NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF WATER

COMBINED SEWER OVERFLOWS ANNUAL REPORT

PART I. GENERAL INSTRUCTIONS: The Combined Sewer Overflows (CSO) Annual Report is consistent with the EPA CSO Long-Term Control Policy requiring permitting authorities to report "Measures of Success" of the policy implementation. Hence, the goal of this report is to obtain information regarding:

1. Compliance with the 15 CSO Best Management Practices;
2. The condition and operation of the combine sewer system (CSS) components. Most importantly, the end-of-pipe measures that show trends in the discharge of CSS flows to the receiving water body, such as reduction of pollutant loadings, the frequency of CSOs, and the duration of CSOs;
3. Receiving water body measures that show trends of the conditions in the water body to which the CSO occurs;
4. Overall status of the CSO LTCP, if applicable;
5. Key CSO control accomplishments and design and construction progress in the previous year

Permittee must complete ALL parts of the form and must attach all supporting documents. Please be aware that this annual report form template highlights the minimum requirement a permittee is expected to submit. Permittee is obligated to complete abatement activities to ensure compliance with the Clean Water Act. This report is also consistent with NYS *6 NYCRR 750-2.1(i)*.

Special Instructions:

1. Multiple permittees (for instance NYC and Albany Pool) responsible to develop a single LTCP can submit one form and also complete Section D of this form.
2. **ALL SECTIONS OF THIS REPORT MUST BE COMPLETED.**

Part II - CSO LTCP Control Information

CSO Facility: NY-0026212: Spring Creek; NY-0026182: Paerdegat Basin; NY-0026239: Alley (	**Flow:**	**MGD**

SECTION A: CSO LTCP GENERAL INFORMATION

LTCP Development/Implementation:

Check all that apply:		*Describe other controls currently being used or planned. Also describe how the objectives of the CSO Control Policy have been met.*
In Development	☐	DEP has submitted eleven (11) CSO LTCPs to date and ten (10) have been approved by the DEC including the Alley Creek, Bronx River, Coney Island Creek, Gowanus Canal, Hutchinson River, Flushing Bay, Flushing Creek, Newtown Creek, and Westchester Creek CSO LTCPs. The Jamaica Bay CSO LTCP was approved in January 2023. The only pending CSO LTCP is the Citywide/Open Waters that was submitted in September 2020 and should be approved later this year.
Submitted	✔	
Approved	✔	
In Progress	✔	
Completed	✔	
Not Required	☐	

CSO Controls:

Check all that apply:		*Describe other controls currently being used or planned. Also describe how the objectives of the CSO Control Policy have been met under the selected controls*
Source Controls	✔	1995 - 2022: Four (4) CSO Storage Tanks (118 MG); Pumping Station Expansion (Ave V and Gowanus); Bronx River Nets and Screens; Sewer Improvements (26th Ward and Jamaica); Gowanus Canal Flushing Tunnel; Environmental Dredging (Hendrix Creek and Paerdegat Basin); English Kills and East Branch In-stream Aeration; Bending Weirs Installations (Bergen Basin, Thurston Basin, and Newtown Creek), Flushing Bay regulator modifications; Flushing Bay Environmental Dredging; Wet Weather Improvements at Wards Island WRRF; Regulator and Conveyance Improvement in Westchester Creek; Fresh Creek Phase 1 & 2 High Level Storm Sewers, 26W WRRF Wet Weather Improvements, and Completed Citywide GI. Approved Future Projects: CSO Storage Tunnels (Newtown Creek and Flushing Bay); CSO Disinfection (Flushing Creek & Alley Creek); Borden Avenue Pump Station Expansion;
Collection System Controls	✔	
Storage Technologies	✔	
Treatment Technologies	✔	
Floatable Controls	✔	
Disinfection	✔	
Type:		

Post-Construction Compliance Monitoring (PCCM) Program:

Check all that apply:		*Describe PCCM findings, status, updates, and future plan. Attach a separate sheet if necessary and describe if the PCCM confirms that LTCP is meeting the t objectives of the CSO Control Policy*
In Development	✔	DEP has conducted and completed PCCM for a number of water bodies including Alley Creek, Paerdegat Basin, Gowanus Canal, Flushing Bay, Flushing Creek, Newtown Creek; Coney Island Creek; and Spring Creek as required under it's previously approved Waterbody Watershed Facility Plans (WFFP). DEP is preparing an updated CSO LTCP PCCM Sampling Plan and upon completion of the approved LTCP projects; DEP will be conducting additional PCCM to assess efficacy of the LTCP recommended CSO controls.
Submitted	✔	
Approved	☐	
In Progress	✔	
Completed	✔	
Not Required	☐	

Part II - CSO LTCP Control Information

SECTION B: OUTFALL INFORMATION

List all existing and active CSO the outfalls. Attach extra sheets, if necessary.

Outfall #	Latitude	Longitude	Receiving Water/Classification	# of Regulators Associated with this Outfall	Type of Regulator(s) Associated with this Outfall (Fixed Dam, Float / Dynamic, Elevated Pipe, Wet Well Overflow, etc.)
This	information	was	submitted to the NYSDEC under	separate cover on	March 30, 2022

Part II - CSO LTCP Control Information

List all CSO the outfalls that have been closed or separated since LTCP development. Attach extra sheets, if necessary.

Outfall #	Latitude	Longitude	Receiving Water/Classification	Indicate Reason for Closure
This	information	was	submitted to NYSDEC under	separate cover on March 30, 2022

Part II - CSO LTCP Control Information

SECTION C: CSO EVENTS, DISCHARGE VOLUME, ETC. Provide an estimate or actual data on overflow events. If necessary, use a separate spreadsheet to report all CSO outfalls.

CSO Outfall #	No. of overflow events in the previous year		Total Annual CSO Volume Discharged (MG)		Total Annual Volume Captured or Diverted to POTW (MG)		# of CSO Outfalls		Indicate type of overflow measurements (e.g. metered, estimated, or modeled). *If other, please describe.*
	Baseline	Current	Baseline	Current	Baseline	Current	Baseline	Current	
See	attached	spreadsheet	that	has	been	provided	with	this	checklist

Part II - CSO LTCP Control Information

CSO Outfall #	No. of overflow events in the previous year		Total Annual CSO Volume Discharged (MG)		Total Annual Volume Captured or Diverted to POTW (MG)		# of CSO Outfalls		Indicate type of overflow measurements (e.g. metered, estimated, or modeled). *If other, please describe.*
	Baseline	Current	Baseline	Current	Baseline	Current	Baseline	Current	
See	attached	spreadsheet	that	has	been	provided	with	this	Checklist
TOTAL									

Part II - CSO LTCP Control Information

SECTION D: Collection System Information

	Baseline	After CSO BMP and/or LTCP Implementation	Current
Percentage of the collection system owned by the permittee that is combined.		~60%	~60%
Approximate no. of miles of combined sewers in the permittee owned system		3,337	3,337
Number of combined sewer outfalls in the permittee owned system	413	413	413
Average annual no. of CSO events in the permittee owned system	40	18	24
Average annual CSO volume discharged from the permittee owned system (MG)	29,560	16,302	15,830
Population served by the permittee's owned system	7,000,000	7,000,000	7,600,000
Number of satellite system connections	N/A	N/A	N/A

Use the space below to provide any further relevant information on the collection system. This should include a description of any unique ownership, operation and maintenance agreements or further explanation and description of satellite system connections. (Attach extra sheets, if necessary):

(1) Baseline is taken from the 2007 Waterbody Watershed Facility Plans (WWFP) baseline conditions that was selected as the most appropriate pre CSO BMP Baseline Condition. The baseline condition uses projected 2040 sanitary flows at the time of the WWFP submittal, JFK 1988 annual precipitation data, and 2003 WRRF wet weather operating conditions.
(2) Percentage of system that is combined is estimated based on latest GIS.
(3) After LTCP reflects LTCP projects being completed, 2040 projected high end sanitary flows, and 2008 JFK precipitation data.
(4) Current is based on modeling using CY2022 precipitation data and CY2022 sanitary flows observed at the WRRFs.
(5) Population above doesn't include Oakwood Beach and Rockaway WRRF drainage areas, systems are both separate.

Part II - CSO LTCP Control Information

SECTION F: Use this section to describe how the implementation of the LTCP development and implementation have met the water quality standards of the receiving stream(s) and also objectives of the EPA CSO Control Policy (attach extra sheets as necessary):

DEP has been completed PCCM program in (7) waterbodies including Spring Creek, Flushing Creek, Alley Creek, Paerdegat Basin, Gowanus Canal, Newtown Creek, and Coney Island Creek to assess efficacy of the pre-LTCP CSO Controls. The data has been consistent with previous modeling projections and two of these waterbodies (Paerdegat Basin and Spring Creek) have been attaining primary contact criteria for bacteria. DEP also conducts an extensive Harbor Monitoring Program and the Open Waters including vast majority of East River, Hudson River, Harlem River, Inner and Outer Bay, and Jamaica Bay are attaining primary contact standards.

DEP has also submitted eleven (11) CSO LTCPs in accordance with EPA CSO Policy and ten (10) of these LTCPs have been approved. Upon implementation of these additional controls DEP anticipates further improvements in the tributaries and embayments but will likely not be able to fully attain primary contact standards in all waterbodies due to man-made alterations and poor circulation.

A subsequent round of PCCM will be implemented upon completion of the CSO LTCP recommended projects.

SECTION G: Use the following space to summarize other planned CSO control projects (attach extra sheets as necessary):

CY2022 Milestones:
Certified Design Completion for FC Floatable Control & Bronx River Sewer Enhancements
Initiated preliminary design of Flushing Bay CSO Tunnel and Final Design of Newtown Creek CSO Tunnel

Pending and Approved Modification Requests:
Approved modification request to eliminate disinfection at Hutchinson River in lieu of Storage
Pending modification request to eliminate a small portion of the Bronx River Project and to to defer or eliminate Alley Creek Disinfection for an alternate equivalent project.

Upcoming CSO Milestones for CY2023 & 2024:
NTP to construction for FC Floatable Control & Bronx River Sewer Enhancements
Design completion for Borden Avenue Pump Station Expansion

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

Name: Keith Mahoney	**Official Title:** Director, WIP&M	**Phone:** 718-595-5972
Signature: Keith Mahoney	**Date Signed:** 4/18/23	**Email:** Kmahoney@dep.nyc.gov

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

Check N/A if not required in the permit, consent order, or LTCP:

1. **CSO Maintenance/Inspection** *6 NYCRR 750-2.8(a)(2) (EPA NMC: Proper Operation and Maintenance)*	YES	NO	N/A
Is there a written program for the operation, inspection and maintenance of the CSS?	✔		
Does the program include procedures for ALL outfalls in the permit?	✔		
Does the program include procedures for ALL regulators in the permit?	✔		
Are inspections conducted at least as frequently as required in the permit (weekly or monthly)?	✔		
Are inspections conducted during dry and wet weather?	✔		
Do the inspection reports indicate visual inspection, any observed flows, incidence of rain or snowmelt, condition of equipment, and any work required?	✔		
Are inspection reports submitted to the DEC regional office with the monthly operating reports?			
Is the written program sufficiently detailed? Indicate which of the following additional components are included in the plan.	✔		
Pump Stations	✔		
Sewer cleaning			✔
Sewer Manholes and Catch Basins			✔
Outfalls			✔
CSO Controls			✔
Are there inter-municipal agreements which require inspection and maintenance?			✔
Are any changes planned in the upcoming year for the agreements to make them more effective?			✔
Is the collection system mapped using GIS?	✔		
Entire system, including manholes and catch basins?			✔
In the past year, was significant mapping progress accomplished?			✔
In the upcoming year, is GIS mapping planned?	✔		
Is the collection system monitored using a SCADA system?	✔		
In the past year, was significant progress accomplished in installing or expanding monitoring with a SCADA system?			✔
In the upcoming year, is installation of a SCADA system planned or being expanded?			✔
Does the municipality have an asset management plan that includes the collection system?			✔
Are funds available to carry out the BMP requirements?			✔
Are any major equipment purchases planned or expected in the next five years related to the BMP requirements? If yes, describe below			✔
Is the pump inventory, including spare parts, adequate for the upcoming year?			✔
Is sufficient staff training available?			✔

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

Is funding for training adequate and available?	☐	☐	✔
	YES	**NO**	**N/A**
Is sufficient staff training available?	☐	☐	✔
Is funding for training adequate and available?	☐	☐	✔
Have any work efforts or problems in the past year resulted in changes in overflows? If yes, describe below	☐	✔	
Fewer events	☐	☐	
Less volume	☐	☐	
Reduction in floatables, settleable solids or oil and grease discharged	☐	☐	
Reduction in industrial pollutants (chemicals)	☐	☐	
Improvement in water quality of receiving waterbody	☐	☐	
In the past year, was the inspection and maintenance program mostly:			
Reactive (responding to problems)	☐	✔	☐
Proactive (focusing on preventative maintenance to avoid problems)?	✔	☐	☐
If the program is mostly reactive, describe below any plans to shift the emphasis to prevention	☐	☐	✔

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

See CSO BMP Report for more details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

2. Maximum Use of Collection System for Storage *6 NYCRR 750-2.7(f), 750-2.8(a)(2), 750-2.8(a)(5) (EPA NMC: Maximum Use of Collection System for Storage)*	**Yes**	**No**	**N/A**
Are CSOs minimized, and flow to the treatment plant maximized?	✔		
Has the hydraulic capacity of the system been evaluated?	✔		
Is there a continuous program of flushing and cleaning to prevent deposition of solids?	✔		
Have regulators and weirs been adjusted to maximize storage without causing service backups?	✔		
In the past year or the upcoming year, have any changes to structures or procedures been made or planned that will improve use of the collection system for storage? Describe below	✔		
Tidegates maintenance/repairs/replacement		✔	
FOG program		✔	
Removal of small systems bottlenecks			✔
Sewer cleaning and sediment removal		✔	
Removal of flow obstructions			✔
Regulator or weir adjustment - list locations below	✔		
In-line storage: Inflatable dams or sluice gates			✔
Wet Weather Operating Plan	✔		
Do the municipalities within the combined sewer system have a water conservation program for homeowners?	✔		
In the upcoming year are there any studies, work, or projects planned (other than routine activities) to improve use of collection system for storage? Describe below.			✔

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

Existing: Four (4) CSO Storage Tanks (118 MG); Pumping Station Expansion (Ave V and Gowanus); Bronx River Nets and Screens; Sewer Improvements (26th Ward and Jamaica); Bending Weirs Installations (Bergen Basin, Thurston Basin, and Newtown Creek), Regulator and Conveyance Improvement in Westchester Creek and Flushing Bay.

Approved Future Projects: CSO Storage Tunnels (Newtown Creek and Flushing Bay); Hutchinson River Floatable Control & Storage Conduit; Sewer and Regulator Improvements in Bronx River; and Daylighting of Tibbett's Brook.

Pending Future Projects: Citywide Regulator and Conveyance Improvements and Hannah Street Gravity Diversion Sewer.

See CSO BMP Report for more details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

3. Industrial Pretreatment *6 NYCRR 750-2.7(f) and 2.9(a)(4)* *(EPA NMC: Review and Modify Pretreatment Requirements)* ☐ **N/A**	**YES**	**NO**	**N/A**
Has the impact on CSOs from nondomestic users that discharge toxic pollutants been evaluated, and steps taken to minimize such impacts?	✔		
Is there an approved pretreatment or mini-pretreatment program?	✔		
If there is no pretreatment or min-pretreatment program, are there any nondomestic users? If No to both of the previous questions, go to BMP 4			
Is there an inventory of industrial dischargers? Is the following information included?	✔		
Volume of discharge?	✔		
Pollutants in discharge?	✔		
Are any pollutants classified as "persistent toxics" or bioaccumulative?	✔		
Is the location included on the collection system map?			✔
Are there any industrial discharges that could reach CSO outfalls?	✔		
If yes, have any industrial dischargers been identified as contributing to a water quality impairment?		✔	
If yes, does the industry have a holding tank or EQ tank to store wastewater prior to discharge to the collection system?			✔
If yes, does the industry have a written plan to store or hold discharges during rain events?			✔
If yes, has the industry been asked to prepare a written plan to store or hold discharges?			✔
In the past year, have there been negotiations or changes to agreements with industrial dischargers which will potentially reduce impacts during CSO events? Describe below.		✔	
In the upcoming year, are any negotiations or changes to agreements with industrial dischargers planned which will potentially reduce impacts during CSO events? Describe below.		✔	

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

See CSO BMP Report for details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

4. Maximize Flow to POTW *6 NYCRR 750-2.7(f), 2.8(a)(2), and 2.8(a)(5)* *(EPA NMC: Maximum Flow to POTW for Treatment)* ☐ **N/A**	**YES**	**NO**	**N/A**
In the past year, were the headworks, primary treatment works and disinfection works able to pass the flows specified in the permit for all wet weather flows?	☐	✔	☐
In the past year, was the secondary treatment works able to treat the flows specified in the permit for all wet weather flows?	☐	✔	☐
If the answer to either of the above questions was No, has a plan and schedule to accomplish this been submitted to the Department?	✔	☐	☐
In the past year have there been any physical modifications to the collection system which have allowed more flow to reach the POTW? Describe below.	✔	☐	☐
Are any physical modifications planned for the upcoming year?	✔	☐	☐
Are there areas of the collection system, including pump stations that need additional study to evaluate capacity, condition, or to determine if illegal connections (i.e. inflow) exist? List below	✔	☐	☐
In the past year, have any new problem areas been identified that restrict flow to the plant? List locations below	☐	✔	☐
In the upcoming year, are there plans to address hydraulic restrictions or bottlenecks?	☐	☐	✔
Pipe replacement	☐	☐	✔
Construction of relief sewer	✔	☐	☐
Construction of overflow tank	☐	✔	☐
Pump station improvements	☐	☐	✔
Pump replacement	☐	☐	✔
Weir adjustment	✔	☐	☐
Smoke testing, dye testing to identify illicit connections	☐	✔	☐
Other:	☐	☐	✔

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

Existing Projects: Four (4) CSO Storage Tanks (118 MG); Pumping Station Expansion (Ave V and Gowanus); Bronx River Nets and Screens; Sewer Improvements (26th Ward and Jamaica); Bending Weir Installations (Bergen Basin, Thurston Basin, and Newtown Creek), Wet Weather Improvements at Wards Island and 26th Ward WRRFs; Regulator and Conveyance Improvement in Westchester Creek and Flushing Bay.

Approved Future Projects: Borden Avenue Pump Station Expansion; Hutchinson River Floatable Control & Storage Conduit; Sewer and Regulator Improvements in Bronx River; and Daylighting of Tibbett's Brook.

Pending Future Projects: Citywide Regulator and Conveyance Improvements and Hannah Street Gravity Diversion Sewer.

DEP also performs routine upgrades to it's pipes and pump stations but these aren't linked to any bottlenecks, just state of good repair.

See CSO BMP Report for more details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

5. Wet Weather Operating Plan (WWOP) *6 NYCRR 750-2.8(a) (EPA NMC: None)* ☐ **N/A**	**YES**	**NO**	**N/A**
Has a WWOP been developed, specifying procedures for unit operations, to maximize treatment during wet weather events while not diminishing effluent quality or destabilizing treatment upon return to dry weather operation?	✔		
In the past year, did treatment of wet weather flows cause any effluent violations or destabilize treatment upon return to normal service?	✔		
Has the WWOP been developed in accordance with the DEC guidance, "Wet Weather Operating Practices for POTWs with Combined Sewers"? If no, describe changes needed.	✔		
Has the WWOP been submitted to the Regional Office and Bureau of Water Permits (Albany) for review and approval?	✔		
If the collection system or plant has been modified or upgraded, has the WWOP been modified to reflect new flow rates or new procedures?	✔		
If yes, has the revised plan been submitted to the Regional Office for approval?	✔		
Does the plan identify the maximum flows through preliminary, primary, secondary treatment, tertiary, and disinfection units?	✔		
In the upcoming year, are changes to the plan expected?		✔	

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

See CSO BMP Report for details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

6. Prohibition of Dry Weather Overflows *6 NYCRR 750-2.7 and 2.8(b)(2)* *(EPA NMC: Eliminate Dry Weather Overflows)* ☐ **N/A**	**YES**	**NO**	**N/A**
In the past year, were there any dry weather overflows? If no, skip to BMP 7.	✔		
Were all dry weather overflows reported in accordance with 6 NYCRR Part 750-2.7 (incident reporting)?	✔		
If dry weather overflows occurred, indicate which procedures or equipment have been improved or replaced			
Schedule for routine inspections		✔	
Management, operation and maintenance program			✔
Modification of existing or issuance of new inter-municipal agreements			✔
FOG program		✔	
Removal of illicit connections		✔	
I/I Control program		✔	
Leaky tidegates		✔	
Adjustment and/or repair of regulators		✔	
Pumps		✔	
Auxiliary power		✔	
Elimination of hydraulic bottlenecks			✔
Adequate dry weather flow capacity at the treatment plant		✔	
Other, list below			✔
Has additional staff training been provided?			✔
Has the likelihood of future dry weather overflows been eliminated? If not, describe additional information below.		✔	

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

See CSO BMP Report narrative for details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

7. Control of Floatables and Settleable Solids *6 NYCRR 750-2.8(a)(4)* *(EPA NMC: Control of Solid and Floatable Materials in CSOs)* ☐ **N/A**	**YES**	**NO**	**N/A**
In the past year, were did any outfalls discharge floating solids, oil and grease, or solids of sewage origin?	✔		
Have BMPs been implemented to eliminate or minimize the discharge of floatables and settleable solids?	✔		
Have any of the following measures been implemented (either existing from previous years, in the past year) or will any be implemented in the upcoming year? If significant progress has been made in implementing these, or if significant improvements have occurred, describe below.	✔		
Floatables quantification	✔		
Booming and skimming of open waters	✔		
Source controls (street cleaning, public education, household hazardous waste collection, solid waste collection, recycling, and/or composting of lawn/leaf/roadkill deer)	✔		
In-line netting	✔		
Screens	✔		
Catch basin hoods	✔		
Other:			✔
Are any changes needed or planned for the upcoming year? Describe additional information below.		✔	

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

See CSO BMP Report narrative for details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

8. **Combined Sewer System Replacement** *6 NYCRR 750-2.10(i) (EPA NMC: None)* ☐ **N/A**	**YES**	**NO**	**N/A**
In the past year, were any combined sewers designed or constructed that were not approved by DEC?	☐	✔	☐
If yes, was the combined sewer replaced by separate sanitary and storm sewers to the greatest extent possible?	☐	☐	✔
If yes, were the separate sanitary and storm sewers designed and constructed simultaneously but without interconnections to the maximum extent practicable?	☐	☐	✔
Is the combined portion of the collection system completely identified on maps or GIS?	✔	☐	☐
Are there any plans or current projects to separate combined sewers into sanitary and storm sewers?	✔	☐	☐
Is there an approved engineering plan for this project?	✔	☐	☐
In the past year, how many areas of combined sewer were separated? acres			
In the upcoming year, how many areas of combined sewer are scheduled to be separated? acres			
Are the sewer replacement projects on schedule? If no, describe below.	☐	☐	✔
Overall, has the implementation of this BMP resulted in fewer overflow events and/or less volume discharged? Describe below.	☐	☐	✔

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

There are many ongoing sewer separation projects that are ongoing throughout NYC and these are long term projects to improve drainage in certain areas and not typically done for CSO reductions with the exception of a high level storm sewer project completed in 26th Ward WRRF drainage area.

See CSO BMP Report for more details.

PERMITTEE NAME: _____ SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

9. **Combined Sewer Extension** *6 NYCRR 750-2.10(i) (EPA NMC: None)* ☐ **N/A**	**YES**	**NO**	**N/A**
In the past year, were any combined sewers extended not using separate sewers?	✔		
Were sanitary and storm sewers extensions designed and constructed simultaneously but without interconnections?		✔	
Were any new sources of stormwater added to a separate sewer anywhere in the collection system?		✔	
If separate sewers were extended from combined sewers, was it demonstrated that the sewerage system had the ability to convey, and the treatment plant had the ability to adequately treat, the increased dry-weather flows?	✔		
If determined necessary by the Regional Water Engineer, was an assessment made of the effects of the increased flow of sanitary sewage or industrial waste on the strength of CSOs and their frequency of occurrence, including the impacts upon best usage of the receiving water?			✔
Has a recent combined sewer extension resulted in increased discharge from a CSO?		✔	
Has a recent combined sewer extension resulted in increased flow to the POTW? Describe any CSO impacts below.		✔	
Is any development planned upstream of a combined sewer?	✔		
If yes, has a sewer extension plan been submitted for review and approval?			✔
If the approval contained a flow credit requiring removal of I/I, what was the requirement or ratio?			✔
Does the plan include any flow retention structures?			✔

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

See CSO BMP Report for more details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

10. **Connection Prohibitions** *6 NYCRR750-2.9(a)(5) (EPA NMC: None)* ☐ **N/A**	**YES**	**NO**	**N/A**
In the past year, were any sewer connections approved, in spite of a notice from DEC to prohibit further connections due to documented, recurrent instances of sewage backing up into house(s) or discharges of raw sewage onto the ground surface from surcharging manholes?	☐	☐	✔
Are new connections prohibited by the DEC? If no, skip to BMP 11.	☐	✔	☐
Is this due to basement backups?	☐	☐	✔
Is this due to surcharging manholes?	☐	☐	✔
In the upcoming year, is any work planned to either increase capacity or reduce hydraulic loading? Describe below.	☐	☐	✔

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

See CSO BMP Report for more details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

11. **Septage and Hauled Waste** *6 NYCRR750-2.7(f) and 2.8(a)(1) (EPA NMC: None)* ☐ **N/A**	**YES**	**NO**	**N/A**
In the past year, has there been any discharge or release of septage or hauled waste into the collection system upstream of a CSO?	☐	✔	☐
Does the facility have authorization from DEC to accept hauled waste or septage at a location other than the POTW? Describe below.	☐	✔	☐
Are any of these locations upstream of a CSO?	☐	☐	✔
Are there any agreements with haulers to accept waste at a location other than at the POTW?	☐	☐	✔
In the past year, was any hauled waste or septage accepted at a location other than at the POTW?	☐	☐	✔
What was the total volume received at locations other than the POTW?	☐	☐	✔
Is there a dedicated location to discharge septage at the POTW?	✔	☐	☐
Are there restrictions on when the plant accepts hauled waste or septage?	✔	☐	☐
Have there been any changes to the POTW's policy on septage and hauled waste in the past year? Are any changes needed or planned in the upcoming year?	☐	✔	☐

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

See CSO BMP Report for details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

12. **Control of Run-off** *6 NYCRR750- 2.1(e) (EPA NMC: None)* ☐ **N/A**	**YES**	**NO**	**N/A**
Is sediment in runoff from construction zones entering catch basins in the combined sewer system?	☐	☐	✔
Is there adequate communication between the local municipal department that enforces local stormwater codes and ordinances and the collection system staff regarding stormwater runoff?	☐	☐	✔
Do the municipalities within the combined sewer system have adequate storm water pollution prevention programs to reduce pollutants in stormwater?	☐	☐	✔
Annual household hazardous waste collection	✔	☐	☐
Autumn leaf collection	✔	☐	☐
Lawn clippings	✔	☐	☐
Christmas tree pickup	✔	☐	☐
Roadkill deer composting	☐	☐	✔
Fertilizer and pesticide management	☐	☐	✔
Enforcement of litter laws	✔	☐	☐
Public education programs on composting	✔	☐	☐
Are any changes needed in the implementation of this BMP to reduce the number of CSO events, the volume discharged, or pollutants in the discharge? If yes, describe below.	☐	✔	☐

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

See CSO BMP Report for details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

13. **Public Notification** *6 NYCRR 750-1.12 (EPA NMC: Public Notification)* ☐ **N/A**	**YES**	**NO**	**N/A**
Have identification signs been installed and maintained at all CSO outfalls owned and operated by the permittee?	✔		
Are all signs placed at or near the outfall?	✔		
Are the signs easily readable by the public?	✔		
Are the signs a minimum size of 18" by 24"?	✔		
Do the signs have white letters on a green background?	✔		
Do all the signs contain the following information:			
SPDES permit number	✔		
Outfall number	✔		
Permittee name, contact name and phone number at business office or NYSDEC Division of Water regional contact address and phone number	✔		
For waters that are Class B or higher, is a public notification program implemented to inform citizens of the location and occurrence of CSO events?	✔		
Does this program include a mechanism (public media broadcast, standing beach advisories, newspaper notice, etc) to alert potential users of the receiving waters affected by CSOs?	✔		
Does this program include a system to determine the nature and duration of conditions that are potentially harmful to users of these receiving waters due to CSOs?	✔		
Were there any problems in the past year with missing or damaged signs? Describe below.	✔		
Is there a written public notification plan?	✔		
Does the plan list all methods used to notify the public of CSO events?	✔		
Does the plan list outfalls where signs are posted?	✔		

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

See CSO BMP Report for details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

14. **Characterization and Monitoring** (*6 NYCRR 750-1.11(a), 2.5(a) and 2.7(g)) (EPA NMC: Monitoring)*	YES	NO	N/A
If required in the permit, has the combined sewer system been characterized to determine the frequency of overflows, and identify CSO impacts?	☐	☐	✔
Was a baseline sampling program established as part of the LTCP development?	✔	☐	☐
Are all outfalls monitored during discharge events for:	☐	☐	☐
Flow Volume:	☐	✔	☐
Frequency:	☐	✔	☐
Duration:	☐	✔	☐
If all outfalls are not monitored, explain how sufficient data is obtained to document the success of the BMPs.	☐	☐	✔
List locations of rain gauges or the source of data, below.	☐	☐	✔
Has a Post Construction Modeling and Monitoring plan been submitted to the Department for review and approval?	✔	☐	☐
Has the Department approved the Post Construction Modeling and Monitoring plan?	✔	☐	☐
Has post construction monitoring and modeling of the receiving water begun? Attach results if this has not already been provided.	✔	☐	☐

DESCRIBE BELOW HOW THIS BMP IMPLEMENTATION HAS MET THE REQUIREMENTS OF THE SPDES PERMIT, AND THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS. (Attach extra sheet if necessary)

DEP has too many regulator structures with very complex geometry and that are tidally influenced that make it not viable to monitor all CSO outfalls. However, DEP does have a SCADA system that helps provide some information pertaining to water levels in the regulator structures that provide some indication on whether on not a CSO is occurring but its not a direct flow measurement and is influenced by other factors such as tidal elevations. DEP has also conducted some very comprehensive and intense interim flow monitoring using specialized vendors at a number of representative locations to calibrate and validate the InfoWork models. These calibrated InfoWork models are then used to estimate this CSO annual volume and frequency for all the CSO outfalls.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

15. **Annual report** *6 NYCRR 750-2.1(i)* ☐ **N/A** *(EPA NMC: None; Required in LTCP permit)*	**YES**	**NO**	**N/A**
Is this report being used to satisfy BMP 15, Annual report, and the BMP checklist?	✔		
Is existing documentation of implementation of the BMPs included?	✔		
Is this annual report submitted by January 31 to the Regional Office and the Bureau of Water Permits (Albany)?			✔
Attach any additional information necessary to document the implementation of BMPs in the past year or list plans for the upcoming year.	✔		
Overall, was implementation of the BMPs effective in controlling and minimizing CSO discharges?	✔		
If no, list any improvements needed that have not been described elsewhere			✔

See CSO BMP Report for details.

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

ADDITIONAL INFORMATION:

DESCRIBE BELOW IN DETAIL OTHER "MEASURE OF SUCCESS" ABOVE AND BEYOND THE REQUIREMENTS OF THE SPDES PERMIT. DESCRIBE HOW ADDITIONAL PROJECT(S) HAS HELPED TO MEET THE OBJECTIVES OF THE EPA NINE MINIMUM CONTROLS POLICY. (Attach extra sheet if necessary)

PERMITTEE NAME: _____ SPDES PERMIT NO.: NY- _____

PART III - CSO BEST MANAGEMENT PRACTICES

SECTION D: For Multiple Permittees Only

Permittee Name	SPDES Permit Name	SPDES Permit No

SECTION E: GLOSSARY/ACCRONYMS

For the purposes of this annual report, the following terms and acronyms are described below:

Baseline: Conditions before the development and/or implementation of CSO BMPs and/or LTCP.

Best Management Practice (BMP): Permit condition used in place of or in conjunction with effluent limitations to prevent or control the discharge of pollutants. May include schedule of activities, prohibition of practices, maintenance procedure, or other management practice. BMPs may include, but are not limited to, treatment requirements, operating procedures, or practices to control plant site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage.

Bypass: A discharge of wastewater, stormwater, or combination of both, around a treatment unit designed for the removal of pollutants.

Catch Basin: A chamber usually built at the curbline of a street, which admits surface water for discharge into a storm drain

Collection System: A wastewater collection system which conveys sanitary wastewaters (domestic, commercial and industrial wastewaters) and stormwater through a single pipe to a publicly owned treatment works for treatment prior to discharge to surface waters.

Combined Sewer: A sewer designed to carry wastewater and stormwater runoff.

Combined Sewer Overflows (CSO): A discharge of untreated wastewater from a combined sewer system at a point prior to the headworks of a publicly owned treatment works. CSOs generally occur during wet weather (rainfall or snowmelt). During periods of wet weather, these systems become overloaded, bypass treatment works, and discharge directly to receiving waters.

Combined Sewer System (CSS): A wastewater collection system that conveys sanitary wastewaters and storm water through a single pipe to a publicly owned treatment works for treatment prior to discharge to surface waters.

Demonstrative Regulatory Approach: Control approach where a permittee develops and implement an LTCP that meets the state water quality standards. A permittee could develop an LTCP that would provide for attainment of water quality standards, or it could use a total maximum daily load (TMDL) to *demonstrate* that water quality standards can be attained through a combination of CSO controls and other controls.

EPA: Environmental Protection Agency

EQ Tank: Equalization Tank often used to smooth hydraulic peaks to a POTW or WWTP.

Fats Oil & Grease (FOG)

Geographic Information System (GIS) is a computer-based tool for mapping and analyzing features in the environment. GIS support a wide range of activities including water quality modeling, watershed planning, and wetlands permitting and mitigation.

GI: Green" Infrastructure

Infiltration/Inflow (I/I): Rainwater, snowmelt, or groundwater flowing into separate sanitary or combined sewers, typically introduced via connected roof downspouts and/or building footing drains or infiltrating into the pipe through cracks in the pipe walls or joints.

This Period: Period covering the last 12 months from January to December

Last Period: Activities covering the 12 calendar months prior to the end of the current period

PERMITTEE NAME: NYC Department of Environmental Protection SPDES PERMIT NO.: NY- see below

PART III - CSO BEST MANAGEMENT PRACTICES

Long Term Control Plan (LTCP): An engineering document that characterizes and assesses CSO discharge to a receiving waterbody. The goal of the Plan is to comply with the water quality standards of the receiving waterbody.

Million Gallons per Day (MGD) is a unit of flow commonly used for wastewater discharges. One mgd is equivalent to 1.547 cubic feet per second.

Multiple Permittees here is described as when a group of permittees (e.g. Albany Pool) is responsible to develop a single LTCP or when a single LTCP is required for multiple SPDES permit under a single permittee (e.g. NYC).

Nine Minimum Controls (NMC) provide information on nine minimum technology-based controls that permittees are expected to use to address CSO problems, without extensive engineering studies or significant construction costs, before long-term measures are taken.

NYSDEC: New State Department of Environmental Conservation (interchangeably uses as DEC)

Publicly Owned Treatment Works (POTW): Also commonly referred to as "treatment facility, WWTP (Wastewater Treatment Plant)

SPDES Permit: State Pollutant Discharge Elimination System Permit. A permit issued by DEC, authorized under the federal Clean Water Act, to discharge treated wastewater to waters of the United States.

Overflow Events: An event starts once an overflow starts from an outfall, and ends once the overflow stops and the pumpback to treatment facility have ended.

Presumptive Approach: The presumption approach is based on the assumption that an LTCP that meets certain minimum defined performance criteria. The "presumption approach," under which achievement of certain performance criteria (i.e., 4-6 untreated overflow events or 85 percent by volume capture) would be presumed to provide an adequate level of control to attain water quality standards

Raw Sewage: Untreated sanitary sewage.

Sanitary Sewer Overflow (SSO) is an untreated or partially treated sewage discharge from the sanitary sewer collection system.

Separate Sewer (SS): A pipe or conduit intended to convey only sanitary sewage to a wastewater treatment facility.

SPDES: State Pollutant Discharge Elimination System

Sewer System: A public or privately owned wastewater collection facility designed and used to convey or treat sanitary sewage or sanitary sewage and storm water. Sewer system does not include an on-site wastewater treatment system serving one residential unit or duplex.

Supervisory Control and Data Acquisition (SCADA) is a complex computer system that provides automatic control of stormwater storage and overflows at various locations within the sewer system.

Volume Discharged: Total discharge volume for the event (in millions of gallons) from each CSO outfall within this reporting period.

Volume Captured: Total discharge volume for the event (in millions of gallons) that were either captured via an offline treatment facility before discharge or diverted to the WWTP for treatment.

WWOP: Wet Weather Operating Plan

Water Quality Standards (WQS) are regulations that establish the uses for which surface waters of the state are protected and include numeric and narrative criteria to protect those uses.

