGLISH KILLS
NCB-638	GARDENER AVE	40	43	4	73	56	41	54" DIA	ENGLISH KILLS
NCB-639	MASPETH AVE & NEWTOWN CREEK	40	43	11	73	55	29	22"	NEWTOWN CREEK
NCM-628	RECTOR PLACE	40	42	35	74	1	6	54" DIA	HUDSON RIVER
NCM-634	FIRST PLACE	40	42	24	74	1	9	54" DIA	HUDSON RIVER
NCM-640	E 15TH STREET (CO ED-NORTH)	40	43	40	73	58	18	42" DIA	EAST RIVER
NCM-641	E 16TH STREET	40	43	42	73	58	17	5' 6" X 4'	EAST RIVER
NCQ-632	GRAND AVE	40	42	60	73	55	20	54" DIA	NEWTOWN CREEK
NCQ-633	300' N/O GRAND AVE BRIDGE	40	43	5	73	55	24	60" DIA	NEWTOWN CREEK
NCQ-637	LAUREL HILL BLVD & REVIEW AVE	40	43	43	73	56	53	72" DIA	NEWTOWN CREEK

North River

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
NR-001	NORTH RIVER WRRF OUTFALL	40	49	31	73	58	30	96" DIA	HUDSON RIVER				
NR-002	W 152ND ST (REG # N-20, 21, 21A, 21B)	40	49	57	73	57	4	60" DIA	HUDSON RIVER	REG #N-20, N-21, N-21A, N-21B			
NR-003	W 158TH ST (REG # N-19)	40	50	12	73	57	57	48" DIA	HUDSON RIVER	REG #N-19			
NR-004	W 171ST ST (REG # N-18)	40	50	45	73	57	47	6' X 10' 6" FT	HUDSON RIVER	REG #N-18			YES
NR-005	W 190TH ST (REG # N-17)	40	51	28	73	56	22	18" DIA	HUDSON RIVER	REG #N-17			
NR-006	DYCKMAN ST (REG # N-16)	40	52	9	73	56	56	DBL 7' 0" X 5' 0"	HUDSON RIVER	REG #N-16			YES
NR-007	W 218TH ST (REG # N-15)	40	52	29	73	55	9	4' 0" X 2' 4" FT	SPUYTEN DUYVIL CREEK	REG #N-15			
NR-008	W 216TH ST (REG # N-14)	40	52	8	73	55	41	5' X 4' EGG	HARLEM RIVER	REG #N-14			
NR-009	W 215TH ST (REG # N-13)	40	52	5	73	55	42	3' 6" X 2' 4" EGG	HARLEM RIVER	REG #N-13			
NR-010	W 211TH ST (REG # N-10, N-11, N-12)	40	51	56	73	55	48	54" DIA	HARLEM RIVER	REG #N-10, N-11, N-12			
NR-011	W 209TH ST (REG # N-9)	40	51	52	73	55	54	24" DIA	HARLEM RIVER	REG #N-9			
NR-012	W 207TH ST (SOUTH SIDE) (REG # N-7)	40	51	47	73	55	56	36" DIA	HARLEM RIVER	REG #N-7			
NR-013	W 206TH ST (REG # N-6)	40	51	45	73	55	58	3' 6" X 2' 4" EGG	HARLEM RIVER	REG #N-6			
NR-014	W 205TH ST (REG # N-5)	40	51	43	73	55	1	48" DIA	HARLEM RIVER	REG #N-5			
NR-016	W 203RD ST (REG # N-4)	40	51	39	73	55	5	3' 6" X 2' 4" EGG	HARLEM RIVER	REG #N-4			
NR-017	W 201ST ST (REG # N-3)	40	51	34	73	55	8	6' X 4' FT	HARLEM RIVER	REG #N-3			YES
NR-018	HIGHBRIDGE PARK (REG # N-1)	40	51	26	73	55	18	48" DIA	HARLEM RIVER	REG #N-1			
NR-019	BANK ST (REG # N-56)	40	44	11	74	1	38	48" DIA	HUDSON RIVER	REG #N-56			
NR-020	JANE ST (REG # N-55)	40	44	18	74	1	40	48" DIA	HUDSON RIVER	REG #N-55			
NR-021	GANSEVOORT ST (REG # N-54)	40	44	21	74	1	41	48" DIA	HUDSON RIVER	REG #N-54			
NR-022	S/O W 17TH ST (REG # N-51)	40	44	40	74	1	32	54" DIA	HUDSON RIVER	REG #N-51			
NR-023	W 18TH ST (REG # 50)	40	44	45	74	1	41	5' 0" X 4' 6"	HUDSON RIVER	REG #N-50			YES
NR-024	W 21ST ST (REG # N-48, N-49)	40	44	52	74	1	41	48" DIA	HUDSON RIVER	REG #N-48, N-49			

North River (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
NR-025	W 24TH ST (REG # N-47)	40	45	3	74	1	39	42" DIA	HUDSON RIVER	REG #N-47			
NR-026	W 26TH ST (REG# N-46)	40	45	9	74	1	34	DBL 4' X 3'	HUDSON RIVER	REG #N-46			
NR-027	W 30TH ST (REG # N-45)	40	45	17	74	0	26	11' X 6'	HUDSON RIVER	REG #N-45			YES
NR-028	W 36TH ST (REG # N-43)	40	45	34	74	0	24	48" DIA	HUDSON RIVER	REG #N-43			
NR-029	W 40TH ST (REG # N-42)	40	45	40	74	0	10	30" DIA	HUDSON RIVER	REG #N-42			
NR-030	W 43RD ST (REG # N-39 & N-40)	40	45	49	74	0	13	54" DIA	HUDSON RIVER	REG #N-39, N-40			
NR-031	W 44TH ST (REG # N-38)	40	45	50	74	0	3	54" DIA	HUDSON RIVER	REG #N-38			
NR-032	W 46TH ST (REG # N-36)	40	45	57	74	0	8	48" DIA	HUDSON RIVER	REG #N-36, N-37			
NR-033	N/O W 48TH ST (REG # N-34, N-33)	40	45	58	73	60	53	4' X 2' 8" FT	HUDSON RIVER	REG #N-33, N-34			YES (ON N-33)
NR-034	W 50TH ST (REG # N-32)	40	46	7	74	0	5	4' X 4' FT	HUDSON RIVER	REG #N-32			
NR-035	W 56TH ST (REG # N-31)	40	46	16	73	60	43	6' X 4' 6" FT	HUDSON RIVER	REG #N-31			
NR-036	W 59TH ST (REG # N-30)	40	46	26	73	60	46	48" DIA	HUDSON RIVER	REG #N-30			
NR-037	N/O W 72ND ST (REG # N-29)	40	46	54	73	59	17	60" DIA	HUDSON RIVER	REG #N-29			
NR-038	W 80TH ST (REG # N-28)	40	47	12	73	59	5	10' 6" X 6' 0" FT	HUDSON RIVER	REG #N-28			YES
NR-039	W 91ST ST (REG # N-27)	40	47	37	73	59	47	48" DIA	HUDSON RIVER	REG #N-27			
NR-040	W 96TH ST (REG # N-26, 26A)	40	47	49	73	59	38	10' X 6' FT	HUDSON RIVER	REG #N-26, N-26A			YES (ON N-26)
NR-041	W 108TH ST (REG # N-25)	40	48	17	73	58	19	4' 0" X 4' 0"	HUDSON RIVER	REG #N-25			
NR-042	W 115TH ST (REG # N-24)	40	48	33	73	58	7	4' 6" X 4' 0"	HUDSON RIVER	REG #N-24			
NR-043	SAINT CLAIRS PLACE (REG # N-23)	40	49	5	73	58	43	DBL 8' 8" X 7'	HUDSON RIVER	REG #N-23			YES
NR-044	W 138TH ST (REG # N-22)	40	49	25	73	58	34	42" DIA	HUDSON RIVER	REG #N-22			
NR-045	ACADEMY ST (REG # N-2)	40	51	36	73	55	16	DBL 6' X 7'	HARLEM RIVER	REG #N-2			
NR-046	W 66TH ST (REG # N-29A)	40	46	39	73	59	27	10' 8" X 6' 10"	HUDSON RIVER	REG #N-29A			YES
NR-047	W 47TH ST	40	45	54	73	60	55	4' X 2' 8" FT	HUDSON RIVER	REG #N-35			

North River (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
NR-048	W 42ND ST (REG # N-40 & N-41)	40	45	44	74	0	7	DBL 8' 0" X 2' 0"	HUDSON RIVER	REG #N-40, N-41			
NR-049	W 14TH ST (REG # N-52)	40	44	33	74	1	33	6' X 4' FT	HUDSON RIVER	REG #N-52			
NR-050	BLOOMFIELD ST (REG # N-53)	40	44	27	74	1	40	3' 6" X 2' 4" EGG	HUDSON RIVER	REG #N-53			
NR-051	W 49TH ST (CSO)	40	45	59	73	60	51	DBL 12' 0" X 6' 0"	HUDSON RIVER	N/A			
NR-052	N/O W 33RD ST (REG # N-44)	40	45	24	74	0	21	4' 9" X 4' 6" FT	HUDSON RIVER	REG #N-44			
NR-055	W 207TH ST (NORTH SIDE) (REG # N-8)	40	51	47	73	55	56	36" DIA	HARLEM RIVER	REG #N-7, N-8			
NR-056	W 142ND ST (REG # N-22A)	40	49	33	73	57	18	5' X 4'	HUDSON RIVER	REG #N-22A			

Oakwood Beach

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
OB-001	OAKWOOD BEACH WRRF OUTFALL	40	32	51	74	7	45	96" DIA	LOWER NEW YORK BAY				
OB-001A	OAKWOOD BEACH WRRF PLANT BYPASS	40	32	57	74	7	53	60" DIA	LOWER NEW YORK BAY	PLANT BYPASS			

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
OB-605	450' N/O RICHMOND ROAD BRIDGE	40	34	20	74	9	52	5' X 3' 2"	RICHMOND CREEK
OB-607	SEAVIEW AVE	40	34	41	74	5	31	DBL 15' X 6'	LOWER NEW YORK BAY
OB-609	EBBITTS ST	40	33	32	74	6	58	10' X 5'	LOWER NEW YORK BAY
OB-610	TYSENS LANE	40	33	20	74	6	5	11' X 8'	LOWER NEW YORK BAY
OB-612	200' S/O FAIRLAWN AVE	40	32	45	74	8	14	42" DIA	GREAT KILLS HARBOR
OB-613	S/O WIMAN AVE	40	32	14	74	9	38	60" DIA	RARITAN BAY
OB-614	ARMSTRONG AVE	40	32	7	74	9	46	9' X 4' 6"	RARITAN BAY
OB-615	WOODS OF ARDEN ROAD	40	31	45	74	9	25	48" DIA	RARITAN BAY