City of New York
Department of Environmental Protection
Bureau of Wastewater Treatment

Floatables Monitoring Program
Progress Report

(Presented as an Addendum to the CSO BMP Annual Report)

Prepared by
Markus Koelbl
Scientist W.E. III

March 2023

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CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION
FLOATABLES MONITORING PROGRAM
ANNUAL REPORT FOR 2022

INTRODUCTION

The New York City Department of Environmental Protection (NYC DEP) has been tasked through its State Pollutant Discharge Elimination System (SPDES) permit requirements to implement and maintain a floatables control program as well as a monitoring program to provide a means to assess and measure the effectiveness of the programs. These control and monitoring programs are embodied in the City-Wide Comprehensive CSO Floatables Plan Modified Facility Planning Report (Floatables Plan, July 2005) inclusive of Addendum 1 – Pilot Floatables Monitoring Program Workplan (December 2005).

The floatables plan contains a conceptual framework for the monitoring of floatables conditions in New York Harbor water and a work plan for a pilot program that was implemented over the course of 2006 and 2007 to develop and test the monitoring methodology envisioned in the framework. Since 2008, the floatables monitoring program has completed its fifteenth year of full scale program.

The floatables monitoring program is based on observations of the presence/absence of floatables from monitoring sites throughout the harbor. It has developed a number of methods to assess floatables control programs. The monitoring data were used to prioritize problem areas; and three sites with persistent "Poor" ratings were selected for more comprehensive site-specific investigations. These site-specific studies were performed by contractors in 2009 and 2010. NYC DEP Harbor Water Quality Survey (HWQS) continued the study in 2011 going forward.

At NYSDEC's request, NYC DEP agreed to add a public participation component to the program. Since summer 2007, it has been achieved through the participation of the New York City Beach Floatables Survey Program (Survey Program); and the Survey Program volunteers provide monitoring data which have been included in past reports, but not since 2020.

Since 2006, the program has been grown to monitor most of NYC's regional waters and their near shores and shorelines. NYC DEP Harbor Water Quality Survey and Volunteer Survey Program monitoring stations increased from 25 sites in 2006 to 132 sites in 2019. In 2022 there were 58 sites sampled by the DEP resulting in 4,389 ratings. Over the long term, variations in monitoring sites and locations will likely occur as public participation volunteer interest varies, shoreline cleanup sites change, and HWQS sites change; floatables monitoring at PCM sites will continue to be added as forthcoming LTCP element construction is completed.

Numeric Rating System

A numeric rating system (see table below) was set up for the floatables monitoring program to evaluate floatables conditions among monitoring stations. Monitoring fieldwork confirmed several complexities about Harbor-wide monitoring, such as tide dependent categories (e.g., some sites may have a rip rap or sand shoreline during low tide and no shoreline when the water rises against the bulk head at high tide), and differences from site to site (e.g., sand vs. rip rap shorelines, width of shorelines). These complexities plus the complexities inherent in an assessment method used by multiple organizations (e.g., HWQS and public participation groups) led to the need for a simple, percent-based ranking of sites. Therefore, sites were ranked based on their percentage of good vs. poor ratings per total number of the ratings in a given time period.

Table 1. Sample Floatables Condition Ratings.

Score(1)	Rating(2)	Rating Description
1	Very Good	No floatables present
2	Good	Floatables present but diffuse
3	Fair	Floatables present in moderate density
4	Poor	Floatables present and dense
5	Very Poor	Floatables present and extremely dense

(1) The intent of this table is to show the "best to worst" gradients for floatables condition ratings.
(2) Each monitoring site included scores and ratings for up to three categories:
1) Open Water or Off Shore dependent upon vessel-based or land-based observations,
2) Near Shore, and
3) Shoreline - areas with only one or two of the categories, the missing categories were not rated.

DATA COLLECTION OPERATIONS

The floatables monitoring program reached its fourteenth year for the full-scale survey; and there were 58 total monitoring stations around NYC's five boroughs in 2022. Floatables Conditions Monitoring Stations Maps can be found in Appendix 2 and Fig. 6 below.

According to the full-scale floatables monitoring plan, NYC DEP HWQS conducted several visits per station every month during bathing season (from Jun. to Oct.), and one monthly visit per station during the off-season (Nov. to May).

Site specific investigations have been performed since 2008. Based on the ratings from 2021, "poor" and "very poor" sites were evaluated and three sites were selected (Newtown Creek at East Branch, Newtown Creek Nature Walk, and head of Flushing Creek). Sampling here was performed in the summer of 2022. Details for the investigations are presented in section 'Site Specific Investigation Study'.

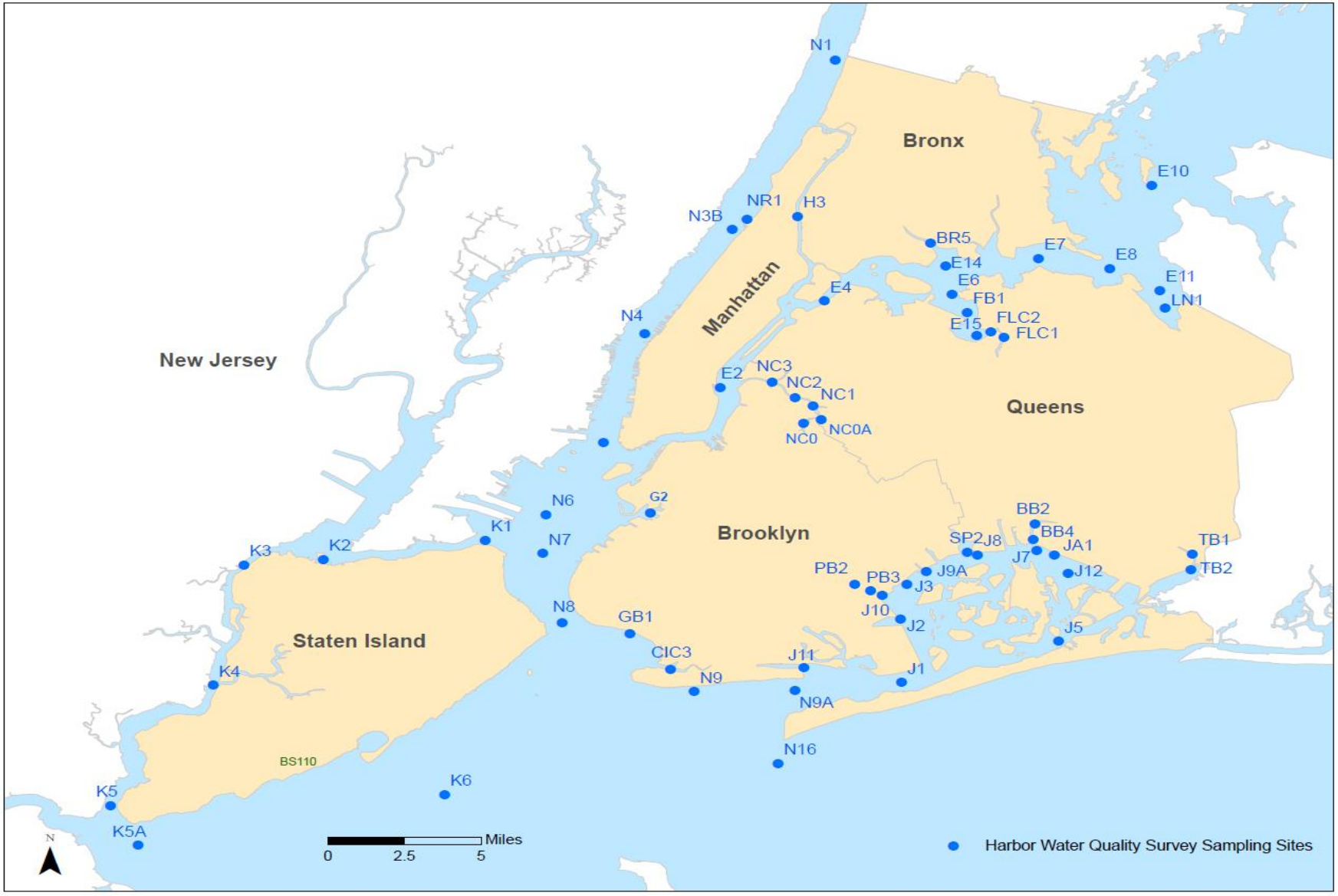


Figure 1. Floatables condition monitoring stations map.

DATA MANAGEMENT, MONITORING/REMEDIATION, AND ACTION TRIGGERS

A discussion of data reporting and how resulting investigations relate to action triggers and remediation can be found in all prior Floatables Monitoring Progress Reports. Below is a table summarizing the floatables monitoring program schedule.

Table 2. Floatables Monitoring Program Completion Dates

Task	Original Completion Date	New Completion Date	Status
Pilot Program Setup Tasks	January 2007	January 2007 No change	Completed – schedule met
Action Trigger & Investigation Process Development	March 2007	March 2007 No change	Completed – schedule met
Pilot Program Operation / Implementation Tasks	July 2007	July 2007 No change	Completed – schedule met
Pilot Program Evaluation / Adjustment	Ongoing	Ongoing No change	Completed – schedule met
Final Floatables Condition Rating System	July 2007	July 2007 No change	Completed – schedule met. Minor updates in 2008 to distinguish between water and land-based observations.
Public Participation Component Commencement	September 2006	April 2007	Complete – schedule met
Public Participation Component Ongoing Activities	Ongoing (as feasible)	Ongoing No change	2007-2019 Activities Complete
Pilot Program Interim Progress Report	December 2006	December 2006 No change	Accepted by NYSDEC
Pilot Program Progress Report	April 1, 2007 (part of ongoing CSO BMP annual report)	April 1, 2007 No change	Accepted by NYSDEC
Transition to Full Scale Program	February 2008	February 2008 No change	Completed – schedule met
Progress Report	April 1 each year (part of ongoing CSO BMP annual report)	April 1	Submission dates: April 2008 Each March 2009-2023

FLOATABLES CONDITION RATING DATA SUMMARY

FLOATABLES CONDITION RATING INTRODUCTION

The following data summary provides an explanation of how the floatables monitoring data has been used to rank sites in order to prioritize areas for the investigative phases of the program. Due to the complexities of floatables monitoring, the rating field work has been intentionally kept simple, and

the resulting data analysis mirrors this simplicity by showing the count of each rating for each site as a percent of the total number of ratings. Using this simple comparison, the three sites with the highest percent poor ratings were targeted for investigations as described in the Pilot Floatables Monitoring Program Work plan. Sites selected for investigation each year are all mutually disjoint within a five year span, regardless of persistent poor ratings.

The data analysis below has been completed for the entire set of data collected during the full-scale floatables monitoring program from January 1 through December 31, 2022. Figure 1 shows the program monitoring station locations (see Appendix 2 for more detail).

2-Point Site Specific Ratings

The simplest way to view the floatables monitoring data is to combine like ratings so that only two categories are used for ranking purposes. To this end, Figures 3 and 4 display a 2-point rating comparison, "good vs. poor." The 5-point rating system data has been combined as follows for these figures.

- **Good** – The "good" ratings (shown in green in Figures 3 and 4) comprise the "good" and "very good" ratings from the data compiled to date as based on the Floatables Monitoring Program rating scale.

- **Poor** – The "poor" ratings (shown in red in Figures 3 through 4) comprise the "fair," "poor," and "very poor" ratings from the data compiled to date as based on the Floatables Monitoring Program rating scale

Combining the ratings in this way simplifies the site prioritization by reducing the amount of data categories that have to be considered, plus, any issues of subjectivity and rating inconsistency among the monitoring staff are de-emphasized. In this 2 point system percentages of good or poor ratings are examined. The DEP open water and near shore data set has an $n \geq 25$ for many stations.

Generally, open water ratings are better than near shore ratings which are better than shoreline ratings (Fig. 3). Shoreline ratings are most likely the poorest due to the concentration of debris that washes up after each tidal cycle and the possible addition of litter from upland sources. Only 71 of the 1743 NYC DEP open water ratings in 2022 (4.1%) were poor (Table 3). Near shore DEP ratings were considered poor 3.6% of the time. Only in the shoreline ratings do we see a marked increase in poor ratings; 12.9% for the DEP surveys (116 poor out of 901 total).

For open water rating categories, all but one site had at least 80% good ratings (Fig. 3a). NC2 (roughly the midpoint of Newtown Creek) was the worst rated open water site in 2022 (78.1% "good") and was also rated poorly in the nearshore category. Many of the poorest sites are in tributaries and flow restrictive waterways such as Newtown Creek, Coney Island Creek, Bergen Basin, Thurston Basin, Bronx River, etc. (Fig. 3).

Coney Island Creek had only four good ratings in the shoreline (Fig. 3c). Sites in Coney Island Creek, Thurston Basin, Bergen Basin, Bronx River and Kill Van Kull were very poorly rated based

on DEP data (CIC3, NC0, BB2, BR5 and K1). Areas with good tidal flow and public beaches that may be kept clean during the summer tend to have good ratings (East River and Hudson River sites, Breezy Point).

Table 3. Total ratings of Good or Poor in each rating category for the NYC DEP monitoring program in 2022.

	Open Water			Near Shore			Shoreline		
	Good ratings	Poor ratings	Percent Poor	Good ratings	Poor ratings	Percent Poor	Good ratings	Poor ratings	Percent Poor
NYC DEP	1672	71	4.1	1683	62	3.6	785	116	12.9

5-Point Site Specific Ratings

Figure 4 shows the 5-point rating scales for all sites and categories. This is the scale used by all personnel in the field at the time of rating and, although it can appear a bit confusing, it is useful in further breaking down the rating scale. One striking observation of these figures is the predominance of "very good" ratings in the open water and near shore categories. Shoreline ratings look very different and follow the trends described above in the 2-point rating section. In all of the 4,389 ratings there were only 17 very poor ratings and 70 poor ratings (combined less than 2%).

COMPARISON: 2009-2022

Table 4 displays the "worst" sites based on the 2-point rating scale from 2009 to 2022. Newtown Creek (NC0 & NC3) and Coney Island Creek (CIC3) are ubiquitously poorly rated sites. The evidence suggests that poor sites remain so from year to year and are often located in restricted waterways. Future comparisons and tracking of sites will shed more light on these patterns.

Site specific investigation sites are typically chosen as the worst of the near shore category (Table 4), excluding previously sampled locations within the last five years. NC0, NC0A and NC3 were all sampled within the last five years. NC2 is eligible for sampling. Since no other eligible sites had nearshore ratings less than 90% good, it was determined that the poorest shoreline ratings would be used to select sites. The resulting three site specific investigation sites for 2023 are NC2, K1 and TB1.

Table 4. Comparison of the three sites with the highest % of poor ratings in each category in 2009 to 2022. Ratings are from the 2-point rating scale. Stations with less than four observations were not considered. Repeating stations are in bold type.

"Worst" Sites: 2009 to 2022

	Open Water	Near Shore	Shoreline
2009	**BS41**, BS54, BSNY010	**BS41**, BS54, **BS57**	**BS49**, BS54, **BS57**
2010	BS15, BS24, **BS41**	BS24, **BS41**, **BS57**	**BS49**, BS53, **BS57**
2011	**BS41**, BS71, **BSNY010**	**BS41**, **BS49, BS57**	**BS41, BS49**, BS62
2012	**BS41**, BS44B, **BS49**	BS23, **BS41**, **BS49**	BB2, **BS49**,**BS41**
2013	BS82, **BS15**, BS1	BS48, BS88, **BS49**	**BB2, BS41, BS49**
2014	BS29, CIC3, K2	NC3, **BS23**, BS84	**BB2,** CIC3**, BS49**
2015	**BS84**, BS44C, BS44D	**BS41,** BS44C, BS44D	**BS15,** BS3, EJ3
2016	**CIC3**, **NC0,** BS61	BS90, **CIC3, NC0**	**BB2, CIC3,** BS3
2017	**BS41, BS54, BS84**	**BS84,** BS22, (BS93,BS95,BS91)*	**BB2, CIC3, BS3**
2018	**BS22, BS23, BS61**	**BS22, BS23,** BS106	**BS3, CIC3, BS49**
2019	BS23B, **BS41**, **BS93**	BS23B, **BS93, BS95**	**BS3**, **BB2**, K1
2020	**NC0**, NC2, FLC1	BR5, NC2, **NC3**	BR5, **CIC3,** TB1
2021	**NC3, BB2,** FLC1	**NC0, NC3, NC2**	NC1, **CIC3, BR5**
2022	**NC2, NC0A, BR5**	**NC0, NC0A, (NC2, NC3)***	**CIC3, K1, TB1**

***Stations tied**

SUMMARY

Sites in Bergen Basin (BB2), Thurston Basin (TB1), Coney Island Creek (CIC3), Kill Van Kull (K1), and Newtown Creek (NC0) were considered the major problem sites in 2022 in terms of Shoreline ratings (Figures 3c & 4c). On the other hand, some sites that have been poor in the past appear to have made a rebound in 2022. Among them are Bronx River (BR5) and Newtown Creek near the Kosciuszko Bridge (NC1). When examining the whole data set there is an overwhelming number of sites rated "good" in the offshore and near shore zones. Areas with consistently poor ratings can be focused on and examined.

The past year's overall poor ratings decreased from 2021. The shoreline ratings were 12.9% poor. Over the years the combined shoreline poor rating percentage has increased from 16.5% to 21.8% to 33.3% in 2012, then settling down to 29.2% in 2013 and decreasing again after 2014. Figure 2 breaks down the combined ratings of Public Participation and DEP monitoring sites over the years. Patterns in the occurrence of floatable trash at rating sites can be attributed to a combination of rainfall, city clean-up efforts and the propensity for the public to litter. At some sites it is apparent that something as simple as a regularly maintained trash receptacle could cut down on floatables.

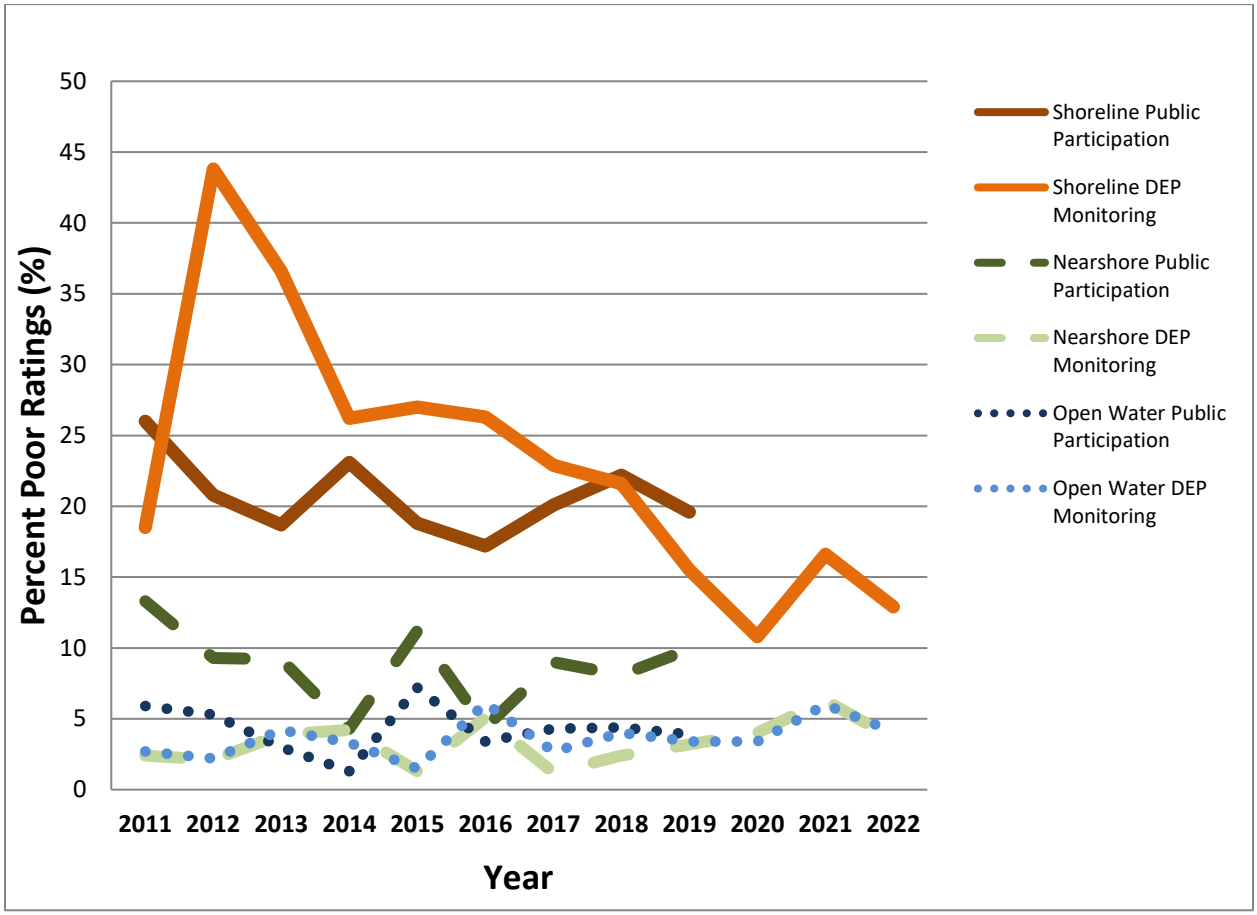


Figure 2. Percent poor ratings for all Public Participation and DEP sites from 2011 to 2022 in all three sampling zones based on 2-point ratings.

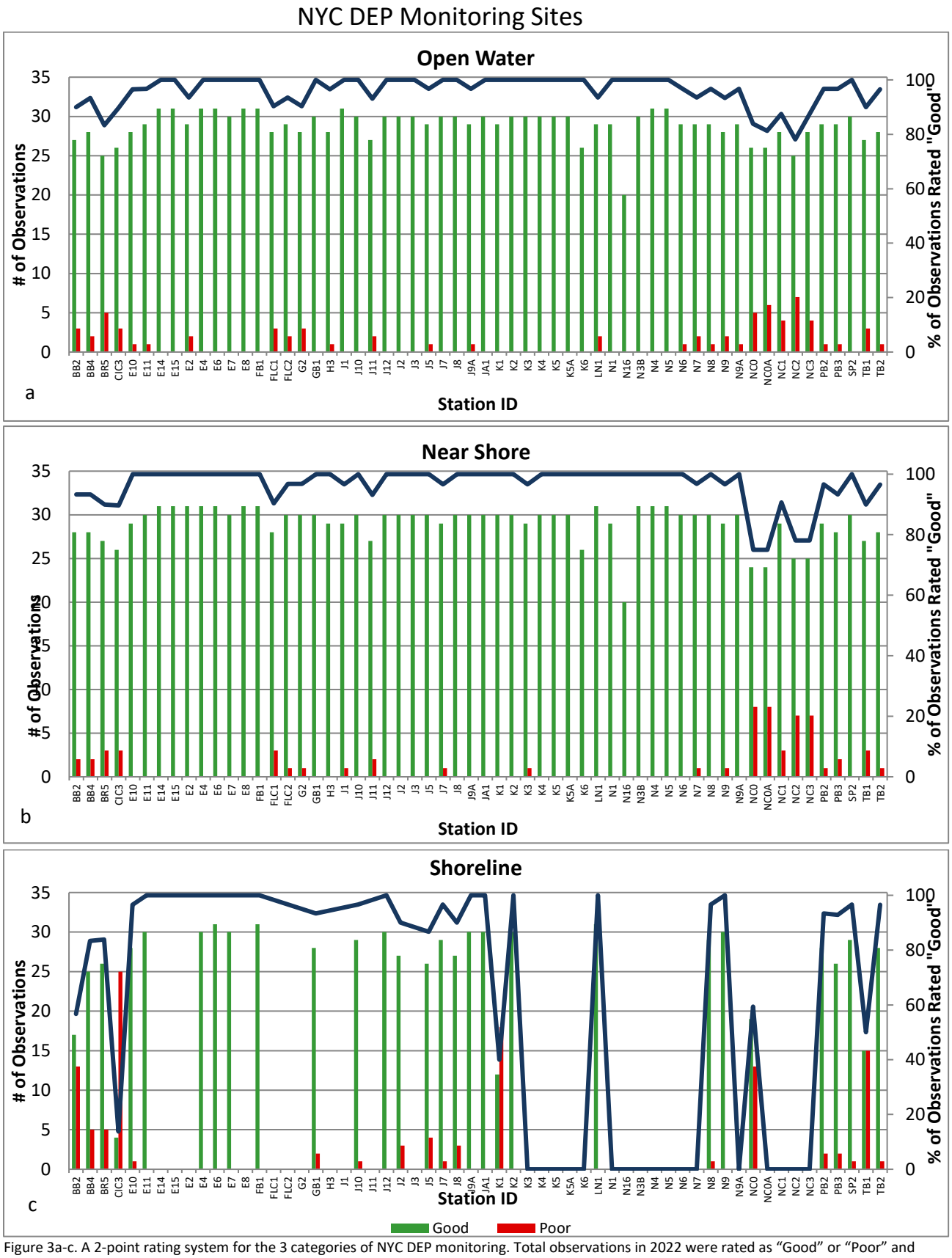


Figure 3a-c. A 2-point rating system for the 3 categories of NYC DEP monitoring. Total observations in 2022 were rated as “Good” or “Poor” and tallied. Some sites in the shoreline category received no ratings due to permanent bulkheads or shore was too far from the boat to view.

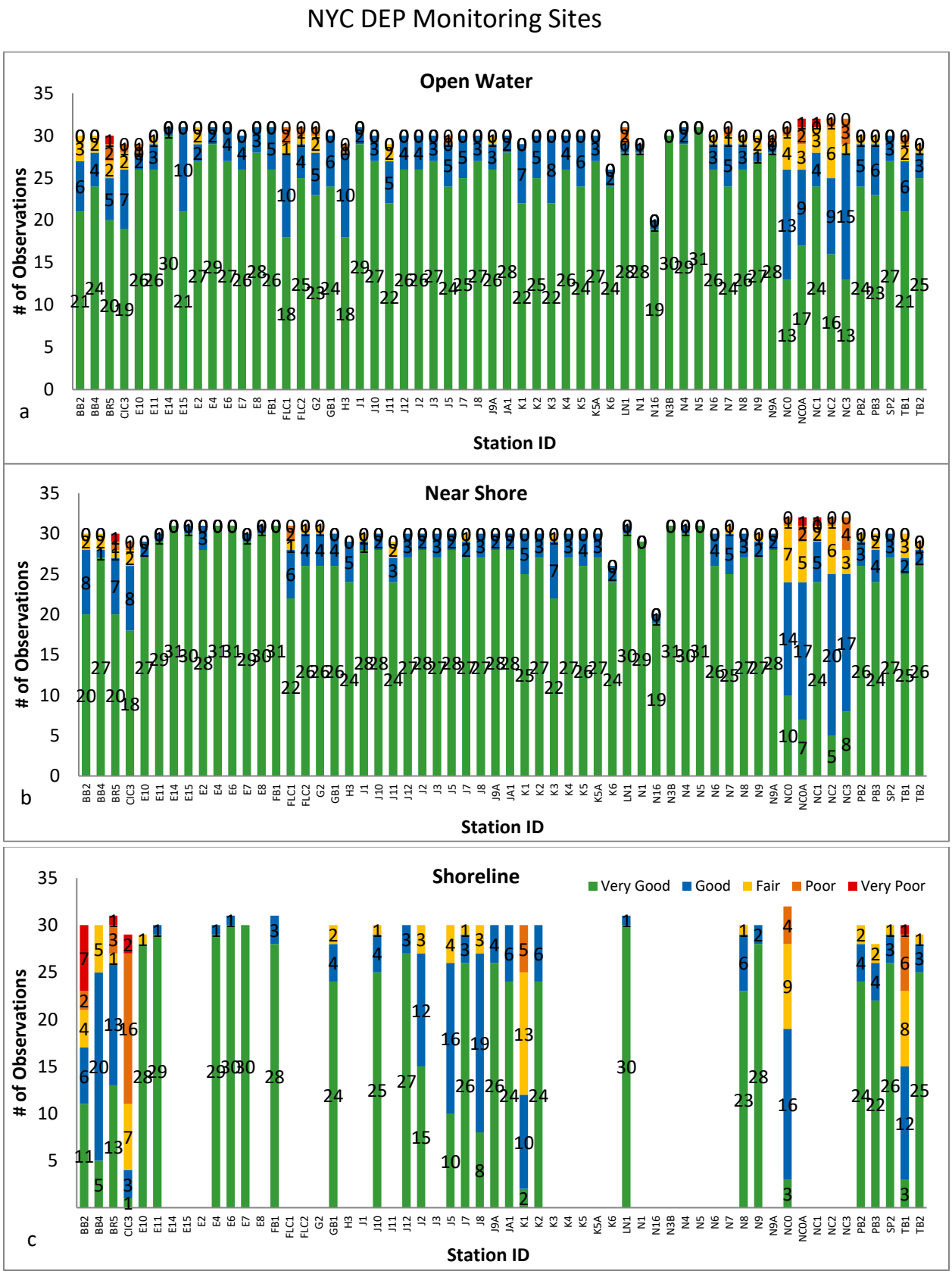


Figure 4a-c. A 5-point rating system for the 3 categories of NYC DEP monitoring. Some sites in the shoreline category received no ratings due to permanent bulkheads or the shore was too far from the boat to view.

PRECIPITATION ANALYSIS

As part of the floatables monitoring program, additional screening level data analyses were conducted in order to get a sense of how the floatables condition ratings could be used. Given the variable nature of the sites involved and the somewhat subjective nature of the rating system, the floatables condition ratings were never intended to do any more than provide a systematic manner in which to help prioritize areas of New York Harbor with regard to floatables control planning purposes. However, investigating the data to see if any patterns exist has been useful in providing insight into the results of the site specific investigations and other portions of the program.

This section summarizes findings based on monitoring data from 2022 with regard to the association of ratings with monthly rainfall totals. Figure 5 shows the percentage of each rating category in each month. Rainfall totals are displayed in the background. Rainfall totals were moderate in 2022 (46.3 inches). It was a relatively dry summer and monthly rainfall was variable throughout the year with no clear correlation to ratings.

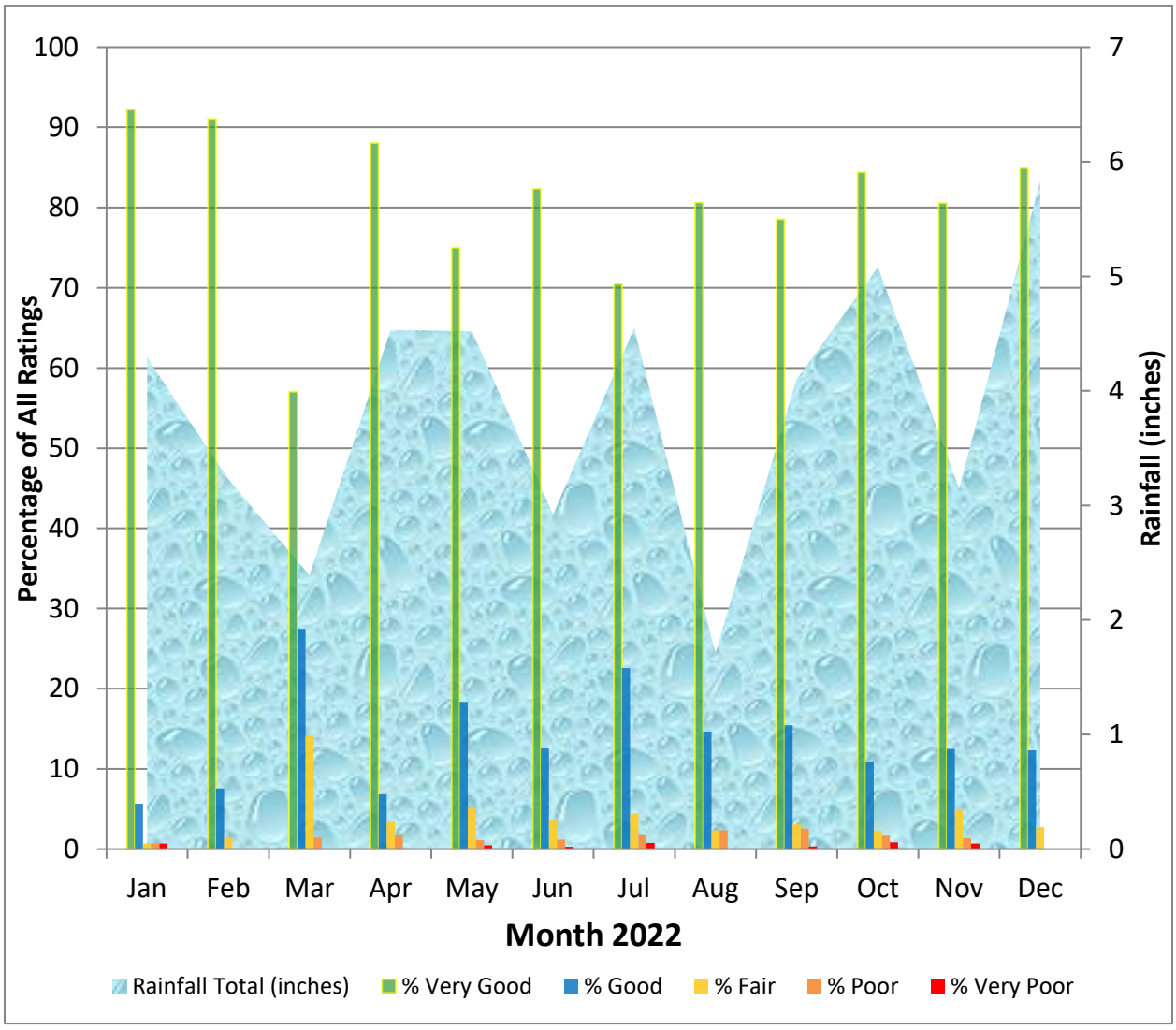


Figure 5. Monthly ratings and precipitation comparison. Rainfall data are from N.O.A.A. online weather data (Central Park Area, http://www.weather.gov/okx/CentralParkHistorical).

SITE SPECIFIC INVESTIGATION STUDY

INTRODUCTION

As part of the Floatables Monitoring Program, site-specific investigations were conducted for the monitoring sites that had the most persistent poor floatables condition ratings based on monitoring data collected in 2021 (i.e., NC0A East Branch of Newtown Creek, NC3 Whale Creek and FLC1 head of Flushing Creek; see Figure 6). To date, the investigations have included document and database reviews and field observations during dry and wet weather. The overarching goal of this year's site specific investigations was to gain insight into the sources of floatables and other debris at the selected sites in order to inform planning within the framework of the City-wide Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP). The investigations were able to provide a step toward this goal and initial findings have confirmed that the floatables conditions at each site were impacted by several types of debris from several types of sources.

Summarized progress information, investigation methods, and findings are presented in the following sections with the purpose of describing the approach the New York City Department of Environmental Protection (NYCDEP) has taken to advance this portion of the floatables monitoring program. In addition, general methods for conducting the investigations as well as compiled data and information gathered as a result of the investigations are provided.

In the sections that follow, the classification of CSO vs. non-CSO debris is addressed by describing the use of material characterization and source inference to make this distinction, and also recognizing the overlap of debris sources that adds to the complexity of this issue.

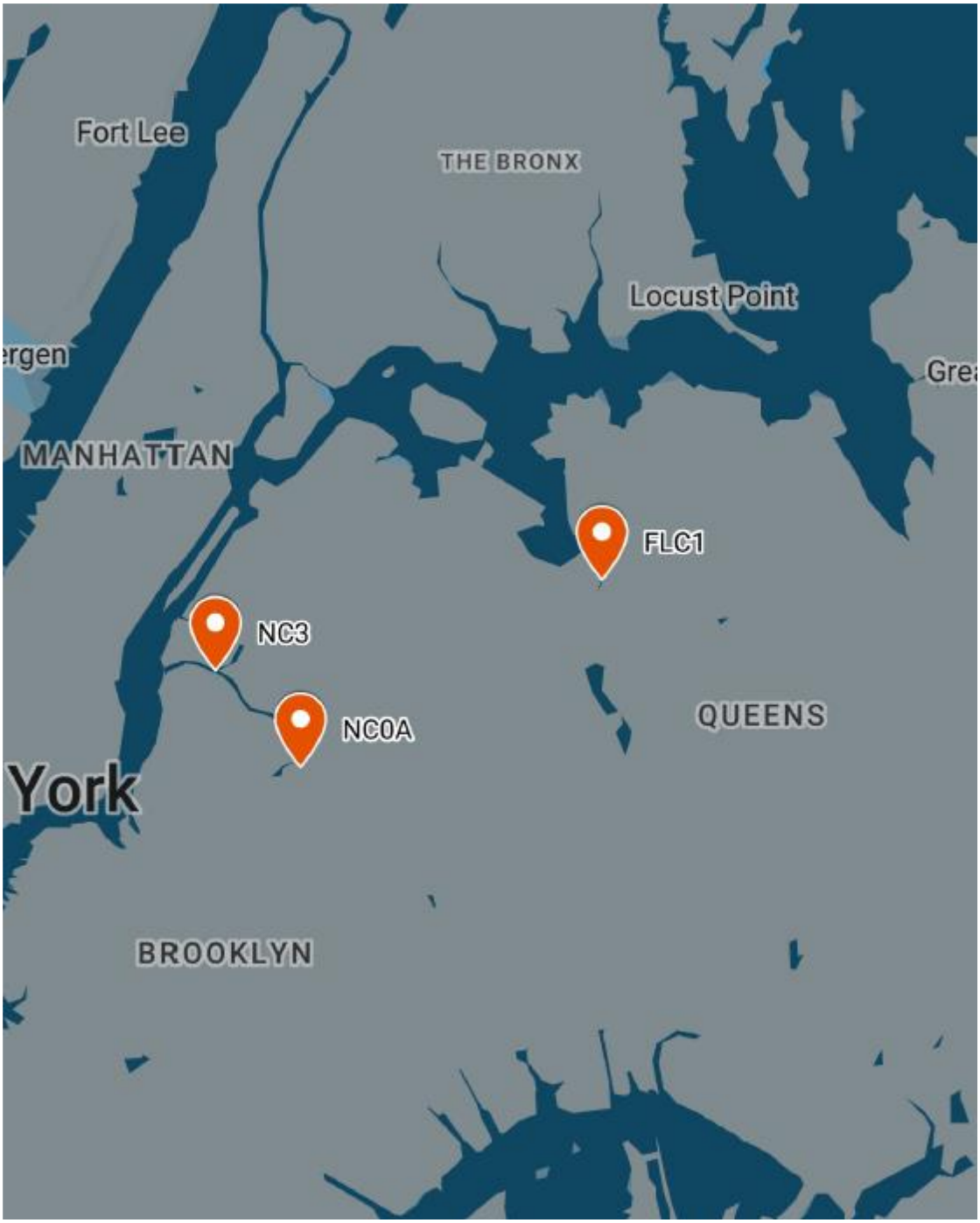


Figure 6. The 3 sites selected for the site specific investigation study in 2022.

OBJECTIVES

The objectives of the site-specific investigations include the following near-term goals:

- **Study area characterization, including proximal floatable control programs:** The characterization of the study area surrounding the selected monitoring site was intended to identify traits that may influence debris, such as land use; CSO and litter control mechanisms and practices;

sewer system components; and CSO and storm outfall locations, physical characteristics, and drainage areas.

- **Floatable and debris materials characterization:** By categorizing and enumerating the discarded material found at a site, the influence of the different types of material on the floatables condition rating in the Off Shore, Near Shore, Shoreline and Upland areas and the influence on upland conditions was generally determined with regard to relative magnitude. Because the condition ratings as well as the general aesthetics of an area are affected by the presence of all types of discarded material, not just waterborne floatables, debris ranging from sunken, derelict pier pilings to upland litter were included in the material characterizations.
- **Investigation of floatables and debris sources:** Following from the debris and study area characterizations, a sense of debris sources and their relative degrees of influence was reasonably determined through inference. Although not necessarily definitive due to overlapping sources (e.g., street litter from CSO outfalls or shoreline littering) and the lack of observed active deposition (e.g., illegal dumping caught in the act), source identification of this sort may help to prioritize further investigations and/or rule out certain sources.

Other, longer term objectives of the program include:

- **Correlation of rating trends to floatables control programs where applicable:** Using the information gained in the study area and material characterizations and the material source investigations, an association of floatables rating trends to control programs may be made in some, but not all, cases. Additional work will be necessary to complete this objective.

- **Initiation of appropriate remediation planning where feasible:** The information developed through the achievement of the near-term goals was fed into the LTCP in order to help inform control program planning, as necessary and appropriate.

METHODS

The site investigations conducted to date focused on the three near term objectives listed above. Methods for each are described below.

Study Area Characterization, Including Proximal Floatable Control Programs

Data reviews were conducted for study areas surrounding each of the study sites. Reviews included the following information and were conducted for the primary area immediately adjacent to the sites and for the secondary study area encompassed by the regulated combined sewage drainage area(s) that contribute flow to the waterbody. Data sources included readily accessible data and documents produced by the New York City Department of City Planning and GIS databases maintained as part of the New York City Department of Environmental Protection CSO LTCP project.

- Land use
- Zoning
- Sewer system components (e.g., regulators, outfalls, catch basins)
- Sewer system characteristics (e.g. combined, separate, direct drainage)
- Lot ownership (primary study area only)
- General character

Site characterization data was confirmed, in general, as part of field investigations, and additional information was noted such as the general cleanliness of the primary study area with regard to litter.

Floatables and Debris Material Characterizations

Materials characterizations were conducted in the field by observing, counting, and categorizing debris items within the count area. Descriptions of the count area and the categorization of items are provided below.

Count Area Delineation

The delineation for each count area for each site was determined by what could reasonably be seen and identified from the monitoring site landside vantage point. Given the variability of the sites with regard to existence of shoreline and bulkhead areas, readily available access to the sites, access to the shoreline area, and the existence of view obstructions, this "line of sight" delineation proved most useful for the objectives at hand. Standard delineations, such as sampling uniform grids across all the sites were considered during the pilot phase, but found impractical. Delineations are represented in Figures 7-9.

Material Categorization

Item counts were initially categorized in the field by material type according to a data sheet adapted from the International Coastal Cleanup (ICC). The ICC is a yearly event sponsored by the Ocean Conservancy where volunteers count and remove trash and debris from beaches worldwide, including many in New York City. The ICC data sheets and categorization system are widely recognized and were selected for use to allow for future data comparisons with ICC events, if warranted.

ICC major categories used on the site investigation field data sheet included Shoreline/Recreational Activities/Street Litter, Ocean/Waterway Activities, Dumping Activities, and Medical/Personal Hygiene. In addition, two new categories, Natural Material and Derelict Pier/Bulkhead Material, were added during 2007. Most items within each category were terms from the ICC data sheet. Some terms were modified forms of the ICC terms, and others were terms that were added to the lists, based on observations from preliminary site visits in February 2007. These changes in ICC terms were made in order to put the data collection into the context of the floatables monitoring program.

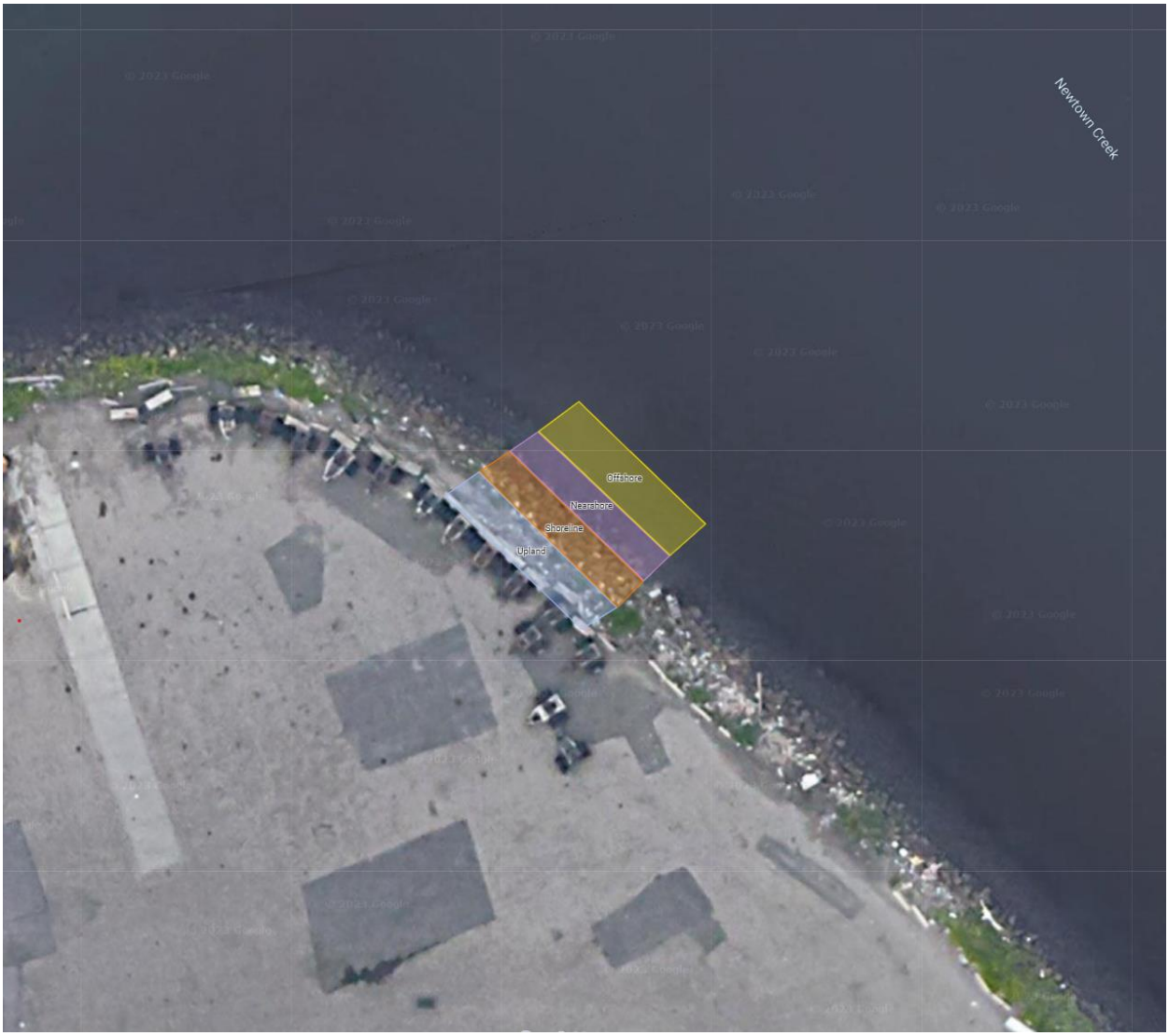


Figure 7. Debris sample zones at East Branch of Newtown Creek (NC0A).

Figure 8. Debris sample zones at Whale Creek (NC3).

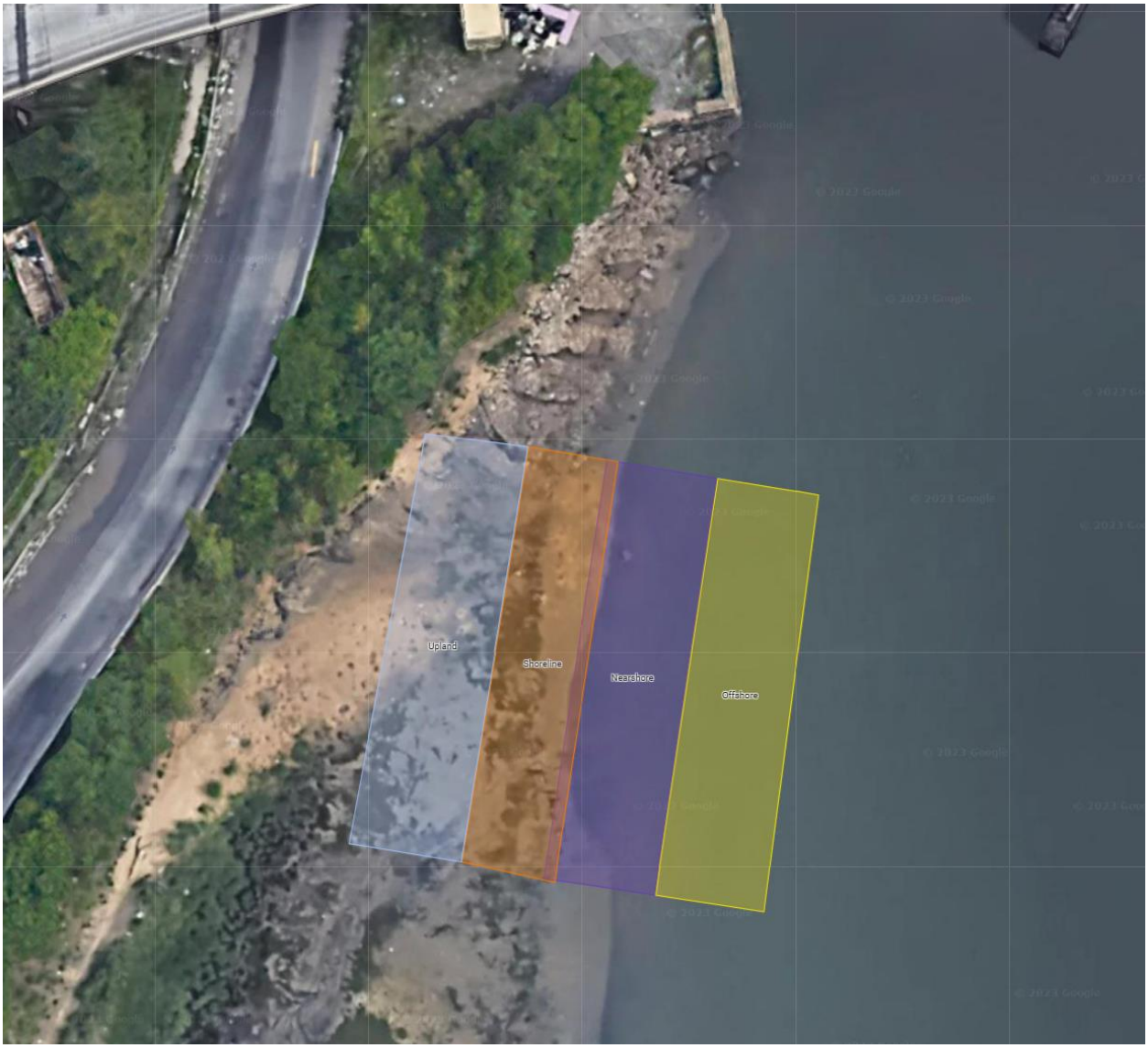


Figure 9. Debris sample zones at the head of Flushing Creek (FLC1).

The following bullet points summarize the count categories and provide alternative names in parenthesis that are more relevant to the context of this study.

- **Ocean/Waterway Activities (i.e., Marine/Boating Activities):** Items such as nets, line, buoys, and fishing gear were included in this category.

- **Dumping Activities (i.e., Construction and Demolition Debris (C&D) and Automotive Items):** Discarded building materials, such as dry wall, block, stone, siding, metal conduit, plumbing, and used lumber were considered part of this category along with tires, axles, doors, spark plugs, batteries, and other car parts. Full, 30+ gallon trash bags were also part of this category.

- **Medical/Personal Hygiene:** Items such as condoms, tampon applicators, syringes, and diapers were included in this category.

- **Derelict Pier and Bulkhead Material:** Debris, such as planks and pilings, that were likely to have originated from the decay of wooden piers and bulkheads comprise this category.

- **Natural Material**: Debris such as seaweed, grasses, leaves, sticks, logs and other natural items comprise this category.

- **Shoreline, Recreational Activities & Street Litter**: This category includes debris characteristic of municipal solid waste items generally found on streets in sidewalk litter baskets. The category comprises numerous items such as food wrappers, beverage containers, newspapers, and household items. The ICC category of Smoking-Related Activities, cigarette butts and cigarette packaging, was added to this category.

Item counts were also categorized by location according to the three of the four floatables condition rating system categories, Off Shore, Near Shore, and Shoreline. An Upland category was also included. The Open Water category was excluded (water-based survey); the site specific investigations were done from land-based observations. A section on the data sheet also included areas for the user to record certain data about the tide and weather at each site, including the tide stage, time, temperature, precipitation, and wind direction.

Investigation of Floatables and Debris Sources

In order to associate materials with sources, field observers inferred a material's source from its characteristics and/or its location. Although related to the item categories based on the ICC data sheets, this source categorization was deemed necessary due to the overlap of sources for certain materials, most notably street litter. For instance, the hypothetical waterborne beverage bottle vs. an upland beverage bottle share similar characteristics as street litter, but their sources could be different.

The possible sources of each material category are described below. It is noted that many of these sources may overlap – different source categories may contain some of the same items.

- **CSO Discharge:** The presence of floatables comprised of items characteristic of Street Litter (i.e., Shoreline and Recreational Activities) and Medical/Personal Hygiene items were considered to suggest CSO discharge as a potential source.

- **Illegal Dumping:** Items characteristic of bulk Street Litter, bulk Natural Material, C&D, and Automotive (i.e., Dumping Activities) items have been associated with illegal dumping. Depending upon the site, illegal dumping influences waterbodies through the direct dumping of material into the waterbody (e.g., a tire thrown over a bulkhead) and possibly through the wind dispersal of items from land to the water.

- **On-Land Littering:** Items characteristic of Street Litter, Marine Litter, and Medical/Personal Hygiene products have the potential to enter waterbodies through direct human deposition onto the shoreline and/or into the water and through possible wind or runoff dispersal of lighter items deposited upland. On land littering also includes items discharged by stormwater outfalls in the case of water borne debris.

- **Marine Dumping/Littering:** Items characteristic of Street Litter, Marine Litter and Medical/Personal Hygiene products have the potential to enter waterbodies through direct deposition from boats or marinas.

- **Natural Deposition:** Natural materials, such as tree limbs, leaves, and reeds, have the potential to be deposited in the water or on shore as a result of natural activities including storms, deciduous leaf cycles, and seasonal plant life cycles.

- **Pier/Bulkhead Decay:** Derelict Pier and Bulkhead Debris including such items as waterlogged planks and pier pilings have been inferred to have been deposited as a result of pier and bulkhead decay.

In order to simplify the source categorization, especially given the overlapping sources, these categories of items were further classified during data compilation and analysis as Possible CSO, Non-CSO, or Unknown. Possible CSO includes items in the Street Litter and Medical/Personal Hygiene categories. Non-CSO Material includes items in the Illegal Dumping, On-Land Littering, Marine Dumping/Littering, Natural Deposition, and Pier/Bulkhead Decay categories.

SITE CHARACTERIZATION RESULTS

Newtown Creek East Branch (NC0A)

This site is near the head of Newtown Creek at the Grand Avenue Bridge. The shoreline is rip rap (Fig. 10) with some CSO outfalls to the north and south (Fig. 12). The surrounding area is predominantly industrial and manufacturing facilities.

Figure 10. NC East Branch (NC0A) sampling zones. Top: Shoreline, nearshore and offshore sampling zones. Bottom left: shoreline and upland zone. Bottom right: close up of shoreline zone.

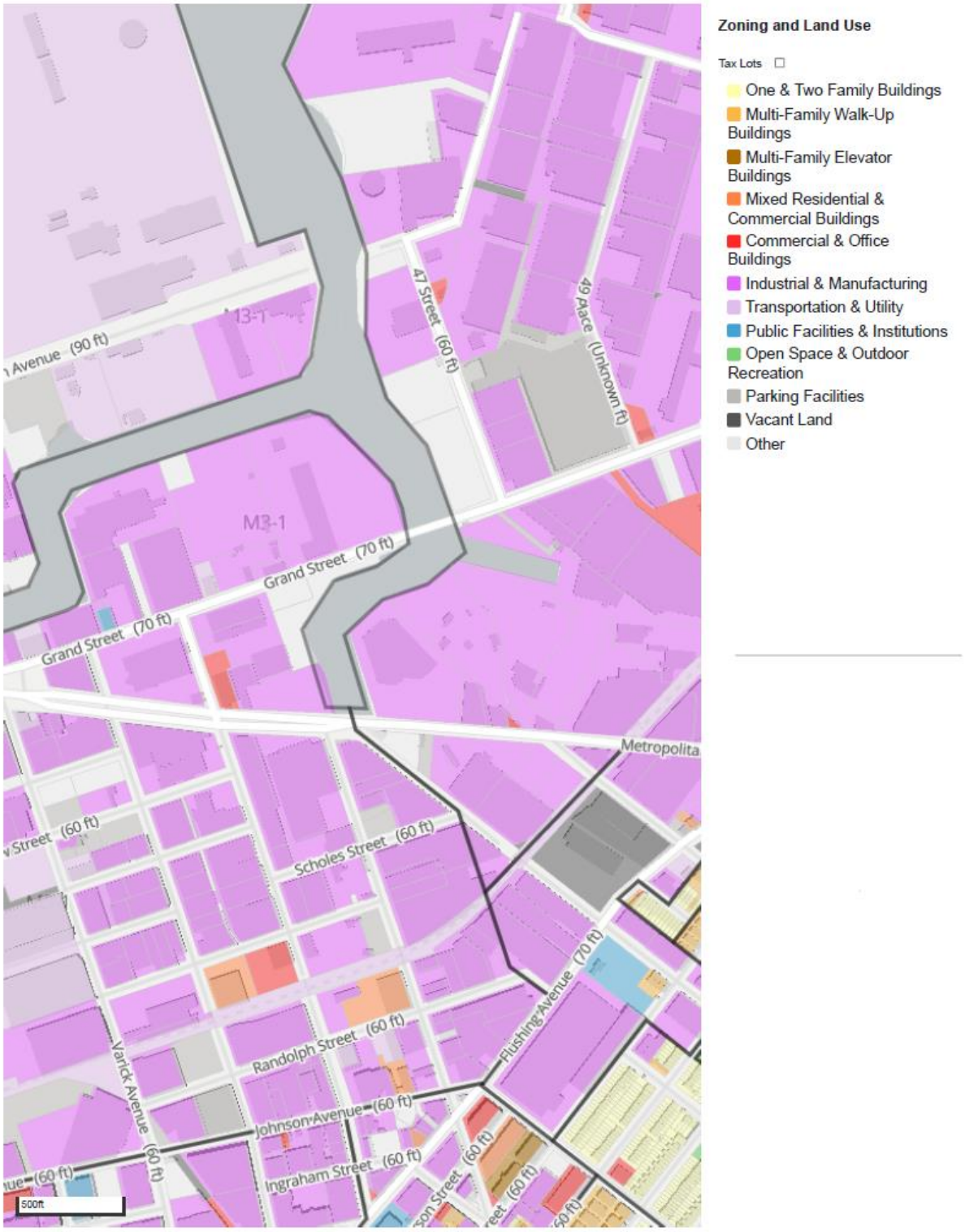


Figure 11. Land use map of the East Branch of Newtown Creek (NC0A) area.

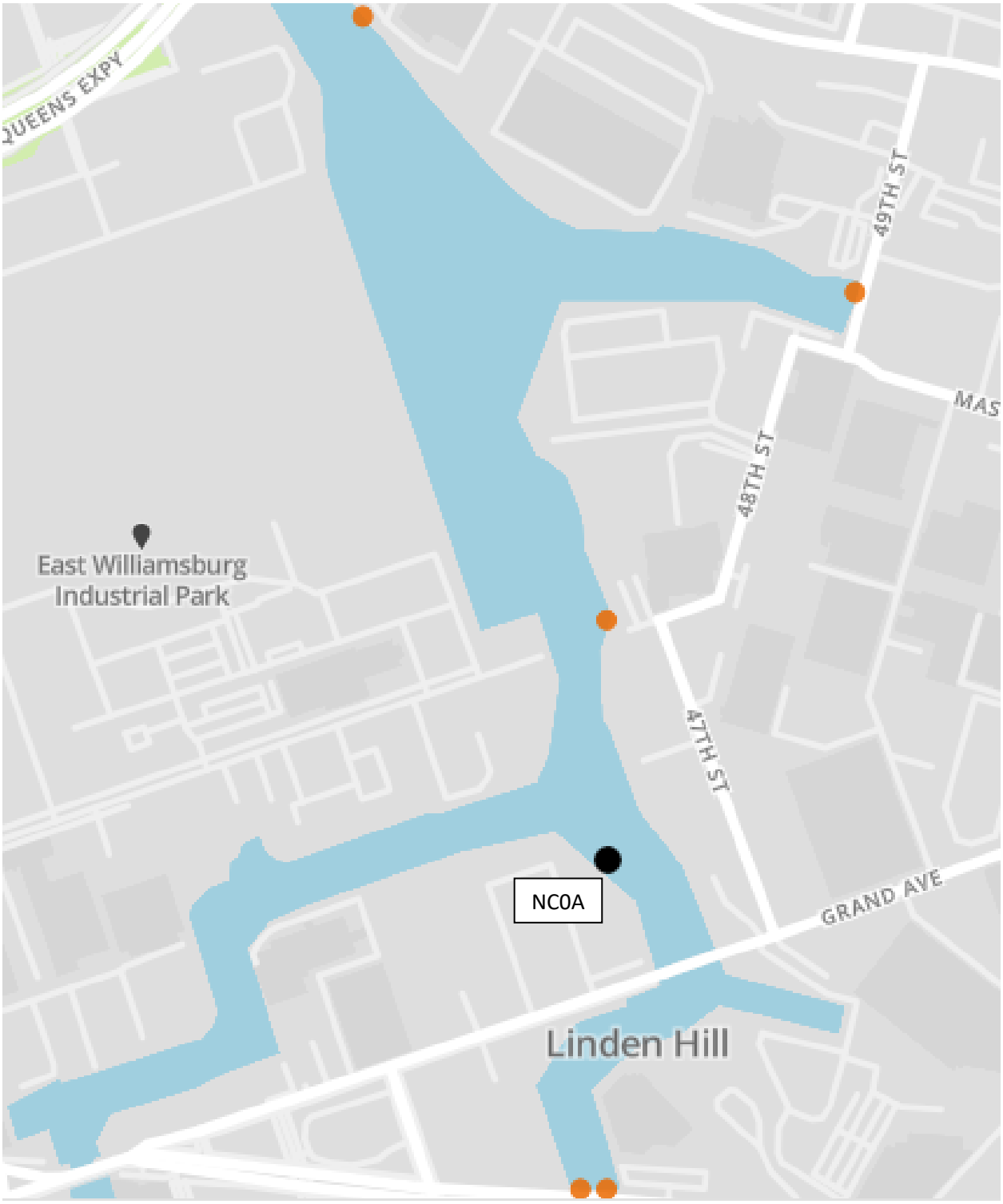


Figure 12. CSO map of the East Branch, Newtown Creek (NC0A) area. The brown markers are CSOs. The site drains to the Newtown Creek Plant.

Newtown Creek at Whale Creek (NC3)

This site is located in the Newtown Creek Nature Walk adjacent to Whale Creek so there may be litter present from park visitors. The shore consists of steps down to the water. The area consists of mostly industrial, manufacturing, transportation and utility facilities (Fig. 14).

Figure 13. Whale Creek sampling zones. Top: The steps are shoreline and upland zones. Bottom: closeup of nearshore zone.

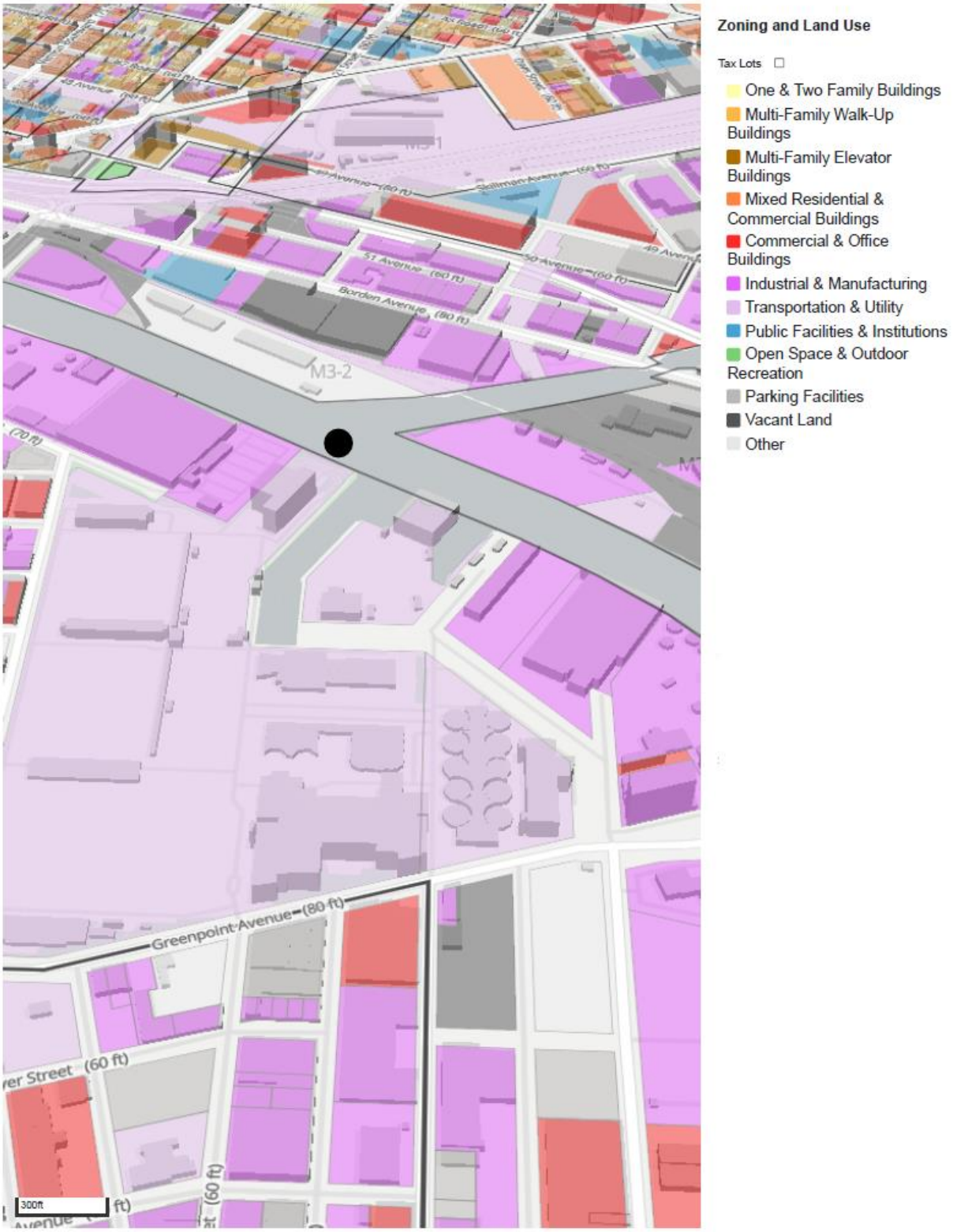


Figure 14. Land use map for Whale Creek (NC3).

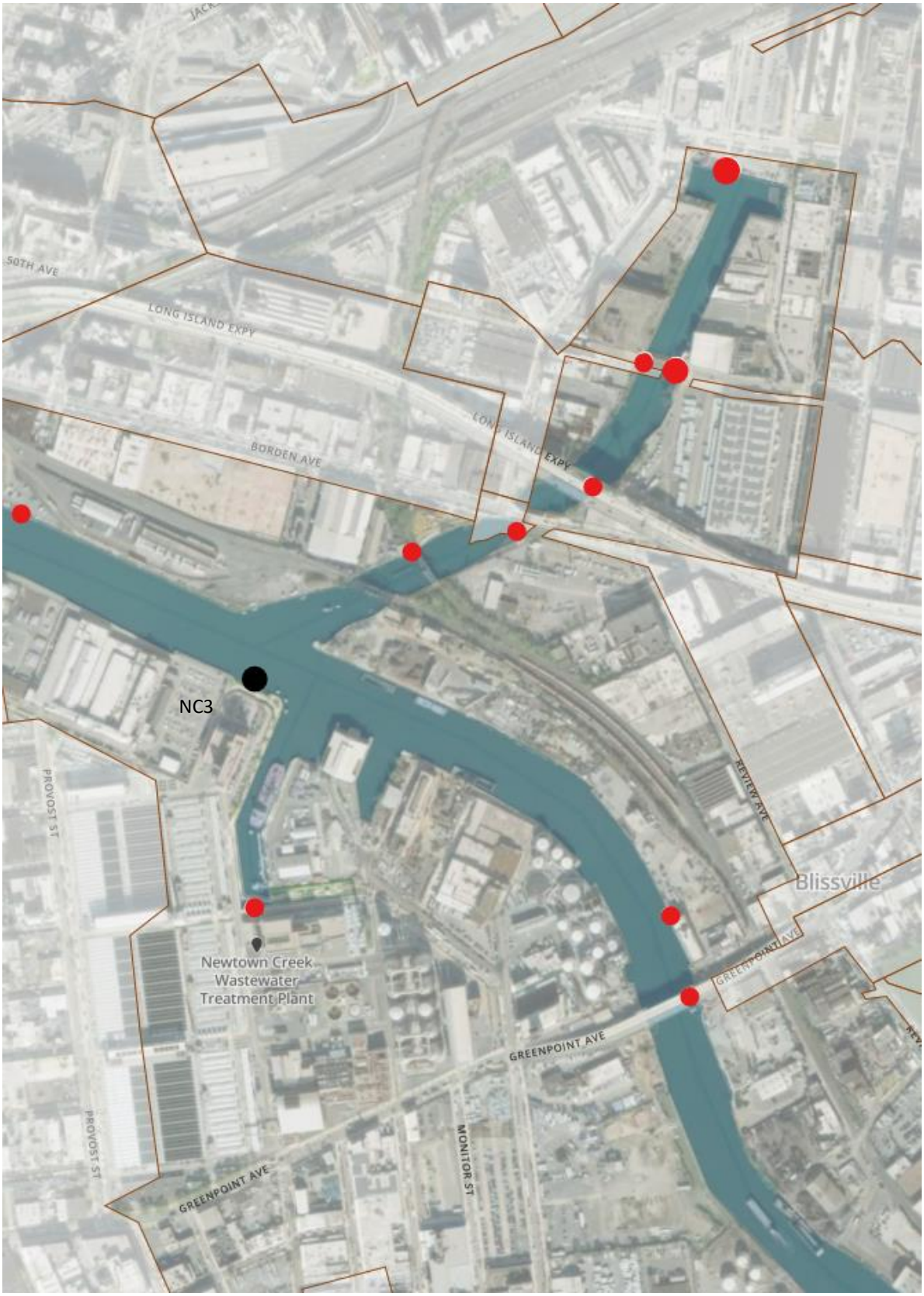


Figure 15. CSO map of the Whale Creek (NC3) area. The red markers are CSOs.

Flushing Creek (FLC1)

This site is next to a highway and across the creek from a building supply facility. Fishermen occasionally use the site. The immediate area is predominantly industrial and manufacturing (Fig. 17). There are several CSOs in the creek and the adjacent World's Fair Marina (Fig. 18).

Figure 16. Flushing Creek sampling zones. Top: overview of site. Bottom left: shoreline and nearshore zones. Bottom right: upland zone.

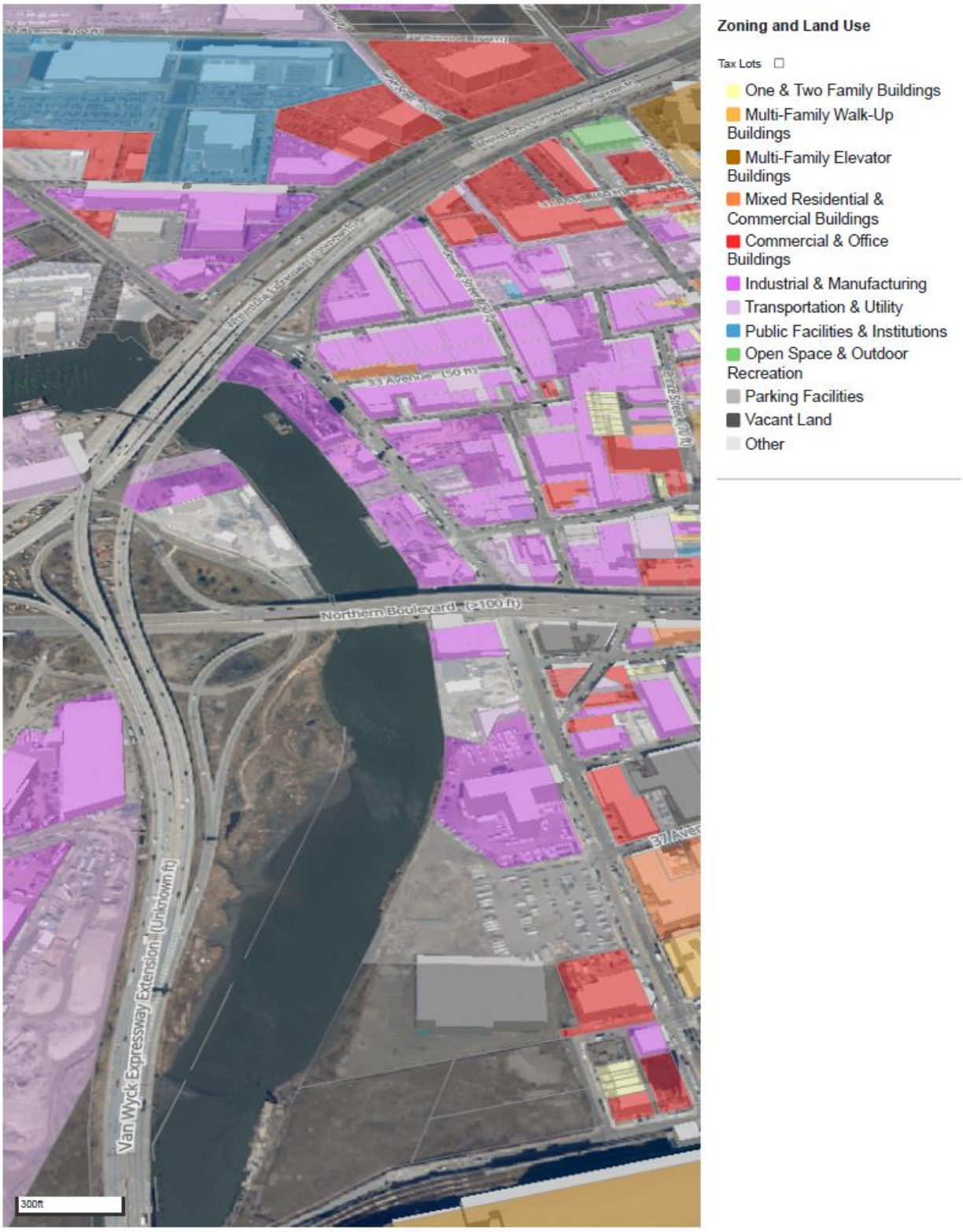


Figure 17. Land use map of Flushing Creek (FLC1) area.