Oakwood Beach (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
OB-618	S/O ELMTREE AVE	40	33	59	74	5	29	3' X 2'7"	LOWER NEW YORK BAY
OB-619	N/O NEW DORP LANE	40	33	46	74	6	39	13' X 5' 6"	LOWER NEW YORK BAY
OB-622	HOLDRIDGE PLACE	40	31	35	74	10	50	48" DIA	RARITAN BAY
OB-623	150' N/O ARBUTUS AVE	40	31	35	74	11	45	6' 6" X 6'	RARITAN BAY
OB-625	HUGUENOT AVE	40	31	12	74	11	60	42" DIA	RARITAN BAY
OB-627	BEDELL AVE	40	30	7	74	14	52	36" DIA	RARITAN BAY
OB-628	S. GOFF & STATEN ISLAND RAILROAD	40	31	21	74	13	43	18" DIA	LEMON CREEK
OB-629	STATEN ISLAND RAILROAD & W/O SHARROTT AVE	40	31	22	74	13	49	5' 8" X 3' 7"	LEMON CREEK
OB-630	STATEN ISLAND RAILROAD & W/O WOODVALE AVE	40	31	27	74	13	36	4' X 2' FT	LEMON CREEK
OB-631	15 HASTINGS COURT	40	31	26	74	12	24	48" DIA	AR-10 DEC WETLAND
OB-633	EAST DRUMGOOLE ROAD & ADDISON AVE	40	31	59	74	12	57	66" DIA	LEMON CREEK
OB-635	MAGUIRE AVE & FONDA PLACE	40	31	43	74	13	39	50" DIA	LEMON CREEK
OB-636	PAGE AVE & STATEN ISLAND RAILROAD	40	31	7	74	14	4	42" DIA	MILL CREEK
OB-638	BOSCOMBE AVE & E/O WEST SHORE EXPRESSWAY	40	31	28	74	14	36	42" DIA	MILL CREEK
OB-639	BOSCOMBE AVE & E/O WEST SHORE EXPRESSWAY	40	31	28	74	14	36	18" DIA	MILL CREEK
OB-641	ARTHUR KILL ROAD & PARK DRIVE SOUTH	40	33	51	74	11	39	48" DIA	RICHMOND CREEK
OB-642	RICHMOND AVE & N/O ARTHUR KILL ROAD	40	33	43	74	10	10	72" DIA	RICHMOND CREEK
OB-643	RICHMOND AVE & N/O ARTHUR KILL ROAD	40	33	43	74	10	10	8' X 7'	RICHMOND CREEK
OB-644	ARTHUR KILL ROAD & E/O RIDGEWOOD AVE	40	33	38	74	10	59	3'9" X 2'5"	RICHMOND CREEK
OB-645	ABINGDON AVE & N/O ARTHUR KILL ROAD	40	33	55	74	10	51	3BL 16' X 6'6"	RICHMOND CREEK
OB-645A	GREAVES AVE & ISLINGTON ST	40	33	42	74	9	1	24" DIA	AR-38 DEC WETLAND
OB-646	ARTHUR KILL ROAD & S/O TANGLEWOOD DRIVE	40	34	4	74	9	8	6' 6" X 3'	RICHMOND CREEK
OB-647	RICHMOND AVE & RICHMOND HILL ROAD	40	35	24	74	10	6	16' X 6'	SPRINGVILLE CREEK

Oakwood Beach (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
OB-648	RICHMOND AVE & RICHMOND HILL ROAD	40	35	21	74	10	4	42" DIA	SPRINGVILLE CREEK
OB-649	RICHMOND AVE & RICHMOND HILL ROAD	40	35	21	74	10	4	5' X 3'2"	SPRINGVILLE CREEK
OB-650	RICHMOND AVE & W/O RICHMOND HILL ROAD	40	35	22	74	10	5	30" DIA	SPRINGVILLE CREEK
OB-652	RICHMOND AVE & NOME AVE	40	35	27	74	10	58	6'11" X 4'5"	SPRINGVILLE CREEK
OB-653	TRAVIS AVE & DRAPER AVE	40	35	36	74	10	51	8'10" X 5'8"	SPRINGVILLE CREEK
OB-654	TRAVIS AVE & FREEDOM AVE	40	35	36	74	10	53	36" DIA	SPRINGVILLE CREEK
OB-655	TRAVIS AVE & W/O MULBERRY AVE	40	35	39	74	10	9	42" DIA	MARSH
OB-656	CLEVELAND AVE	40	32	32	74	9	32	9' X 5' 6"	GREAT KILLS HARBOR
OB-657	POILLON AVE	40	31	22	74	10	25	36" DIA	RARITAN BAY
OB-660	ROSSVILLE AVE	40	33	21	74	13	47	4' 8" X 2'	ARTHUR KILL
OB-661	ARTHUR KILL ROAD & HERVEY ST	40	33	18	74	13	5	9' 6" X 6'	ARTHUR KILL
OB-662	HUGUENOT AVE	40	33	23	74	12	11	DBL 8'10" X 6'	ARTHUR KILL
OB-663	SHARON LANE & W/O HELENE COURT	40	32	10	74	13	55	36" DIA	LEMON CREEK
OB-664	INDEPENDENCE AVE & N/O FOREST HILL ROAD	40	34	17	74	10	6	78" DIA	RICHMOND CREEK
OB-666	LUTEN AVE & EYLANDT ST & JANSEN ST	40	31	33	74	11	26	48" DIA	LEMON CREEK
OB-668	CINDRA AVE	40	32	23	74	9	34	4' X 1' 6"	GREAT KILLS HARBOR
OB-669	RICHMOND AVE	40	31	58	74	9	5	4' X 3'	RARITAN BAY
OB-670	ARDEN AVE	40	31	39	74	10	36	48" DIA	RARITAN BAY
OB-671	ARBUTUS AVE	40	31	36	74	11	50	60" DIA	RARITAN BAY
OB-672	W/O SHARROTT AVE	40	30	39	74	13	42	4' X 3' 6" EGG	MARSH
OB-673	JOLINE AVE	40	30	4	74	14	59	5' X 3'	RARITAN BAY
OB-674	SPRAGUE AVE	40	30	1	74	14	11	36" DIA	RARITAN BAY
OB-675	LORETTO AVE	40	29	58	74	14	16	13' 6" X 5'	RARITAN BAY

Oakwood Beach (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
OB-676	TRACY AVE	40	30	57	74	15	44	4' X 3'	ARTHUR KILL
OB-677	NASSAU PLACE	40	31	9	74	14	26	36" DIA	ARTHUR KILL
OB-678	SAND LANE	40	35	18	74	4	52	10' X 6'	LOWER NEW YORK BAY
OB-679	ATLANTIC AVE	40	34	54	74	4	14	DBL 10' X 6' 6"	LOWER NEW YORK BAY
OB-680	GREELEY AVE	40	34	2	74	5	21	DBL 15' X 6' 3"	LOWER NEW YORK BAY
OB-682	SEGUINE AVE	40	30	47	74	12	48	36" DIA	LEMON CREEK
OB-685	850' E/O ARTHUR KILL ROAD & PAGE AVE	40	31	47	74	14	35	48" DIA	MILL CREEK
OB-686	MAIN ST	40	30	51	74	15	6	30" DIA	ARTHUR KILL
OB-687	QUINTARD ST	40	35	18	74	4	30	10' X 6'	MARSH
OB-688	NAUGHTON AVE	40	34	30	74	5	43	DBL 10' X 6' 6"	LOWER NEW YORK BAY
OB-688A	NAUGHTON AVE	40	35	8	74	5	51	42" DIA	LAST CHANCE POND PARK MARSH
OB-689	MIDLAND AVE	40	34	7	74	5	10	8' 6" X 5'	LOWER NEW YORK BAY
OB-690	ARTHUR KILL & PAGE AVE	40	31	39	74	14	7	24" DIA	ARTHUR KILL
OB-691	MILL POND	40	34	20	74	9	37	3' X 2'6"	RICHMOND CREEK
OB-691A	RICHMOND HILL RD & MACE ST	40	34	21	74	8	40	6'0" x 2'6"	RICHMOND CREEK
OB-692	ST. ANDREWS ROAD	40	34	25	74	9	33	4' X 2'	RICHMOND CREEK
OB-693	LIGHTHOUSE AVE	40	34	25	74	8	29	18" DIA	RICHMOND CREEK
OB-694	MACE ST & LIGHTHOUSE AVE	40	34	24	74	8	23	24" DIA	RICHMOND CREEK
OB-695	ST. GEORGES ROAD	40	34	33	74	8	1	4' X 2'	RICHMOND CREEK
OB-696	BOYLE PLACE / NUGENT ST	40	34	35	74	8	60	5' X 3'	RICHMOND CREEK
OB-697	MEISNER AVE & LIGHTHOUSE AVE	40	34	58	74	8	51	36" DIA	RICHMOND CREEK
OB-698	BOOTH AVE	40	32	10	74	11	34	5' X 3'2"	BLUE HERON
OB-699	EYLANDT ST	40	31	58	74	10	24	5'8" X 3'7"	BLUE HERON

Oakwood Beach (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
OB-700	KOCH POND	40	32	2	74	10	5	3'9" X 2'5"	BLUE HERON
OB-701	SHIRLEY AVE	40	31	48	74	10	15	4'5" X 2'10"	BLUE HERON
OB-702	NEWTON ST	40	31	41	74	10	20	3'9" X 2'5"	BLUE HERON
OB-703	DOLE ST	40	31	39	74	10	18	18" DIA	BLUE HERON
OB-704	POILLON AVE	40	31	46	74	11	34	30" DIA	BLUE HERON
OB-705	BENNETT POND	40	32	8	74	11	15	3'9" X 2'6"	ARBUTUS CREEK
OB-706	PHILIP AVE	40	32	1	74	11	51	3'9" X 2'5"	ARBUTUS CREEK
OB-707	HUGUENOT POND	40	31	50	74	11	24	3'9" X 2'5"	ARBUTUS CREEK
OB-708	ANDROVETTE POND	40	31	34	74	11	23	4' X 2'8"	ARBUTUS CREEK
OB-709	LUTEN POND	40	31	29	74	11	19	6'4" X 4"	MARSH
OB-710	SALA COURT	40	31	56	74	11	11	3'2" X 2'	ARBUTUS CREEK
OB-711	RUGGLES ST	40	32	0	74	11	59	18" DIA	MARSH
OB-712	CONVENT AVE	40	32	25	74	13	48	6'11" X 4'5"	LEMON CREEK
OB-713	EDGEGROVE AVE	40	32	1	74	12	28	4' X 2'	LEMON CREEK
OB-714	DARLINGTON AVE	40	31	58	74	12	27	3' 2" X 2'	LEMON CREEK
OB-715	MAGUIRE AVE	40	31	56	74	13	40	4' X 2'	LEMON CREEK
OB-716	FOSTER ROAD	40	31	39	74	12	6	5' X 3' 2"	LEMON CREEK
OB-717	AMBOY ROAD	40	31	31	74	13	33	4'5" X 2'10"	LEMON CREEK
OB-718	BAYVIEW AVE	40	31	11	74	12	16	5' X 2'6"	LEMON CREEK
OB-719	BAYVIEW AVE	40	31	17	74	12	17	4' X 4'	LEMON CREEK
OB-720	KOREAN WAR VETERANS MEMORIAL PARKWAY	40	32	2	74	12	57	60" DIA	WOLFE'S POND
OB-721	CHISHOLM AVE	40	31	33	74	12	35	8'10" X 5'8" EGG	WOLFE'S POND
OB-722	CLERMONT AVE / FINLAY ST	40	30	3	74	15	52	DBL 7'3" X 3'6"	RARITAN BAY