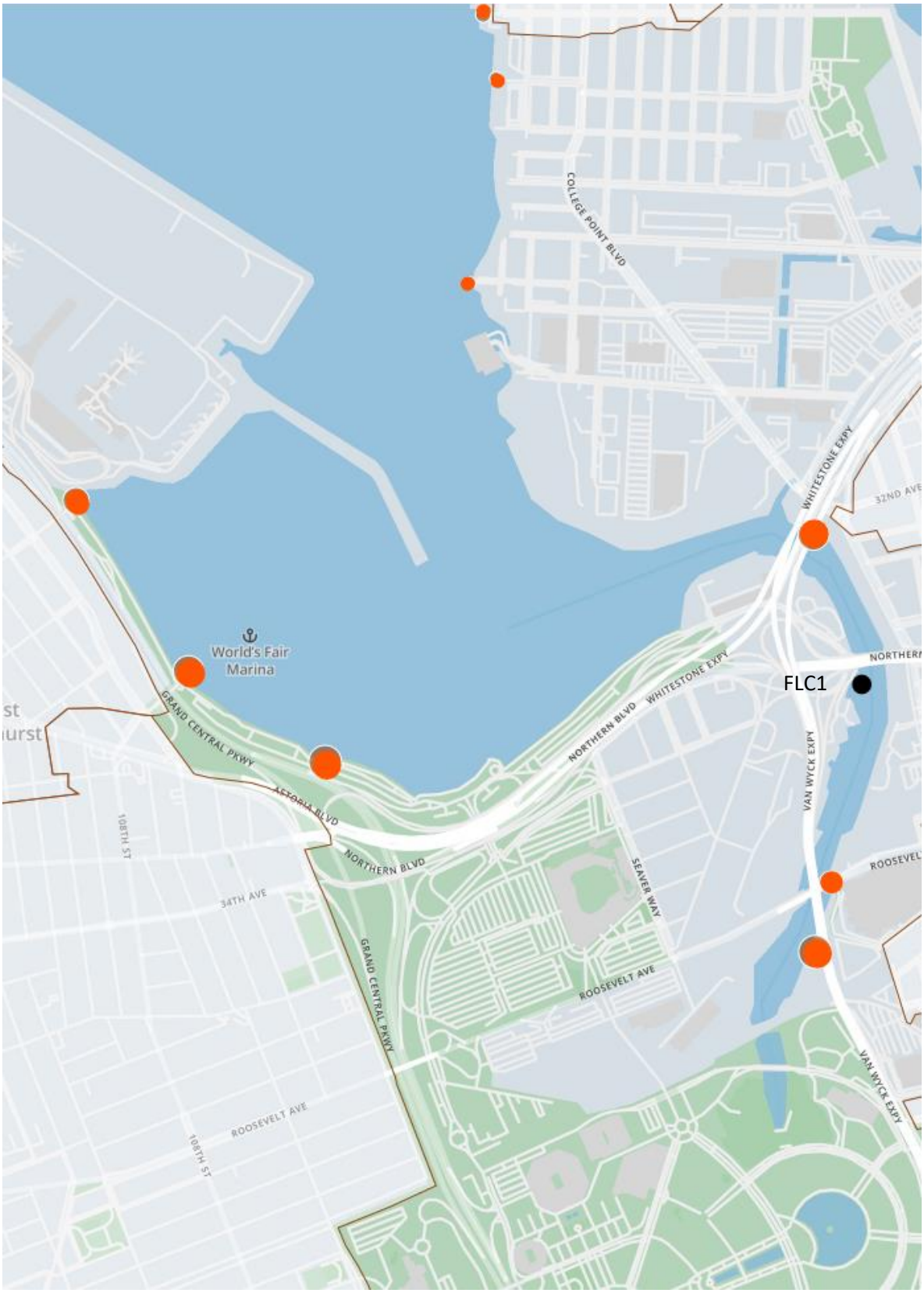


Figure 18. CSO map of Flushing Creek (FLC1) area. The red markers are CSOs. The site lies in the Bowery Bay WWTP drainage basin.

OBSERVATION NOTES

June 23-24, 2022 Conditions

All three sites were visited between 9:30am and 10:30am over the two days. The temperature was in the mid to high 70's °F. There was no precipitation, and light winds from the southeast. The tide was low and flooding at Flushing Creek and low and ebbing at Newtown Creek. The East Branch site was sampled from the H.S.V. *Osprey*.

August 18-19, 2022 Conditions

All three sites were visited between 10am and 11:45am over the two days. The temperature was in the low to mid 80's °F. There was no precipitation, and light winds from the east and southeast. The tide was low and flooding at all sites.

September 23, 2022 Conditions

All three sites were visited between 9:30am and 10:30am with no precipitation and the temperature was in the high 50's °F. Winds blew strongly out of the north and northwest. The tide was high and flooding at Flushing Creek and high and ebbing at Newtown Creek. There was heavy rain the previous day which allowed these samples to be considered wet weather samples.

MATERIAL COUNTS AND DISCUSSION

Field sheet tables for each site on each sampling date showing the individual counts of debris items at the site specific zones are available upon request (Appendix 1). Figures 19-21 associate a possible source to these debris items.

Newtown Creek East Branch (NC0A)

Figure 19 summarizes the debris count sources at the East Branch of Newtown Creek in 2022. Most floatable debris here were recorded in the upland and shoreline zones (Fig. 19a and b). Floatable litter accumulating on the rocky shoreline over many tide cycles seems to be the major contributor to debris in all the zones. Recent wet weather on 9/22/22 did increase the occurrence of overall debris in all zones (Fig. 19). This was likely a result of land runoff and CSO flow after the storm.

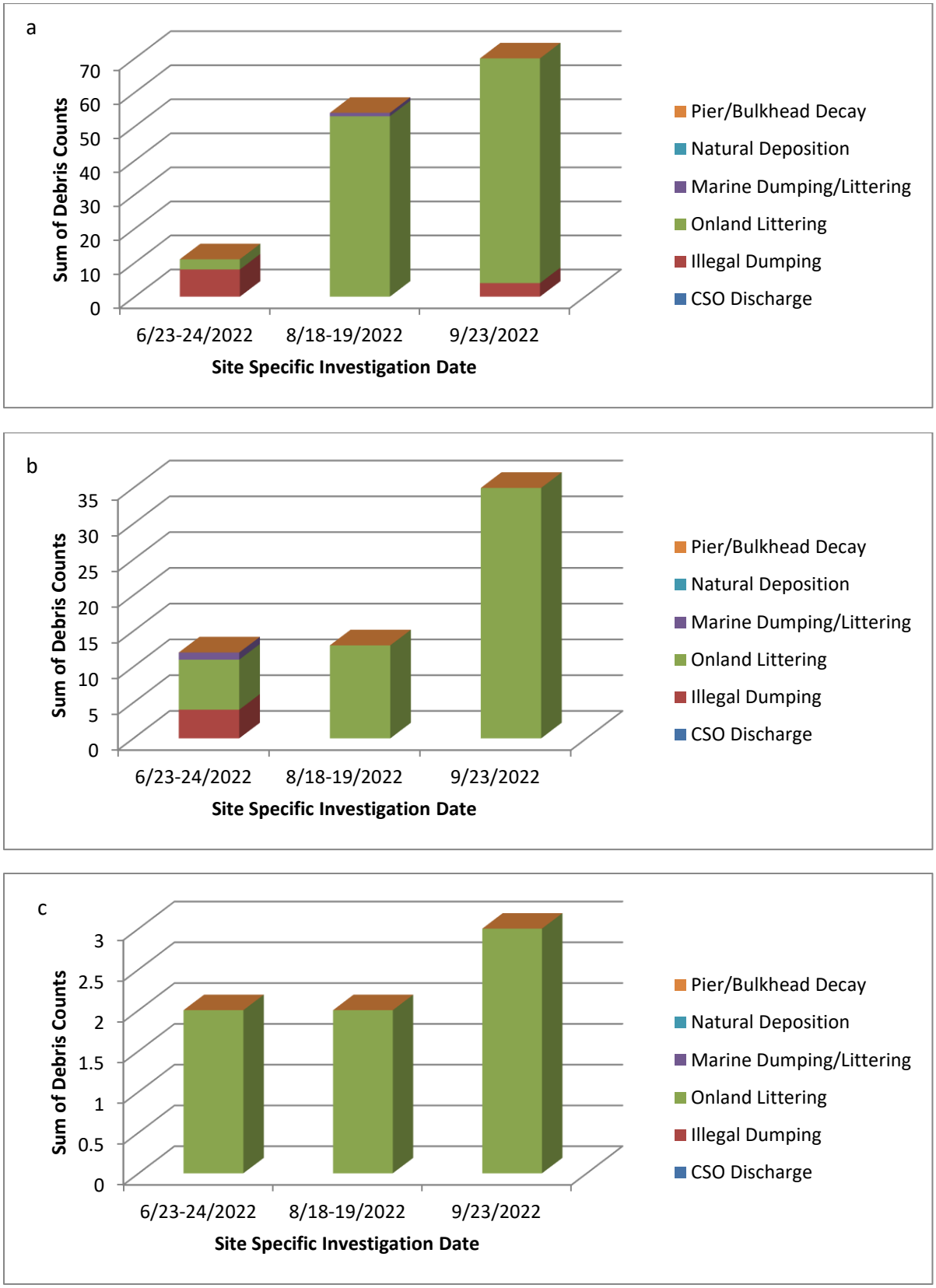
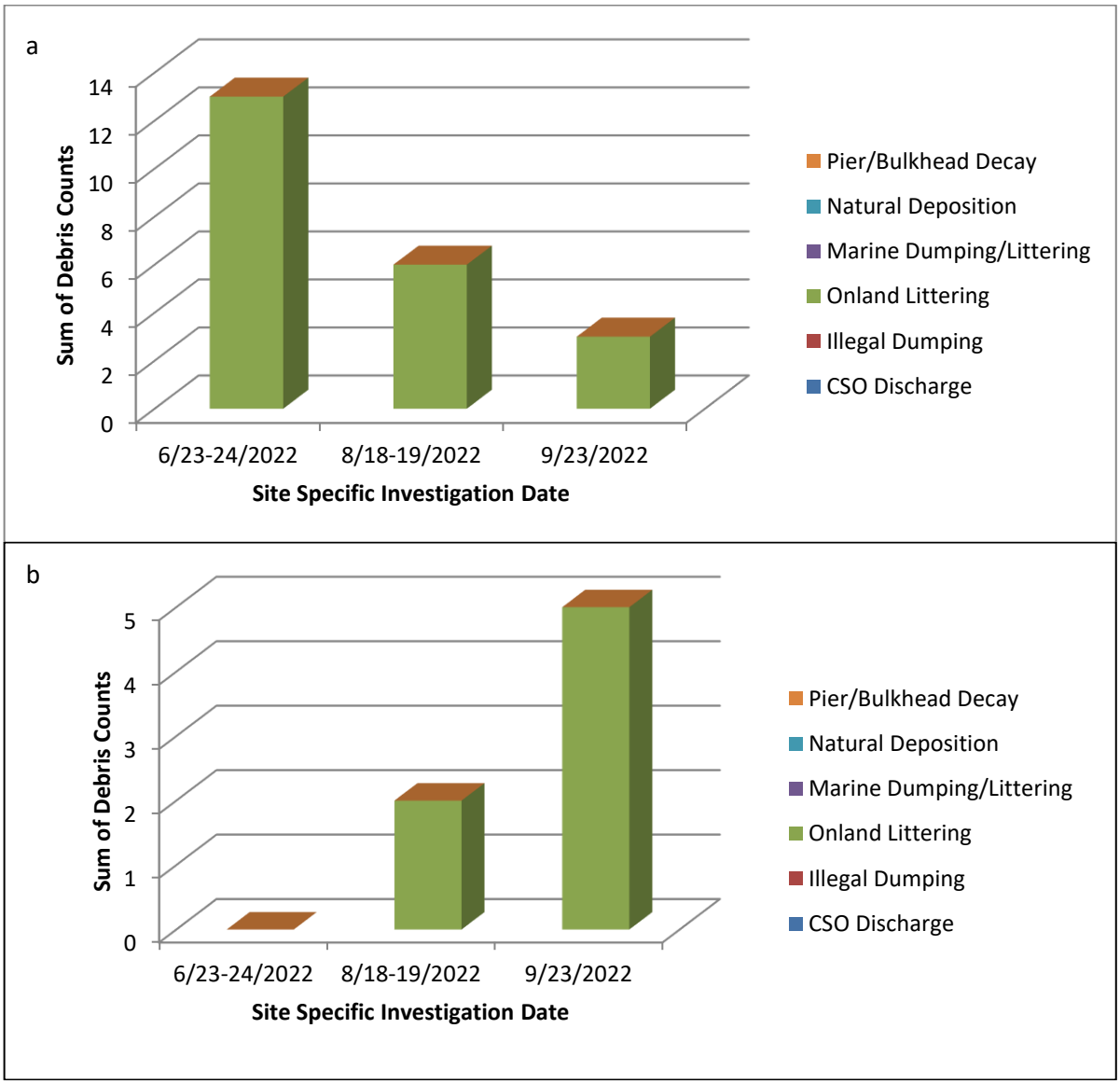


Figure 19. Newtown Creek at East Branch debris source counts in the upland (a), shoreline (b) and nearshore (c) zones. 9/23/22 was a wet weather sampling day.

Newtown Creek at Whale Creek (NC3)

Figure 20 summarizes the debris count sources at Whale Creek in 2022. The floatable sources here were predominantly littering related debris in the upland zone (Fig. 22a). There was a slight increase in floatables recorded after the wet weather event on 9/22/22 in the shoreline and nearshore zones (Fig. 20). Debris occurrence here can be a function of the tide as floatables get carried in during the flood.



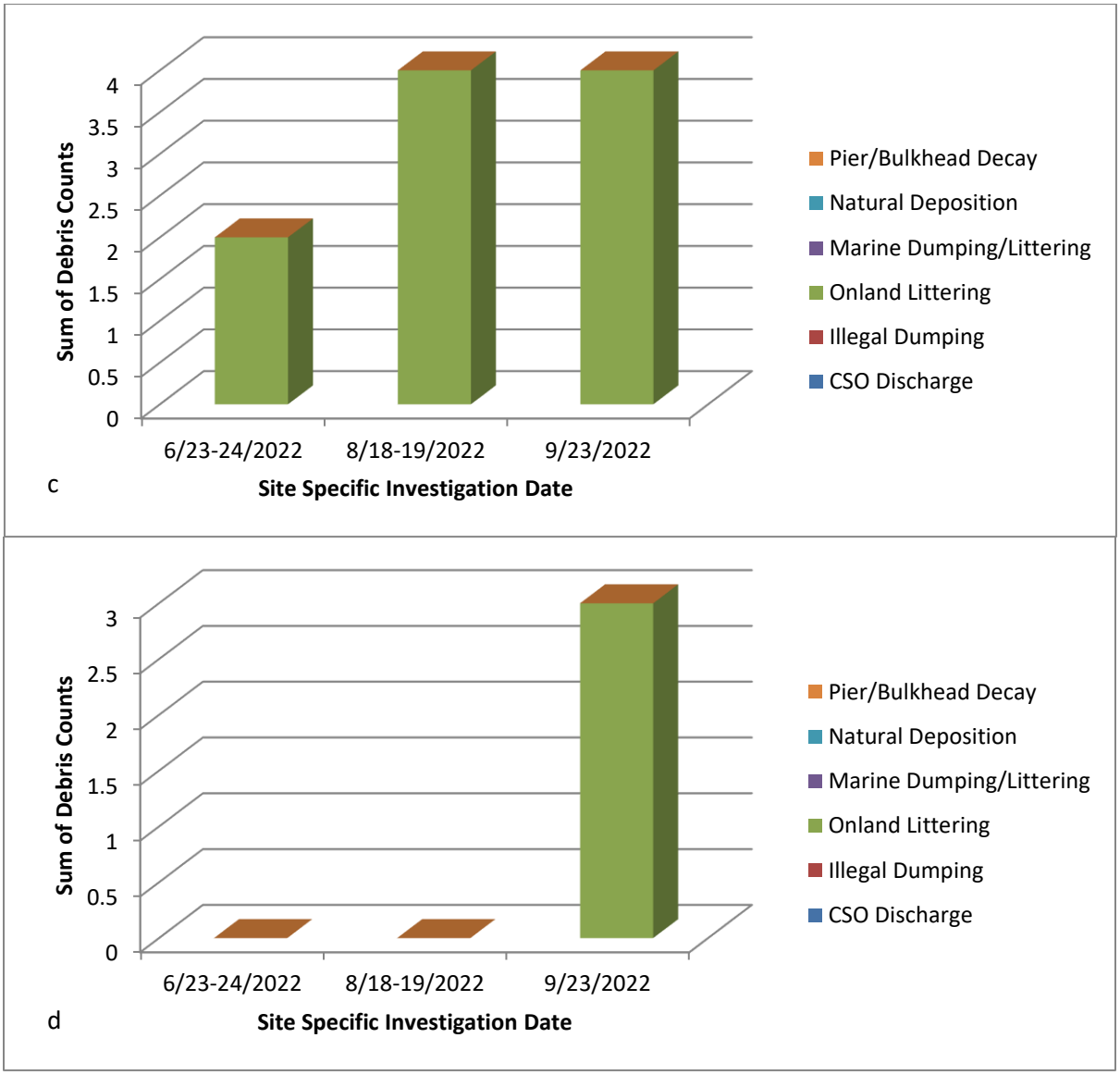
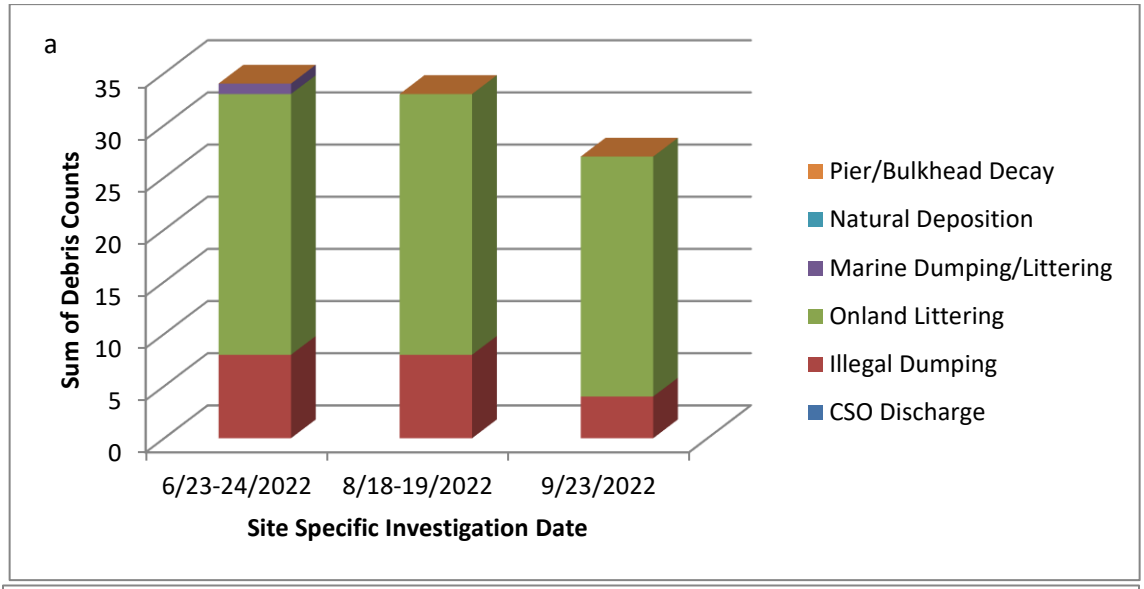
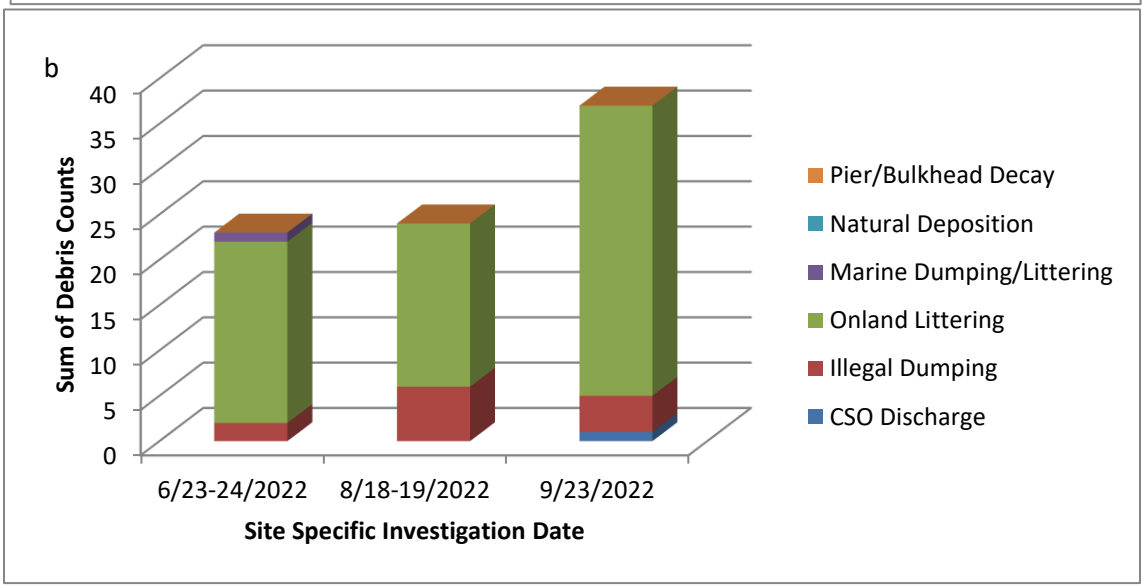


Figure 20. Whale Creek debris source counts in the upland (a), shoreline (b), nearshore (c) and offshore (d) zones. 9/23/22 was a wet weather sampling day.

Flushing Creek (FLC1)

Much of the debris at this site is from onland littering and illegal dumping (Fig. 21). There was an increase in the debris counts in the shoreline and nearshore zones after heavy rainfall (Fig. 21b & c). For a portion of the year there was construction in the creek at this site which may have affected the occurrence of floatables.


a
Sum of Debris Counts
0
5
10
15
20
25
30
35
6/23-24/2022
8/18-19/2022
9/23/2022
Site Specific Investigation Date
Pier/Bulkhead Decay
Natural Deposition
Marine Dumping/Littering
Onland Littering
Illegal Dumping
CSO Discharge


b
Sum of Debris Counts
0
5
10
15
20
25
30
35
40
6/23-24/2022
8/18-19/2022
9/23/2022
Site Specific Investigation Date
Pier/Bulkhead Decay
Natural Deposition
Marine Dumping/Littering
Onland Littering
Illegal Dumping
CSO Discharge

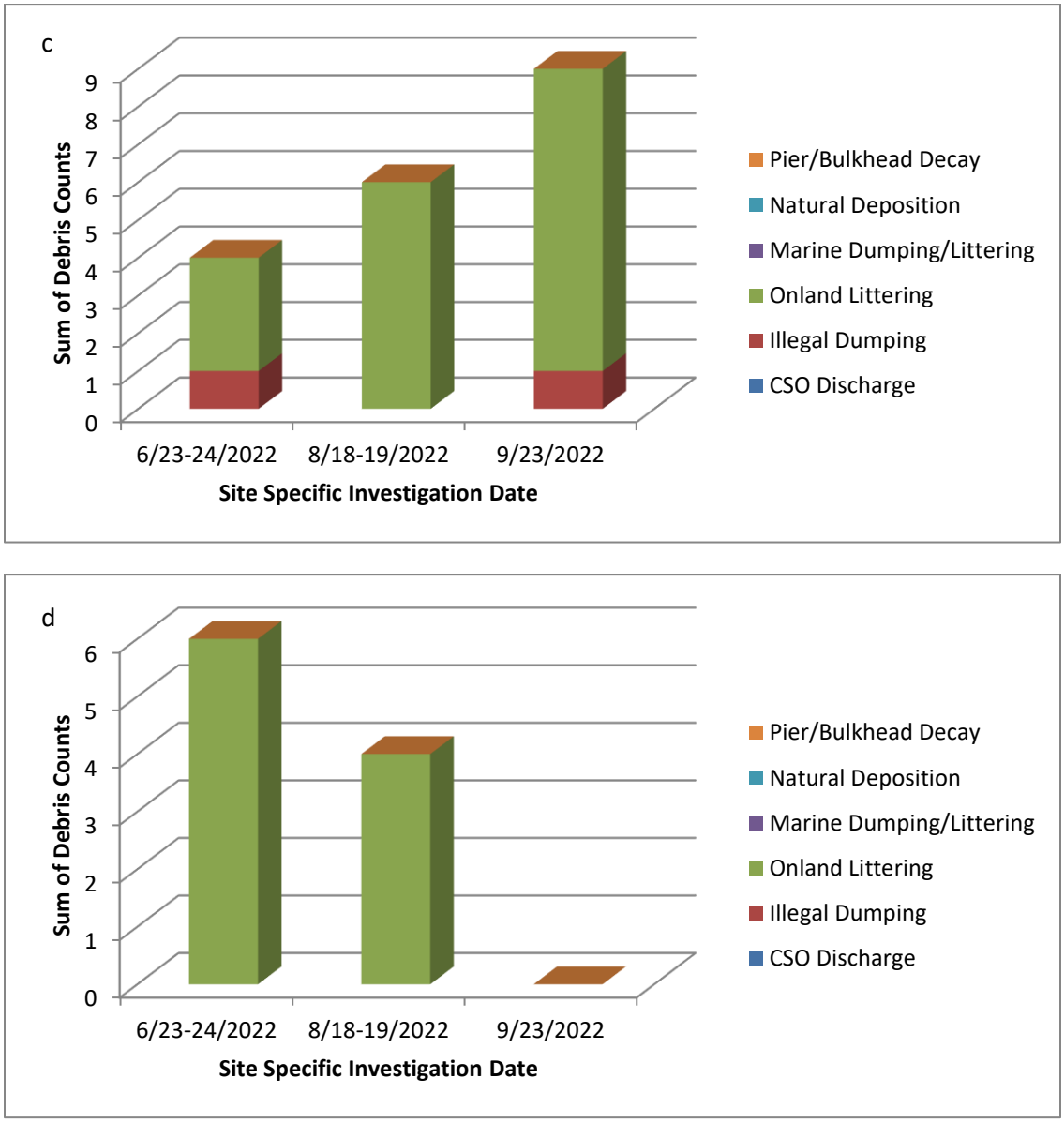


Figure 21. Head of Flushing Creek debris counts in the upland (a), shoreline (b) near shore (c) and offshore (d) zones. 9/23/22 was a wet weather sampling day.

APPENDIX 1

Categorized Material Item Counts

Field sheets for floatable item counts are available upon request

Contact email: MKoelbl@dep.nyc.gov

APPENDIX 2

RAW DATA

Raw Data available upon request

Contact email: MKoelbl@dep.nyc.gov

APPENDIX 3

LOCATION OF PROGRAM MONITORING STATIONS

The following list and map of floatables monitoring stations includes those stations for which ratings were conducted and data collected in 2021. The stations include all active monitoring stations for the following programs.

- Harbor Water Quality Survey (HWQS)
- Long Term Control Plan (LTCP) Post Construction Compliance Monitoring (PCM)

The number of monitoring sites will vary from year to year within each program, although the total number will generally increase each year through the completion of the LTCP. PCM sites will grow in number as LTCP elements come on line.

Table 1. Descriptive Locations and ID's of all floatables monitoring stations.

Primary Station ID	Secondary Station ID	Descriptive Location	Monitoring Group
BB2	BB2	Head of Bergen Basin	HWQS
BB4	BB4	Mouth of Bergen basin	HWQS
BR5	BR5	Midway of Bronx River	HWQS
CIC3	CIC3	Coney Island Creek, midway, Brooklyn	HWQS
E10	E10-W	Off Hart Island, Western Long Island Sound, Bronx	HWQS
E14	E14-W	Mouth of Bronx River, Bronx	HWQS
E15	E15	Flushing Bay near world's Fair Marina, Queens	HWQS
E2	E2	Mouth of Newtown Creek, East River, Brooklyn/Queens	HWQS
E4	E4-W	Astoria Park, East River, Queens	HWQS
E6	E6	Mouth of Flushing Bay, East River, Queens	HWQS
E7	E7	East of Whitestone Bridge, East River, Queens	HWQS
E8	E8	Between Willet's Point and Throg's Point, Little Bay, Queens	HWQS
FB1	FB1	LaGuardia Airport, Flushing Bay, Queens	HWQS
FLC1	FLC1	Flushing Creek mid creek, Queens	HWQS
FLC2	FLC2	Mouth of Flushing Creek, Queens	HWQS
G2	G2-W	Gowanus Canal mouth, Brooklyn	HWQS
GB1	GB1	Gravesend Bay, Brooklyn	HWQS
H3	H3-W	Jerome Avenue, Harlem River, Manhattan/Bronx	HWQS

Primary Station ID	Secondary Station ID	Descriptive Location	Monitoring Group
J1	J1	Jamaica Bay - Rockaway Inlet near Marine Parkway Bridge, Brooklyn	HWQS
J10	J10	South of Paerdegat Basin Bridge, Brooklyn	HWQS
J11	J11	Sheepshead Bay near mouth of bay, Brooklyn	HWQS
J12	J12-W	Eastern Jamaica Bay, Grassy Bay off of JFK airport, Queens	HWQS
J2	J2	Mouth of Mill Basin, Jamaica Bay, Brooklyn	HWQS
J3	J3-W	Canarsie Pier, Jamaica Bay, Brooklyn	HWQS
J5	J5	Near mouth of Barbadoes Basin, Jamaica Bay, Queens	HWQS
J7	J7	Mouth of Bergen Basin, Jamaica Bay, Queens	HWQS
J8	J8-W	Mouth of Spring Creek, Jamaica Bay, Brooklyn/Queens	HWQS
J9A	J9A	Beyond mouth of Fresh Creek, Jamaica Bay, Brooklyn	HWQS
K1	K1	Mouth of Kill Van Kull, Staten Island	HWQS
K2	K2-W	Kill Van Kull near Shooters Island, Staten Island	HWQS
K3	K3	Near Goethal's Bridge, Arthur Kill, Staten Island	HWQS
K4	K4	Island of Meadows, Arthur Kill, Staten Island	HWQS
K5	K5	Mouth of Arthur Kill, Staten Island	HWQS
K5A	K5A	Open water beyond Conference House Park, Raritan Bay, Staten Island	HWQS
K6	K6	Open water beyond Great Kills Park, Raritan Bay, Staten Island	HWQS
N1	N1	Westchester County border, Hudson River, Bronx	HWQS
N16	N16	Open Water beyond Breezy Point Park, New York Harbor, Queens	HWQS
N3B	N3B	South of North River WPCP, Hudson River, Manhattan	HWQS
N4	N4-W	44th Street, Hudson River, Manhattan	HWQS
N5	N5	Mouth of Hudson River at Battery, Manhattan	HWQS
N6	N6	Mid-Upper Bay	HWQS
N7	N7	Upper New York Harbor open water between northern Staten Island and Owl's Head Park Brooklyn	HWQS
N8	N8-W	Narrows, Lower Bay/ Upper Bay, Brooklyn/	HWQS
N9	N9-W	Coney Island Beach, Lower Bay, Brooklyn	HWQS
N9A	N9A	Coney Island outfall, Brooklyn	HWQS
NC0	NC0	Off Rewe Street, English Kills, Brooklyn	HWQS
NC0B	NC0B	Grand Ave. Bridge, East Branch, Brooklyn	HWQS
NC1	NC1	Near Mouth of Maspeth Creek, Newtown Creek, Queens	HWQS
NC2	NC2-W	Apollo Street, Newtown Creek, Brooklyn/ Queens	HWQS

Primary Station ID	Secondary Station ID	Descriptive Location	Monitoring Group
NC3	NC3-W	Mouth of Dutch Kills, Newtown Creek, Brooklyn/ Queens	HWQS
PB2	PB2	Midway of Paerdegat Basin, Brooklyn	HWQS
PB3	PB3	Mouth of Paerdegat Basin, Brooklyn	HWQS
SP2	SP2	Near mouth of Spring Creek, Brooklyn	HWQS
TB1	TB1	Thurston Basin Head	HWQS
TB2	TB2	Thurston Basin mouth	HWQS

Monitoring Group Description:

HWQS – Harbor Water Quality Survey

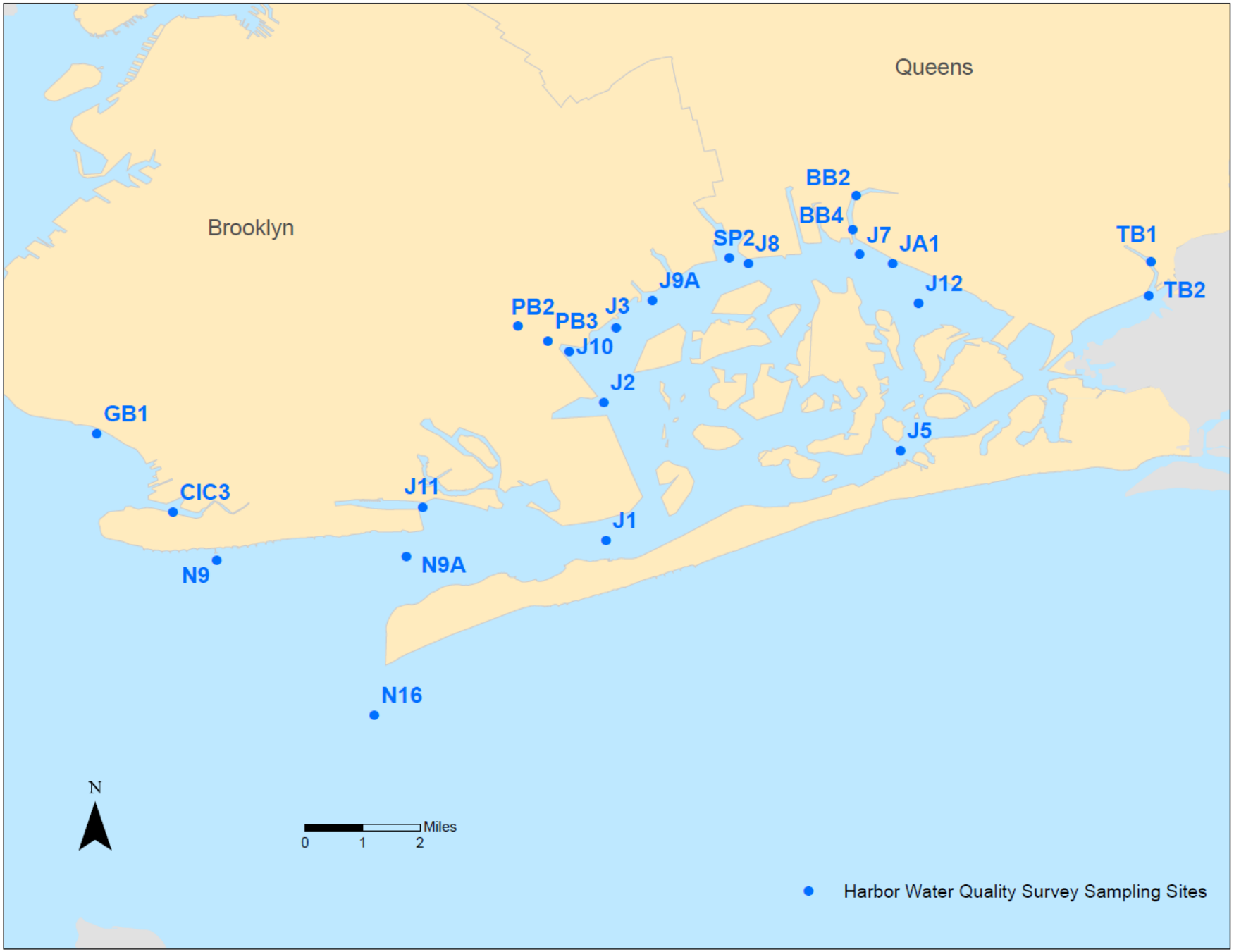


Figure 1. Detailed area of monitoring station map (Jamaica Bay).