Oakwood Beach (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
OB-723	HOPKINS AVE	40	33	21	74	8	43	36" DIA	GREAT KILLS HARBOR
OB-724	BAY TERRACE	40	33	8	74	8	58	66" DIA	GREAT KILLS HARBOR
OB-725	CLARK AVE & ARUTHUR KILL RD	40	34	16	74	9	52	7' 3" X 3' 6"	MARSH
OB-726	REDGRAVE AVE	40	33	4	74	8	3	24" DIA	GREAT KILLS
OB-727	NE/O AINSWORTH AVE	40	33	1	74	8	8	36" DIA	GREAT KILLS
OB-728	VETERANS RD W AND TYRELLAN AVE	40	31	39	74	14	34	15"	MARSH
OB-729	BILLIOU ST AND STECHER ST	40	31	55	74	11	13	90" X 42"	POND
OB-730	ITHACA ST AND HYLAN BLVD	40	33	33	74	7	17	42"	STREAM WIDER THAN 8 FEET
OB-731	HYLAN BLVD AND BUFFALO ST	40	33	24	74	8	39	42"	MARSH
OB-732	STOBE AVE AND ZOE ST	40	35	3	74	6	0	72" X 48"	RIVER
OB-733	MASON AV & BEDFORD AVE	40	34	33	75	34	13	10' X 3'	Stream wider than 8 feet
OB-734	N/O Patten Street	40	30	37	75	30	48	12"" DIA	ARTHUR KILL
OB-735	SOUTH BRIDGE STREET	40	31	28	75	31	24	36"" DIA	ARTHUR KILL
OB-736	HYLAN BOULEVARD & BERMUDA PLACE	40	34	56	75	34	12	24"" DIA	River Stream
OB-737	HYLAN BOULEVARD & BERMUDA PLACE	40	34	57	75	34	10	24"" DIA	Pond
OB-738	PURDY PLACE	40	30	45	75	30	22	5' X 3'	LEMON CREEK
OB-739	AMBOY ROAD	40	31	10	75	31	17	12"" DIA	MARSH
OB-740	HYLAN BLVD & BUFFALO STREET	40	31	12	75	52	22	20" DIA	GREAT KILLS HARBOR
OB-741	AULTMAN AVE & ST GEORGE RD	40	34	31	74	8	13	18" DIA	LIGHTHOUSE HILL STREAM
OB-742	SIGNS ROAD	40	36	9	75	36	42	36""DIA	MARSH
OB-743	NUGENT STREET	40	34	38	75	34	6	3.5' X 3'	Stream wider than 8 feet
OB-744	LINCOLN AVENUE	40	34	32	75	34	55	60""DIA	Stream wider than 8 feet
OB-745	AMBOY ROAD	40	31	16	75	31	56	24""DIA	MARSH

Oakwood Beach (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
OB-746	OCEANIC AVENUE	40	31	58	75	31	58	20""DIA	RARITAN BAY
OB-747	GRANTWOOD AVENUE	40	33	18	75	33	2	48""DIA	MARSH
OB-748	HUGUENOT AVENUE	40	31	30	75	31	47	15""DIA	MARSH
OB-749	IONIA AVENUE	40	32	30	75	32	0	4.5' X 11'	Stream wider than 8 feet
OB-750	KINGDOM AVENUE	40	31	35	75	31	51	24""DIA	MARSH
OB-751	COLON STREET	40	31	51	75	31	50	20""DIA	Stream wider than 8 feet
OB-752	SHOTWELL AVE	40	33	18	75	49	5	42" DIA	ARDEN HEIGHTS WOODS MARSH
OB-753	LIPSETT AVENUE	40	32	4	75	32	33	30""DIA	MARSH
OB-754	EDGEGROVE AVENUE	40	32	30	75	32	4'	4.5' X 11'	Stream wider than 8 feet
OB-755	CARLTON BOULEVARD & JEFFERSON BOULEVARD	40	32	34	75	32	13	20""DIA	Stream wider than 8 feet
OB-756	WOODROW ROAD & SHOTWELL AVENUE	40	33	21	75	33	4	20""DIA	MARSH
OB-757	SHELDON AVENUE	40	32	37	75	32	43	7.6' X 5.8'	MARSH
OB-758	FINGAL STREET	40	32	11	75	32	39	20""DIA	MARSH
OB-759	ARDEN AVENUE & SNEDEN AVE	40	32	29	75	32	45	20""DIA	Pond
OB-760	ARDEN AVENUE & SNEDEN AVE	40	32	29	75	32	45	2.5' X 1.6'	Pond
OB-761	LACONIA AVENUE	40	34	52	75	34	20	12"" DIA	River Stream
OB-762	MASON AVENUE	40	34	48	75	34	26	42"" DIA	River Stream
OB-764	GRAHAM BOULEVARD	40	34	31	75	34	51	45"" DIA	River Stream
OB-765	MILL CREEK	40	31	15	74	13	19	5' x 3'	MILL CREEK
OB-766	ARDEN AVE	40	32	46	74	10	47	48" DIA	ANNADALE STREAM
OB-767	ARDEN AVE	40	32	46	74	10	47	48" DIA	ANNADALE STREAM
OB-768	ARDEN AVE	40	32	48	74	10	42	12" DIA	ANNADALE STREAM
OB-769	GRANTWOOD AVE	40	32	53	74	10	33	36" DIA	ANNADALE STREAM

Oakwood Beach (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
OB-770	GRANTWOOD AVE	40	32	53	74	10	32	24" DIA	ANNADALE STREAM
OB-771	ARTHUR KILL ROAD	40	34	20	74	8	48	18" DIA	LATOURETTE PARK RIVER
OB-772	SHADYSIDE AVE & WOODVALE AVE	40	31	17	74	12	29	10" DIA	LEMON CREEK MARSH
OB-773	BAYVIEW AVENUE	40	31	18	74	12	17	4' X 4'	LEMON CREEK
OB-774	GOFF AVE	40	31	40	74	12	46	38" x 24"	MARSH
OB-775	BALSAM PL & GERVIL ST	40	32	54	74	12	45	48" DIA	WOODBROOKE ESTATES COMMUNITY PARK STREAM
OB-776	MAGUIRE AVE & MC BAINE AVE	40	32	35	74	12	42	6.3' x 2'	ROSSVILLE POND
OB-777	HUGUENOT AVE & ARTHUR KILL RD	40	33	20	74	12	10	6.3' x 4'	ARTHUR KILL STREAM
OB-778	LEMON CREEK PARK	40	31	6	74	11	57	4'2" x 2'	LEMON CREEK MARSH
OB-779	BMP LC-15 (Lemon Creek)	40	31	22	74	12	4	30" DIA	LEMON CREEK MARSH
OB-780	BMP LC-17 (Lemon Creek)	40	31	22	74	12	0	4' X 3'	LEMON CREEK MARSH
OB-781	BMP LC-18 (Lemon Creek)	40	31	12	74	12	0	4'2" x 2'	LEMON CREEK MARSH
OB-782	FOREST HILL RD & YUKON AVE	40	34	26	74	9	49	18" DIA	LATOURETTE PARK STREAM
OB-783	ROBERTS DRIVE	40	33	32	74	6	41	30" DIA	GREAT KILLS PARK MARSH
OB-784	HYLAN BLVD	40	31	25	74	11	15	15" DIA	WOLFE'S POND PARK MARSH
OB-785	LUTEN AVE	40	31	26	74	11	21	3.75' x 2.4'	WOLFE'S POND PARK MARSH
OB-786	BARCLAY AVE & SANDBORN ST	40	31	59	74	10	17	12" DIA	BLUE HERON PARK POND
OB-787	MERRICK AVE DEAD END	40	36	6	74	6	29	24" DIA	POND
OB-788	RICHMOND RD & INDEPENDENCE AVE	40	34	25	74	10	13	24" DIA	MARSH
OB-789	RICHMOND RD & FOREST HILL RD	40	34	17	74	10	13	24" DIA	MARSH
OB-790	ROSSVILLE AVE	40	32	35	74	12	31	8" DIA	AR105 DEC WETLAND
OB-791	MERRICK AVE DEAD END	40	36	6	74	6	29	24" DIA	Reed's Basket Willow Swamp Park
OB-792	OLYMPIA BLVD & BUEL AVE	40	34	52	74	5	8	36" DIA	NA-9 DEC WETLAND

Oakwood Beach (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
OB-793	ITHACA ST & HYLAN BLVD	40	33	33	74	7	16	42" DIA	NA-10 DEC WETLAND
OB-794	LOUISE ST	40	31	41	74	10	56	45" x 29"	AR-12 DEC WETLAND
OB-795	PLATINUM AVE & RICHMOND AVE	40	34	47	74	10	11	34" x 53"	FRESH KILLS MARSH
OB-796	160' NW/O ARTHUR KILL RD AND ERIKA LOOP	40	33	53	74	11	9	48" DIA	FRESH KILLS MARSH
OB-797	KYLE CT & ARDEN AVE	40	33	29	74	11	48	12" DIA	AR-5 DEC WETLAND
OB-798	ARDEN AV (200' NW/O HALPIN AV)	40	33	4	74	11	21	36"DIA	AR-5 DEC WETLAND
OB-799	FAIRLAWN AVE	40	32	49	74	8	13	24" DIA	GREAT KILLS HARBOR
OB-1600	BROOK AVE (120' NE/O FARIBANKS AVE)	40	33	23	74	7	19	36" DIA	NA-10 DEC WETLAND
OB-1601	WOODROW RD (300' SW/O ERIKA LOOP)	40	33	21	74	10	58	24" DIA	AR-5 DEC WETLAND
OB-1602	PEMBROOK LOOP	40	32	6	74	13	12	36" DIA	AR-10 DEC WETLAND
OB-1603	ALVERSON AVE & POND ST	40	33	9	74	12	35	24" x 38"	POND
OB-1604	SHARON LANE	40	32	9	74	12	53	36" DIA	AR-10 DEC WETLAND
OB-1605	IONIA AVE	40	32	43	74	10	50	120" x 30"	AR-28 DEC WETLAND
OB-1606	ALVERSON AVE & AARON LANE	40	33	18	74	12	39	12" DIA	Arthur Kill and minor tribs
OB-1607	GRASMERE LAKE	40	36	15	74	4	42	18" DIA	NA-4 DEC WETLAND
OB-1608	263 MACE ST	40	34	26	74	8	17	15" DIA	AR-3 DEC WETLAND
OB-1609	CODY PLACE (175' S/O ARTHUR KILL RD)	40	33	20	74	12	8	128" x 82"	Arthur Kill and minor tribs
OB-1610	COMMODORE DR	40	30	47	74	12	4	36" DIA	RARITAN BAY
OB-1611	CODY PLACE	40	33	18	74	12	2	90" DIA	Arthur Kill and minor tribs
OB-1612	MADSEN AVE & RICHMOND VALLEY RD	40	31	14	74	14	2	5' X 3' 6"	MILL CREEK
OB-1613	115' N/O ALEXANDER AVE AND WOODROW RD	40	33	30	74	10	50	2' x 4'	AR-5 DEC WETLAND
OB-1614	HYLAN BLVD	40	30	32	74	13	16	6' X 3'	AR-15 DEC WETLAND
OB-1615	HYLAN BLVD	40	30	31	74	13	22.97	30" DIA	AR-15 DEC WETLAND
OB-1616	HYLAN BLVD	40	30	35	74	13	3	24" DIA	MARSH

Owls Head

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
OH-001	OWLS HEAD WRRF OUTFALL	40	38	31	74	2	14	96" DIA	UPPER NEW YORK BAY				
OH-002	64TH ST (REG #6A,B,C)	40	38	42	74	2	51	3BL 7' 6" X 8' 10"	UPPER NEW YORK BAY	REG #6A, 6B, 6C			YES (ON 6C)
OH-003	49TH ST (REG #7A,B,C)	40	39	10	74	1	17	11' X 8' FT	UPPER NEW YORK BAY	REG #7A, 7B, 7C			YES (ON 7A)
OH-004	43RD ST (REG #7D)	40	39	20	74	1	1	6' X 4'	UPPER NEW YORK BAY	REG #7D, 19TH ST. PS			YES
OH-005	CARROLL ST BRIDGE	40	40	41	73	59	20	42" DIA	GOWANUS CANAL	3RD AVE SEWER RELIEF			
OH-006	19TH ST (NORTH SIDE)	40	40	3	74	0	2	36" DIA	GOWANUS CANAL	3RD AVE SEWER RELIEF			
OH-007	2ND AVE	40	40	32	73	59	27	78" DIA	GOWANUS CANAL	2ND AVE P.S.			
OH-015	17TH AVE (REG #9A, B, C)	40	36	5	74	1	44	4BL 14' 6" X 10'	GRAVESEND BAY	REG #9A, 9B, 9C			YES (ON 9A & 9B)
OH-017	92ND ST (REG #1)	40	37	14	74	2	30	3BL 7' 4" X 7' 4"	UPPER NEW YORK BAY	REG #1			YES
OH-018	79TH ST (REG #3)	40	37	54	74	2	25	12' X 7'	UPPER NEW YORK BAY	REG #2, 3			YES (ON 3)
OH-019	71ST ST (REG #4)	40	38	13	74	2	16	48" DIA	UPPER NEW YORK BAY	REG #4			YES
OH-020	BAY RIDGE AVE (REG #5)	40	38	21	74	2	12	3' X 3' FT	UPPER NEW YORK BAY	REG #5			
OH-021	W 15TH ST	40	34	60	73	59	2	3BL 15' X 9' 9"	CONEY ISLAND CREEK	REG #10, 11, AVE.V P.S.	YES		YES (ON 10 & 11)
OH-022	32ND ST (BUSH TERMINAL COMPLEX)	40	39	36	74	0	29	11' X 6' FT	GOWANUS BAY	2ND AVE SEWER RELIEF			
OH-024	23RD ST	40	39	49	74	0	1	3' 6" X 2' 3"	GOWANUS BAY	3RD AVE SEWER RELIEF			
OH-025	29TH ST (BUSH TERMINAL COMPLEX)	40	39	43	74	0	23	66" DIA	GOWANUS BAY	BUSH TERMINAL PS			
OH-026	22ND ST	40	39	51	73	60	59	36" DIA	GOWANUS BAY	3RD AVE SEWER RELIEF			

Owls Head (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
OH-606	W 15TH ST	40	35	0	73	59	2	5' X 5'	CONEY ISLAND CREEK
OH-610	20TH AVE	40	35	51	74	0	20	3' 6" X 3' 6" FT	GRAVESEND BAY
OH-611	BAY PARKWAY	40	35	39	74	0	7	60" DIA	GRAVESEND BAY
OH-612	25TH AVE	40	35	24	73	60	55	8' X 8'	GRAVESEND BAY
OH-613	15TH AVE	40	36	9	74	1	7	24" DIA	GRAVESEND BAY
OH-614	27TH AVE (S/O BELT PARKWAY)	40	35	14	73	60	33	54" DIA	GRAVESEND BAY
OH-615	BAY 43RD ST (S/O BELT PARKWAY)	40	35	20	73	60	35	5' 6" X 5' 6"	GRAVESEND BAY
OH-616	21ST ST	40	39	55	74	0	3	24" DIA	GOWANUS BAY
OH-619	39TH ST	40	39	27	74	0	52	48" DIA	UPPER NEW YORK BAY
OH-620	E/O 9TH STREET	40	40	27	73	60	47	42" DIA	GOWANUS CANAL

Port Richmond

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
PR-001	PORT RICHMOND WRRF OUTFALL	40	38	29	74	7	29	96" DIA	KILL VAN KULL				
PR-002	E/O TAYLOR ST	40	38	24	74	7	27	20" DIA	KILL VAN KULL	REG #R-34			
PR-003	BROADWAY	40	38	30	74	7	7	15" DIA	KILL VAN KULL	REG #R-33			
PR-004	BARD AVE	40	38	44	74	7	32	18" DIA	KILL VAN KULL	REG #R-29			
PR-005	30' N/O KISSEL AVE	40	38	44	74	6	24	20" DIA	KILL VAN KULL	REG #R-28			
PR-006	CLINTON AVE	40	38	43	74	6	54	36" DIA	KILL VAN KULL	REG #R-23			
PR-007	SAILOR SNUG HARBOR (BRENTWOOD AVE)	40	38	44	74	6	7	15" DIA	KILL VAN KULL	REG #R-27			
PR-008	FRANKLIN AVE	40	38	46	74	6	35	15" DIA	KILL VAN KULL	REG #R-21			
PR-009	JERSEY ST	40	38	50	74	5	22	6' X 4'6"	KILL VAN KULL	REG #R-20			

Port Richmond (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
PR-010	ST. PETERS PLACE	40	38	55	74	5	3	30" DIA	UPPER NEW YORK BAY	REG #R-19			
PR-011	HAMILTON AVE	40	38	49	74	5	36	30" DIA	UPPER NEW YORK BAY	REG #R-18			
PR-013	VICTORY BOULEVARD	40	38	17	74	4	21	7' 1" X 4' 1"	UPPER NEW YORK BAY	REG #R-17			
PR-014	BALTIC ST	40	37	51	74	4	23	DBL 6'2" X 3'6"	UPPER NEW YORK BAY	REG #R-15			
PR-015	S/O DOCK ST	40	37	33	74	4	21	3' 6" X 2' 4"	UPPER NEW YORK BAY	REG #R-11			
PR-016	MARINE HOSPITAL	40	37	28	74	4	20	20" DIA	UPPER NEW YORK BAY	REG #R-10			
PR-017	NORWOOD AVE	40	37	21	74	4	14	48" DIA	UPPER NEW YORK BAY	REG #R-9			
PR-018	N/O CAMDEN ST	40	37	15	74	4	9	36" DIA	UPPER NEW YORK BAY	REG #R-8			
PR-019	LYNHURST AVE	40	37	10	74	4	2	13' X 6' FT	UPPER NEW YORK BAY	REG #R-7			YES
PR-020	N/O SYLVA LANE	40	37	2	74	4	53	15" DIA	UPPER NEW YORK BAY	REG #R-5			
PR-021	HYLAN BOULEVARD	40	36	56	74	4	47	10" DIA	UPPER NEW YORK BAY	REG #R-4			
PR-023	NAUTILUS ST	40	36	43	74	4	35	6'6" X 5'11"	UPPER NEW YORK BAY	REG #R-3			
PR-023A	NAUTILUS ST	40	36	43	74	4	36	20" DIA	UPPER NEW YORK BAY	REG #R-2			
PR-023B	NAUTILUS ST	40	36	43	74	4	36	20" DIA	UPPER NEW YORK BAY	REG #R-1			
PR-024	W/O HOLLAND AVE	40	38	41	74	10	18	16" DIA	KILL VAN KULL	REG #R-1W			
PR-025	SOUTH AVE	40	38	28	74	10	57	10" DIA	KILL VAN KULL	REG #R-2W			
PR-026	HARBOR ROAD	40	38	18	74	10	37	52" DIA	KILL VAN KULL	REG #R-3W			
PR-027	UNION AVE	40	38	17	74	9	28	12" DIA	KILL VAN KULL	REG #R-4W			
PR-028	HOUSEMAN AVE	40	38	15	74	9	55	DBL 5' 11-1/2" X 2'9"	KILL VAN KULL	REG #R-5W			
PR-029	NICHOLAS ST	40	38	27	74	8	21	DBL 8' 6" X 6'	KILL VAN KULL	REG #R-6W			YES
PR-030	SYLVATON TERRANCE	40	37	5	74	4	55	16" DIA	UPPER NEW YORK BAY	REG #R-6			
PR-031	CANAL ST	40	37	37	74	4	22	DBL 3'1" X 3'6"	UPPER NEW YORK BAY	REG #13			YES
PR-032	VICTORY BOULEVARD	40	38	14	74	4	14	24" DIA	UPPER NEW YORK BAY	REG #16			

Port Richmond (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
PR-033	ELIZABETH AVE	40	38	38	74	7	47	12" DIA	KILL VAN KULL	REG #R-31			
PR-034	BEMENT AVE	40	38	37	74	7	50	12" DIA	KILL VAN KULL	REG #R-32			
PR-035	BODINE ST	40	38	25	74	8	34	18" DIA	KILL VAN KULL	REG #R-35			YES
PR-036	RECTOR ST	40	38	15	74	8	40	9' X 4'	KILL VAN KULL	REG #R-36			
PR-037	PORT RICHMOND AVE	40	38	28	74	8	52	5' X 3'	KILL VAN KULL	REG #R-37			

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
PR-603	DAVIS AVE	40	38	42	74	7	39	84" DIA	KILL VAN KULL
PR-612	SIGNS ROAD (100' W/O DINSMORE ST)	40	36	8	74	10	18	DBL 12' X 5' 6"	MAIN CREEK
PR-613	RECTOR ST	40	38	15	74	8	40	DBL13' 10" X 5' 4"	KILL VAN KULL
PR-614	CLOVE ROAD	40	37	6	74	6	29	7' X 4' 8"	CLOVE LAKE
PR-615	LOGAN AVE	40	36	56	74	6	23	8' 10" X 5' 8"	CLOVE LAKE
PR-616	MANOR ROAD	40	36	53	74	7	26	36" DIA	CLOVE LAKE
PR-617	CLOVE ROAD	40	37	23	74	7	5	42" DIA	MARTLING LAKE
PR-618	FOREST AVE	40	37	39	74	7	21	36" DIA	BROOKS LAKE
PR-619	FOREST AVE	40	37	39	74	7	22	12' X 5'6"	BROOKS LAKE
PR-621	GARRICK ST	40	37	21	74	10	16	DBL 16' X 6'6"	OLD PLACE CREEK
PR-622	END OF SWAN ST AND MURRAY HULBERT AV	40	38	6	74	4	23	21" DIA	KILL VAN KULL
PR-623	RICHMOND TER AND TOMPKINS CT	40	38	26	74	7	21	96" X 60"	KILL VAN KULL
PR-624	BEMENT AVE AND RICHMOND TER	40	38	37	74	7	50	48"	KILL VAN KULL
PR-625	RICHMOND TERRACE & BROADWAY	40	38	26	75	38	54	10' X 4.5'	KILL VAN KULL
PR-626	KILL VAN KULL SHORELINE	40	38	43	75	54	5	12" DIA	KILL VAN KULL