City of New York Department of Environmental Protection
Floatables Monitoring Program
Location of Pilot Program
Monitoring Stations
March 2023

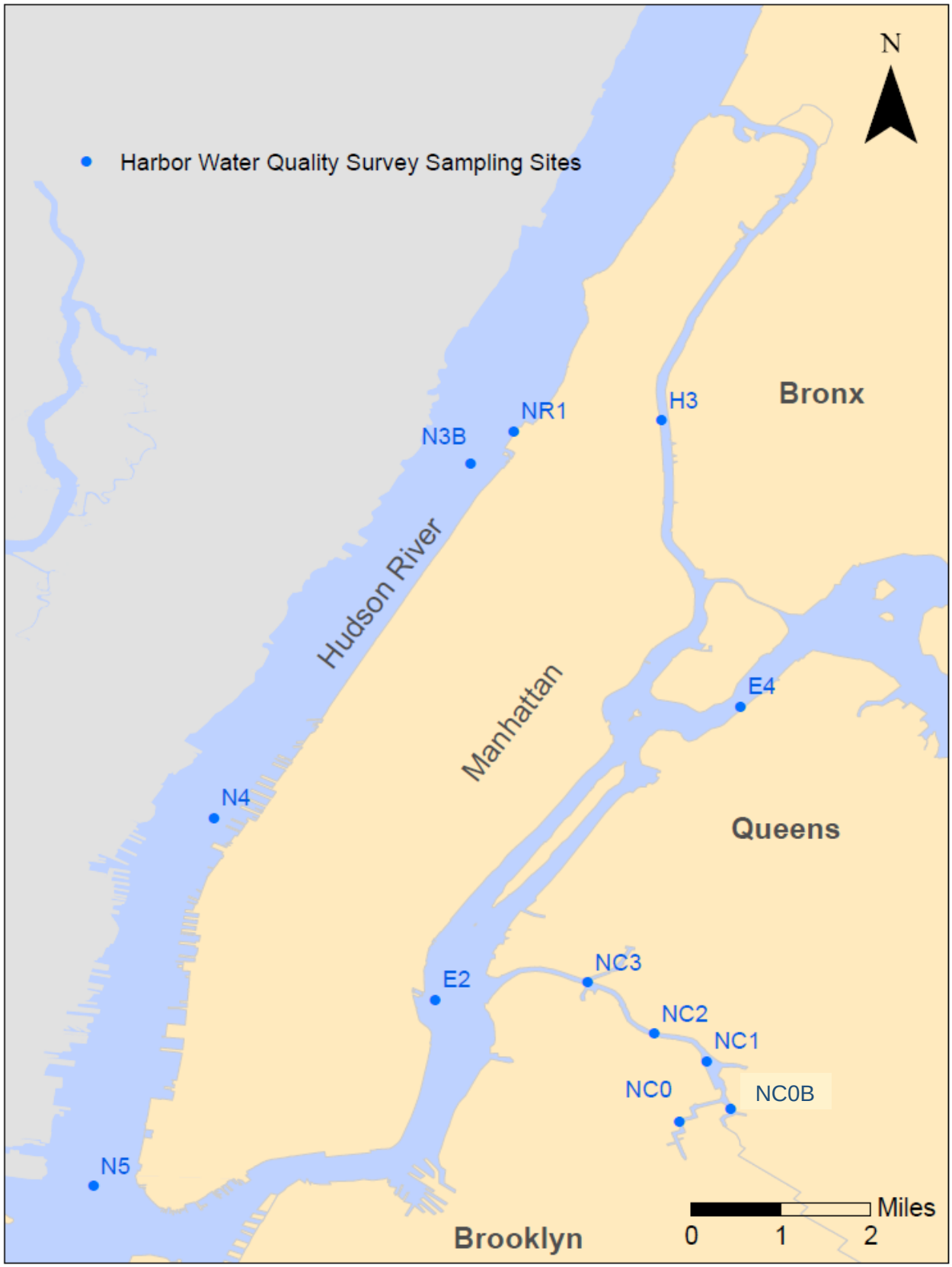


Figure 2. Detailed area of monitoring station map (Manhattan, East River).

City of New York Department of Environmental Protection
Floatables Monitoring Program
Location of Pilot Program
Monitoring Stations
March 2023

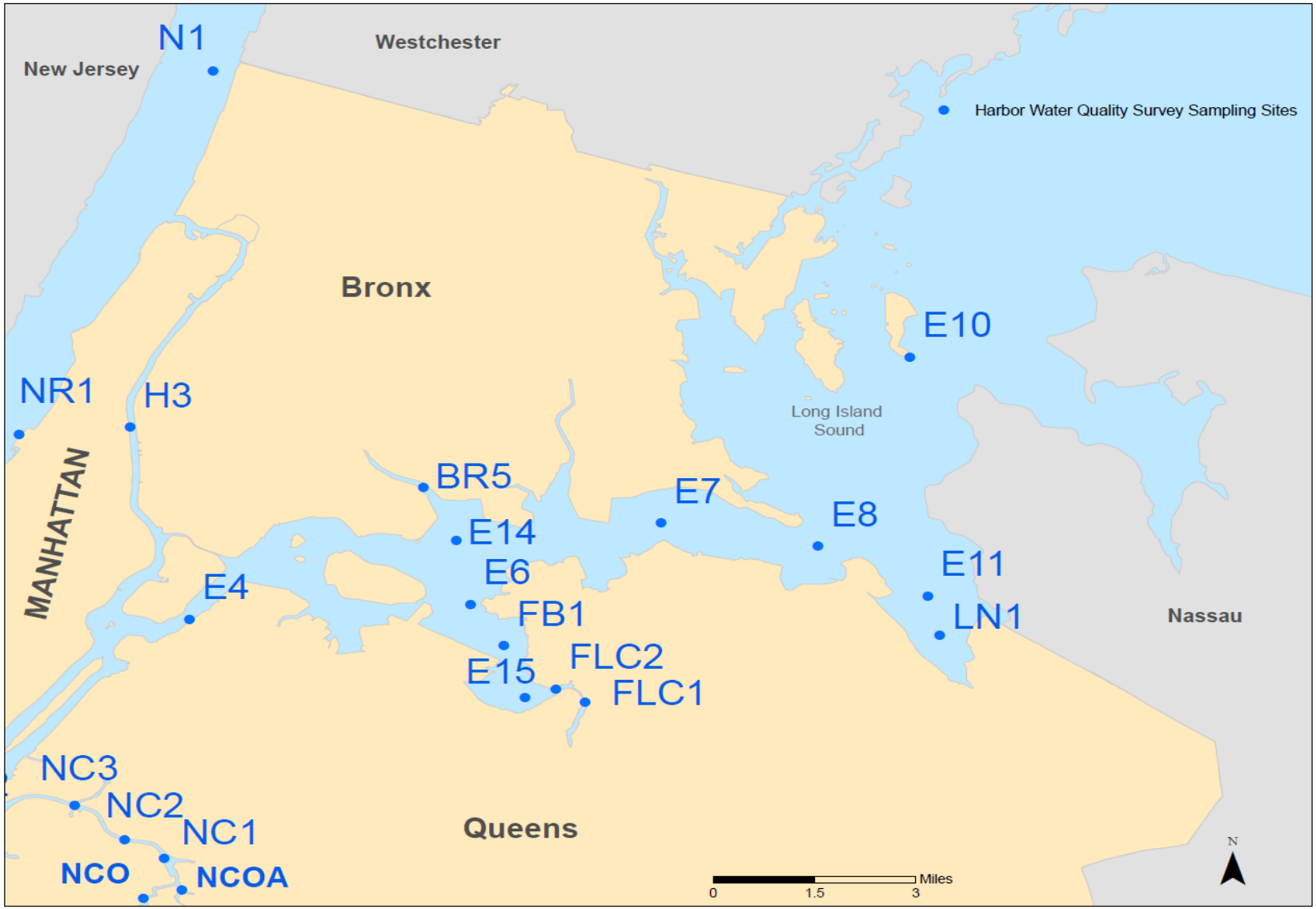


Figure 3. Detailed area of monitoring station map (Upper East River).

City of New York Department of Environmental Protection
Floatables Monitoring Program
Location of Pilot Program
Monitoring Stations
March 2023

Figure 4. Detailed area of monitoring station map (Staten Island).

Environmental Protection

14 WASTEWATER TREATMENT PLANTS' SPDES PERMITS

COMBINED SEWER OVERFLOWS

BEST MANAGEMENT PRACTICES

ANNUAL REPORT

ATTACHMENT A

Summary of preventive and corrective maintenance performed during 2022 on all regulators tributary to each treatment plant.

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF WASTEWATER TREATMENT

May 2023

Contents

26W - REGULATOR LOCATIONS - 2022

LOCATION	REG PM	REG CM	TG PM	TG CM	EBPP	CI Runs	ACTIONS TAKEN
26W-01	01/11/22						
26W-01	02/05/22						
26W-01	03/06/22						
26W-01	04/02/22						
26W-01	05/01/22		X				PM 6 Tide Gates: greased, exercised, scraped. Removed wood debris from channels.
26W-01	06/11/22						
26W-01	07/04/22						
26W-01	08/28/22						
26W-01	09/14/22						
26W-01	10/08/22						
26W-01	11/15/22						
26W-01	12/04/22						
26W-02	01/11/22						
26W-02	02/05/22						
26W-02	03/06/22						
26W-02	04/02/22						
26W-02	05/01/22						
26W-02	05/22/22						
26W-02	06/11/22		X				PM: New TG N1, New TG N2, N3, N4, N5.Exercised, cleaned. Regulator under construction.
26W-02	07/04/22						
26W-02	08/28/22						
26W-02	09/14/22						
26W-02	10/08/22						Removed wood from Tide Gate Chamber. Under construction.
26W-02	11/15/22						
26W-02	12/04/22						
26W-02A	01/11/22						
26W-02A	02/05/22						
26W-02A	03/06/22						
26W-02A	04/02/22						
26W-02A	05/01/22						
26W-02A	06/11/22						
26W-02A	07/04/22						
26W-02A	08/28/22						
26W-02A	09/14/22						
26W-02A	10/08/22						
26W-02A	11/15/22						
26W-02A	12/04/22						
26W-03	01/11/22						
26W-03	02/05/22						
26W-03	03/06/22						
26W-03	04/02/22						
26W-03	05/01/22						
26W-03	06/11/22						
26W-03	07/04/22						

26W-03	08/28/22						
26W-03	09/14/22						
26W-03	10/08/22						
26W-03	11/15/22						
26W-03	12/04/22						

Note:

26W-01 has six sections of tide gates-A,B,C,D,E,F & each section has two tide gates

26W-02 has a total of sixteen gates-eight gates fronting diversion chamber (1N,2N,3N,4N,5N,6N,7N,8N) & eight gates in the second line(1S,2S,3S,4S,5S,6S,7S,8S)

26W-02 under constuction - installation of new tide gates.

BBH - REGULATOR LOCATIONS - 2022

LOCATION	REG PM	REG CM	TG PM	TG CM	EBPP	Cl Runs	ACTIONS TAKEN
BBH1	01/21/22		X				full entry inspection exercised tide gate
BBH1	02/27/22						
BBH1	03/06/22		X				full entry inspection exercised tide gate
BBH1	04/05/22		X				exercised tide gate
BBH1	05/26/22		X				exercised tide gate
BBH1	06/28/22						
BBH1	07/23/22		X				exercised tide gate
BBH1	08/13/22		X				exercised tide gate
BBH1	09/25/22						
BBH1	10/23/22						
BBH1	11/07/22		X				exercised tide gate
BBH1	12/08/22		X				exercised tide gate
BBH2	01/21/22		X				full enrty inspection greased and exercised tide gate
BBH2	02/27/22						
BBH2	03/06/22		X				full entry inspection,greased and exercised tide gate
BBH2	04/05/22		X				full entry inspection,greased and exercised tide gate
BBH2	05/26/22		X				full entry inspection,greased and exercised tide gate
BBH2	06/28/22						
BBH2	07/23/22		X				full entry inspection,greased and exercised tide gate
BBH2	08/13/22		X				full entry inspection,greased and exercised tide gate
BBH2	09/25/22						
BBH2	10/14/22						full entry inspection
BBH2	11/07/22		X				full entry inspection,greased tide gate
BBH2	12/08/22		X				full entry inspection,greased tide gate
BBH3	01/21/22		N/A	N/A			
BBH3	02/27/22		N/A	N/A			
BBH3	03/16/22		N/A	N/A			
BBH3	04/10/22		N/A	N/A			
BBH3	05/03/22		N/A	N/A			
BBH3	05/28/22		N/A	N/A			full entry inspection,cleaned floats
BBH3	06/28/22		N/A	N/A			
BBH3	07/23/22		N/A	N/A			
BBH3	08/13/22		N/A	N/A			
BBH3	09/24/22		N/A	N/A			full entry inspection cleaned floats

BBH3	10/03/22		N/A	N/A			
BBH3	11/07/22		N/A	N/A			
BBH3	12/08/22		N/A	N/A			
BBH4	01/21/22		N/A	N/A			
BBH4	02/27/22		N/A	N/A			
BBH4	03/16/22		N/A	N/A			
BBH4	04/10/22		N/A	N/A			
BBH4	05/26/22		N/A	N/A			
BBH4	06/28/22		N/A	N/A			
BBH4	07/23/22		N/A	N/A			
BBH4	08/13/22		N/A	N/A			
BBH4	09/24/22		N/A	N/A			
BBH4	10/23/22		N/A	N/A			
BBH4	11/07/22		N/A	N/A			
BBH4	12/08/22		N/A	N/A			
BBH5	01/21/22		N/A	N/A			
BBH5	02/27/22		N/A	N/A			
BBH5	02/28/22		N/A	N/A			
BBH5	03/16/22		N/A	N/A			
BBH5	04/10/22		N/A	N/A			
BBH5	05/26/22		N/A	N/A			
BBH5	06/28/22		N/A	N/A			
BBH5	07/23/22		N/A	N/A			
BBH5	08/13/22		N/A	N/A			
BBH5	09/24/22		N/A	N/A			
BBH5	10/23/22		N/A	N/A			
BBH5	11/07/22		N/A	N/A			
BBH5	12/08/22		N/A	N/A			
BBH6	N/A		N/A	N/A			1/1/22 to 7/31/22 under constuction BEDC monitoring location
BBHL6	08/21/22		N/A	N/A			full entry inspection
BBH6	09/22/22		N/A	N/A			
BBH6	10/23/22		N/A	N/A			full entry inspection
BBH6	11/07/22		N/A	N/A			
BBH6	11/10/22		N/A	N/A			full entry inspection
BBH6	12/29/22		N/A	N/A			full entry inspection

BBH7	01/21/22		N/A	N/A			
BBH7	02/27/22		N/A	N/A			
BBH7	03/16/22		N/A	N/A			
BBH7	04/10/22		N/A	N/A			
BBH7	05/26/22		N/A	N/A			
BBH7	06/28/22		N/A	N/A			
BBH7	07/23/22		N/A	N/A			
BBH7	08/13/22		N/A	N/A			
BBH7	09/24/22		N/A	N/A			
BBH7	10/23/22		N/A	N/A			
BBH7	11/07/22		N/A	N/A			
BBH7	12/08/22		N/A	N/A			
BBH8	01/21/22		N/A	N/A			
BBH8	02/27/22		N/A	N/A			
BBH8	03/16/22		N/A	N/A			
BBH8	04/10/22		N/A	N/A			
BBH8	05/26/22		N/A	N/A			
BBH8	06/28/22		N/A	N/A			
BBH8	07/23/22		N/A	N/A			
BBH8	08/13/22		N/A	N/A			
BBH8	09/24/22		N/A	N/A			
BBH8	10/23/22		N/A	N/A			
BBH8	11/07/22		N/A	N/A			
BBH8	12/08/22		N/A	N/A			
BBH9	N/A		N/A	N/A			1/1/22 to 7/31/22 under construction BEDC monitoring location
BBHL9	08/21/22		N/A	N/A			full entry inspection
BBHL9	09/24/22		N/A	N/A			
BBH9	10/23/22		N/A	N/A			
BBHL9	11/07/22		N/A	N/A			
BBHL9	12/08/22		N/A	N/A			
BBH10	01/15/22		N/A	N/A			
BBH10	02/16/22		N/A	N/A			full entry inspection
BBH10	03/16/22		N/A	N/A			full entry inspection
BBH10	04/10/22		N/A	N/A			
BBH10	05/14/22		N/A	N/A			full entry inspection

BBH10	06/28/22		N/A	N/A			full entry inspection
BBH10	07/23/22		N/A	N/A			full entry inspection
BBH10	08/13/22		N/A	N/A			full entry inspection
BBH10	09/25/22		N/A	N/A			
BBH10	10/11/22		N/A	N/A			full entry inspection
BBH10	11/07/22		N/A	N/A			full entry inspection
BBH10	12/08/22		N/A	N/A			full entry inspection
BBH11	01/15/22		N/A	N/A			
BBH11	02/16/22		N/A	N/A			
BBH11	03/16/22		N/A	N/A			
BBH11	04/10/22		N/A	N/A			
BBH11	05/14/22		N/A	N/A			
BBH11	06/28/22		N/A	N/A			
BBH11	07/23/22		N/A	N/A			
BBH11	08/13/22		N/A	N/A			
BBH11	09/25/22		N/A	N/A			
BBH11	10/11/22		N/A	N/A			
BBH11	11/07/22		N/A	N/A			
BBH11	12/08/22		N/A	N/A			
BBH12	01/15/22		N/A	N/A			
BBH12	02/16/22		N/A	N/A			
BBH12	03/16/22		N/A	N/A			
BBH12	04/10/22		N/A	N/A			
BBH12	05/14/22		N/A	N/A			
BBH12	06/28/22		N/A	N/A			
BBH12	07/23/22		N/A	N/A			
BBH12	08/13/22		N/A	N/A			
BBH12	09/25/22		N/A	N/A			
BBH12	10/11/22		N/A	N/A			
BBH12	11/07/22		N/A	N/A			
BBH12	12/08/22		N/A	N/A			
BBHL14	1/15/2022		N/A	N/A			
BBHL14	2/16/2022		N/A	N/A			
BBHL14	3/19/2022		N/A	N/A			
BBHL14	4/10/2022		N/A	N/A			

BBL - REGULATOR LOCATIONS - 2022

BBHL14	5/14/2022		N/A	N/A			full entry,removed partial blockage (rags and sticks)from diversion
BBHL14	6/25/2022		N/A	N/A			
BBHL14	7/2/2022		N/A	N/A			
BBHL14	7/30/2022		N/A	N/A			
BBHL14	8/27/2022		N/A	N/A			
BBHL14	9/25/2022		N/A	N/A			
BBHL14	10/23/2022		N/A	N/A			
BBHL14	11/14/2022		N/A	N/A			
BBHL14	12/22/2022		N/A	N/A			
BBHL15	1/15/2022		N/A	N/A			
BBHL15	2/16/2022		N/A	N/A			
BBHL15	3/19/2022		N/A	N/A			
BBHL15	4/10/2022		N/A	N/A			
BBHL15	5/14/2022		N/A	N/A			
BBHL15	6/25/2022		N/A	N/A			
BBHL15	7/30/2022		N/A	N/A			
BBHL15	8/27/2022		N/A	N/A			
BBHL15	9/25/2022		N/A	N/A			
BBHL15	10/23/2022		N/A	N/A			
BBHL15	11/14/2022		N/A	N/A			
BBH15	12/22/2022		N/A	N/A			
BBH27	1/15/2022		N/A	N/A			
BBH27	2/16/2022		N/A	N/A			
BBH27	N/A		N/A	N/A			3/1/22 to 4/1/22 UNDER CONSTRUCTION
BBH27	4/10/2022		N/A	N/A			
BBHL27	5/14/2022		N/A	N/A			
BBHL27	6/25/222		N/A	N/A			
BBH27	7/30/2022		N/A	N/A			
BBHL27	8/27/2022		N/A	N/A			
BBHL27	9/18/2022		N/A	N/A			full entry inspection removed partial blockage
BBHL27	10/23/2022		N/A	N/A			
BBHL27	11/14/2022		N/A	N/A			
BBHL27	12/7/2022		N/A	N/A			full entry inspection,cleared partial blockage
BBHL27A	1/15/2022		N/A	N/A			
BBHL27A	2/16/2022		N/A	N/A			

BBHL27A	3/19/2022		N/A	N/A			
BBHL27A	4/10/2022		N/A	N/A			
BBHL27A	5/14/2022		N/A	N/A			
BBHL27A	6/25/2022		N/A	N/A			
BBHL27A	7/30/2022		N/A	N/A			
BBHL27A	8/27/2022		N/A	N/A			
BBHL27A	9/18/2022		N/A	N/A			
BBHL27A	10/23/2022		N/A	N/A			
BBHL27A	11/14/2022		N/A	N/A			
BBHL27A	12/7/2022		N/A	N/A			
BBHL28	1/15/2022		N/A	N/A			
BBHL28	2/16/2022		N/A	N/A			
BBHL28	3/19/2022		N/A	N/A			
BBHL28	4/10/2022		N/A	N/A			
BBHL28	5/14/2022		N/A	N/A			
BBHL28	6/25/2022		N/A	N/A			
BBHL28	7/30/2022		N/A	N/A			
BBHL28	8/27/2022		N/A	N/A			
BBHL28	9/25/2022	X	N/A	N/A			full entry inspection,removed partial blockage in regulator
BBHL28	10/23/2022		N/A	N/A			
BBHL28	11/14/2022		N/A	N/A			
BBHL28	12/22/2022		N/A	N/A			removed partial blockage from diversion with boat hook

LOCATION	REG PM	REG CM	TG PM	TG CM	EBPP	CI Runs	ACTIONS TAKEN
BBL1	01/19/22		X				full entry inspection,greased and exercised tide gate
BBL1	02/06/22		X				full entry inspection,greased and exercised tide gate
BBL1	03/08/22		X				full entry inspection,greased and exercised tide gate
BBL1	04/07/22		X				full entry inspection,greased and exercised tide gate
BBL1	05/09/22		X				exercised tide gate
BBL1	06/14/22						
BBL1	07/31/22		X				exercised tide gate
BBL1	08/06/22		X				full entry inspection,greased and exercised tide gate
BBL1	09/03/22		X				full entry inspection,greased and exercised tide gate
BBL1	10/16/22		X				exercised tide gate
BBL1	11/17/22		X				full entry inspection,greased and exercised tide gate
BBL1	12/26/22						
BBL2	01/19/22		N/A	N/A			
BBL2	02/06/22		N/A	N/A			
BBL2	03/08/22		N/A	N/A			
BBL2	04/07/22		N/A	N/A			
BBL2	05/09/22		N/A	N/A			
BBL2	06/14/22		N/A	N/A			
BBL2	07/03/22		N/A	N/A			
BBL2	08/06/22		N/A	N/A			
BBL2	09/03/22		N/A	N/A			
BBL2	10/16/22		N/A	N/A			
BBL2	11/17/22		N/A	N/A			
BBL2	12/26/22		N/A	N/A			
BBL3	01/19/22						
BBL3	02/06/22		X				full entry inspection,greased and exercised tide gate
BBL3	03/08/22		X				full entry inspection,greased and exercised tide gate
BBL3	03/28/22						respond to DWB alarm,false alarm
BBL3	04/07/22		X				full entry inspection,greased and exercised tide gate
BBL3	05/09/22		X				full entry inspection,greased and exercised tide gate
BBL3	06/14/22						
BBL3	06/18/22		X				full entry inspection,greased and exercised tide gate
BBL3	07/03/22		X				full entry inspection,greased and exercised tide gate
BBL3	08/06/22		X				full entry inspection,greased and exercised tide gate
BBL3	09/03/22		X				full entry inspection,greased and exercised tide gate
BBL3	10/16/22		X				full entry inspection,greased and exercised tide gate
BBL3	11/17/22		X				full entry inspection,greased and exercised tide gate
BBL3	12/18/22		X				full entry inspection,greased and exercised tide gate
BBL3A	01/19/22		N/A	N/A			
BBL3A	02/06/22		N/A	N/A			
BBL3A	03/08/22		N/A	N/A			
BBL3A	04/07/22		N/A	N/A			
BBL3A	05/09/22		N/A	N/A			

BBL3A	06/14/22		N/A	N/A			
BBL3A	07/03/22		N/A	N/A			
BBL3A	08/06/22		N/A	N/A			
BBL3A	09/03/22		N/A	N/A			
BBL3A	10/16/22		N/A	N/A			
BBL3A	11/17/22		N/A	N/A			
BBL3A	12/18/22		N/A	N/A			
BBL3B	01/25/22						
BBL3B	02/12/22		X				full entry inspection,greased and exercised tide gate
BBL3B	03/26/22						
BBL3B	04/24/22						
BBL3B	05/15/22						
BBL3B	06/18/22						
BBL3B	07/03/22		X	X			full entry inspection,gate was held open removed debris,greased and exercised gate
BBL3B	08/06/22						
BBL3B	09/03/22						
BBL3B	10/16/22		X				exercised tide gate
BBL3B	11/17/22						
BBL3B	12/18/22		X				full entry inspection,greased and exercised tide gate
BBL3C	01/19/22		X				full entry inspection,greased and exercised tide gate
BBL3C	02/06/22		X				full entry inspection,greased and exercised tide gate
BBL3C	03/08/22		X				full entry inspection,greased and exercised tide gate
BBL3C	03/28/22						
BBL3C	04/07/22		X				full entry inspection,greased and exercised tide gate
BBL3C	05/09/22		X				full entry inspection,greased and exercised tide gate
BBL3C	06/14/22		X				full entry inspection,greased and exercised tide gate
BBL3C	07/03/22		X				full entry inspection,greased and exercised tide gate
BBL3C	08/06/22		X				full entry inspection,greased and exercised tide gate
BBL3C	09/03/22		X				full entry inspection,greased and exercised tide gate
BBL3C	10/16/22		X				full entry inspection,greased and exercised tide gate
BBL3C	11/17/22		X				full entry inspection,greased and exercised tide gate
BBL3C	12/18/22		X				full entry inspection,greased and exercised tide gate
BBL3C	12/27/22						
BBL4	01/19/22						full enrty inspection
BBL4	02/06/22						full enrty inspection
BBL4	03/08/22						
BBL4	04/07/22						
BBL4	04/27/22						
BBL4	05/09/22		X				full entry inspection,greased and exercised tide gate
BBL4	06/10/22						
BBL4	06/18/22		X				exercised tide gate
BBL4	07/03/22		X				full entry inspection,greased and exercised tide gate
BBL4	08/06/22		X				full entry inspection,greased and exercised tide gate

BBL4	08/20/22						full entry inspection,cleaned ultra-sonic cone
BBL4	09/03/22		X				exercised tide gate
BBL4	10/16/22		X				exercised tide gate
BBL4	11/17/22		X				exercised tide gate
BBL4	12/18/22						
BBL5	01/19/22	X					removed debris from regulator with boat hook
BBL5	02/06/22		X				exercised tide gate
BBL5	03/08/22		X				full entry inspection,exercised tide gate
BBL5	04/07/22		X				exercised tide gate
BBL5	05/09/22		X				exercised tide gate
BBL5	06/18/22		X				exercised tide gate
BBL5	07/03/22		X				full entry inspection,exercised tide gate
BBL5	08/06/22		X				full entry inspection,exercised tide gate
BBL5	09/03/22		X				exercised tide gate
BBL5	10/16/22		X				exercised tide gate
BBL5	11/17/22		X				exercised tide gate
BBL5	12/18/22		X	X			full entry inspection,exercised tide gate,removed debris from tide gate chamber
BBL6	01/19/22						
BBL6	02/06/22		X				exercised tide gate
BBL6	03/08/22		X				full enty inspection,exercised tide gate
BBL6	04/07/22		X				exercised tide gate
BBL6	05/09/22		X				exercised tide gate
BBL6	06/18/22		X				exercised tide gate
BBL6	07/03/22		X				exercised tide gate
BBL6	08/06/22		X				exercised tide gate
BBL6	09/03/22		X				exercised tide gate
BBL6	10/16/22		X				exercised tide gate
BBL6	11/17/22		X				exercised tide gate
BBL6	12/18/22		X				exercised tide gate
BBL7	01/19/22						
BBL7	02/06/22		X				full entry inspection,greased and exercised tide gate
BBL7	03/08/22						
BBL7	04/07/22		X				full entry inspection,greased tide gate
BBL7	05/23/22		X				full entry inspection,greased tide gate
BBL7	06/18/22						
BBL7	07/03/22						
BBL7	08/07/22						
BBL7	09/04/22						
BBL7	10/16/22						
BBL7	11/17/22						
BBL7	12/27/22		X				full entry inspection,greased tide gate
BBL8	01/19/22						
BBL8	02/06/22						

BBL8	03/08/22						
BBL8	04/07/22						
BBL8	05/23/22		X				full entry inspection,greased and exercised tide gate
BBL8	06/18/22		X				full entry inspection,greased tide gate
BBL8	07/03/22						
BBL8	08/06/22		X				full entry inspection,greased and exercised tide gate
BBL8	09/03/22						
BBL8	10/16/22						
BBL8	11/17/22						
BBL8	12/27/22		X				full entery inspection,greased tide gate
BBL9	01/19/22						
BBL9	02/06/22						
BBL9	03/08/22		X				full entry inspection,exercised tide gate
BBL9	N/A						4/1/22 to 4/30/22 under construction
BBL9	05/15/22	X					full entry,removed partial blockage (grease,plastic bottles)from regulator
BBL9	06/18/22						
BBL9	07/03/22						
BBL9	08/19/22						
BBL9	09/04/22	X	X				full entry,greased and exercised tide gate,removed debris from regulator
BBL9	10/17/22						removed partial blockage in diversion with boat hook
BBL9	11/17/22		X				exercised tide gate
BBL9	12/27/22		X				full entry,greased and exercised tide gate
BBL10	01/19/22						
BBL10	02/06/22						
BBL10	03/22/22		X				exercised tide gate
BBL10	04/07/22		X				exercised tide gate
BBL10	05/23/22		X				greased and exercised tide gate
BBL10	06/18/22						
BBL10	07/30/22						
BBL10	08/19/22						
BBL10	09/04/22		X				full entry inspection,greased and exercised tide gate
BBL10	10/17/22						
BBL10	11/17/22						
BBL10	12/27/22		X				full entry inspection,exercised tide gate
BBL11	01/25/22						
BBL11	02/09/22						
BBL11	03/22/22		X				exercised tide gate
BBL11	04/23/22		X				exercised tide gate
BBL11	05/23/22		X				full entry inspection,greased and exercised tide gate
BBL11	06/19/22						
BBL11	07/30/22						
BBL11	08/19/22		X				exercised tide gate
BBL11	09/04/22						

BBL11	10/17/22						
BBL11	11/26/22						
BBL11	12/27/22						
BBL12	01/25/22		X				exercised tide gate,removed partial blockage from diversion with boat hook
BBL12	02/09/22		X				exercised tide gate
BBL12	03/22/22		X				exercised tide gate
BBL12	04/23/22		X				exercised tide gate
BBL12	05/23/22		X				exercised tide gate
BBL12	06/19/22		X				exercised tide gate
BBL12	07/30/22						
BBL12	08/19/22		X				exercised tide gate
BBL12	09/04/22		X				exercised tide gate
BBL12	10/17/22		X				exercised tide gate
BBL12	11/26/22		X				exercised tide gate
BBL12	12/27/22						
BBL12A	01/25/22		X				exercised tide gate
BBL12A	02/09/22		X				exercised tide gate,removed partial blockage from diversion with boat hook
BBL12A	03/22/22		X				exercised tide gate
BBL12A	04/23/22						removed debris from diversion
BBL12A	05/23/22	X	X				removed partial blockage in regulator,exercised tide gate
BBL12A	06/19/22		X				remove partial blockage in diversion,exercised tide gate
BBL12A	07/30/22						
BBL12A	08/19/22		X				exercised tide gate
BBL12A	09/04/22		X				exercised tide gate,removed debris from diversion with boat hook
BBL12A	10/17/22						
BBL12A	11/26/22		X				exercised tide gate,removed partial blockage in diversion
BBL12A	12/27/22						
BBL15	01/25/22						
BBL15	02/09/22		X				exercised tide gate
BBL15	03/22/22		X				full entry inspection,greased and exercised tide gate
BBL15	04/23/22		X				full entry inspection,greased and exercised tide gate
BBL15	05/23/22		X				full entry inspection,greased and exercised tide gate
BBL15	06/19/22		X				full entry inspection,greased and exercised tide gate
BBL15	07/30/22						
BBL15	08/19/22		X				exercised tide gate
BBL15	09/04/22		X				full entry inspection,greased and exercised tide gate
BBL15	10/17/22						
BBL15	11/26/22						
BBL15	12/27/22						
BBL16	01/25/22		X				exercised tide gate
BBL16	02/09/22		X				exercised tide gate
BBL16	03/22/22		X				exercised tide gate
BBL16	04/23/22		X				exercised tide gate,removed debris from diversion

BBL16	05/23/22		X	X			removed rags from tide gate and exercised
BBL16	06/19/22		X				exercised tide gate
BBL16	07/30/22						
BBL16	08/19/22		X				exercised tide gate
BBL16	09/04/22		X				exercised tide gate
BBL16	10/17/22						
BBL16	11/26/22						
BBL16	12/27/22						
BBL17	01/26/22						
BBL17	02/09/22						
BBL17	03/22/22						
BBL17	04/23/22						
BBL17	05/28/22						
BBL17	06/19/22		X				exercised tide gate
BBL17	07/31/22						
BBL17	08/20/22		X				full entry inspection,greased and exercised tide gate
BBL17	09/17/22		X				full entry inspection,greased and exercised tide gate
BBL17	10/17/22						
BBL17	11/26/22						
BBL17	12/29/22		X				full entry inspection,greased tide gate
BBL18	01/26/22						
BBL18	02/26/22						
BBL18	03/22/22						
BBL18	04/23/22						
BBL18	05/28/22						
BBL18	06/25/22						
BBL18	07/31/22						
BBL18	08/04/22						
BBL18	09/27/22						
BBL18	10/26/22						
BBL18	11/28/22						full entry inspection,removed partial blockage in diversion
BBL18	12/29/22						
BBL19	01/26/22						
BBL19	02/09/22						
BBL19	03/23/22		X				full entry inspection,greased and exercised tide gate
BBL19	04/24/22		X				full entry inspection,greased and exercised tide gate
BBL19	05/23/22		X				full entry inspection,greased and exercised tide gate
BBL19	06/19/22						
BBL19	07/31/22						
BBL19	08/04/22						
BBL19	09/17/22		X				full entry inspection,greased and exercised tide gate
BBL19	10/30/22						
BBL19	11/26/22						

BBL19	12/29/22		X				full entry inspection,greased tide gate
BBL20	01/26/22						
BBL20	02/09/22						
BBL20	03/23/22		X				full entry,greased and exercised tide gate
BBL20	04/24/22		X				full entry,greased and exercised tide gate
BBL20	05/28/22						
BBL20	06/19/22						DWB - blow off valve was open,BWSO closed vave
BBL20	07/31/22						
BBL20	08/04/22		X				full entry inspection,greased and exercised tide gate
BBL20	09/17/22		X				full entry inspection,greased and exercised tide gate
BBL20	10/30/22						
BBL20	11/26/22						
BBL20	12/26/22						
BBL21	01/26/22						
BBL21	02/09/22						
BBL21	03/23/22						full entry inspection,flushed line going to interceptor with flusher truck
BBL21	03/26/22						
BBL21	03/29/22						
BBL21	04/24/22		X				full entry inspection,greased and exercised tide gate
BBL21	05/23/22						
BBL21	06/25/22						
BBL21	07/31/22						
BBL21	08/04/22		X				full entry inspection,greased and exercised tide gate
BBL21	09/17/22						
BBL21	10/26/22						
BBL21	11/26/22						
BBL21	12/29/22						
BBL22	01/26/22						
BBL22	02/11/22						
BBL22	03/02/22						
BBL22	04/05/22						
BBL22	05/05/22						
BBL22	06/25/22						
BBL22	07/31/22						
BBL22	08/04/22						
BBL22	09/17/22						
BBL22	09/21/22						
BBL22	10/26/22						
BBL22	11/26/22						
BBL22	12/26/22						
BBL22A	01/25/22						
BBL22A	02/09/22						
BBL22A	03/22/22						

BBL22A	04/23/22						
BBL22A	05/28/22						
BBL22A	06/18/22						
BBL22A	07/31/22						
BBL22A	08/20/22						
BBL22A	09/04/22						
BBL22A	10/17/22						
BBL22A	11/19/22						
BBL22A	12/27/22						
BBL23	01/26/22						
BBL23	02/11/22						
BBL23	03/26/22						
BBL23	04/05/22		X				changed grease fittings and greased tide gate
BBL23	04/27/22		X	X			full entry inspection,removed wires stuck in gates and exercised tide gates
BBL23	05/05/22						
BBL23	06/25/22						
BBL23	07/31/22						
BBL23	08/04/22						
BBL23	09/27/22						
BBL23	10/30/22						
BBL23	11/26/22						
BBL23	12/26/22						
BBL25	01/27/22		N/A	N/A			
BBL25	02/11/22		N/A	N/A			
BBL25	03/26/22	X	N/A	N/A			removed partial blockage in regulator
BBL25	04/05/22		N/A	N/A			
BBL25	05/05/22		N/A	N/A			
BBL25	06/04/22		N/A	N/A			
BBL25	07/16/22		N/A	N/A			
BBL25	08/20/22		N/A	N/A			
BBL25	09/27/22		N/A	N/A			
BBL25	10/26/22		N/A	N/A			
BBL25	11/15/22		N/A	N/A			
BBL25	12/26/22		N/A	N/A			
BBL26	01/27/22		X				exercised tide gate
BBL26	02/11/22						
BBL26	03/26/22	X					full entry inspection,removed partial blockage in regulator
BBL26	04/03/22		X				exercised tide gate
BBL26	05/05/22	X					remove partial blockage from regulator with boat hook
BBL26	06/04/22		X				exercised tide gate
BBL26	07/16/22		X				exercised tide gate
BBL26	08/20/22		X				exercised tide gate
BBL26	09/27/22						