Port Richmond (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
PR-627	LAFAYETTE AVENUE	40	38	43	75	38	14	54" DIA	Stream wider than 8 feet
PR-628	FOREST HILL ROAD	40	35	58	75	35	35	18" DIA	Pond
PR-629	HIRSCH LANE	40	36	53	75	36	53	12" DIA	MARSH
PR-630	GRAHAM AVENUE	40	36	50	75	36	51	12" DIA	MARSH
PR-631	MEREDITH AVENUE	40	35	55	75	35	28	18" DIA	MARSH
PR-632	FOREST HILL RD & FIELD ST	40	35	38	74	8	36	3.75' x 2.4'	WILLOWBROK WETLAND
PR-633	WESTBURY AVE & HENDERSON AVE	40	38	21	74	6	14	"96"" X 84""	SNUG HARBOR
PR-634	AVON LN & WILLARD PL	40	36	54	74	8	7	53" x 34"	POND
PR-635	5 CHESHIRE PLACE	40	37	16	74	6	8	18" DIA	VALLEY LAKE
PR-636	LOGAN AVE	40	36	56	74	6	23	84" x 74"	NA-1 DEC WETLAND
PR-637	GOETHALS RD N	40	37	25	74	10	25	15" DIA	E-3 DEC WETLAND
PR-638	MARTLING LAKE	40	37	22	74	7	7	30" DIA	NA-1 DEC WETLAND
PR-639	WATCHOGUE ROAD & VOGEL LOOP	40	36	54	74	7	57	18" DIA	WATCHOGUE ROAD
PR-640	2800 VICTORY BOULEVARD	40	36	24	74	9	8	4 pipes of 10"	STREAM
PR-641	MEREDITH AVE & NECK CREEK	40	35	47	74	11	26	96" x 72"	NECK CREEK
PR-642	136 LIVINGSTON AVE	40	36	8	74	7	43	76" x 48"	STREAM
PR-643	WEST SHORE PLAZA (230' NE/O MEREDITH AVE)	40	35	59	74	11	31	53" x 34"	AR-52 DEC WETLAND
PR-644	66 SIDEVIEW AVE	40	36	23	74	10	3	24" DIA	STREAM
PR-645	WESTWOOD AVE & HAWTHORNE AVE	40	36	24	74	8	59	30" DIA	STREAM

Red Hook

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
RH-001	RED HOOK WRRF OUTFALL	40	42	15	73	59	38	96" DIA	NAVY YARD BASIN				
RH-002	HUDSON AVE (REG # R-21A)	40	42	21	73	59	52	15" DIA	EAST RIVER	REG #R-21A			YES
RH-003	HUDSON AVE (REG # R-21)	40	42	21	73	59	52	4' 6" X 7' 3"	EAST RIVER	REG #R-21			
RH-005	GOLD ST (REG # R-20A)	40	42	20	73	59	57	168" DIA	EAST RIVER	REG #R-20A			YES
RH-006	PEARL ST (REG # R-19A)	40	42	19	73	59	15	36" DIA	EAST RIVER	REG #R-19A			
RH-007	ADAMS ST (REG # R-19)	40	42	16	73	59	18	15" DIA	EAST RIVER	REG #R-19			
RH-008	WASHINGTON ST (REG # R-18A)	40	42	18	73	59	23	60" DIA	EAST RIVER	REG #R-18A			
RH-009	MAIN ST (REG # R-18)	40	42	16	73	59	26	2' X 2'	EAST RIVER	REG #R-18			
RH-010	ORANGE ST (REG # R-16)	40	42	0	73	60	50	18" DIA	EAST RIVER	REG #R-16			
RH-011	MONTAGUE ST (REG # R-15)	40	41	46	73	60	59	4' 0" X 4' 0"	EAST RIVER	REG #R-15			
RH-012	CADMAN PLAZA (REG # R-17)	40	42	11	73	60	42	6' X 6' FT	EAST RIVER	REG #R-17			
RH-013	JORALEMON ST (REG # R-14)	40	41	39	74	0	4	18" DIA	EAST RIVER	REG #R-14			
RH-014	ATLANTIC AVE (REG # R-13)	40	41	29	74	0	3	24" DIA	BUTTERMILK CHANNEL	REG #R-13			
RH-016	AMITY ST (REG # R-12)	40	41	26	74	0	3	8' 6" X 8' 6"	BUTTERMILK CHANNEL	REG #R-12			
RH-018	KANE ST (REG # R-11)	40	41	20	74	0	15	5' 7" X 3' 9"	BUTTERMILK CHANNEL	REG #R-11			
RH-019	HAMILTON AVE (REG # R-9)	40	41	11	74	0	29	72" DIA	BUTTERMILK CHANNEL	REG #R-9	(HAMILTON AVE PS?)		
RH-020	DEGRAW ST (REG # R-10)	40	41	12	74	0	20	18" DIA	BUTTERMILK CHANNEL	REG #R-10			
RH-021	SACKETT ST (REG # R-9A)	40	41	13	74	0	27	48" DIA	BUTTERMILK CHANNEL	REG #R-9A			
RH-022	S/O BOWNE ST (REG # R-8)	40	40	60	74	1	35	24" DIA	BUTTERMILK CHANNEL	REG #R-8			
RH-023	COMMERCE ST (REG # R-7)	40	40	57	74	1	38	24" DIA	BUTTERMILK CHANNEL	REG #R-7			
RH-024	VERONA ST (REG # R-6)	40	40	53	74	1	43	24" DIA	BUTTERMILK CHANNEL	REG #R-6			
RH-025	PIONEER ST (REG # R-5)	40	40	50	74	1	47	30" DIA	BUTTERMILK CHANNEL	REG #R-5			
RH-028	WOLCOTT ST (REG # R-2)	40	40	50	74	1	4	72" DIA	BUTTERMILK CHANNEL	REG #R-2			YES

Red Hook (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
RH-029	VAN BRUNT ST (REG # R-1)	40	40	25	74	1	2	24" DIA	UPPER NEW YORK BAY	REG #R-1, VAN BLANT ST. PS			
RH-030	HICKS ST	40	40	7	74	0	26	54" DIA	GOWANUS BAY	CSO-2			
RH-030A	W/O HENRY ST	40	40	7	74	0	25	54" DIA	GOWANUS BAY	CSO-2			
RH-031	CREAMER ST	40	40	17	73	60	56	72" DIA	GOWANUS CANAL	BOND-LORRAINE SWR RELIEF			
RH-033	DOUGLASS ST (REG # R-25)	40	40	53	73	59	13	42" DIA	GOWANUS CANAL	REG #R-25	YES		
RH-034	HEAD OF GOWNAUS CANAL (GOWANUS PUMPING STATION)	40	40	54	73	59	13	4BL 10' X 10'	GOWANUS CANAL	GOWANUS PS	YES		
RH-035	BOND ST	40	40	34	73	60	33	DBL 24" DIA	GOWANUS CANAL	CSO-3, BOND-LORRAINE SWR RELIEF			
RH-036	PRESIDENT ST (REG # R-23)	40	40	44	73	59	19	18" DIA	GOWANUS CANAL	REG #R-22			
RH-037	SACKETT ST (REG # R-23)	40	40	48	73	59	16	18" DIA	GOWANUS CANAL	REG #R-23			
RH-038	DEGRAW ST (REG # R-24)	40	40	51	73	59	14	12' 0" X 5' 2-1/2"	GOWANUS CANAL	REG #R-24			
RH-040	EAST RIVER & NAVY YARD	40	42	12	73	59	39	72" DIA	NAVY YARD BASIN	REG #R-26			

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
RH-602	SULLIVAN ST	40	40	51	74	1	1	15" DIA	BUTTERMILK CHANNEL
RH-603	BEACH 5TH ST	40	35	46	73	44	26	18" DIA	GOWANUS CANAL
RH-604	1 ST AND DEAD END BY GOWANUS CANAL	40	40	39	73	59	22	30" DIA	GOWANUS CANAL

Rockaway

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
ROC-001	ROCKAWAY WRRF OUTFALL	40	35	4	73	50	47	72" DIA	GRASS HASSOCK CHANNEL				
ROC-001A	ROCKAWAY WRRF DISINFECTION SYSTEM BYPASS	40	35	5	73	50	44	72" DIA	GRASS HASSOCK CHANNEL	PLANT DISINFECTION SYSTEM BYPASS			
ROC-001B	BEACH 106TH ST	40	35	5	73	50	43	72" DIA	GRASS HASSOCK CHANNEL	REG #1, 2, EMERGENCY BYPASS			YES (ON 1 & 2)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
ROC-601	BEACH 5TH ST	40	35	46	73	44	26	42" DIA	HEMPSTEAD BAY
ROC-611	BEACH 147TH ST	40	34	29	73	52	55	48" DIA	ROCKAWAY INLET
ROC-614	BEACH 145TH ST	40	34	32	73	52	49	48" DIA	ROCKAWAY INLET
ROC-617	BEACH 141ST ST	40	34	38	73	52	38	48" DIA	ROCKAWAY INLET
ROC-618	BEACH 140TH ST	40	34	40	73	52	35	20" DIA	ROCKAWAY INLET
ROC-619	BEACH 139TH ST	40	34	41	73	52	33	48" DIA	ROCKAWAY INLET
ROC-624	BEACH 136TH ST	40	34	45	73	51	24	60" DIA	ROCKAWAY INLET
ROC-625	BEACH 130TH ST	40	34	54	73	51	8	7' 7" X 4' 10"	ROCKAWAY INLET
ROC-627	BEACH 126TH ST	40	34	56	73	51	54	54" DIA	ROCKAWAY INLET
ROC-629	BEACH 121ST ST	40	34	54	73	51	35	5' X 3' 2"	ROCKAWAY INLET
ROC-630	BEACH 118TH ST	40	34	54	73	50	25	8' X 6' 6"	ROCKAWAY INLET
ROC-631	BEACH 106TH ST	40	35	5	73	50	43	60" DIA	GRASS HASSOCK CHANNEL
ROC-633	BEACH 74TH ST	40	35	33	73	48	9	12' 6" X 4' FT	VERNAM BASIN
ROC-634	ELIZABETH AVE	40	35	43	73	48	13	24" DIA	VERNAM BASIN
ROC-635	ELIZABETH AVE	40	35	46	73	47	21	42" DIA	SOMMERVILLE BASIN
ROC-636	THURSBY AVE	40	35	43	73	47	21	DBL 7' X 4'	SOMMERVILLE BASIN
ROC-637	BEACH 40TH ST	40	35	56	73	46	26	7' X 5'	GRASS HASSOCK CHANNEL

Rockaway (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
ROC-638	BEACH 38TH ST	40	35	54	73	46	16	54" DIA	GRASS HASSOCK CHANNEL
ROC-641	EGMONT PLACE	40	36	44	73	46	54	54" DIA	NEGRO BAR CHANNEL
ROC-648	BEACH 49TH ST	40	35	49	73	47	48	8' 6" X 5' FT	CONCH BASIN
ROC-649	ALAMEDA AVE	40	35	52	73	47	53	66" DIA	CONCH BASIN
ROC-651	FAR ROCKAWAY BOULEVARED	40	35	53	73	46	5	DBL 12' 9" X 6'	GRASS HASSOCK CHANNEL
ROC-652	DICKENS ST	40	36	37	73	46	35	24" DIA	NEGRO BAR CHANNEL
ROC-653	BEACH 77TH ST	40	35	29	73	48	16	7' 6" X 4' 6"	BARBADOES BASIN
ROC-656	BEACH 87TH ST	40	35	29	73	49	46	18" DIA	GRASS HASSOCK CHANNEL
ROC-657	BEACH 84TH ST	40	35	32	73	49	35	11' X 4' 6"	GRASS HASSOCK CHANNEL
ROC-658	BEACH 72ND ST	40	35	57	73	48	5	12" DIA	GRASS HASSOCK CHANNEL
ROC-659	BEACH 68TH ST	40	35	58	73	48	52	16" DIA	GRASS HASSOCK CHANNEL
ROC-666	CHURCH ROAD	40	36	16	73	49	5	18" DIA	BROAD CHANNEL
ROC-667	CHURCH ROAD	40	36	19	73	49	5	24" DIA	BROAD CHANNEL
ROC-670	FALCON AVE	40	35	54	73	46	7	9' X 4' FT	GRASS HASSOCK CHANNEL
ROC-671	BEACH 127TH ST	40	34	56	73	51	57	5' 8" X 3' 7"	ROCKAWAY INLET
ROC-672	BEACH 125TH ST	40	34	55	73	51	50	5' X 3' 2"	ROCKAWAY INLET
ROC-674	BEACH 136TH ST	40	34	47	73	51	22	5' X 3' 2"	ROCKAWAY INLET
ROC-675	BEACH 134TH ST	40	34	48	73	51	19	5' X 3' 2"	ROCKAWAY INLET
ROC-676	BEACH 132ND ST	40	34	51	73	51	13	54" DIA	ROCKAWAY INLET
ROC-677	BEACH 128TH ST (REG # D-20)	40	34	56	73	51	1	18" DIA	ROCKAWAY INLET
ROC-678	BEACH 124TH ST	40	34	54	73	51	46	5' X 3' 2"	ROCKAWAY INLET
ROC-679	BEACH 122ND ST (REG # D-18)	40	34	54	73	51	39	5' X 3' 2"	ROCKAWAY INLET
ROC-680	BEACH 108TH ST (REG # D-14)	40	35	3	73	50	52	6' X 4' FT	GRASS HASSOCK CHANNEL

Rockaway (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
ROC-684	BEACH 137 ST AND BEACH CHANNEL DR	40	34	44	73	51	27	60" X 38"	ROCKAWAY INLET
ROC-685	BURCHELL AVE AND BARBADOES DR	40	35	45	73	48	15	12"	VERNAM BASIN
ROC-686	CHANNEL RD AND E 14 RD	40	36	10	73	49	7	18"	BROAD CHANNEL
ROC-688	THURSBY AVE	40	35	43	73	47	27	13' X 5' FTRC	SOMMERVILLE BASIN
ROC-689	BEACH CHANNEL DR AND BEACH 138 ST	40	34	42	73	52	30	53" X 34"	ROCKAWAY INLET
ROC-690	E 9 RD AND LANARK RD	40	36	25	73	49	56	30" X 19"	BROAD CHANNEL
ROC-691	BEACH CHANNEL SHORELINE	40	35	16	74	10	49	12" DIA	GRASS HASSOCK CHANNEL
ROC-692	BEACH CHANNEL SHORELINE	40	35	14	74	10	46	12" DIA	GRASS HASSOCK CHANNEL
ROC-693	BEACH 88th STREET	40	35	26	73	48	52	8' 2" x 5' 3"	GRASS HASSOCK CHANNEL
ROC-694	Dwight Ave - Norton Basin Shoreline	40	36	0	73	46	16	24" DIA	GRASS HASSOCK CHANNEL
ROC-695	Mott Basin Shoreline - North of Battery Rd and Chandler Street intersection (NAMEOKE PS EMERGENCY BYPASS)	40	36	37	73	45	20	DBL 9.5' x 4.5'	NEGRO BAR CHANNEL
ROC-696	BEACH 106TH STREET	40	35	5	73	49	42	36" DIA	GRASS HASSOCK CHANNEL
ROC-697	BEACH 98TH ST (REG # D-7,D-8,D-9,D-10,D-11)	40	35	12	73	49	16	36" DIA	GRASS HASSOCK CHANNEL
ROC-698	BEACH 98TH ST (REG # D-6)	40	35	13	73	49	16	24" DIA	GRASS HASSOCK CHANNEL
ROC-699	MOTT AVE	40	36	46	73	46	17	4" DIA	GRASS HASSOCK CHANNEL WETLAND
ROC-700	MOTT AVE	40	36	27	73	45	45	12" DIA	NEGRO BAR CHANNEL WETLAND
ROC-701	BEACH CHANNEL DR & ROCKAWAY FREEWAY	40	34	59	73	50	5	18" DIA	GRASS HASSOCK CHANNEL
ROC-702	512 CROSS BAY BLVD	40	36	40	73	49	7	18" DIA	MARSH
ROC-703	ARDEN AVE	40	36	39	73	49	10	15" DIA	BROAD CHANNEL
ROC-704	525 CROSS BAY BLVD	40	36	39	73	49	10	15" DIA	BROAD CHANNEL
ROC-705	526 CROSS BAY BLVD	40	36	39	73	49	6	15" DIA	MARSH
ROC-706	BAYSWATER AVE (BAYSWATER PS EMERGENCY BYPASS)	40	36	26	73	46	12	60" DIA	GRASS HASSOCK CHANNEL
ROC-707	BEACH 3RD STREET (SEAGIRT PS EMERGENCY BYPASS)	40	35	51	73	44	19	DBL 13' 6" X 5'	HEMPSTEAD BAY

Rockaway (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
ROC-708	9 WEST 16TH ROAD	40	36	7	73	49	15	15" DIA	JAMAICA BAY, EASTERN, AND TRIBS (QUEENS)
ROC-709	205 AVENUE	40	36	2	73	49	16	15" DIA	JAMAICA BAY, EASTERN, AND TRIBS (QUEENS)
ROC-710	9 19TH ROAD	40	35	56	73	49	17	15" DIA	JAMAICA BAY, EASTERN, AND TRIBS (QUEENS)
ROC-711	SEAGIRT AV & BEACH 5TH STREET	40	35	46	73	44	26	42" DIA	MARSH
ROC-712	W 10 RD & SHAD CREEK RD	40	36	22	73	49	21	30" X 19"	JAMAICA BAY, EASTERN, AND TRIBS (QUEENS)
ROC-713	322 CROSS BAY BOULEVARD	40	36	48	73	49	11	15" DIA	MARSH

Tallman Island

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
TI-001	TALLMAN ISLAND WRRF OUTFALL	40	47	52	73	50	25	60" DIA	EAST RIVER				
TI-003	N/O 7TH AVE (REG # 10A)	40	47	35	73	50	45	11' X 7'	EAST RIVER	REG #10A, 10B			YES (ON 10B)
TI-004	151ST ST (REG # 11)	40	47	50	73	49	47	42" DIA EGG	EAST RIVER	REG #11			
TI-005	154TH ST (REG # 12)	40	47	47	73	48	24	24" DIA	EAST RIVER	REG #12			
TI-006	24TH AVE	40	46	56	73	46	15	10' X 7' 6"	LITTLE NECK BAY	24 AVE P.S.			
TI-007	NORTHERN BLVD	40	45	47	73	45	7	18" DIA	ALLEY CREEK	OLD DOUG P.S.			
TI-008	46TH AVE (REG # 46, 47, 48, 49)	40	45	42	73	45	4	10' X 7' 6"	ALLEY CREEK	REG #46, 47, 48, 49			YES (ON 46, 47, & 49)
TI-010	ROOSEVELT AVE (REG # 30, 31, 40, 44)	40	45	20	73	50	19	3BL 18' 6" X 10'	FLUSHING CREEK	REG #30, 31, 40, 44	YES		YES (ON 30 & 40)
TI-011	32ND AVE (REG # 51 - 54)	40	45	57	73	50	21	DB 96" DIA	FLUSHING CREEK	REG #9, 51, 52, 53, 54		YES	YES (ON 9)
TI-012	29TH AVE (REG # 9)	40	46	19	73	51	59	10" DIA	EAST RIVER	122ND ST P.S.			
TI-014	23RD AVE (REG # 7)	40	46	43	73	51	58	12" DIA	EAST RIVER	REG #7			
TI-015	22ND AVE (REG # 6)	40	46	49	73	51	1	12" DIA	EAST RIVER	REG #6			
TI-016	20TH AVE (REG # 5)	40	46	54	73	51	57	60" DIA	EAST RIVER	REG #5			

Tallman Island (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
TI-017	15TH AVE (REG # 4)	40	47	1	73	51	29	12" DIA	EAST RIVER	REG #4			
TI-018	14TH AVE (REG # 3)	40	47	8	73	52	32	7' 7" X 4' 10" EGG	EAST RIVER	REG #3			
TI-022	40TH ROAD (REG # 55 - 58)	40	45	22	73	50	19	8' 6" X 6'	FLUSHING CREEK	REG #55, 56, 57, 58	YES		
TI-023	CRYDERS LANE (REG # 13)	40	47	21	73	48	37	13' 6" X 8'	EAST RIVER	REG #13, CLEARVIEW P.S.			YES (ON 13)
TI-025	400' SOUTH OF LIRR BRIDGE	40	45	51	73	45	10	52' 6" X 9' 0"	ALLEY CREEK	ALLEY CREEK CSO STORAGE FACILITY			
TI-026	W/O 154TH STREET	40	47	47	73	48	23	48" DIA	EAST RIVER	REG #			

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
TI-601	NORTHERN BOULEVARD (SOUTH SIDE)	40	45	45	73	50	11	30" DIA	FLUSHING CREEK
TI-603	NORTHERN BOULEVARD (NORTH SIDE)	40	45	47	73	50	11	30" DIA	FLUSHING CREEK
TI-605	300' W/O WHITESTONE EXPRESSWAY	40	45	60	73	50	25	DB 6' 9" X 4' 11"	FLUSHING CREEK
TI-609	121ST ST	40	47	46	73	51	47	36" DIA	EAST RIVER
TI-610	147TH ST	40	47	52	73	49	26	48" DIA	EAST RIVER
TI-615	9TH AVE	40	47	34	73	48	41	54" DIA	EAST RIVER
TI-616	12TH AVE	40	47	30	73	48	42	24" DIA	EAST RIVER
TI-617	12TH ROAD	40	47	26	73	48	40	18" DIA	EAST RIVER
TI-618	14TH AVE	40	47	23	73	48	39	18" DIA	EAST RIVER
TI-619	CRYDERS LANE	40	47	21	73	48	38	18" DIA	EAST RIVER
TI-623	28TH AVE	40	46	46	73	46	5	24" DIA	LITTLE NECK BAY
TI-624	35TH AVE	40	46	20	73	46	48	10' X 4'	LITTLE NECK BAY
TI-631	31ST ROAD	40	46	1	73	50	22	48" DIA	FLUSHING CREEK
TI-633	250' S/O 17TH AVE	40	47	9	73	46	26	54" DIA	LITTLE NECK BAY