BBL26	10/26/22						
BBL26	11/15/22		X				exercised tide gate
BBL26	12/10/22		X				exercised tide gate
BBL27	01/27/22						
BBL27	02/11/22	X	X				full entry inspection,removed wood from regulator,exercised tide gate
BBL27	03/27/22	X	X				full entry,greased and exercised tide gate,removed partiol blockage in diversion
BBL27	04/05/22		X				full entry inspection,greased and exercised tide gate
BBL27	05/05/22		X				full entry inspection greased and exercised tide gate
BBL27	06/04/22						
BBL27	07/27/22		X	X			full entry inspection,gate was held open removed debris,greased and exercised gate
BBL27	08/20/22		X				full entry inspection,greased and exercised tide gate
BBL27	09/27/22						
BBL27	N/A						unable to access due to construction
BBL27	11/15/22						
BBL27	12/10/22						
BBL27	12/11/22	X	X	X			full entry,gate held open,exercised gate,cleared blockage in regulator
BBL29	01/26/22		N/A	N/A			
BBL29	02/11/22		N/A	N/A			
BBL29	03/06/22		N/A	N/A			
BBL29	04/03/22		N/A	N/A			
BBL29	04/11/22		N/A	N/A			
BBL29	05/05/22		N/A	N/A			
BBL29	06/04/22		N/A	N/A			
BBL29	07/16/22		N/A	N/A			
BBL29	08/04/22		N/A	N/A			
BBL29	09/27/22		N/A	N/A			
BBL29	10/16/22		N/A	N/A			
BBL29	10/26/22		N/A	N/A			
BBL29	11/15/22		N/A	N/A			
BBL29	12/26/22		N/A	N/A			
BBL29A	01/26/22						
BBL29A	02/11/22						
BBL29A	03/06/22						
BBL29A	04/03/22						
BBL29A	05/05/22						
BBL29A	06/04/22						
BBL29A	07/16/22						
BBL29A	08/04/22						
BBL29A	09/27/22						
BBL29A	10/26/22						
BBL29A	11/15/22						
BBL29A	12/26/22						
BBL30	01/27/22		X	X			full entry greased & exercised tide gate,removed tree truck from tide gate chamber

BBL30	02/11/22		X	X			full entry inspection,removed tree branch from tide gate,greased and exercised tide gate
BBL30	03/06/22		X				full entry inspection,greased and exercised tide gate
BBL30	04/03/22		X				full entry inspection,greased and exercised tide gate
BBL30	05/05/22		X				full entry inspection greased and exercised tide gate
BBL30	06/04/22		X				full entry inspection,greased and exercised tide gate
BBL30	07/16/22		X				full entry inspection,greased and exercised tide gate
BBL30	08/20/22		X				full entry inspection,greased and exercised tide gate
BBL30	09/17/22		X				full entry inspection,greased and exercised tide gate
BBL30	10/26/22		X				full entry inspection,greased and exercised tide gate
BBL30	11/15/22		X				full entry inspection,greased and exercised tide gate
BBL30	12/10/22		X				full entry inspection,greased and exercised tide gate
BBL30	12/272022						
BBL31	01/25/22						
BBL31	02/11/22		X				exercised tide gate
BBL31	03/06/22		X				exercised tide gate
BBL31	04/03/22		X				exercised tide gate
BBL31	05/03/22		X				exercised tide gate
BBL31	06/04/22		X				exercised tide gate
BBL31	07/16/22		X				exercised tide gate
BBL31	08/20/22		X				exercised tide gate
BBL31	09/17/22		X				exercised tide gate
BBL31	10/13/22		X				exercised tide gate
BBL31	11/15/22		X				exercised tide gate
BBL31	12/10/22		X	X			tide gate held open,removed rags and exercised
BBL31	12/27/22						
BBL32	01/25/22						
BBL32	02/11/22		X				exercised tide gate
BBL32	03/06/22		X				exercised tide gate
BBL32	04/03/22		X				full entry inspection,greased and exercised tide gate
BBL32	05/03/22		X				exercised tide gate
BBL32	06/04/22						
BBL32	07/16/22						
BBL32	08/20/22		X				full entry inspection,greased and exercised tide gate
BBL32	09/17/22		X				full entry inspection,greased and exercised tide gate
BBL32	10/13/22						
BBL32	11/15/22		X				exercised tide gate
BBL32	12/26/22						
BBL32	12/27/22						
BBL32A	01/25/22		N/A	N/A			
BBL32A	02/11/22		N/A	N/A			
BBL32A	03/06/22		N/A	N/A			
BBL32A	04/03/22		N/A	N/A			full entry inspection,removed partial blockage (rags and sticks) from diversion
BBL32A	05/03/22		N/A	N/A			

BBL32A	06/04/22		N/A	N/A			
BBL32A	07/16/22		N/A	N/A			
BBL32A	08/07/22		N/A	N/A			
BBL32A	09/11/22		N/A	N/A			
BBL32A	10/13/22		N/A	N/A			
BBL32A	10/25/22		N/A	N/A			
BBL32A	11/15/22		N/A	N/A			
BBL32A	12/10/22		N/A	N/A			
BBL32A	12/27/22		N/A	N/A			
BBL32B	01/25/22						
BBL32B	02/11/22						
BBL32B	03/06/22						full entry inspection,removed partial blockage from diversion
BBL32B	04/03/22						full entry inspection,removed partial blockage (rags) from diversion
BBL32B	05/03/22						DWB - used flusher truck to clear blockage ,removed rags and grease from flow
BBL32B	06/04/22						
BBL32B	07/16/22						
BBL32B	08/07/22						
BBL32B	09/11/22						DWB blockage in diversion,used flusher truck to clear blockage
BBL32B	10/13/22						DWB blockage in diversion,used flusher truck to clear blockage
BBL32B	11/15/22						
BBL32B	12/10/22						full entry inspection,removed partial blockage from diversion
BBL32B	12/27/22						
BBL33	01/25/22		X				full entry exercised tide gate,removed partial blockage from diversion,2 buckets of grease
BBL33	02/11/22		X				exercised tide gate
BBL33	02/26/22						
BBL33	03/06/22		X				full entry inspection,removed partial blockage from diversion,exercised tide gate
BBL33	04/03/22						
BBL33	05/03/22		X				removed partial blockage from diverison with boat hook,exercised tide gate
BBL33	06/04/22		X				exercised tide gate
BBL33	06/25/22						
BBL33	07/16/22		X				exercised tide gate
BBL33	08/07/22		X				exercised tide gate
BBL33	09/11/22		X				exercised tide gate
BBL33	10/13/22		X				exercised tide gate
BBL33	10/26/22		X				exercised tide gate
BBL33	10/27/22						removed partial blockage from diversion
BBL33	11/15/22		X				exercised tide gate
BBL33	12/10/22		X				exercised tide gate
BBL33	12/27/22						
BBL34	01/25/22		N/A	N/A			
BBL34	02/26/22		N/A	N/A			
BBL34	03/06/22		N/A	N/A			
BBL34	04/26/22		N/A	N/A			

BBL34	05/03/22		N/A	N/A			
BBL34	06/25/22		N/A	N/A			
BBL34	07/10/22		N/A	N/A			
BBL34	08/07/22		N/A	N/A			
BBL34	09/11/22		N/A	N/A			
BBL34	10/13/22		N/A	N/A			
BBL34	10/27/22		N/A	N/A			
BBL34	11/15/22		N/A	N/A			
BBL34	12/10/22		N/A	N/A			
BBL37	01/26/22		N/A	N/A			
BBL37	02/12/22		N/A	N/A			
BBL37	03/13/22		N/A	N/A			
BBL37	04/24/22		N/A	N/A			
BBL37	05/15/22		N/A	N/A			
BBL37	06/25/22		N/A	N/A			
BBL37	07/27/22		N/A	N/A			
BBL37	08/07/22		N/A	N/A			
BBL37	09/29/22		N/A	N/A			
BBL37	10/11/22		N/A	N/A			
BBL37	11/19/22		N/A	N/A			
BBL37	12/09/22		N/A	N/A			
BBL37	12/18/22		N/A	N/A			
BBL38	01/26/22		N/A	N/A			
BBL38	02/12/22		N/A	N/A			
BBL38	03/13/22		N/A	N/A			
BBL38	04/24/22		N/A	N/A			
BBL38	05/15/22		N/A	N/A			
BBL38	06/25/22		N/A	N/A			
BBL38	07/27/22		N/A	N/A			
BBL38	08/07/22		N/A	N/A			
BBL38	09/29/22		N/A	N/A			
BBL38	10/11/22		N/A	N/A			
BBL38	11/19/22		N/A	N/A			
BBL38	12/18/22		N/A	N/A			
BBL39	01/26/22		N/A	N/A			
BBL39	02/12/22		N/A	N/A			
BBL39	03/13/22		N/A	N/A			
BBL39	04/24/22		N/A	N/A			
BBL39	05/15/22		N/A	N/A			
BBL39	06/25/22		N/A	N/A			
BBL39	07/27/22		N/A	N/A			
BBL39	08/07/22		N/A	N/A			
BBL39	09/29/22		N/A	N/A			

BBL39	10/11/22		N/A	N/A			
BBL39	11/19/22		N/A	N/A			
BBL39	12/18/22		N/A	N/A			
BBL40	01/26/22		N/A	N/A			
BBL40	02/12/22		N/A	N/A			
BBL40	03/13/22		N/A	N/A			
BBL40	04/24/22		N/A	N/A			
BBL40	05/15/22		N/A	N/A			
BBL40	06/25/22		N/A	N/A			
BBL40	07/27/22		N/A	N/A			
BBL40	08/07/22		N/A	N/A			
BBL40	09/29/22		N/A	N/A			
BBL40	10/11/22		N/A	N/A			
BBL40	11/19/22		N/A	N/A			
BBL40	12/18/22		N/A	N/A			
BBL41	01/26/22		N/A	N/A			
BBL41	02/12/22		N/A	N/A			
BBL41	03/13/22		N/A	N/A			
BBL41	04/24/22		N/A	N/A			
BBL41	05/15/22		N/A	N/A			
BBL41	06/25/22		N/A	N/A			
BBL41	07/27/22		N/A	N/A			
BBL41	08/07/22		N/A	N/A			
BBL41	09/29/22		N/A	N/A			
BBL41	10/11/22		N/A	N/A			
BBL41	11/19/22		N/A	N/A			
BBL41	12/18/22		N/A	N/A			
BBL42	01/26/22		N/A	N/A			
BBL42	02/12/22		N/A	N/A			
BBL42	03/13/22		N/A	N/A			
BBL42	04/24/22		N/A	N/A			
BBL42	05/15/22		N/A	N/A			
BBL42	06/25/22		N/A	N/A			
BBL42	07/27/22		N/A	N/A			
BBL42	08/07/22		N/A	N/A			
BBL42	09/29/22		N/A	N/A			
BBL42	10/11/22		N/A	N/A			
BBL42	11/19/22		N/A	N/A			
BBL42	12/18/22		N/A	N/A			

CI - REGULATOR LOCATIONS - 2022

LOCATION	REG PM	REG CM	TG PM	TG CM	EBPP	CI Runs	ACTIONS TAKEN
CI-01	01/09/22						
CI-01	02/20/22						
CI-01	03/13/22						
CI-01	04/08/22						
CI-01	05/04/22						
CI-01	06/12/22						
CI-01	07/04/22						
CI-01	08/21/22						
CI-01	09/19/22						
CI-01	10/18/22						
CI-01	11/15/22						
CI-01	12/03/22						
CI-02	01/09/22						
CI-02	02/20/22						
CI-02	03/13/22						
CI-02	04/08/22						
CI-02	05/04/22						
CI-02	06/12/22						
CI-02	07/04/22						
CI-02	08/21/22						
CI-02	09/19/22						
CI-02	10/18/22						A lot of grit.
CI-02	11/15/22						
CI-02	12/03/22						
CI-03	01/09/22						
CI-03	02/20/22						
CI-03	03/13/22						Removed debris (rugs and paper) from Diversion chamber from top side.
CI-03	04/08/22						
CI-03	05/04/22						
CI-03	06/12/22						
CI-03	07/04/22						
CI-03	08/21/22						
CI-03	09/19/22						
CI-03	10/18/22						
CI-03	11/15/22						
CI-03	12/03/22						
CI-04	01/09/22						
CI-04	02/20/22						
CI-04	03/13/22						Removed rocks and bricks from diversion chamber from top side.
CI-04	04/08/22						
CI-04	05/04/22						
CI-04	06/12/22						Removed debris and rags from Diversion Chamber with boat hook.
CI-04	07/04/22						
CI-04	08/21/22						

CI-04	09/19/22						
CI-04	10/18/22						
CI-04	11/15/22						
CI-04	12/03/22						
CI-06	01/09/22						
CI-06	02/20/22						
CI-06	03/13/22						
CI-06	04/08/22						
CI-06	05/04/22						Removed piece of wood with boat hook.
CI-06	06/12/22						
CI-06	07/04/22						
CI-06	08/21/22						
CI-06	09/19/22						
CI-06	10/18/22						
CI-06	11/15/22						
CI-06	12/03/22						
CSO TG-1	01/09/22						
CSO TG-1	02/23/22		X				PM all 5 Tide Gates.
CSO TG-1	03/26/22						
CSO TG-1	04/09/22						
CSO TG-1	05/14/22						
CSO TG-1	06/12/22						
CSO TG-1	07/10/22						
CSO TG-1	08/21/22		X				PM, exercised Tide Gates #1,2,3,4,5.
CSO TG-1	09/05/22						
CSO TG-1	10/18/22						
CSO TG-1	11/17/22						
CSO TG-1	12/03/22						
CSO TG-2	01/09/22						
CSO TG-2	02/23/22						
CSO TG-2	03/26/22						
CSO TG-2	04/09/22		X				PM Tide Gates, exercised, greased, scraped.
CSO TG-2	05/14/22						
CSO TG-2	06/12/22						
CSO TG-2	07/10/22						
CSO TG-2	08/27/22						
CSO TG-2	09/05/22		X				PM Tide Gates #1, #2: greased, scraped seals, exercised, removed debris from top of gates.
CSO TG-2	10/18/22						
CSO TG-2	11/17/22						
CSO TG-2	12/03/22		X				PM:TG#1, TG#2 Exercised, cleaned, lubricated.
CSO TG-3	01/09/22						
CSO TG-3	02/23/22						
CSO TG-3	03/26/22						
CSO TG-3	04/09/22		X				PM Tide Gates, exercised, greased, scraped.
CSO TG-3	05/14/22						
CSO TG-3	06/12/22						
CSO TG-3	07/10/22						
CSO TG-3	08/27/22						

CSO TG-3	09/05/22		X				PM Tide Gates #1, #2: greased, scraped seals, exercised, removed debris from top of gates.
CSO TG-3	10/18/22						
CSO TG-3	11/17/22						
CSO TG-3	12/03/22						
CSO TG-4	01/09/22		X				PM Tide Gates 1A, 1B, 1C, 2A, 2C, 3A.
CSO TG-4	02/23/22						
CSO TG-4	03/26/22		X				PM Tide Gates 3B, 3C, 4A, 4B, 4C.
CSO TG-4	04/09/22						
CSO TG-4	05/14/22						
CSO TG-4	06/12/22						
CSO TG-4	07/10/22						
CSO TG-4	08/27/22						
CSO TG-4	09/05/22		X				PM Tide Gate 1A: greased, scraped seals, exercised, removed debris from top of gate.
CSO TG-4	10/18/22		X				PM Tide Gates 1B, 1C, 2A. Exercised, greased, cleaned.
CSO TG-4	11/17/22		X				PM Tide Gates 2B, 2C, 3A, 3B, 3C.
CSO TG-4	12/03/22		X				PM: TG 4A, 4B, 4C. Exercised, cleaned, lubricated.

HUNTS POINT REGULATOR LOCATIONS - 2022

NUMBER	REG PM	REG CM	TG PM	TG CM	EBPP	CL RUN	COMMENTS
HP-1	1-Jan		x				
HP-1	3-Feb		x				
HP-1	8-Mar		x				
HP-1	2-Apr		x				
HP-1	6-May		x				
HP-1	5-Jun		x				
HP-1	4-Jul		x	x			cleaned, exercised,lubricated,adjusted
HP-1	6-Aug		x				
HP-1	3-Sep		x				
HP-1	13-Oct		x				
HP-1	3-Nov		x				
HP-1	1-Dec		x				
HP-2	1-Jan		x				
HP-2	3-Feb		x				
HP-2	8-Mar		x				
HP-2	2-Apr		x				
HP-2	6-May		x				
HP-2	5-Jun		x				
HP-2	4-Jul		x				
HP-2	6-Aug		x				
HP-2	7-Aug	x	x	x			cleaned, exercised,lubricated,adjusted
HP-2	3-Sep		x				
HP-2	13-Oct		x				
HP-2	3-Nov		x				
HP-2	1-Dec		x				
HP-2A	1-Jan		x				
HP-2A	3-Feb		x				
HP-2A	8-Mar		x				
HP-2A	2-Apr		x				
HP-2A	6-May		x				
HP-2A	5-Jun		x				
HP-2A	4-Jul		x				

HP-2A	6-Aug		x				
HP-2A	3-Sep		x				
HP-2A	13-Oct		x				
HP-2A	3-Nov		x				
HP-2A	1-Dec		x				
HP-3	1-Jan		x				
HP-3	3-Feb		x				
HP-3	8-Mar		x				
HP-3	2-Apr	x	x				
HP-3	6-May		x				
HP-3	5-Jun		x				
HP-3	14-Jun		x		x		telemetry alarm
HP-3	4-Jul		x				
HP-3	6-Aug	x	x				
HP-3	3-Sep		x				
HP-3	3-Oct		x		x		telemetry alarm
HP-3	13-Oct		x				
HP-3	3-Nov		x				
HP-3	1-Dec		x				
HP-4	1-Jan		x				
HP-4	1-Feb	x	x				cleared partial blockage
HP-4	8-Mar		x				
HP-4	2-Apr		x				
HP-4	6-May		x				
HP-4	5-Jun		x				
HP-4	4-Jul		x				
HP-4	6-Aug		x				
HP-4	7-Aug	x	x	x			cleaned, exercised,lubricated,adjusted
HP-4	3-Sep		x				
HP-4	9-Oct		x				
HP-4	4-Nov		x				
HP-4	3-Dec		x				
NUMBER	REG PM	REG CM	TG PM	TG CM	EBPP	CL RUN	COMMENTS
HP-5	1-Jan		x				

HP-5	25-Jan	x	x	x			flushed & vactored
HP-5	26-Jan	x	x	x			flushed & vactored
HP-5	1-Feb		x				
HP-5	6-Mar		x				
HP-5	25-Mar		x		x		telemetry alarm
HP-5	2-Apr		x				
HP-5	6-May		x				
HP-5	5-Jun	x	x				cleared partial blockage
HP-5	5-Jul		x				
HP-5	7-Aug	x	x	x			cleaned, exercised,lubricated,adjusted
HP-5	8-Aug		x				
HP-5	5-Sep	x	x	x			blockage flushed & vactored
HP-5	10-Sep	x	x	x			flushed & vactored
HP-5	13-Sep		x	x			telemetry alarm
HP-5	13-Sep		x	x			telemetry alarm
HP-5	9-Oct		x				
HP-5	9-Oct		x				
HP-5	9-Oct		x				cleared partial blockage
HP-5	4-Nov		x	x			telemetry alarm
HP-5	4-Nov	x	x	x			blockage flushed & vactored
HP-5	4-Nov		x				
HP-5	3-Dec	x	x				cleared partial blockage
HP-5	5-Dec	x	x	x			blockage flushed & vactored
HP-6	1-Jan		n/a	n/a			
HP-6	25-Jan	x	n/a	n/a	x		flushed & vactored
HP-6	26-Jan	x	n/a	n/a	x		flushed & vactored
HP-6	1-Feb		n/a	n/a			
HP-6	6-Mar		n/a	n/a			
HP-6	2-Apr		n/a	n/a			
HP-6	6-May		n/a	n/a			
HP-6	Jun		n/a	n/a			under construction
HP-6	Jul		n/a	n/a			under construction
HP-6	Aug		n/a	n/a			under construction
HP-6	Sep		n/a	n/a			under construction

HP-6	Oct		n/a	n/a			under construction
HP-6	Nov		n/a	n/a			under construction
HP-6	Dec		n/a	n/a			under construction
HP-7	1-Jan		n/a	n/a			
HP-7	1-Feb		n/a	n/a			
HP-7	6-Mar		n/a	n/a			
HP-7	2-Apr		n/a	n/a			
HP-7	6-May		n/a	n/a			
HP-7	5-Jun		n/a	n/a			
HP-7	5-Jul		n/a	n/a			
HP-7	8-Aug		n/a	n/a			
HP-7	5-Sep		n/a	n/a			
HP-7	9-Oct		n/a	n/a			
HP-7	4-Nov		n/a	n/a			
HP-7	3-Dec		n/a	n/a			
HP-8	1-Jan		x				
HP-8	6-Jan	x	x	x			cleaned, exercised,lubricated,adjusted
HP-8	1-Feb		x				
HP-8	5-Mar		x				
HP-8	2-Apr		x				
HP-8	6-May		x				
HP-8	5-Jun		x				
HP-8	5-Jul		x				
HP-8	23-Jul		x	x			telemetry alarm
HP-8	5-Aug		x				
HP-8	5-Sep		x				
HP-8	9-Oct		x				
HP-8	4-Nov		x				
HP-8	3-Dec		x				
HP-9	1-Jan		x				
HP-9	14-Jan	x	x	x			flushed & vactored exercised, lubricated, adjusted
HP-9	15-Jan	x	x				cleared partial blockage
HP-9	1-Feb		x				
HP-9	5-Mar		x				

HP-9	2-Apr		x				
HP-9	6-May		x				
HP-9	5-Jun		x				
HP-9	5-Jul		x				
HP-9	5-Aug		x				
HP-9	1-Sep		x	x			telemetry alarm
HP-9	1-Sep		x	x			telemetry alarm
HP-9	5-Sep		x				
HP-9	9-Oct		x				
HP-9	4-Nov		x				
HP-9	3-Dec		x				
HP--9A	1-Jan						
HP-9A	1-Feb						
HP-9A	5-Mar						
HP-9A	2-Apr						
HP-9A	6-May						
HP-9A	5-Jun						
HP-9A	5-Jul						
HP-9A	5-Aug						
HP-9A	5-Sep						
HP-9A	9-Oct						
HP-9A	4-Nov						
HP-9A	3-Dec						
HP-10	1-Jan		x				
HP-10	6-Jan	x	x	x			cleaned, exercised,lubricated,adjusted
HP-10	5-Mar		x				
HP-10	2-Apr		x				
HP10	6-May		x				
HP-10	20-May		x		x		telemetry alarm 2x
HP-10	21-May		x		x		telemetry alarm 2x
HP-10	22-May		x		x		telemetry alarm 2x
HP-10	23-May		x		x		telemetry alarm 2x
HP-10	24-May		x		x		telemetry alarm 2x
HP-10	25-May		x		x		telemetry alarm 2x

HP-10	26-May		x		x		telemetry alarm 2x
HP-10	27-May		x		x		telemetry alarm 2x
HP-10	28-May		x		x		telemetry alarm 2x
HP-10	29-May		x		x		telemetry alarm 2x
HP-10	30-May		x		x		telemetry alarm 2x
HP-10	31-May		x		x		telemetry alarm 2x
HP-10	1-Jun		x		x		telemetry alarm 2x
HP-10	2-Jun		x		x		telemetry alarm 2x
HP-10	3-Jun		x		x		telemetry alarm 2x
HP-10	4-Jun		x		x		telemetry alarm 2x
HP-10	5-Jun		x		x		telemetry alarm 2x
HP-10	6-Jun		x		x		telemetry alarm 2x
HP-10	7-Jun		x		x		telemetry alarm 2x
HP-10	8-Jun		x		x		telemetry alarm 2x
HP-10	9-Jun		x		x		telemetry alarm 2x
HP-10	10-Jun		x		x		telemetry alarm 2x
HP-10	11-Jun		x		x		telemetry alarm 2x
HP-10	12-Jun		x		x		telemetry alarm 2x
HP-10	13-Jun		x		x		telemetry alarm 2x
HP-10	14-Jun		x		x		telemetry alarm 2x
HP-10	15-Jun		x		x		telemetry alarm 2x
HP-10	16-Jun		x		x		telemetry alarm 2x
HP-10	17-Jun		x		x		telemetry alarm 2x
HP-10	18-Jun		x		x		telemetry alarm 2x
HP-10	19-Jun		x		x		telemetry alarm 2x
HP-10	20-Jun		x		x		telemetry alarm 2x
HP-10	21-Jun		x		x		telemetry alarm 2x
HP-10	22-Jun		x		x		telemetry alarm 2x
HP-10	23-Jun		x		x		telemetry alarm 2x
HP-10	24-Jun		x		x		telemetry alarm 2x
HP-10	25-Jun		x		x		telemetry alarm 2x
HP-10	26-Jun		x		x		telemetry alarm 2x
HP-10	27-Jun		x		x		telemetry alarm 2x
HP-10	28-Jun		x		x		telemetry alarm 2x

HP-10	29-Jun		x		x		telemetry alarm 2x
HP-10	30-Jun		x		x		telemetry alarm 2x
HP-10	1-Jul		x		x		telemetry alarm 2x
HP-10	2-Jul		x		x		telemetry alarm 2x
HP-10	3-Jul		x		x		telemetry alarm 2x
HP-10	4-Jul		x		x		telemetry alarm 2x
HP-10	5-Jul		x		x		telemetry alarm 2x
HP-10	6-Jul		x		x		telemetry alarm 2x
HP-10	7-Jul		x		x		telemetry alarm 2x
HP-10	8-Jul		x		x		telemetry alarm 2x
HP-10	9-Jul		x		x		telemetry alarm 2x
HP-10	10-Jul		x		x		telemetry alarm 2x
HP-10	11-Jul		x		x		telemetry alarm 2x
HP-10	12-Jul		x		x		telemetry alarm 2x
HP-10	13-Jul		x		x		telemetry alarm 2x
HP-10	14-Jul		x		x		telemetry alarm 2x
HP-10	15-Jul		x		x		telemetry alarm 2x
HP-10	16-Jul		x		x		telemetry alarm 2x
HP-10	17-Jul		x		x		telemetry alarm 2x
HP-10	18-Jul		x		x		telemetry alarm 2x
HP-10	19-Jul		x		x		telemetry alarm 2x
HP-10	20-Jul		x		x		telemetry alarm 2x
HP-10	21-Jul		x		x		telemetry alarm 2x
HP-10	22-Jul		x		x		telemetry alarm 2x
HP-10	23-Jul		x		x		telemetry alarm 2x
HP-10	24-Jul		x		x		telemetry alarm 2x
HP-10	25-Jul		x		x		telemetry alarm 2x
HP-10	26-Jul		x		x		telemetry alarm 2x
HP-10	27-Jul		x		x		telemetry alarm 2x
HP-10	28-Jul		x		x		telemetry alarm 2x
HP-10	29-Jul		x		x		telemetry alarm 2x
HP-10	30-Jul		x		x		telemetry alarm 2x
HP-10	31-Jul		x		x		telemetry alarm 2x
HP-10	1-Aug		x		x		telemetry alarm 2x

HP-10	2-Aug		x		x		telemetry alarm 2x
HP-10	3-Aug		x		x		telemetry alarm 2x
HP-10	4-Aug		x		x		telemetry alarm 2x
HP-10	5-Aug		x		x		telemetry alarm 2x
HP-10	6-Aug		x		x		telemetry alarm 2x
HP-10	7-Aug		x		x		telemetry alarm 2x
HP-10	8-Aug		x		x		telemetry alarm 2x
HP-10	9-Aug		x		x		telemetry alarm 2x
HP-10	10-Aug		x		x		telemetry alarm 2x
HP-10	11-Aug		x		x		telemetry alarm 2x
HP-10	12-Aug		x		x		telemetry alarm 2x
HP-10	13-Aug		x		x		telemetry alarm 2x
HP-10	14-Aug		x		x		telemetry alarm 2x
HP-10	15-Aug		x		x		telemetry alarm 2x
HP-10	16-Aug		x		x		telemetry alarm 2x
HP-10	17-Aug		x		x		telemetry alarm 2x
HP-10	18-Aug		x		x		telemetry alarm 2x
HP-10	19-Aug		x		x		telemetry alarm 2x
HP-10	20-Aug		x		x		telemetry alarm 2x
HP-10	21-Aug		x		x		telemetry alarm 2x
HP-10	22-Aug		x		x		telemetry alarm 2x
HP-10	23-Aug		x		x		telemetry alarm 2x
HP-10	24-Aug		x		x		telemetry alarm 2x
HP-10	25-Aug		x		x		telemetry alarm 2x
HP-10	26-Aug		x		x		telemetry alarm 2x
HP-10	27-Aug		x		x		telemetry alarm 2x
HP-10	28-Aug		x		x		telemetry alarm 2x
HP-10	29-Aug		x		x		telemetry alarm 2x
HP-10	30-Aug		x		x		telemetry alarm 2x
HP-10	31-Aug		x		x		telemetry alarm 2x
HP-10	1-Sep		x		x		telemetry alarm 2x
HP-10	2-Sep		x		x		telemetry alarm 2x
HP-10	3-Sep		x		x		telemetry alarm 2x
HP-10	4-Sep		x		x		telemetry alarm 2x

HP-10	12-Sep		x		x		telemetry alarm 2x
HP-10	13-Sep		x		x		telemetry alarm 2x
HP-10	14-Sep		x		x		telemetry alarm 2x
HP-10	15-Sep		x		x		telemetry alarm 2x
HP-10	16-Sep		x		x		telemetry alarm 2x
HP-11	17-Sep		x		x		telemetry alarm 2x
HP-10	18-Sep		x		x		telemetry alarm 2x
HP-10	19-Sep		x		x		telemetry alarm 2x
HP-10	9-Oct		x				
HP-10	3-Nov		x				
HP-10	1-Dec		x				
HP-11	1-Jan		x				
HP-11	6-Jan	x	x	x			cleaned, exercised,lubricated,adjusted
HP-11	3-Feb		x				
HP-11	8-Mar		x				
HP-11	2-Apr		x				
HP-11	6-May		x				
HP-11	20-May		x				
HP-11	5-Jun		x				
HP-11	4-Jul		x				
HP-11	6-Aug		x				
HP-11	3-Sep		x				
HP-11	10-Oct		x				
HP-11	3-Nov		x				
HP-11	3-Dec		x				
HP-12	1-Jan		x				
HP-12	3-Feb		x				
HP-12	8-Mar		x				
HP-12	2-Apr		x				
HP-12	6-May		x				
HP-12	5-Jun		x				
HP-12	29-Jun		x				telemetry alarm 2x
HP-12	30-Jun		x				telemetry alarm 2x
HP-12	4-Jul		x				

HP-12	3-Aug		x	x			telemetry alarm
HP-12	3-Aug		x	x			telemetry alarm
HP-12	6-Aug		x				
HP-12	18-Aug		x	x			telemetry alarm
HP-12	3-Sep		x				
HP-12	4-Sep		x	x			telemetry alarm
HP-12	10-Oct		x				
HP-12	12-Nov		x				
HP-12	1-Dec		x				
HP-13	1-Jan		x				
HP-13	3-Feb		x				
HP-13	3-Mar		x				
HP-13	2-Apr		x				
HP-13	6-May		x				
HP-13	5-Jun		x				
HP-13	27-Jun		x		x		telemetry alarm
HP-13	27-Jun		x		x		telemetry alarm
HP-13	5-Jul		x				
HP-13	7-Aug	x	x	x			cleaned, exercised,lubricated,adjusted
HP-13	5-Sep		x				
HP-13	9-Oct		x				
HP-13	3-Nov		x				
HP-13	1-Dec		x				
HP-14	2-Jan		x				
HP-14	3-Feb		x				
HP-14	8-Mar		x				
HP-14	2-Apr		x				
HP-14	6-May		x				
HP-14	10-Jun		x				
HP-14	4-Jul		x				
HP-14	5-Aug		x				
HP-14	3-Sep		x				
HP-14	9-Oct		x				
HP-14	3-Nov		x				

HP-14	1-Dec		x				
HP-14A	2-Jan		n/a	n/a			
HP-14A	3-Feb		n/a	n/a			
HP-14A	8-Mar		n/a	n/a			
HP-14A	3-Apr		n/a	n/a			
HP-14A	3-May		n/a	n/a			
HP-14A	10-Jun		n/a	n/a			
HP-14A	4-Jul		n/a	n/a			
HP-14A	8-Aug		n/a	n/a			
HP-14A	3-Sep		n/a	n/a			
HP-14A	9-Oct		n/a	n/a			
HP-14A	3-Nov		n/a	n/a			
HP-14A	1-Dec		n/a	n/a			
HP-14B	2-Jan		n/a	n/a			
HP-14B	3-Feb		n/a	n/a			
HP-14B	8-Mar		n/a	n/a			
HP-14B	3-Apr		n/a	n/a			
HP-14B	3-May		n/a	n/a			
HP-14B	10-Jun		n/a	n/a			
HP-14B	4-Jul		n/a	n/a			
HP-14B	8-Aug		n/a	n/a			
HP-14B	3-Sep		n/a	n/a			
HP-14B	9-Oct		n/a	n/a			
HP-14B	3-Nov		n/a	n/a			
HP-14B	1-Dec		n/a	n/a			
HP-14C	2-Jan		n/a	n/a			
HP-14C	3-Feb		n/a	n/a			
HP-14C	8-Mar		n/a	n/a			
HP-14C	3-Apr		n/a	n/a			
HP-14C	3-May		n/a	n/a			
HP-14C	10-Jun		n/a	n/a			
HP-14C	4-Jul		n/a	n/a			
HP-14C	8-Aug		n/a	n/a			
HP-14C	3-Sep		n/a	n/a			

HP-14C	9-Oct		n/a	n/a			
HP-14C	3-Nov		n/a	n/a			
HP-14C	9-Nov	x	n/a	n/a	x		blockage flushed & vactored
HP-14C	1-Dec		n/a	n/a			
HP-15	2-Jan		x				
HP-15	1-Feb		x				
HP-15	15-Mar		x				
HP-15	3-Apr		x				
HP-15	3-May		x				
HP-15	10-Jun		x				
HP-15	6-Jul		x				
HP-15	7-Aug	x	x	x			cleaned, exercised,lubricated,adjusted
HP-15	3-Sep		x				
HP-15	10-Oct		x				
HP-15	3-Nov		x				
HP-15	1-Dec		x				
HP-15A	2-Jan		n/a	n/a			
HP-15A	1-Feb		n/a	n/a			
HP-15A	15-Mar		n/a	n/a			
HP-15A	3-Apr		n/a	n/a			
HP-15A	3-May		n/a	n/a			
HP-15A	10-Jun		n/a	n/a			
HP-15A	6-Jul		n/a	n/a			
HP-15A	9-Aug		n/a	n/a			
HP-15A	3-Sep		n/a	n/a			
HP-15A	10-Oct		n/a	n/a			
HP-15A	3-Nov		n/a	n/a			
HP-15A	1-Dec		n/a	n/a			
HP-15B	2-Jan		n/a	n/a			
HP-15B	1-Feb		n/a	n/a			
HP-15B	15-Mar	x	n/a	n/a			cleared partial blockage
HP-15B	3-Apr		n/a	n/a			
HP-15B	3-May		n/a	n/a			
HP-15B	10-Jun	x	n/a	n/a	x		blockage flushed & vactored

HP-15B	6-Jul		n/a	n/a			
HP-15B	7-Aug	x	n/a	n/a	x		flushed & vactored
HP-15B	9-Aug		n/a	n/a			
HP-15B	3-Sep		n/a	n/a			
HP-15B	7-Sep	x	n/a	n/a	x		blockage flushed & vactored
HP-15B	10-Oct		n/a	n/a			cleared partial blockage
HP-15B	3-Nov		n/a	n/a			
HP-15B	1-Dec		n/a	n/a			
HP-15C	2-Jan		n/a	n/a			
HP-15C	1-Feb		n/a	n/a			
HP-15C	15-Mar		n/a	n/a			
HP-15C	3-Apr		n/a	n/a			
HP-15C	3-May		n/a	n/a			
HP-15C	10-Jun		n/a	n/a			
HP-15C	6-Jul		n/a	n/a			
HP-15C	8-Aug	x	n/a	n/a			flushed & vactored
HP-15C	9-Aug	x	n/a	n/a	x		blockage flushed & vactored
HP-15C	3-Sep	x	n/a	n/a			flushed & vactored
HP-15C	3-Oct		n/a	n/a			
HP-15C	8-Nov	x	n/a	n/a			flushed & vactored
HP-15C	3-Nov		n/a	n/a			
HP-15C	1-Dec		n/a	n/a			

JA - REGULATOR LOCATIONS - 2022

LOCATION	REG PM	REG CM	TG PM	TG CM	EBPP	Cl Runs	ACTIONS TAKEN
JAM-01	01/08/22						
JAM-01	02/19/22						
JAM-01	03/19/22						
JAM-01	04/07/22						
JAM-01	05/01/22						
JAM-01	06/02/22						
JAM-01	07/09/22						
JAM-01	08/28/22						
JAM-01	09/04/22						
JAM-01	10/09/22						
JAM-01	11/06/22						
JAM-01	12/18/22						
JAM-02	01/08/22						
JAM-02	02/19/22						
JAM-02	03/19/22						
JAM-02	04/07/22						
JAM-02	05/01/22						
JAM-02	06/02/22						
JAM-02	07/09/22						
JAM-02	08/28/22						
JAM-02	09/04/22						
JAM-02	10/09/22						
JAM-02	11/06/22						
JAM-02	12/04/22						
JAM-03	01/08/22						
JAM-03	02/05/22				X		False Dry Weather alarm.
JAM-03	02/19/22						
JAM-03	03/19/22						
JAM-03	04/07/22						
JAM-03	05/01/22						
JAM-03	06/02/22						
JAM-03	07/09/22						
JAM-03	08/28/22						
JAM-03	09/04/22						
JAM-03	10/09/22						
JAM-03	11/06/22						
JAM-03	12/04/22						
JAM-03A	01/08/22						
JAM-03A	02/19/22						
JAM-03A	03/19/22						
JAM-03A	04/07/22						
JAM-03A	05/01/22						
JAM-03A	06/02/22						
JAM-03A	07/09/22						

JAM-03A	08/28/22						
JAM-03A	09/04/22						
JAM-03A	10/09/22						
JAM-03A	11/06/22						
JAM-03A	12/04/22						
JAM-04	01/08/22						
JAM-04	02/19/22						
JAM-04	03/19/22						
JAM-04	04/07/22						
JAM-04	05/01/22						
JAM-04	06/02/22						
JAM-04	07/09/22						
JAM-04	08/28/22						
JAM-04	09/04/22						
JAM-04	10/09/22						
JAM-04	11/06/22						
JAM-04	12/18/22						
JAM-06	01/08/22						
JAM-06	02/19/22						
JAM-06	03/19/22						
JAM-06	04/07/22						
JAM-06	05/01/22						
JAM-06	06/11/22						
JAM-06	07/09/22						
JAM-06	08/28/22						
JAM-06	09/04/22						
JAM-06	10/09/22						
JAM-06	11/06/22						
JAM-06	12/18/22						
JAM-07	01/08/22						
JAM-07	02/19/22						
JAM-07	03/19/22						
JAM-07	04/07/22						
JAM-07	05/01/22						
JAM-07	06/11/22						
JAM-07	07/09/22						
JAM-07	08/28/22						
JAM-07	09/04/22						
JAM-07	10/09/22						
JAM-07	11/06/22						
JAM-07	12/18/22						
JAM-08	01/08/22						
JAM-08	02/19/22						
JAM-08	03/19/22						
JAM-08	04/07/22						
JAM-08	05/01/22						
JAM-08	06/11/22						
JAM-08	07/09/22						

JAM-08	08/28/22						
JAM-08	09/04/22						
JAM-08	10/09/22						
JAM-08	11/06/22						
JAM-08	12/18/22						
JAM-09	01/08/22						
JAM-09	02/19/22						
JAM-09	03/19/22						
JAM-09	04/07/22						
JAM-09	05/01/22						
JAM-09	06/11/22						
JAM-09	07/09/22						
JAM-09	08/28/22						
JAM-09	09/04/22						Removed debris (grease and rags) in Diversion with boat hook from top side.
JAM-09	10/09/22						Grease and debris in Diversion Chamber. Needs Vactor and Flusher.
JAM-09	10/10/22						Survey for Flusher and Vactor job.
JAM-09	11/06/22						
JAM-09	12/18/22						Removed partial blockage from topside.
JAM-10	01/08/22						
JAM-10	02/19/22						
JAM-10	03/19/22						
JAM-10	04/07/22						
JAM-10	05/01/22						
JAM-10	06/11/22						
JAM-10	07/09/22						
JAM-10	08/28/22						
JAM-10	09/04/22						
JAM-10	10/09/22						
JAM-10	11/06/22						
JAM-10	12/18/22						
JAM-11	01/08/22						
JAM-11	02/19/22						
JAM-11	03/19/22						
JAM-11	04/07/22						
JAM-11	05/01/22						
JAM-11	06/02/22						
JAM-11	07/09/22						
JAM-11	08/28/22						
JAM-11	09/04/22						
JAM-11	10/09/22						
JAM-11	11/06/22						
JAM-11	12/04/22						
JAM-12	01/08/22						
JAM-12	02/19/22						
JAM-12	03/19/22						
JAM-12	04/07/22						
JAM-12	05/01/22						
JAM-12	06/02/22						

JAM-12	07/09/22						
JAM-12	08/28/22						
JAM-12	09/04/22						
JAM-12	10/09/22						
JAM-12	11/06/22						
JAM-12	12/04/22						
JAM-14	01/08/22						
JAM-14	02/05/22				X		False Dry Weather alarm.
JAM-14	02/16/22						
JAM-14	02/19/22						
JAM-14	03/19/22						
JAM-14	04/07/22						Removed piece of wood and debris
JAM-14	05/01/22						
JAM-14	06/02/22						
JAM-14	07/09/22		X				PM, exercised, lubricated all Tide Gates.
JAM-14	08/09/22				X		Responded to Dry Weather Bypass - False Alarm.
JAM-14	08/28/22						
JAM-14	08/29/22				X		Responded to Dry Weather Bypass - False Alarm
JAM-14	09/04/22						
JAM-14	10/09/22						Diversion and Regulator full with rocks and sand. Needs Vactor.
JAM-14	11/06/22						
JAM-14	12/04/22						
WC-1	01/08/22						
WC-1	02/19/22						
WC-1	03/19/22						
WC-1	04/08/22						
WC-1	05/05/22						
WC-1	06/11/22						
WC-1	07/10/22						
WC-1	08/27/22						
WC-1	09/11/22						
WC-1	10/10/22						
WC-1	11/08/22						
WC-1	12/05/22						
WC-2	01/08/22						
WC-2	02/19/22						
WC-2	03/19/22						
WC-2	04/08/22						
WC-2	05/05/22						
WC-2	06/11/22						
WC-2	07/10/22						
WC-2	08/27/22						
WC-2	09/11/22						
WC-2	10/10/22						
WC-2	11/08/22						
WC-2	12/05/22						
WC-3	01/08/22						
WC-3	02/19/22						

WC-3	03/19/22						Cover pinched
WC-3	04/08/22						
WC-3	05/05/22						Cover is damaged.
WC-3	06/11/22						
WC-3	07/10/22						
WC-3	08/27/22						
WC-3	09/11/22						Cover can not be opened
WC-3	10/10/22						
WC-3	11/08/22						
WC-3	12/05/22						Removed traffic cone from WC
WC-4	01/08/22						
WC-4	02/19/22						
WC-4	03/19/22						
WC-4	04/08/22						
WC-4	05/05/22						
WC-4	06/11/22						
WC-4	07/10/22						
WC-4	08/27/22						
WC-4	09/11/22						
WC-4	10/10/22						
WC-4	11/08/22						
WC-4	12/05/22						
WC-5	01/08/22						Flush needed
WC-5	02/19/22						
WC-5	03/19/22						Need flush
WC-5	04/08/22						
WC-5	05/05/22						
WC-5	06/11/22						
WC-5	06/11/22						
WC-5	07/10/22						
WC-5	08/27/22						Flush needed
WC-5	09/11/22						Needs to be flushed
WC-5	09/14/22						Flushed chamber
WC-5	10/10/22						
WC-5	11/08/22						
WC-5	12/05/22						
WC-6	01/08/22						Flush needed
WC-6	02/19/22						
WC-6	03/19/22						Need flush
WC-6	04/08/22						
WC-6	05/05/22						
WC-6	06/11/22						
WC-6	07/10/22						
WC-6	08/27/22						Flush needed
WC-6	09/11/22						Needs to be flushed
WC-6	09/14/22						Flushed chamber
WC-6	10/10/22						
WC-6	11/08/22						

WC-6	12/05/22						

Note:
WC - Weir Chambers

NEWTOWN CREEK LOCATIONS 2022

Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
Q-1	12-Jan				N/A		Inspection
Q-1	23-Feb				N/A		Inspection
Q-1	29-Mar				N/A		Inspection
Q-1	14-Apr				N/A		Inspection
Q-1	24-May				N/A		Inspection
Q-1	22-Jun				N/A		Inspection
Q-1	17-Jul				N/A		Inspection
Q-1	14-Aug				N/A		Inspection
Q-1	8-Sep				N/A		Inspection
Q-1	16-Oct				N/A		Inspection
Q-1	20-Nov				N/A		Inspection
Q-1	28-Dec				N/A		inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
Q-2	12-Jan		N/A	N/A	N/A		Inspection
Q-2	23-Feb		N/A	N/A	N/A		Inspection
Q-2	29-Mar		N/A	N/A	N/A		Inspection
Q-2	27-Apr		N/A	N/A	N/A		Inspection
Q-2	24-May		N/A	N/A	N/A		Inspection
Q-2	22-Jun		N/A	N/A	N/A		Inspection
Q-2	17-Jul		N/A	N/A	N/A		Inspection
Q-2	14-Aug		N/A	N/A	N/A		Inspection
Q-2	8-Sep		N/A	N/A	N/A		Inspection
Q-2	16-Oct		N/A	N/A	N/A		Inspection
Q-2	20-Nov		N/A	N/A	N/A		Inspection
Q-2	28-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-1	12-Jan	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
B-1	23-Feb				N/A		Inspection
B-1	29-Mar				N/A		Inspection
B-1	14-Apr				N/A		Inspection
B-1	27-Apr	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
B-1	24-May				N/A		Inspection
B-1	22-Jun	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A, B and C.
B-1	17-Jul				N/A		Inspection
B-1	14-Aug				N/A		Inspection
B-1	8-Sep				N/A		Inspection
B-1	16-Oct				N/A		Inspection
B-1	20-Nov				N/A		Inspection
B-1	28-Dec	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B1-A	30-Jan				N/A		Inspection
B1-A	23-Feb				N/A		Inspection
B1-A	29-Mar				N/A		Inspection
B1-A	14-Apr				N/A		Inspection
B1-A	24-May				N/A		Inspection
B1-A	22-Jun				N/A		Inspection
B1-A	17-Jul				N/A		Inspection
B1-A	14-Aug				N/A		Inspection
B1-A	8-Sep				N/A		Inspection
B1-A	16-Oct				N/A		Inspection
B1-A	20-Nov				N/A		Inspection
B1-A	28-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
MH-15	12-Jan		N/A	N/A	N/A		Inspection
MH-15	23-Feb		N/A	N/A	N/A		Inspection
MH-15	29-Mar		N/A	N/A	N/A		Inspection
MH-15	14-Apr		N/A	N/A	N/A		Inspection
MH-15	24-May		N/A	N/A	N/A		Inspection
MH-15	22-Jun		N/A	N/A	N/A		Inspection
MH-15	17-Jul		N/A	N/A	N/A		Inspection
MH-15	14-Aug		N/A	N/A	N/A		Inspection
MH-15	8-Sep		N/A	N/A	N/A		Inspection
MH-15	16-Oct		N/A	N/A	N/A		Inspection
MH-15	20-Nov		N/A	N/A	N/A		Inspection
MH-15	28-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-2	12-Jan		N/A	N/A			Inspection
B-2	23-Feb		N/A	N/A			Inspection
B-2	29-Mar		N/A	N/A			Inspection

B-2	27-Apr		N/A	N/A			Inspection
B-2	24-May		N/A	N/A			Inspection
B-2	22-Jun		N/A	N/A			Inspection
B-2	17-Jul		N/A	N/A			Inspection
B-2	14-Aug		N/A	N/A			Inspection
B-2	8-Sep		N/A	N/A			Inspection
B-2	16-Oct		N/A	N/A			Inspection
B-2	20-Nov		N/A	N/A			Inspection
B-2	28-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-3	31-Jan				N/A		Inspection
B-3	16-Feb				N/A		Inspection
B-3	9-Mar				N/A		Inspection
B-3	27-Apr				N/A		Inspection
B-3	18-May				N/A		Inspection
B-3	8-Jun				N/A		Inspection
B-3	13-Jul				N/A		Inspection
B-3	6-Aug				N/A		Inspection
B-3	16-Sep				N/A		Inspection
B-3	17-Oct				N/A		Inspection
B-3	15-Nov				N/A		Inspection
B-3	13-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-4	31-Jan		N/A	N/A	N/A		Inspection
B-4	16-Feb		N/A	N/A	N/A		Inspection
B-4	9-Mar		N/A	N/A	N/A		Inspection
B-4	27-Apr		N/A	N/A	N/A		Inspection
B-4	18-May		N/A	N/A	N/A		Inspection
B-4	8-Jun		N/A	N/A	N/A		Inspection
B-4	13-Jul		N/A	N/A	N/A		Inspection
B-4	6-Aug		N/A	N/A	N/A		Inspection
B-4	16-Sep		N/A	N/A	N/A		Inspection
B-4	17-Oct		N/A	N/A	N/A		Inspection
B-4	15-Nov		N/A	N/A	N/A		Inspection
B-4	13-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-5	31-Jan				N/A		Inspection
B-5	16-Feb				N/A		Inspection
B-5	9-Mar				N/A		Inspection
B-5	27-Apr	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
B-5	18-May				N/A		Inspection
B-5	8-Jun				N/A		Inspection
B-5	13-Jul				N/A		Inspection
B-5	6-Aug				N/A		Inspection
B-5	16-Sep				N/A		Inspection
B-5	17-Oct				N/A		Inspection
B-5	22-Nov				N/A		Inspection
B-5	13-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-5A	31-Jan				N/A		Inspection
B-5A	16-Feb				N/A		Inspection
B-5A	9-Mar				N/A		Inspection
B-5A	27-Apr				N/A		Inspection
B-5A	18-May	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
B-5A	8-Jun				N/A		Inspection
B-5A	13-Jul				N/A		Inspection
B-5A	6-Aug				N/A		Inspection
B-5A	16-Sep				N/A		Inspection
B-5A	17-Oct				N/A		Inspection
B-5A	22-Nov				N/A		Inspection
B-5A	13-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-6	31-Jan	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
B-6	16-Feb				N/A		Inspection
B-6	9-Mar				N/A		Inspection
B-6	27-Apr				N/A		Inspection
B-6	18-May				N/A		Inspection
B-6	8-Jun	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
B-6	13-Jul				N/A		Inspection
B-6	6-Aug				N/A		Inspection
B-6	16-Sep	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A,B,C.
B-6	17-Oct				N/A		Inspection

B-6	22-Nov				N/A		Inspection
B-6	13-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-6A	31-Jan		N/A	N/A			Inspection
B-6A	16-Feb		N/A	N/A			Inspection
B-6A	9-Mar		N/A	N/A			Inspection
B-6A	27-Apr		N/A	N/A			Inspection
B-6A	18-May		N/A	N/A			Inspection
B-6A	8-Jun		N/A	N/A			Inspection
B-6A	13-Jul		N/A	N/A			Inspection
B-6A	6-Aug		N/A	N/A			Inspection
B-6A	16-Sep		N/A	N/A			Inspection
B-6A	17-Oct		N/A	N/A			Inspection
B-6A	22-Nov		N/A	N/A			Inspection
B-6A	13-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-7	31-Jan				N/A		Inspection
B-7	16-Feb				N/A		Inspection
B-7	9-Mar				N/A		Inspection
B-7	27-Apr				N/A		Inspection
B-7	18-May				N/A		Inspection
B-7	8-Jun				N/A		Inspection
B-7	13-Jul				N/A		Inspection
B-7	6-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate
B-7	16-Sep				N/A		Inspection
B-7	17-Oct				N/A		Inspection
B-7	22-Nov				N/A		Inspection
B-7	13-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-8	30-Jan		N/A	N/A			Inspection
B-8	16-Feb		N/A	N/A			Inspection
B-8	9-Mar		N/A	N/A			Inspection
B-8	27-Apr		N/A	N/A			Inspection
B-8	18-May		N/A	N/A			Inspection
B-8	8-Jun		N/A	N/A			Inspection
B-8	13-Jul		N/A	N/A			Inspection
B-8	6-Aug		N/A	N/A			Inspection
B-8	16-Sep		N/A	N/A			Inspection
B-8	17-Oct		N/A	N/A			Inspection
B-8	22-Nov		N/A	N/A			Inspection
B-8	13-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-9	30-Jan				N/A		Inspection
B-9	16-Feb	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A,B,C,D.
B-9	9-Mar				N/A		Inspection
B-9	27-Apr				N/A		Inspection
B-9	18-May				N/A		Inspection
B-9	8-Jun				N/A		Inspection
B-9	13-Jul				N/A		Inspection
B-9	6-Aug				N/A		Inspection
B-9	16-Sep				N/A		Inspection
B-9	17-Oct				N/A		Inspection
B-9	22-Nov				N/A		Inspection
B-9	1-Dec				N/A		Responded to callout- DRY WEATHER BYPASS- FALSE alarm
B-9	13-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-10	12-Jan				N/A		Inspection
B-10	16-Feb				N/A		Inspection
B-10	9-Mar	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
B-10	27-Apr				N/A		Inspection
B-10	18-May				N/A		Inspection
B-10	8-Jun				N/A		Inspection
B-10	15-Jul				N/A		Inspection
B-10	30-Aug				N/A		Inspection
B-10	20-Sep				N/A		Inspection
B-10	14-Oct				N/A		Inspection
B-10	15-Nov	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
B-10	30-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-11	12-Jan		N/A	N/A			Inspection
B-11	16-Feb		N/A	N/A			Inspection
B-11	9-Mar		N/A	N/A			Inspection

B-11	27-Apr		N/A	N/A			Inspection
B-11	18-May		N/A	N/A			Inspection
B-11	8-Jun		N/A	N/A			Inspection
B-11	15-Jul		N/A	N/A			Inspection
B-11	30-Aug		N/A	N/A			Inspection
B-11	20-Sep		N/A	N/A			Inspection
B-11	14-Oct		N/A	N/A			Inspection
B-11	15-Nov		N/A	N/A			Inspection
B-11	30-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-12	12-Jan				N/A		Inspection/No Access To Regulator/Checked In and Out Going
B-12	16-Feb				N/A		Inspection
B-12	9-Mar				N/A		Inspection
B-12	27-Apr				N/A		Inspection
B-12	18-May				N/A		Inspection
B-12	8-Jun				N/A		Inspection
B-12	15-Jul	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
B-12	30-Aug				N/A		Inspection
B-12	20-Sep				N/A		Inspection
B-12	14-Oct				N/A		Inspection
B-12	15-Nov	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
B-12	30-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-13	12-Jan		N/A	N/A			Inspection
B-13	16-Feb		N/A	N/A			Inspection
B-13	9-Mar		N/A	N/A			Inspection
B-13	27-Apr		N/A	N/A			Inspection
B-13	24-May	X	N/A	N/A			Inspection-Cleared Debri in Diversion
B-13	8-Jun		N/A	N/A			Inspection
B-13	15-Jul		N/A	N/A			Inspection
B-13	30-Aug		N/A	N/A			Inspection
B-13	20-Sep		N/A	N/A			Inspection
B-13	14-Oct		N/A	N/A			Inspection
B-13	15-Nov		N/A	N/A			Inspection
B-13	30-Dec	X	N/A	N/A			Inspection-Cleared Debri on Sluice Gate
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-14	12-Jan				N/A		Inspection
B-14	16-Feb				N/A		Inspection
B-14	9-Mar				N/A		Inspection
B-14	27-Apr	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
B-14	24-May	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate, Cleared Debri in Diversion.
B-14	8-Jun				N/A		Inspection
B-14	15-Jul				N/A		Inspection
B-14	14-Aug				N/A		Inspection
B-14	20-Sep				N/A		Inspection
B-14	14-Oct				N/A		Inspection
B-14	15-Nov				N/A		Inspection
B-14	30-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-15	30-Jan		N/A	N/A			Inspection
B-15	16-Feb		N/A	N/A			No Access
B-15	9-Mar		N/A	N/A			Inspection
B-15	27-Apr		N/A	N/A			Inspection
B-15	24-May		N/A	N/A			Inspection
B-15	8-Jun		N/A	N/A			Inspection
B-15	15-Jul		N/A	N/A			Inspection
B-15	14-Aug		N/A	N/A			Inspection
B-15	20-Sep		N/A	N/A			Inspection
B-15	14-Oct		N/A	N/A			Inspection
B-15	15-Nov		N/A	N/A			Inspection
B-15	30-Dec	X	N/A	N/A			Inspection-Cleared Debri on Sluice Gate
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
B-16	12-Jan				N/A		Inspection
B-16	23-Feb				N/A		Inspection
B-16	9-Mar				N/A		Inspection
B-16	27-Apr				N/A		Inspection
B-16	24-May				N/A		Inspection
B-16	8-Jun				N/A		Inspection
B-16	17-Jul	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
B-16	14-Aug				N/A		Inspection
B-16	20-Sep				N/A		Inspection
B-16	14-Oct				N/A		Inspection

B-16	15-Nov				N/A		Inspection	
B-16	30-Dec				N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
B-17	12-Jan				N/A		Inspection/No Access To Regulator/Checked In and Out Going	
B-17	23-Feb				N/A		Inspection	
B-17	9-Mar				N/A		Inspection	
B-17	27-Apr	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.	
B-17	24-May	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.	
B-17	8-Jun				N/A		Inspection	
B-17	15-Jul				N/A		Inspection	
B-17	30-Aug				N/A		Inspection	
B-17	20-Sep				N/A		Inspection	
B-17	17-Oct				N/A		Inspection	
B-17	22-Nov				N/A		Inspection	
B-17	30-Dec				N/A		Inspection	

NEWTOWN CREEK-MANHATTAN REGULATOR LOCATIONS- 2022

TG-01	REG PM	REG CM	TG PM	TG CM	EBPP	CL RUN	COMMENTS
TG-1	26-Jan		x				
TG-1	21-Feb		x				
TG-1	25-Mar		x				
TG-1	24-Apr		x				
TG-1	29-May		x				
TG-1	29-Jun		x				
TG-1	31-Jul		x				
TG-1	30-Aug		x				
TG-1	26-Sep		x				
TG-1	29-Oct		x				
TG-1	26-Nov		x				
TG-1	29-Dec		x				
TG-2	26-Jan		x				
TG-2	21-Feb		x				
TG-2	25-Mar		x				
TG-2	24-Apr		x				
TG-2	29-May		x				
TG-2	29-Jun		x				
TG-2	31-Jul		x				
TG-2	30-Aug		x				
TG-2	26-Sep		x				
TG-2	29-Oct		x				
TG-2	26-Nov		x				
TG-2	29-Dec		x				
NCM-1	26-Jan		x				
NCM-1	21-Feb		x				
NCM-1	25-Mar		x				
NCM-1	24-Apr		x				
NCM-1	29-May		x				
NCM-1	29-Jun		x				
NCM-1	31-Jul		x				
NCM-1	30-Aug		x				

NCM-1	26-Sep		x				
NCM-1	29-Oct		x				
NCM-1	26-Nov		x				
NCM-1	29-Dec		x				
NCM-2	26-Jan		x				
NCM-2	21-Feb		x				
NCM-2	25-Mar		x				
NCM-2	24-Apr		x				
NCM-2	29-May	x	x				
NCM-2	29-Jun		x				
NCM-2	31-Jul		x				
NCM-2	30-Aug		x				
NCM-2	26-Sep		x				
NCM-2	29-Oct		x				
NCM-2	26-Nov		x				
NCM-2	29-Dec		x				
NCM-3	26-Jan		x				
NCM-3	21-Feb		x				
NCM-3	25-Mar		x				
NCM-3	24-Apr		x				
NCM-3	29-May		x				
NCM-3	29-Jun		x				
NCM-3	31-Jul		x				
NCM-3	30-Aug		x				
NCM-3	26-Sep		x				
NCM-3	29-Oct		x				
NCM-3	26-Nov		x				
NCM-3	29-Dec		x				
NCM-4	26-Jan		x				
NCM-4	21-Feb		x				
NCM-4	25-Mar		x				
NCM-4	24-Apr		x				
NCM-4	29-May		x				
NCM-4	29-Jun		x				

NCM-4	31-Jul		x				
NCM-4	30-Aug		x				
NCM-4	26-Sep		x				
NCM-4	29-Oct		x				
NCM-4	26-Nov		x				
NCM-4	29-Dec		x				
NCM-5	26-Jan		x				
NCM-5	21-Feb		x				
NCM-5	25-Mar		x				
NCM-5	24-Apr		x				
NCM-5	29-May		x				
NCM-5	29-Jun		x				
NCM-5	31-Jul		x				
NCM-5	30-Aug		x				
NCM-5	26-Sep		x				
NCM-5	29-Oct		x				
NCM-5	26-Nov		x				
NCM-5	29-Dec		x				
NCM-6	26-Jan	x	x				cleared partial blockage
NCM-6	27-Jan	x	x				flushed & vactored
NCM-6	21-Feb		x				
NCM-6	26-Mar		x				
NCM-6	24-Apr		x				
NCM-6	29-May		x				
NCM-6	29-Jun		x				
NCM-6	31-Jul		x				
NCM-6	30-Aug		x				
NCM-6	26-Sep		x				
NCM-6	29-Oct		x				
NCM-6	27-Nov		x				
NCM-6	29-Dec		x				
NCM-7	26-Jan		x				
NCM-7	21-Feb		x				
NCM-7	26-Mar		x				

NCM-7	24-Apr		x				
NCM-7	29-May		x				
NCM-7	29-Jun		x				
NCM-7	31-Jul		x				
NCM-7	30-Aug		x				
NCM-7	26-Sep		x				
NCM-7	29-Oct		x				
NCM-7	27-Nov		x				
NCM-7	29-Dec		x				
NCM-8	26-Jan		x				
NCM-8	21-Feb		x				
NCM-8	26-Mar		x				
NCM-8	24-Apr		x				
NCM-8	29-May		x				
NCM-8	29-Jun		x				
NCM-8	31-Jul		x				
NCM-8	30-Aug		x				
NCM-8	26-Sep		x				
NCM-8	29-Oct		x				
NCM-8	27-Nov		x				
NCM-8	29-Dec		x				
NCM-9	26-Jan		x				
NCM-9	24-Feb		x				
NCM-9	26-Mar		x				
NCM-9	24-Apr		x				
NCM-9	29-May		x				
NCM-9	29-Jun		x				
NCM-9	31-Jul		x				
NCM-9	30-Aug		x				
NCM-9	26-Sep		x				
NCM-9	29-Oct		x				
NCM-9	27-Nov		x				
NCM-9	29-Dec		x				
NCM-10	26-Jan		x				

NCM-10	24-Feb		x				
NCM-10	26-Mar		x				
NCM-10	24-Apr						
NCM-10	29-May		x				
NCM-10	29-Jun		x				
NCM-10	26-Jul		x				
NCM-10	29-Aug		x				
NCM-10	26-Sep		x				
NCM-10	29-Oct		x				
NCM-10	27-Nov		x				
NCM-10	30-Dec		x				
NCM-11	26-Jan		x				
NCM-11	24-Feb		x				
NCM-11	26-Mar		x				
NCM-11	24-Apr		x				
NCM-11	29-May		x				
NCM-11	29-Jun		x				
NCM-11	26-Jul		x				
NCM-11	29-Aug		x				
NCM-11	26-Sep		x				
NCM-11	29-Oct		x				
NCM-11	27-Nov		x				
NCM-11	30-Dec		x				
NCM-12	26-Jan		x				
NCM-12	24-Feb		x				
NCM-12	26-Mar		x				
NCM-12	24-Apr		x				
NCM-12	27-May		x				
NCM-12	29-Jun		x				
NCM-12	26-Jul		x				
NCM-12	29-Aug		x				
NCM-12	26-Sep		x				
NCM-12	29-Oct		x				
NCM-12	27-Nov		x				

NCM-12	30-Dec		x				
NCM-13	26-Jan		x				
NCM-13	24-Feb		x				
NCM-13	26-Mar		x				
NCM-13	24-Apr		x				
NCM-13	27-May		x				
NCM-13	28-Jun		x				
NCM-13	26-Jul		x				
NCM-13	29-Aug		x				
NCM-13	26-Sep		x				
NCM-13	29-Oct		x				
NCM-13	27-Nov		x				
NCM-13	30-Dec		x				
NCM-16	26-Jan		x				
NCM-16	24-Feb		x				
NCM-16	26-Mar		x				
NCM-16	30-Apr		x				
NCM-16	27-May		x				
NCM-16	28-Jun		x				
NCM-16	26-Jul		x				
NCM-16	29-Aug		x				
NCM-16	26-Sep		x				
NCM-16	29-Oct		x				
NCM-16	27-Nov		x				
NCM-16	30-Dec		x				
NCM-17	26-Jan		x				
NCM-17	24-Feb		x				
NCM-17	26-Mar		x				
NCM-17	30-Apr		x				
NCM-17	27-May		x				
NCM-17	28-Jun		x				
NCM-17	26-Jul		x				
NCM-17	29-Aug		x				
NCM-17	26-Sep		x				

NCM-17	29-Oct		x				
NCM-17	27-Nov		x				
NCM-17	30-Dec						
NCM-18	26-Jan		x				
NCM-18	24-Feb		x				
NCM-18	26-Mar		x				
NCM-18	30-Apr		x				
NCM-18	27-May		x				
NCM-18	28-Jun		x				
NCM-18	26-Jul		x				
NCM-18	29-Aug		x				
NCM-18	26-Sep		x				
NCM-18	29-Oct		x				
NCM-18	27-Nov		x				
NCM-18	30-Dec						
NCM-19	26-Jan		x				
NCM-19	24-Feb		x				
NCM-19	29-Mar		x				
NCM-19	30-Apr		x				
NCM-19	27-May		x				
NCM-19	28-Jun	x	x				
NCM-19	26-Jul		x				
NCM-19	29-Aug		x				
NCM-19	26-Sep		x	x			removed stop plankes
NCM-19	29-Oct		x				
NCM-19	27-Nov		x				no/access
NCM-19	30-Dec	x	x	x			vactored flushed
NCM-20	26-Jan		x				
NCM-20	24-Feb		x				
NCM-20	26-Mar		x				
NCM-20	30-Apr		x				
NCM-20	27-May		x				
NCM-20	28-Jun		x				
NCM-20	26-Jul	x	x				vactored flushed

NCM-20	29-Aug		x				
NCM-20	26-Sep		x				
NCM-20	29-Oct		x				
NCM-20	27-Nov		x				
NCM-20	30-Dec		x				
NCM-21	26-Jan		x				
NCM-21	24-Feb		x				
NCM-21	26-Mar		x				
NCM-21	30-Apr		x				
NCM-21	27-May		x				
NCM-21	15-Jun		x		x		telemetry alarm
NCM-21	15-Jun		x				
NCM-21	26-Jul		x				
NCM-21	29-Aug		x				
NCM-21	26-Sep		x				
NCM-21	29-Oct		x				
NCM-21	27-Nov		x				
NCM-21	30-Dec		x				
NCM-22	27-Jan		x				
NCM-22	19-Feb		x				
NCM-22	26-Mar		x				
NCM-22	30-Apr		x				
NCM-22	27-May		x				no/access
NCM-22	30-Jun		x				
NCM-22	27-Jul		x				
NCM-22	30-Aug		x				
NCM-22	21-Sep		x				
NCM-22	29-Oct		x				no/access
NCM-22	29-Nov	x	x				cleared partial blockage
NCM-22	31-Dec		x				
NCM-23	27-Jan		x				
NCM-23	19-Feb		x				
NCM-23	26-Mar		x				
NCM-23	30-Apr		x				

NCM-23	27-May		x				
NCM-23	30-Jun		x				
NCM-23	27-Jul		x				
NCM-23	30-Aug		x				
NCM-23	21-Sep		x				
NCM-23	29-Oct		x				
NCM-23	29-Nov		x				
NCM-23	31-Dec		x				
NCM-24	27-Jan		x				
NCM-24	19-Feb		x				
NCM-24	26-Mar		x				
NCM-24	30-Apr		x				
NCM-24	27-May		x				
NCM-24	29-Jun		x				
NCM-24	27-Jul	x	x				cleared partial blockage
NCM-24	28-Jul	x	x	x			flushed & vactored
NCM-24	30-Aug		x				
NCM-24	21-Sep		x				
NCM-24	31-Oct		x				
NCM-24	29-Nov		x				
NCM-24	31-Dec		x				
NCM-25	27-Jan		x				
NCM-25	19-Feb		x				no/access
NCM-25	26-Mar		x				
NCM-25	30-Apr		x				
NCM-25	27-May		x				
NCM-25	29-Jun		x				
NCM-25	27-Jul		x				
NCM-25	30-Aug		x				
NCM-25	21-Sep		x				
NCM-25	31-Oct		x				
NCM-25	29-Nov	x	x				cleared partial blockage
NCM-25	31-Dec		x				
NCM-26	27-Jan		x				

NCM-26	19-Feb		x				
NCM-26	26-Mar		x				
NCM-26	30-Apr		x				
NCM-26	27-May		x				
NCM-26	29-Jun		x				
NCM-26	27-Jul		x				
NCM-26	30-Aug		x				
NCM-26	21-Sep		x				
NCM-26	31-Oct		x				
NCM-26	29-Nov		x				
NCM-26	31-Dec		x				
NCM-27	27-Jan		x				
NCM-27	19-Feb		x				
NCM-27	26-Mar		x				
NCM-27	30-Apr		x				
NCM-27	27-May		x				
NCM-27	29-Jun		x				
NCM-27	27-Jul		x				
NCM-27	30-Aug		x				
NCM-27	21-Sep		x				
NCM-27	31-Oct		x				
NCM-27	29-Nov		x				
NCM-27	31-Dec		x				
NCM-28	27-Jan		x				
NCM-28	19-Feb		x				
NCM-28	26-Mar		x				
NCM-28	30-Apr		x				
NCM-28	27-May		x				
NCM-28	29-Jun		x				
NCM-28	27-Jul		x				
NCM-28	30-Aug		x				
NCM-28	21-Sep		x				
NCM-28	31-Oct		x				
NCM-28	29-Nov		x				

NCM-28	31-Dec		x				
NCM-29	27-Jan		x				
NCM-29	19-Feb		x				
NCM-29	26-Mar		x				
NCM-29	30-Apr		x				
NCM-29	27-May		x				
NCM-29	29-Jun		x				
NCM-29	27-Jul		x				
NCM-29	30-Aug		x				
NCM-29	21-Sep		x				
NCM-29	31-Oct		x				
NCM-29	29-Nov		x				
NCM-29	31-Dec		x				
NCM-30	27-Jan		x				
NCM-30	19-Feb		x				
NCM-30	26-Mar		x				
NCM-30	30-Apr		x				
NCM-30	27-May		x				
NCM-30	29-Jun		x				
NCM-30	27-Jul		x				
NCM-30	30-Aug		x				
NCM-30	21-Sep		x				
NCM-30	31-Oct		x				
NCM-30	29-Nov		x				
NCM-30	30-Dec		x				
NCM-31	27-Jan		x				
NCM-31	19-Feb		x				no/access
NCM-31	26-Mar		x				
NCM-31	30-Apr		x				
NCM-31	27-May		x				
NCM-31	29-Jun		x				
NCM-31	27-Jul		x				
NCM-31	30-Aug		x				
NCM-31	21-Sep		x				

NCM-31	31-Oct						
NCM-31	29-Nov						
NCM-31	30-Dec						
NCM-32	27-Jan		x				
NCM-32	19-Feb		x				
NCM-32	26-Mar		x				
NCM-32	30-Apr		x				
NCM-32	27-May		x				
NCM-32	29-Jun		x				no/access
NCM-32	27-Jul		x				
NCM-32	30-Aug		x				
NCM-32	21-Sep		x				
NCM-32	31-Oct		x				
NCM-32	29-Nov		x				
NCM-32	30-Dec		x				
NCM-33	27-Jan		x				
NCM-33	19-Feb		x				no/access
NCM-33	26-Mar		x				
NCM-33	30-Apr		x				
NCM-33	27-May		x				
NCM-33	29-Jun		x				
NCM-33	27-Jul		x				
NCM-33	30-Aug		x				
NCM-33	21-Sep		x				
NCM-33	31-Oct		x				
NCM-33	29-Nov		x				
NCM-33	30-Dec		x				
NCM-34	27-Jan		x				
NCM-34	19-Feb		x				no/access
NCM-34	26-Mar		x				
NCM-34	30-Apr		x				
NCM-34	27-May		x				
NCM-34	29-Jun		x				
NCM-34	27-Jul		x				

NCM-34	30-Aug		x				
NCM-34	21-Sep		x				
NCM-34	31-Oct		x				
NCM-34	29-Nov		x				
NCM-34	30-Dec		x				
NCM-35	27-Jan		x				
NCM-35	19-Feb		x				no/access
NCM-35	26-Mar		x				
NCM-35	30-Apr		x				
NCM-35	27-May		x				
NCM-35	29-Jun		x				
NCM-35	27-Jul		x				
NCM-35	30-Aug		x				
NCM-35	21-Sep		x				
NCM-35	31-Oct		x				
NCM-35	29-Nov		x				
NCM-35	30-Dec		x				
NCM-36	26-Jan		x				
NCM-36	27-Feb		x				
NCM-36	29-Mar		x				
NCM-36	27-Apr		x				
NCM-36	27-May		x				
NCM-36	19-Jun		x				
NCM-36	27-Jul		x				no/access
NCM-36	29-Aug		x				
NCM-36	26-Sep		x				
NCM-36	31-Oct		x				
NCM-36	22-Nov		x				
NCM-36	31-Dec		x				
NCM-37	6-Jan		x		x		telemetry alarm
NCM-37	26-Jan		x				
NCM-37	27-Feb		x				
NCM-37	29-Mar		x				
NCM-37	27-Apr		x				

NCM-37	20-May		x				
NCM-37	19-Jun		x				
NCM-37	27-Jul		x				no/access
NCM-37	29-Aug		x				
NCM-37	26-Sep		x				
NCM-37	31-Oct		x				
NCM-37	22-Nov		x				
NCM-37	31-Dec		x				
NCM-38	26-Jan		x				
NCM-38	26-Feb		x				
NCM-38	29-Mar		x				no/access
NCM-38	27-Apr		x				no/access
NCM-38	20-May		x				
NCM-38	19-Jun		x				
NCM-38	28-Jul		x				
NCM-38	29-Aug		x				
NCM-38	26-Sep		x				
NCM-38	n/a		x				
NCM-38	n/a		x				
NCM-38	31-Dec		x				
NCM-38A	26-Jan		x				
NCM-38A	26-Feb		x				no/access
NCM-38A	29-Mar		x				no/access
NCM-38A	27-Apr		x				
NCM-38A	20-May		x				
NCM-38A	19-Jun		x				
NCM-38A	24-Jul		x				
NCM-38A	29-Aug		x				
NCM-38A	26-Sep		x				
NCM-38A	n/a		x				
NCM-38A	n/a		x				
NCM-38A	31-Dec		x				
NCM-38B	26-Jan		x				
NCM-38B	26-Feb		x				