Tallman Island (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER
		DEG	MIN	SEC	DEG	MIN	SEC		
TI-634	FORT TOTTEN SOUTH JETTY	40	47	28	73	47	54	24" DIA	EAST RIVER
TI-653	SANDHILL ROAD	40	46	19	73	45	39	48" DIA	UDALL'S COVE
TI-654	20' N/O NORTHERN BOULEVARD	40	45	49	73	45	6	54" DIA	ALLEY CREEK
TI-655	223RD ST & NORTHERN BOULEVARD	40	45	49	73	45	7	18" DIA	ALLEY CREEK
TI-656	39TH AVE	40	46	8	73	45	16	60" DIA	LITTLE NECK BAY
TI-658	233RD PLACE	40	46	20	73	45	14	39" DIA	LITTLE NECK BAY
TI-660	39TH AVE & 248TH ST	40	46	23	73	45	40	12" DIA	AURORA POND (E)
TI-661	208TH ST	40	47	26	73	47	2	30" DIA	EAST RIVER
TI-666	9TH AVE	40	47	21	73	50	53	48" DIA	EAST RIVER
TI-670	100' N/O NORTH SHORE M.T.S.	40	46	16	73	51	56	83" X 53" EGG	EAST RIVER
TI-671	W/O 8TH AVE	40	47	23	73	51	16	36" DIA	EAST RIVER
TI-673	FLUSHING BAY & 25TH AVE	40	46	37	73	51	57	48" DIA	EAST RIVER
TI-674	9TH AVE	40	47	21	73	50	15	18" DIA	EAST RIVER
TI-675	131ST ST	40	47	20	73	50	14	72" DIA	EAST RIVER
TI-676	POWELLS COVE BLVD	40	47	32	73	50	12	4' 5" X 2' 10" EGG	EAST RIVER
TI-677	SANDHILL RD	40	46	21	73	44	40	72" DIA	UDALLS COVE PARK POND
TI-678	40 AVE & 247 ST	40	46	20	73	44	37	30" DIA	UDALLS COVE PARK POND
TI-679	BROOKSIDE ST & 34 AVE	40	46	35	73	44	40	5.5' x 2'	UDALLS COVE PARK POND
TI-680	POPPENHUSEN AV AND 115TH ST	40	47	28	73	51	10	5'6" x 3'0"	EAST RIVER
TI-681	POPPENHUSEN AV AND COLLEGE PL	40	47	36	73	50	55	4'6" x 3'6"	EAST RIVER
TI-682	20TH AVE	40	46	53	73	49	52	48" DIA	MARSH
TI-683	20TH AVE	40	46	53	73	50	8	24" DIA	MARSH
TI-684	61ST AVE	40	45	24	73	45	41	DBL 6' X 6'	ALLEY CREEK
TI-685	SEAGIRT AV & BEACH 5TH STREET	40	46	53	73	49	58	54" DIA	FL-2 DEC WETLAND

Wards Island

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
WIB-053	W 255TH ST (REG # R-3)	40	54	18	73	55	50	7' X 4'	HUDSON RIVER	REG #R-3			
WIB-054	W 248TH ST (REG # R-2)	40	53	51	73	55	0	8' X 6'	HUDSON RIVER	REG #R-2			
WIB-055	W 236TH ST (REG # R-1)	40	53	18	73	55	12	6' X 4' 6"	HUDSON RIVER	REG #R-1			
WIB-056	W 192ND ST (REG # 67)	40	52	13	73	55	33	DBL 15' X 9' 2"	HARLEM RIVER	REG #67			YES
WIB-057	LANDING ROAD (REG # 66)	40	51	47	73	55	46	66" DIA	HARLEM RIVER	REG #66			YES
WIB-058	W 178TH ST (REG # 65)	40	51	21	73	55	13	57" DIA	HARLEM RIVER	REG #65			
WIB-059	W 176TH ST (REG # 64)	40	51	2	73	55	27	72" DIA	HARLEM RIVER	REG #64			
WIB-060	200' N/O HIGH BRIDGE (REG # 62)	40	50	34	73	56	45	DB 12' X 7' 4"	HARLEM RIVER	REG #62			
WIB-061	WEST 167TH ST (REG # 61)	40	50	25	73	56	50	42" DIA	HARLEM RIVER	REG #61			
WIB-062	JEROME AVE (REG # 60)	40	49	42	73	56	59	10' X 7'	HARLEM RIVER	REG #60, 60A			YES
WIB-063	S/O MCCOMBS DAM BRIDGE (REG # 72)	40	49	40	73	56	59	48" DIA	HARLEM RIVER	REG #72			
WIB-064	E 149TH ST (REG # 59)	40	49	11	73	56	56	7' X 7'	HARLEM RIVER	REG #59			
WIB-065	PARK AVE (REG # 57)	40	48	39	73	56	58	36" DIA	HARLEM RIVER	REG #57			
WIB-066	THIRD AVE BRIDGE (NORTH SIDE) (REG # 56)	40	48	29	73	56	54	4' X 2' 8" EGG	HARLEM RIVER	REG #56			
WIB-067	LINCOLN AVE (REG # 55)	40	48	23	73	56	50	60" DIA	HARLEM RIVER	REG #55			
WIB-068	BROOK AVE (REG # 53, 54)	40	48	9	73	55	23	12' X 9' 10"	BRONX KILL	REG #53, 54			YES (ON 53)
WIB-069	CYPRESS AVE (REG # 71)	40	47	57	73	55	10	2' 2" X 3'	BRONX KILL	REG #71			
WIB-070	E 134TH ST (REG # 70)	40	47	56	73	54	30	4' 2" X 3' 2" EGG	EAST RIVER	REG #70			
WIB-071	E 138TH ST (REG # 69)	40	48	5	73	54	22	60" DIA	EAST RIVER	REG #69			
WIB-072	E 149TH ST (REG # 68)	40	48	18	73	54	8	9' X 6' 6"	EAST RIVER	REG #68			YES
WIB-073	SAINT ANN'S AVE (REG # 73)	40	48	6	73	55	18	DBL 144" DIA	BRONX KILL	REG #73			
WIB-075	E 138TH ST (REG # 58)	40	48	50	73	56	56	12' X 6' 3"	HARLEM RIVER	REG #58			YES
WIB-076	W/O BRADLEY TERRACE (REG # MH-1)	40	52	43	73	55	21	54" DIA	SPUYTEN DUYVIL CREEK	REG #MH-1			

Wards Island (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
WIB-077	TEUNISSEN PLACE (REG # MH-2)	40	52	32	73	55	58	8' 6" X 7'	SPUYTEN DUYVIL CREEK	REG #MH-2			
WIB-078	BROADWAY BRIDGE (NORTH SIDE) (REG # MH-3)	40	52	27	73	55	39	5' X 4' 6"	SPUYTEN DUYVIL CREEK	REG #MH-3			
WIB-079	750' N/O W 261ST ST (REG # R-4)	40	54	54	73	55	38	18" DIA	HUDSON RIVER	REG #R-4			
WIM-001	WARDS ISLAND WRRF OUTFALL	40	47	11	73	55	15	144" DIA	EAST RIVER				
WIM-002	E 73RD ST (REG # 1)	40	45	59	73	57	2	3' 6" X 2' 0" EGG	EAST RIVER	REG #1			
WIM-003	E 74TH ST (REG # 2A, 2B)	40	46	1	73	57	0	72" DIA	EAST RIVER	REG #2A, 2B			YES (ON 2A)
WIM-004	E 75TH ST (REG # 3)	40	46	3	73	57	58	3' 6" X 2' 0" EGG	EAST RIVER	REG #3			
WIM-005	E 76TH ST (REG # 4)	40	46	6	73	57	57	3' 6" X 2' 0" EGG	EAST RIVER	REG #4			
WIM-006	E 77TH ST (REG # 5)	40	46	8	73	57	55	3' 6" X 3' 0" EGG	EAST RIVER	REG #5			
WIM-007	E 78TH ST (REG # 6)	40	46	10	73	57	53	3' X 2' EGG	EAST RIVER	REG #6			
WIM-008	E 79TH ST (REG # 7)	40	46	13	73	57	51	60" DIA	EAST RIVER	REG #7			YES
WIM-009	E 83RD ST (REG # 8)	40	46	21	73	57	42	16" DIA	EAST RIVER	REG #8			
WIM-010	E 84TH ST (REG # 9)	40	46	23	73	57	40	16" DIA	EAST RIVER	REG #9			
WIM-011	E 86TH ST (REG # 10)	40	46	27	73	57	36	5' X 5'	EAST RIVER	REG #10			
WIM-012	E 89TH ST (REG # 11)	40	46	35	73	57	31	60" DIA	EAST RIVER	REG #11			
WIM-013	E 90TH ST (REG # 12)	40	46	40	73	57	33	4' X 2' 4" EGG	EAST RIVER	REG #12			
WIM-014	E 91ST ST (REG # 13)	40	46	42	73	57	34	15" DIA	EAST RIVER	REG #13			
WIM-015	E 92ND ST (REG # 14)	40	46	47	73	57	36	48" DIA	EAST RIVER	REG #14			
WIM-016	E 95TH ST (REG # 15)	40	46	55	73	57	38	48" DIA	EAST RIVER	REG #15			
WIM-017	E 96TH ST (REG # 16)	40	46	58	73	57	37	42" DIA	EAST RIVER	REG #16			
WIM-018	E 100TH ST (REG # 17)	40	47	6	73	56	26	3' 6" X 2' 4" EGG	EAST RIVER	REG #17			
WIM-019	E 101ST ST (REG # 18)	40	47	7	73	56	23	4' X 2' 4" EGG	EAST RIVER	REG #18			
WIM-020	E 103RD ST (REG # 20)	40	47	11	73	56	20	4' X 2' 4" EGG	EAST RIVER	REG #20			

Wards Island (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
WIM-021	E 104TH ST (REG # 21)	40	47	14	73	56	17	3' 6" X 2' 4" EGG	EAST RIVER	REG #21			
WIM-022	E 105TH ST (REG # 22)	40	47	16	73	56	16	4' X 2' 4" EGG	EAST RIVER	REG #22			
WIM-023	E 106TH ST (REG # 23)	40	47	19	73	56	15	DBL 6' X 7' 6"	EAST RIVER	REG #23			YES
WIM-024	E 110TH ST (REG # 24)	40	47	28	73	56	9	DBL 8' 6" X 7' 6"	EAST RIVER	REG #24			YES
WIM-025	E 114TH ST (REG # 25)	40	47	35	73	56	58	5' 3" X 8'	EAST RIVER	REG #25			
WIM-026	E 115TH ST (REG # 26)	40	47	37	73	56	55	15" DIA	EAST RIVER	REG #26			
WIM-027	E 116TH ST (REG # 27)	40	47	39	73	56	52	15" DIA	EAST RIVER	REG #27			
WIM-030	E 119TH ST (REG # 30)	40	47	46	73	56	45	4' 6" X 2' 4" FT	EAST RIVER	REG #30			
WIM-031	E 120TH ST (REG # 31)	40	47	48	73	56	45	5' X 4' 6" FT	EAST RIVER	REG #31			
WIM-032	E 121ST ST (REG # 32)	40	47	52	73	56	44	4' X 2' 4" FT	EAST RIVER	REG #32			
WIM-033	E 122ND ST (REG # 33)	40	47	54	73	56	44	4' 9" X 4' FT	BRONX KILL	REG #33			
WIM-034	E 124TH ST (REG # 34)	40	47	59	73	56	44	3' 6" X 2' 4"	BRONX KILL	REG #34			
WIM-035	E 125TH ST (REG # 35)	40	48	4	73	56	45	4' X 2' 8" EGG	BRONX KILL	REG #35			
WIM-036	E 129TH ST (REG # 36)	40	48	20	73	56	54	42" DIA	HARLEM RIVER	REG #36			
WIM-037	E 130TH ST (REG # 37)	40	48	25	73	56	59	4' X 2' 8"	HARLEM RIVER	REG #37			
WIM-038	E 135TH ST (REG # 38)	40	48	41	73	56	3	6' X 8' 6" FT	HARLEM RIVER	REG #38			YES
WIM-039	W 140TH ST (REG # 39)	40	48	57	73	56	2	4' X 2' 8" EGG	HARLEM RIVER	REG #39			
WIM-040	W 141ST ST (REG # 40)	40	48	58	73	56	2	5' X 2' 4" FT	HARLEM RIVER	REG #40			
WIM-041	W 142ND ST (REG # 41)	40	49	1	73	56	2	6' X 4' FT	HARLEM RIVER	REG #41			
WIM-042	W 143RD ST (REG # 42)	40	49	4	73	56	2	3' 6" X 2' EGG	HARLEM RIVER	REG #42			
WIM-043	E 102ND ST (REG # 19)	40	47	9	73	56	21	42" DIA	EAST RIVER	REG #19			
WIM-044	W. 145TH ST (REG # 44)	40	49	10	73	56	2	6' X 2' 8" FT	HARLEM RIVER	REG #44			
WIM-045	W 149TH ST (REG # 45)	40	49	22	73	56	3	6' X 5' 6"	HARLEM RIVER	REG #45			YES

Wards Island (continued)

OUTFALL ID	OUTFALL LOCATION	LATITUDE			LONGITUDE			OUTFALL SIZE	RECEIVING WATER	CONTRIBUTORS	BOOM	NET	TELEMETRY
		DEG	MIN	SEC	DEG	MIN	SEC						
WIM-046	W 151ST ST (REG # 46)	40	49	29	73	56	4	8' 6" X 8'	HARLEM RIVER	REG #46			YES
WIM-047	W 154TH ST (REG # 47)	40	49	39	73	56	4	6' X 4' FT	HARLEM RIVER	REG #47			
WIM-048	W 155TH ST (REG # 48)	40	49	42	73	56	5	4' X 2' 4" FT	HARLEM RIVER	REG #48			
WIM-050	W 156TH ST (REG # 50)	40	49	44	73	56	5	15" DIA	HARLEM RIVER	REG #50			
WIM-051	W 167TH ST (REG # 51)	40	50	14	73	56	2	48" DIA	HARLEM RIVER	REG #51			YES
WIM-052	W 176TH ST (REG # 52)	40	50	36	73	56	50	5' X 5'	HARLEM RIVER	REG #52			YES

Appendix 3 – Municipal Compliance Certification

3258632975

MS4 Annual Report Cover Page

MCC form for period ending December 31, 2022

This cover page must be completed by the report preparer.
Joint reports require only one cover page.

SPDES ID
NY0287890

Choose one:

● **This report is being submitted on behalf of an individual MS4.**

Fill in SPDES ID in upper right hand corner.

Name of MS4
CITY OF NEW YORK

OR

○ **This report is being submitted on behalf of a Single Entity**

(Per Part II.E of GP-0-10-002)

Name of Single Entity

OR

○ **This is a joint report being submitted on behalf of a coalition.**

Provide SPDES ID of each permitted MS4 included in this report. Use page 2 if needed.

Name of Coalition

SPDES ID	**SPDES ID**	**SPDES ID**
SPDES ID	**SPDES ID**	**SPDES ID**
SPDES ID	**SPDES ID**	**SPDES ID**
SPDES ID	**SPDES ID**	**SPDES ID**
SPDES ID	**SPDES ID**	**SPDES ID**
SPDES ID	**SPDES ID**	**SPDES ID**

Cover Page 1 of 2

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MS4 Annual Report Cover Page

MCC form for period ending December 31, 2022

Provide SPDES ID of each permitted MS4 included in this report.

SPDES ID	SPDES ID	SPDES ID
SPDES ID	SPDES ID	SPDES ID
SPDES ID	SPDES ID	SPDES ID
SPDES ID	SPDES ID	SPDES ID
SPDES ID	SPDES ID	SPDES ID
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SPDES ID	SPDES ID	SPDES ID
SPDES ID	SPDES ID	SPDES ID

Cover Page 2 of 2

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MS4 Municipal Compliance Certification(MCC) Form

MCC form for period ending December 31, 2022

Name of MS4 CITY OF NEW YORK

SPDES ID NY0287890

Each MS4 must submit an MCC form.

Section 1 - MCC Identification Page

Indicate whether this MCC form is being submitted to certify endorsement or acceptance of:

● **An Annual Report for a single MS4**

○ **A Single Entity (Per Part II.E of GP-0-10-002)**

○ **A Joint Report**

Joint reports may be submitted by permittees with legally binding agreements.

If Joint Report, enter coalition name:

5690581587

MS4 Municipal Compliance Certification(MCC) Form

MCC form for period ending December 31, 2022

Name of MS4 CITY OF NEW YORK

SPDES ID NY0287890

Section 2 - Contact Information

Important Instructions - Please Read

Contact information must be provided for *each* of the following positions as indicated below:

1. **Principal Executive Officer, Chief Elected Official or other qualified individual (per GP-0-08-002 Part VI.J).**
2. **Duly Authorized Representative (Information for this contact must only be submitted if a Duly Authorized Representative is signing this form)**
3. **The Local Stormwater Public Contact (required per GP-0-08-002 Part VII.A.2.c & Part VIII.A.2.c).**
4. **The Stormwater Management Program (SWMP) Coordinator (Individual responsible for coordination/implementation of SWMP).**
5. **Report Preparer (Consultants may provide company name in the space provided).**

A separate sheet must be submitted for each position listed above unless more than one position is filled by the same individual. If one individual fills multiple roles, provide the contact information once and check all positions that apply to that individual.

If a new Duly Authorized Representative is signing this report, their contact information must be provided and a signature authorization form, signed by the Principal Executive Officer or Chief Elected Official must be attached.

For each contact, select all that apply:

- ● **Principal Executive Officer/Chief Elected Official**
- ○ **Duly Authorized Representative**
- ○ **Local Stormwater Public Contact**
- ○ **Stormwater Management Program (SWMP) Coordinator**
- ○ **Report Preparer**

First Name ROHIT **MI** T **Last Name** AGGARWALA

Title COMMISSIONER

Address 59-17 JUNCTION BLVD

City FLUSHING **State** NY **Zip** 11373 –

eMail RAGGARWALA@DEP.NYC.GOV

Phone (718) 595 – 6565 **County** QUEENS

5690581587

MS4 Municipal Compliance Certification(MCC) Form

MCC form for period ending December 31, 2022

Name of MS4 CITY OF NEW YORK

SPDES ID NY0287890

Section 2 - Contact Information

Important Instructions - Please Read

Contact information must be provided for *each* of the following positions as indicated below:

1. **Principal Executive Officer, Chief Elected Official or other qualified individual (per GP-0-08-002 Part VI.J).**
2. **Duly Authorized Representative (Information for this contact must only be submitted if a Duly Authorized Representative is signing this form)**
3. **The Local Stormwater Public Contact (required per GP-0-08-002 Part VII.A.2.c & Part VIII.A.2.c).**
4. **The Stormwater Management Program (SWMP) Coordinator (Individual responsible for coordination/implementation of SWMP).**
5. **Report Preparer (Consultants may provide company name in the space provided).**

A separate sheet must be submitted for each position listed above unless more than one position is filled by the same individual. If one individual fills multiple roles, provide the contact information once and check all positions that apply to that individual.

If a new Duly Authorized Representative is signing this report, their contact information must be provided and a signature authorization form, signed by the Principal Executive Officer or Chief Elected Official must be attached.

For each contact, select all that apply:

- ○ **Principal Executive Officer/Chief Elected Official**
- ● **Duly Authorized Representative**
- ● **Local Stormwater Public Contact**
- ● **Stormwater Management Program (SWMP) Coordinator**
- ○ **Report Preparer**

First Name PINAR **MI** **Last Name** BALCI

Title ASSISTANT COMMISSIONER

Address 59-17 JUNCTION BLVD

City FLUSHING **State** NY **Zip** 11373 –

eMail PBALCI@DEP.NYC.GOV

Phone (718) 595 – 3168 **County** QUEENS

5690581587

MS4 Municipal Compliance Certification(MCC) Form

MCC form for period ending December 31, 2022

Name of MS4 CITY OF NEW YORK

SPDES ID NY0287890

Section 2 - Contact Information

Important Instructions - Please Read

Contact information must be provided for *each* of the following positions as indicated below:

1. **Principal Executive Officer, Chief Elected Official or other qualified individual (per GP-0-08-002 Part VI.J).**
2. **Duly Authorized Representative (Information for this contact must only be submitted if a Duly Authorized Representative is signing this form)**
3. **The Local Stormwater Public Contact (required per GP-0-08-002 Part VII.A.2.c & Part VIII.A.2.c).**
4. **The Stormwater Management Program (SWMP) Coordinator (Individual responsible for coordination/implementation of SWMP).**
5. **Report Preparer (Consultants may provide company name in the space provided).**

A separate sheet must be submitted for each position listed above unless more than one position is filled by the same individual. If one individual fills multiple roles, provide the contact information once and check all positions that apply to that individual.

If a new Duly Authorized Representative is signing this report, their contact information must be provided and a signature authorization form, signed by the Principal Executive Officer or Chief Elected Official must be attached.

For each contact, select all that apply:

○ **Principal Executive Officer/Chief Elected Official**

○ **Duly Authorized Representative**

○ **Local Stormwater Public Contact**

○ **Stormwater Management Program (SWMP) Coordinator**

● **Report Preparer**

First Name Debbie **MI** **Last Name** Einhorn

Title Deputy MS4 PROGRAM MANAGER

Address 59-17 JUNCTION BLVD

City FLUSHING **State** NY **Zip** 11373 -

eMail deinhorn@DEP.NYC.GOV

Phone (718) 595 - 3262 **County** QUEENS

4643023765

MS4 Municipal Compliance Certification (MCC) Form

MCC form for period ending December 31, 2022

Name of MS4 CITY OF NEW YORK

SPDES ID NY0287890

Section 3 - Partner Information

Did your MS4 work with partners/coalition to complete some or all permit requirements during this reporting period? ○ Yes ● No

If Yes, complete information below.

Submit a separate sheet for each partner. Information provided in other formats will not be accepted. If your MS4 cooperated with a coalition, submit one sheet with the name of the coalition. It is not necessary to include a separate sheet for each MS4 in the coalition.

If No, proceed to Section 4 - Certification Statement.

Partner/CoalitionName

Partner/Coalition Name (con't.)

SPDES Partner ID - If applicable

Address

City

State

Zip –

eMail

Phone ( ) –

Legally Binding Agreement in accordance with GP-0-08-002 Part IV.G.? ○ Yes ○ No

What tasks/responsibilities are shared with this partner (e.g. MM1 School Programs or Multiple Tasks)?

○ **MM1**

○ **MM2**

○ **MM3**

○ **MM4**

○ **MM5**

○ **MM6**

Additional tasks/responsibilities

○ *Watershed Improvement Strategy Best Management Practices* required for MS4s in impaired watersheds included in GP-0-08-002 Part IX.

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MS4 Municipal Compliance Certification(MCC) Form

MCC form for period ending December 31, 2022

Name of MS4 CITY OF NEW YORK

SPDES ID NY0287890

Section 4 - Certification Statement

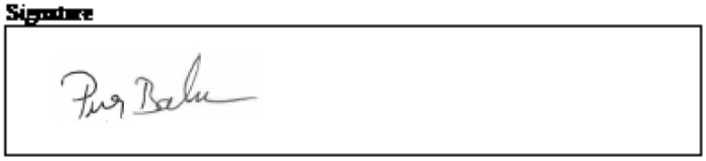
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, 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."

This form must be signed by either a principal executive officer or ranking elected official, or duly authorized representative of that person as described in GP-0-08-002 Part VII.

First Name PINAR **MI** **Last Name** BALCI

Title (Clearly print title of individual signing report) ASSISTANT COMMISSIONER

Signature



Date 09 / 27 / 2023

Send completed form and any attachments to the DEC Central Office at:

MS4 Permit Coordinator
Division of Water
4th Floor
625 Broadway
Albany, New York 12233-3505

nyc.gov/dep/ms4

Printed on post-consumer recyled paper