NCM-38B	29-Mar		x				
NCM-38B	27-Apr		x				
NCM-38B	20-May		x				
NCM-38B	19-Jun		x				
NCM-38B	24-Jul		x				
NCM-38B	29-Aug		x				
NCM-38B	26-Sep		x				
NCM-38B	29-Oct		x				
NCM-38B	22-Nov		x				
NCM-38B	31-Dec		x				
NCM-39	26-Jan		x				
NCM-39	26-Feb		x				
NCM-39	29-Mar		x				
NCM-39	27-Apr		x				
NCM-39	20-May		x				
NCM-39	19-Jun		x				
NCM-39	24-Jul		x				
NCM-39	29-Aug		x				
NCM-39	27-Sep		x				
NCM-39	29-Oct		x				
NCM-39	22-Nov		x				
NCM-39	31-Dec		x				
NCM-39A	26-Jan		n/a	n/a			
NCM-39A	26-Feb		n/a	n/a			
NCM-39A	29-Mar		n/a	n/a			
NCM-39A	27-Apr		n/a	n/a			
NCM-39A	20-May		n/a	n/a			
NCM-39A	19-Jun		n/a	n/a			
NCM-39A	24-Jul		n/a	n/a			
NCM-39A	29-Aug		n/a	n/a			
NCM-39A	27-Sep		n/a	n/a			
NCM-39A	29-Oct		n/a	n/a			
NCM-39A	22-Nov		n/a	n/a			
NCM-39A	31-Dec		n/a	n/a			

NCM-40	26-Jan		x				
NCM-40	26-Feb		x				
NCM-40	29-Mar		x				
NCM-40	27-Apr		x				
NCM-40	27-May		x				
NCM-40	28-Jun		x				
NCM-40	23-Jul		x				
NCM-40	29-Aug		x				
NCM-40	27-Sep		x				
NCM-40	29-Oct		x				
NCM-40	30-Oct		x				
NCM-40	22-Nov		x				
NCM-40	31-Dec		x				
NCM-41	26-Jan		x				
NCM-41	26-Feb		x				
NCM-41	29-Mar		x				
NCM-41	27-Apr		x				
NCM-41	27-May		x				
NCM-41	28-Jun		x				
NCM-41	23-Jul		x				
NCM-41	29-Aug	x	x				cleared partial blockage
NCM-41	27-Sep		x				
NCM-41	29-Oct		x				
NCM-41	22-Nov		x				
NCM-41	31-Dec		x				
NCM-41A	26-Jan		x				
NCM-41A	27-Feb	x	x				cleared partial blockage
NCM-41A	29-Mar		x				
NCM-41A	27-Apr		x				
NCM-41A	27-May		x				
NCM-41A	28-Jun		x				
NCM-41A	23-Jul		x				
NCM-41A	29-Aug		x				
NCM-41A	27-Sep		x				

NCM-41A	29-Oct		x				
NCM-41A	22-Nov		x				
NCM-41A	31-Dec		x				
NCM-42	26-Jan		x				
NCM-42	26-Feb		x				
NCM-42	29-Mar		x				
NCM-42	1-Apr	x	x	x			flushed & vactored
NCM-42	27-Apr		x				
NCM-42	27-May		x				
NCM-42	28-Jun		x				
NCM-42	23-Jul		x				
NCM-42	29-Aug		x				
NCM-42	27-Sep		x				
NCM-42	30-Oct		x				
NCM-42	22-Nov		x				
NCM-42	31-Dec		x				
NCM-43	26-Jan		x				
NCM-43	26-Feb		x				
NCM-43	29-Mar		x				
NCM-43	27-Apr		x				
NCM-43	27-May		x				
NCM-43	28-Jun		x				
NCM-43	23-Jul		x				
NCM-43	29-Aug		x				
NCM-43	27-Sep		x				
NCM-43	30-Oct		x				
NCM-43	20-Nov		x				
NCM-43	31-Dec		x				
NCM-43A	26-Jan		x				
NCM-43A	26-Feb		x				
NCM-43A	29-Mar		x				
NCM-43A	27-Apr		x				
NCM-43A	27-May		x				
NCM-43A	28-Jun		x				

NCM-43A	23-Jul		x				
NCM-43A	28-Aug		x				
NCM-43A	30-Oct		x				
NCM-43A	20-Nov		x				
NCM-43A	31-Dec		x				
NCM-43B	26-Jan		x				
NCM-43B	26-Feb		x				
NCM-43B	29-Mar		x				
NCM-43B	27-Apr		x				
NCM-43B	27-May		x				
NCM-43B	28-Jun		x				
NCM-43B	13-Jul		x				
NCM-43B	28-Aug		x				
NCM-43B	30-Oct		x				
NCM-43B	20-Nov		x				
NCM-43B	31-Dec		x				
NCM-44	26-Jan		x				
NCM-44	26-Feb		x				
NCM-44	29-Mar		x				
NCM-44	27-Apr		x				
NCM-44	27-May		x				
NCM-44	28-Jun		x				
NCM-44	13-Jul		x				
NCM-44	28-Aug		x				
NCM-44	27-Sep		x				
NCM-44	28-Oct		x				
NCM-44	20-Nov		x				
NCM-44	28-Dec		x				
NCM-45	26-Jan		x				
NCM-45	26-Feb		x				
NCM-45	27-Mar	x	x				
NCM-45	25-Apr		x				
NCM-45	21-May		x				
NCM-45	28-Jun		x				

NCM-45	13-Jul		x				
NCM-45	28-Aug		x				
NCM-45	27-Sep		x				
NCM-45	28-Oct		x				
NCM-45	20-Nov		x				
NCM-45	28-Dec		x				
NCM-45A	26-Jan		x				
NCM-45A	26-Feb		x				
NCM-45A	27-Mar		x				
NCM-45A	25-Apr		x				
NCM-45A	21-May		x				
NCM-45A	28-Jun		x				
NCM-45A	13-Jul		x				
NCM-45A	28-Aug		x				
NCM-45A	27-Sep		x				
NCM-45A	28-Oct		x				
NCM-45A	20-Nov		x				
NCM-45A	28-Dec		x				
NCM-46	16-Jan		x				
NCM-46	26-Feb		x				
NCM-46	27-Mar		x				
NCM-46	25-Apr		x				
NCM-46	21-May		x				
NCM-46	27-Jun		x				
NCM-46	13-Jul		x				
NCM-46	28-Aug		x				
NCM-46	27-Sep		x				
NCM-46	28-Oct		x				
NCM-46	16-Nov		x				
NCM-46	28-Dec		x				
NCM-47	16-Jan		x				
NCM-47	26-Feb		x				
NCM-47	27-Mar		x				
NCM-47	25-Apr		x				

NCM-47	21-May		x				
NCM-47	27-Jun		x				
NCM-47	13-Jul		x				
NCM-47	28-Aug		x				
NCM-47	27-Sep		x				
NCM-47	28-Oct		x				
NCM-47	20-Nov		x				
NCM-47	28-Dec		x				
NCM-47A	16-Jan		x				
NCM-47A	26-Feb		x				
NCM-47A	27-Mar		x				
NCM-47A	25-Apr		x				
NCM-47A	21-May		x				
NCM-47A	27-Jun	x	x				
NCM-47A	13-Jul		x				
NCM-47A	28-Aug		x				
NCM-47A	27-Sep		x				
NCM-47A	28-Oct		x				
NCM-47A	16-Nov		x				
NCM-47A	28-Dec		x				
NCM-48	16-Jan		x				
NCM-48	26-Feb		x				
NCM-48	27-Mar		x				
NCM-48	25-Apr		x				
NCM-48	21-May		x				
NCM-48	27-Jun		x				
NCM-48	13-Jul		x				
NCM-48	28-Aug		x				
NCM-48	25-Sep		x				
NCM-48	28-Oct		x				
NCM-48	16-Nov		x				
NCM-48	28-Dec		x				
NCM-48A	16-Jan		x				
NCM-48A	26-Feb		x				

NCM-48A	27-Mar		x				
NCM-48A	25-Apr		x				
NCM-48A	21-May		x				
NCM-48A	27-Jun		x				no/access
NCM-48A	13-Jul		x				
NCM-48A	28-Aug		x				
NCM-48A	25-Sep		x				
NCM-48A	28-Oct		x				
NCM-48A	16-Nov		x				
NCM-48A	29-Dec		x				
NCM-49	16-Jan		n/a				
NCM-49	26-Feb		n/a				
NCM-49	27-Mar		n/a				
NCM-49	25-Apr		n/a				
NCM-49	21-May		n/a				
NCM-49	27-Jun		n/a				
NCM-49	13-Jul		n/a				
NCM-49	28-Aug		n/a				
NCM-49	25-Sep		n/a				
NCM-49	28-Oct		n/a				
NCM-49	16-Nov		n/a				
NCM-49	28-Dec		n/a				
NCM-50	16-Jan		x				
NCM-50	26-Feb		x				
NCM-50	27-Mar		x				
NCM-50	25-Apr		x				
NCM-50	21-May		x				
NCM-50	27-Jun		x				
NCM-50	13-Jul	x	x				replaced broken covers
NCM-50	28-Aug		x				
NCM-50	28-Sep		x				
NCM-50	28-Oct		x				
NCM-50	16-Nov		x				
NCM-50	28-Dec		x				

NCM-51	15-Jan		x				
NCM-51	26-Feb		x				
NCM-51	5-Mar	x	x				flushed & vactored
NCM-51	27-Mar		x				
NCM-51	25-Apr		x				
NCM-51	21-May		x				
NCM-51	27-Jun		x				
NCM-51	13-Jul		x				
NCM-51	21-Aug		x				
NCM-51	28-Aug		x				
NCM-51	25-Sep		x				
NCM-51	28-Oct		x				
NCM-51	16-Nov		x				
NCM-51	28-Dec		x				
NCM-51A	15-Jan		x				
NCM-51A	26-Feb		x				
NCM-51A	27-Mar		x				
NCM-51A	25-Apr		x				
NCM-51A	21-May		x				
NCM-51A	27-Jun		x				
NCM-51A	13-Jul		x				
NCM-51A	21-Aug		x				
NCM-51A	28-Aug		x				
NCM-51A	25-Sep		x				
NCM-51A	28-Oct						
NCM-51A	16-Nov		x				
NCM-51A	28-Dec		x				
NCM-51B	15-Jan		x				
NCM-51B	26-Feb		x				
NCM-51B	27-Mar		x				
NCM-51B	25-Apr		x				
NCM-51B	21-May		x				
NCM-51B	27-Jun		x				
NCM-51B	13-Jul		x				

NCM-51B	21-Aug		x				
NCM-51B	28-Aug		x				
NCM-51B	25-Sep		x				
NCM-51B	28-Oct		x				
NCM-51B	16-Nov		x				
NCM-51B	28-Dec		x				
NCM-51C	15-Jan		x				
NCM-51C	26-Feb		x				
NCM-51C	27-Mar		x				
NCM-51C	25-Apr		x				
NCM-51C	21-May		x				
NCM-51C	27-Jun		x				
NCM-51C	13-Jul		x				
NCM-51C	21-Aug		x				
NCM-51C	28-Aug		x				
NCM-51C	25-Sep		x				
NCM-51C	28-Oct		x				
NCM-51C	16-Nov		x				
NCM-51C	28-Dec		x				

NORTH RIVER REGULATOR LOCATIONS - 2022

NUMBER	REG PM	REG CM	TG PM	TG CM	EBPP	CL RUN	COMMENTS
NR-1	22-Jan		n/a	n/a			
NR-1	16-Feb		n/a	n/a			
NR-1	13-Mar		n/a	n/a			
NR-1	11-Apr		n/a	n/a			
NR-1	20-May		n/a	n/a			
NR-1	22-Jun		n/a	n/a			
NR-1	14-Jul		n/a	n/a			
NR-1	20-Aug		n/a	n/a			
NR-1	22-Sep		n/a	n/a			
NR-1	18-Oct		n/a	n/a			
NR-1	1-Nov		n/a	n/a			
NR-1	7-Dec		n/a	n/a			
NR-2	22-Jan		x				
NR-2	16-Feb		x				
NR-2	13-Mar		x				
NR-2	11-Apr		x				
NR-2	20-May		x				
NR-2	22-Jun		x				
NR-2	14-Jul		x				
NR-2	20-Aug		x				
NR-2	22-Sep		x				
NR-2	18-Oct		x				
NR-2	10-Nov		x				
NR-2	7-Dec		x				
NR-3	22-Jan		x				
NR-3	16-Feb		x				
NR-3	13-Mar		x				
NR-3	11-Apr		x				
NR-3	20-May		x				
NR-3	6-Jun		x				
NR-3	22-Jun		x				

NR-3	5-Jul		x	x			telemetry alarm
NR-3	14-Jul		x				
NR-3	6-Aug		x	x			telemetry alarm
NR-3	7-Aug		x	x			telemetry alarm
NR-3	8-Aug		x	x			telemetry alarm
NR-3	9-Aug		x	x			telemetry alarm
NR-3	10-Aug	x	x	x			cleared partial blockage
NR-3	10-Aug		x	x			telemetry alarm
NR-3	11-Aug		x	x			telemetry alarm
NR-3	22-Sep		x				
NR-3	18-Oct		x				
NR-3	10-Nov		x				
NR-3	7-Dec		x				
NR-4	22-Jan		x				
NR-4	16-Feb		x				
NR-4	13-Mar		x				
NR-4	11-Apr		x				
NR-4	20-May		x				
NR-3	5-Jun		x	x			telemetry alarm
NR-3	14-Jun		x	x			telemetry alarm
NR-4	22-Jun		x				
NR-4	14-Jul		x				
NR-4	22-Sep		x				
NR-4	18-Oct		x				
NR-4	10-Nov		x				
NR-4	7-Dec		x				
NR-5	22-Jan		x				
NR-5	16-Feb		x				
NR-5	13-Mar		x				
NR-5	22-Mar		x	x			vactored & flushed
NR-5	11-Apr		x				
NR-5	20-May		x				
NR-5	23-Jun		x				
NR-5	14-Jul		x				

NR-5	20-Aug		x				
NR-5	22-Sep		x				
NR-5	18-Oct		x				
NR-5	10-Nov		x				
NR-5	7-Dec		x				
NR-6	22-Jan		x				
NR-6	16-Feb		x				
NR-6	13-Mar		x				
NR-6	11-Apr		x				
NR-6	20-May		x				
NR-6	23-Jun		x				
NR-6	14-Jul						
NR-6	20-Aug		x				
NR-6	22-Sep		x				
NR-6	18-Oct		x				
NR-6	10-Nov		x				
NR-6	7-Dec		x				
NR-7	22-Jan		x				
NR-7	16-Feb		x				
NR-7	13-Mar		x				no/access
NR-7	11-Apr		x				no/access
NR-7	20-May		x				
NR-7	30-Jun		x				
NR-7	14-Jul		x				
NR-7	21-Aug		x				
NR-7	22-Sep		x				
NR-7	18-Oct		x				no/access
NR-7	10-Nov		x				no/access
NR-7	7-Dec		x				no/access
NR-8	22-Jan		x				
NR-8	16-Feb		x				
NR-8	13-Mar		x				no/access
NR-8	11-Apr		x				no/access
NR-8	20-May		x				

NR-8	23-Jun		x	x			telemetry alarm
NR-8	14-Jul		x				
NR-8	21-Aug		x				
NR-8	22-Sep		x				
NR-8	18-Oct		x				no/access
NR-8	10-Nov		x				no/access
NR-8	7-Dec		x				no/access
NR-9	22-Jan		x				
NR-9	16-Feb		x				
NR-9	13-Mar		x				
NR-9	11-Apr		x				
NR-9	21-May		x				
NR-9	23-Jun		x				
NR-9	14-Jul		x				
NR-9	20-Aug		x				
NR-9	22-Sep		x				
NR-9	18-Oct		x				
NR-9	10-Nov		x				
NR-9	7-Dec		x				
NR-10	22-Jan		n/a	n/a			no/access
NR-10	16-Feb		n/a	n/a			no/access
NR-10	13-Mar		n/a	n/a			no/access
NR-10	11-Apr		n/a	n/a			no/access
NR-10	21-May		n/a	n/a			no/access
NR-10	23-Jun		n/a	n/a			no/access
NR-10	14-Jul		n/a	n/a			no/access
NR-10	20-Aug		n/a	n/a			
NR-10	22-Sep		n/a	n/a			no/access
NR-10	18-Oct		n/a	n/a			no/access
NR-10	10-Nov		n/a	n/a			no/access
NR-10	7-Dec		n/a	n/a			no/access
NR-11	22-Jan		x				no/access
NR-11	16-Feb		x				no/access
NR-11	13-Mar		x				no/access

NR-11	11-Apr		x				no/access
NR-11	21-May		x				
NR-11	23-Jun		x				no/access
NR-11	14-Jul		x				no/access
NR-11	20-Aug		x				
NR-11	22-Sep		x				
NR-11	18-Oct		x				no/access
NR-11	10-Nov		x				
NR-11	7-Dec		x				no/access
NR-12	22-Jan		x				
NR-12	16-Feb		x				
NR-12	13-Mar		x				
NR-12	11-Apr		x				
NR-12	20-May		x				
NR-12	23-Jun		x				
NR-12	14-Jul		x				
NR-12	20-Aug		x				
NR-12	22-Sep		x				
NR-12	18-Oct		x				
NR-12	10-Nov		x				
NR-12	7-Dec		x				
NR-13	22-Jan		x				
NR-13	16-Feb		x				
NR-13	13-Mar		x				
NR-13	11-Apr		x				
NR-13	20-May		x				
NR-13	23-Jun		x				
NR-13	14-Jul		x				
NR-13	20-Aug		x				
NR-13	22-Sep		x				
NR-13	18-Oct		x				
NR-13	10-Nov		x				
NR-13	7-Dec		x				
NR-14	22-Jan		x				

NR-14	16-Feb		x				
NR-14	13-Mar		x				
NR-14	11-Apr		x				
NR-14	20-May		x				
NR-14	23-Mar		x				
NR-14	14-Jul		x				
NR-14	20-Aug		x				
NR-14	22-Sep		x				
NR-14	24-Oct		x				
NR-14	10-Nov		x				
NR-14	7-Dec		x				
NR-15	22-Jan		x				
NR-15	16-Feb		x				
NR-15	13-Mar	x	x				
NR-15	11-Apr		x				
NR-15	20-May		x				
NR-15	23-Jun		x				
NR-15	14-Jul		x				
NR-15	20-Aug		x				
NR-15	22-Sep	x	x				cleared partial blockage
NR-15	24-Oct		x				
NR-15	10-Nov		x				
NR-15	7-Dec		x				
NR-16	24-Jan		x				
NR-16	16-Feb		x				
NR-16	13-Mar		x				
NR-16	11-Apr	x	x				cleared partial blockage
NR-16	9-May		x				
NR-16	23-Jun		x				
NR-16	14-Jul		x				
NR-16	20-Aug		x				
NR-16	22-Sep		x				
NR-16	24-Oct		x				
NR-16	11-Nov		x				

NR-16	7-Dec		x				
NR-17	24-Jan		n/a	n/a			
NR-17	16-Feb		n/a	n/a			
NR-17	17-Mar	x	n/a	n/a			
NR-17	13-Apr		n/a	n/a			
NR-17	20-May		n/a	n/a			
NR-17	23-Jun		n/a	n/a			
NR-17	15-Jul		n/a	n/a			
NR-17	20-Aug		n/a	n/a			
NR-17	22-Sep	x	n/a	n/a			
NR-17	24-Oct		n/a	n/a			
NR-17	10-Nov		n/a	n/a			
NR-17	12-Dec		n/a	n/a			
NR-18	24-Jan		n/a	n/a			
NR-18	17-Feb		n/a	n/a			
NR-18	17-Mar		n/a	n/a			
NR-18	13-Apr		n/a	n/a			
NR-18	9-May		n/a	n/a			
NR-18	23-Jun		n/a	n/a			
NR-18	15-Jul		n/a	n/a			
NR-18	20-Aug		n/a	n/a			
NR-18	22-Sep		n/a	n/a			
NR-18	24-Oct		n/a	n/a			
NR-18	10-Nov		n/a	n/a			
NR-18	12-Dec		n/a	n/a			
NR-19	24-Jan		x				
NR-19	17-Feb		x				
NR-19	17-Mar		x				
NR-19	13-Apr		x				
NR-19	9-May		x				
NR-19	23-Jun		x				
NR-19	15-Jul		x				
NR-19	31-Aug		x				
NR-19	23-Sep		x				

NR-19	25-Oct		x				
NR-19	11-Nov		x				no/access
NR-19	12-Dec		x				
NR-20	24-Jan		n/a	n/a			
NR-20	17-Feb		n/a	n/a			
NR-20	17-Mar		n/a	n/a			
NR-20	13-Apr		n/a	n/a			
NR-20	9-May		n/a	n/a			
NR-20	23-Jun		n/a	n/a			
NR-20	15-Jul		n/a	n/a			
NR-20	20-Aug		n/a	n/a			
NR-20	22-Sep		n/a	n/a			
NR-20	24-Oct		n/a	n/a			
NR-20	11-Nov		n/a	n/a			
NR-20	12-Dec		n/a	n/a			
NR-21	24-Jan		n/a	n/a			
NR-21	17-Feb		n/a	n/a			
NR-21	17-Mar		n/a	n/a			
NR-21	13-Apr		n/a	n/a			
NR-21	9-May		n/a	n/a			
NR-21	23-Jun		n/a	n/a			
NR-21	15-Jul		n/a	n/a			
NR-21	20-Aug		n/a	n/a			
NR-21	22-Sep		n/a	n/a			
NR-21	24-Oct		n/a	n/a			
NR-21	11-Nov		n/a	n/a			
NR-21	12-Dec		n/a	n/a			
NR-21A	24-Jan		n/a	n/a			
NR-21A	17-Feb		n/a	n/a			
NR-21A	17-Mar		n/a	n/a			
NR-21A	13-Apr		n/a	n/a			
NR-21A	9-May		n/a	n/a			
NR-21A	23-Jun		n/a	n/a			
NR-21A	15-Jul		n/a	n/a			

NR-21A	20-Aug		n/a	n/a			
NR-21A	22-Sep		n/a	n/a			
NR-21A	24-Oct		n/a	n/a			
NR-21A	11-Nov		n/a	n/a			
NR-21A	12-Dec		n/a	n/a			
NR-21B	24-Jan		n/a	n/a			
NR-21B	17-Feb		n/a	n/a			
NR-21B	17-Mar		n/a	n/a			
NR-21B	13-Apr		n/a	n/a			
NR-21B	9-May		n/a	n/a			
NR-21B	23-Jun		n/a	n/a			
NR-21B	15-Jul		n/a	n/a			
NR-21B	20-Aug		n/a	n/a			
NR-21B	22-Sep		n/a	n/a			
NR-21B	24-Oct		n/a	n/a			
NR-21B	11-Nov		n/a	n/a			
NR-21B	12-Dec		n/a	n/a			
NR-22	24-Jan		n/a	n/a			
NR-22	17-Feb		n/a	n/a			
NR-22	17-Mar		n/a	n/a			
NR-22	13-Apr		n/a	n/a			
NR-22	9-May		n/a	n/a			
NR-22	23-Jun		n/a	n/a			
NR-22	15-Jul		n/a	n/a			
NR-22	20-Aug		n/a	n/a			
NR-22	22-Sep		n/a	n/a			
NR-22	25-Oct		n/a	n/a			
NR-22	11-Nov		n/a	n/a			
NR-22	12-Dec		n/a	n/a			
NR-22A	24-Jan		x				
NR-22A	17-Feb		x				
NR-22A	17-Mar		x				
NR-22A	15-Apr		x				
NR-22A	9-May		x				

NR-22A	23-Jun		x				
NR-22A	15-Jul		x				
NR-22A	20-Aug		x				
NR-22A	22-Sep		x				
NR-22A	25-Oct		x				
NR-22A	11-Nov		x				
NR-22A	12-Dec		x				
NR-23	24-Jan		x				
NR-23	17-Feb		x				
NR-23	17-Mar		x				
NR-23	15-Apr		x				
NR-23	20-May		x				
NR-23	14-Jun		x		x		telemetry alarm
NR-23	23-Jun		x				
NR-23	15-Jul		x				
NR-23	20-Aug		x				
NR-23	22-Sep		x				
NR-23	25-Oct		x				
NR-23	11-Nov		x				
NR-23	12-Dec		x				
NR-24	24-Jan		n/a	n/a			
NR-24	17-Feb		n/a	n/a			
NR-24	17-Mar		n/a	n/a			
NR-24	15-Apr		n/a	n/a			
NR-24	20-May		n/a	n/a			
NR-24	23-Jun		n/a	n/a			
NR-24	15-Jul		n/a	n/a			
NR-24	20-Aug		n/a	n/a			
NR-24	25-Oct		n/a	n/a			
NR-24	11-Nov		n/a	n/a			
NR-24	12-Dec		n/a	n/a			
NR-25	24-Jan		n/a	n/a			
NR-25	17-Feb		n/a	n/a			
NR-25	17-Mar		n/a	n/a			

NR-25	15-Apr		n/a	n/a			
NR-25	20-May		n/a	n/a			
NR-25	23-Jun		n/a	n/a			
NR-25	15-Jul		n/a	n/a			
NR-25	20-Aug		n/a	n/a			
NR-25	23-Sep		n/a	n/a			
NR-25	25-Oct		n/a	n/a			
NR-25	11-Nov		n/a	n/a			
NR-25	12-Dec		n/a	n/a			
NR-26	24-Jan		n/a	n/a			
NR-26	17-Feb		n/a	n/a			
NR-26	17-Mar		n/a	n/a			
NR-26	15-Apr		n/a	n/a			
NR-26	20-May		n/a	n/a			
NR-26	23-Jun		n/a	n/a			
NR-26	15-Jul		n/a	n/a			
NR-26	26-Aug		n/a	n/a			
NR-26	23-Sep		n/a	n/a			
NR-26	25-Oct		n/a	n/a			
NR-26	11-Nov		n/a	n/a			
NR-26	12-Dec		n/a	n/a			
NR-26A	24-Jan		x				
NR-26A	17-Feb		x				
NR-26A	17-Mar		x				
NR-26A	15-Apr		x				
NR-26A	20-May		x				
NR-26A	23-Jun		x				
NR-26A	15-Jul		x				
NR-26A	26-Aug		x				
NR-26A	23-Sep		x				
NR-26A	25-Oct		x				
NR-26A	11-Nov		x				
NR-26A	12-Dec		x				
NR-27	24-Jan		n/a	n/a			

NR-27	17-Feb		n/a	n/a			
NR-27	17-Mar		n/a	n/a			
NR-27	15-Apr		n/a	n/a			
NR-27	20-May		n/a	n/a			
NR-27	23-Jun		n/a	n/a			
NR-27	18-Jul		n/a	n/a			
NR-27	26-Aug		n/a	n/a			
NR-27	23-Sep		n/a	n/a			
NR-27	25-Oct		n/a	n/a			
NR-27	11-Nov		n/a	n/a			
NR-27	21-Dec		n/a	n/a			
NR-28	24-Jan		n/a	n/a			
NR-28	17-Feb		n/a	n/a			
NR-28	17-Mar		n/a	n/a			
NR-28	15-Apr		n/a	n/a			
NR-28	20-May		n/a	n/a			
NR-28	25-Jun		n/a	n/a			
NR-28	18-Jul		n/a	n/a			
NR-28	26-Aug		n/a	n/a			
NR-28	23-Sep		n/a	n/a			
NR-28	25-Oct		n/a	n/a			
NR-28	11-Nov		n/a	n/a			
NR-28	21-Dec		n/a	n/a			
NR-29A	24-Jan		n/a	n/a			
NR-29A	17-Feb		n/a	n/a			
NR-29A	17-Mar		n/a	n/a			
NR-29A	15-Apr		n/a	n/a			
NR-29A	20-May		n/a	n/a			
NR-29A	25-Jun		n/a	n/a			
NR-29A	18-Jul		n/a	n/a			
NR-29A	26-Aug		n/a	n/a			
NR-29A	23-Sep		n/a	n/a			
NR-29A	25-Oct		n/a	n/a			
NR-29A	14-Nov		n/a	n/a			

NR-29A	21-Dec		n/a	n/a			
NR-29	24-Jan		n/a	n/a			
NR-29	17-Feb		n/a	n/a			
NR-29	20-Mar		n/a	n/a			
NR-29	15-Apr		n/a	n/a			
NR-29	20-May		n/a	n/a			
NR-29	25-Jun		n/a	n/a			
NR-29	18-Jul		n/a	n/a			
NR-29	26-Aug		n/a	n/a			
NR-29	23-Sep		n/a	n/a			
NR-29	25-Oct		n/a	n/a			
NR-29	14-Nov		n/a	n/a			
NR-29	21-Dec		n/a	n/a			
NR-30	24-Jan		x				
NR-30	17-Feb		x				
NR-30	20-Mar		x				
NR-30	15-Apr		x				
NR-30	9-May	x	x				
NR-30	25-Jun		x				
NR-30	18-Jul		x				
NR-30	26-Aug		x				
NR-30	23-Sep	x	x				cleared partial blockage
NR-30	25-Oct		x				
NR-30	14-Nov		x				
NR-30	21-Dec		x				
NR-31	24-Jan		x				
NR-31	17-Feb		x				
NR-31	20-Mar		x				
NR-31	15-Apr		x				
NR-31	9-May	x	x				
NR-31	25-Jun		x				
NR-31	18-Jul		x				
NR-31	26-Aug		x				
NR-31	23-Sep		x				

NR-31	28-Oct		x				
NR-31	1-Nov	x	x	x			flushed & vactored
NR-31	14-Nov		x				
NR-31	21-Dec		x				
NR-32	24-Jan		x				
NR-32	17-Feb		x				
NR-32	20-Mar		x				
NR-32	15-Apr		x				
NR-32	9-May	x	x				
NR-32	25-Jun		x				
NR-32	18-Jul		x				
NR-32	26-Aug		x				
NR-32	23-Sep		x				
NR-32	28-Oct		x				
NR-32	1-Nov	x	x	x			flushed & vactored
NR-32	14-Nov		x				
NR-32	21-Dec		x				
NR-33	27-Jan		n/a	n/a			
NR-33	17-Feb		n/a	n/a			
NR-33	20-Mar		n/a	n/a			
NR-33	21-Apr		n/a	n/a			
NR-33	19-May		n/a	n/a			
NR-33	25-Jun		n/a	n/a			
NR-33	8-Jul		n/a	n/a			
NR-33	26-Aug		n/a	n/a			
NR-33	23-Sep		n/a	n/a			
NR-33	28-Oct		n/a	n/a			
NR-33	1-Nov	x	n/a	n/a	x		telemetry alarm
NR-33	11-Nov	x	n/a	n/a	x		telemetry alarm
NR-33	14-Nov		n/a	n/a			
NR-33	21-Dec		n/a	n/a			
NR-34	24-Jan		x				
NR-34	17-Feb		x				
NR-34	20-Mar		x				

NR-34	21-Apr		x				
NR-34	9-May	x	x				
NR-34	25-Jun		x				
NR-34	8-Jul	x	x	x			cleaned, exercised,lubricated,adjusted
NR-34	26-Aug		x				
NR-34	23-Sep		x				
NR-34	28-Oct		x				
NR-34	14-Nov		x				
NR-34	21-Dec		x				
NR-35	24-Jan		x				
NR-35	17-Feb		x				
NR-35	20-Mar		x				
NR-35	21-Apr		x				
NR-35	23-Apr		x			x	closed open tg
NR-35	20-May		x				
NR-35	25-Jun		x				
NR-35	8-Jul	x	x	x			cleaned, exercised,lubricated,adjusted
NR-35	27-Aug		x				
NR-35	23-Sep		x				
NR-35	28-Oct		x				
NR-35	14-Nov		x				
NR-35	21-Dec		x				
NR-36	24-Jan		x				
NR-36	18-Feb		x				
NR-36	20-Mar		x				
NR-36	21-Apr		x				
NR-36	19-May		x				
NR-36	25-Jun		x				
NR-36	8-Jul		x				
NR-36	27-Aug	x	x				cleared partial blockage
NR-36	28-Aug	x	x	x			blockage flushed & vactored
NR-36	23-Sep		x				
NR-36	28-Oct	x	x	x			flushed & vactored
NR-36	28-Oct	x	x	x			blockage flushed & vactored

NR-36	28-Oct		x		x		telemetry alarm
NR-36	14-Nov		x				
NR-36	21-Dec		x				
NR-37	24-Jan		x				
NR-37	12-Feb	x	x	x			flushed & vactored
NR-37	18-Feb		x				
NR-37	20-Mar		x				
NR-37	12-Apr		x				
NR-37	21-Apr	x	x	x			flushed & vactored
NR-37	19-May		x				
NR-37	25-Jun		x				
NR-37	8-Jul	x	x	x			cleaned, exercised,lubricated,adjusted
NR-37	27-Aug		x				
NR-37	23-Sep		x				
NR-37	28-Oct		x				
NR-37	14-Nov		x				
NR-37	21-Dec		x				
NR-38	24-Jan		x				
NR-38	18-Feb		x				
NR-38	20-Mar		x				
NR-38	21-Apr		x				
NR-38	19-May		x				
NR-38	25-Jun		x				
NR-38	8-Jul		x				
NR-38	27-Aug		x				
NR-38	23-Sep		x				
NR-38	28-Oct		x				
NR-38	14-Nov		x				
NR-38	21-Dec		x				
NR-39	24-Jan		x				
NR-39	18-Feb		x				
NR-39	20-Mar		x				
NR-39	21-Apr		x				
NR-39	19-May		x				

NR-39	25-Jun		x				
NR-39	8-Jul	x	x	x			cleaned, exercised,lubricated,adjusted
NR-39	27-Aug		x				
NR-39	23-Sep		x				
NR-39	28-Oct		x				
NR-39	14-Nov		x				
NR-39	21-Dec		x				
NR-40	24-Jan		x				
NR-40	18-Feb		x				
NR-40	20-Mar		x				
NR-40	8-Apr	x	x	x			flushed & vactored
NR-40	21-Apr		x				
NR-40	19-May		x				
NR-40	25-Jun		x				
NR-40	8-Jul		x				
NR-40	27-Aug		x				
NR-40	23-Sep		x				
NR-40	28-Oct		x				
NR-40	14-Nov		x				
NR-40	25-Dec		x				
NR-41	24-Jan		x				
NR-41	18-Feb		x				
NR-41	20-Mar		x				
NR-41	21-Apr		x				
NR-41	19-May		x				
NR-41	25-Jun		x				
NR-41	8-Jul		x				
NR-41	27-Aug		x				
NR-41	23-Sep	x	x				cleared partial blockage
NR-41	31-Oct		x				
NR-41	14-Nov		x				
NR-41	25-Dec		x				
NR-42	24-Jan		x				
NR-42	18-Feb		x				

NR-42	25-Mar		x				
NR-42	21-Apr		x				
NR-42	19-May		x				
NR-42	27-Jun		x				
NR-42	8-Jul	x	x	x			cleaned, exercised,lubricated,adjusted
NR-42	27-Aug		x				
NR-42	23-Sep		x				
NR-42	31-Oct		x				
NR-42	15-Nov		x				
NR-42	25-Dec		x				
NR-43	24-Jan		x				
NR-43	25-Jan	x	x	x			cleared pratial blockage
NR-43	18-Feb		x				
NR-43	25-Mar		x				
NR-43	21-Apr		x				
NR-43	28-Apr	x	x	x			flushed & vactored
NR-43	13-May	x	x	x			flushed & vactored
NR-43	19-May		x				
NR-43	27-Jun		x				
NR-43	25-Jul		x				
NR-43	27-Aug		x				
NR-43	23-Sep		x				
NR-43	28-Oct	x	x	x			flushed & vactored
NR-43	1-Nov	x	x	x			blockage flushed & vactored
NR-43	15-Nov		x				
NR-43	25-Dec		x				
NR-44	24-Jan		x				
NR-44	18-Feb		x				
NR-44	25-Mar		x				
NR-44	21-Apr		x				
NR-44	11-May	x	x	x			flushed & vactored
NR-44	19-May		x				
NR-44	27-Jun		x				
NR-44	25-Jul		x				

NR-44	27-Aug		x				
NR-44	26-Sep		x				
NR-44	31-Oct		x				
NR-44	15-Nov		x				
NR-44	26-Dec		x				
NR-45	24-Jan		x				
NR-45	18-Feb		x				
NR-45	25-Mar		x				
NR-45	21-Apr	x	x				
NR-45	19-May		x				
NR-45	27-Jun		x				
NR-45	25-Jul		x				
NR-45	27-Aug		x				
NR-45	26-Sep		x				
NR-45	31-Oct		x				
NR-45	15-Nov		x				
NR-45	26-Dec		x				
NR-46	24-Jan		x				
NR-46	18-Feb		x				
NR-46	25-Mar		x				
NR-46	23-Apr		x				
NR-46	19-May		x				
NR-46	27-Jun		x				
NR-46	25-Jul		x				
NR-46	27-Aug		x				
NR-46	26-Sep		x				
NR-46	31-Oct		x				
NR-46	15-Nov		x				
NR-46	26-Dec		x				
NR-47	24-Jan		x				
NR-47	18-Feb		x				
NR-47	25-Mar		x				
NR-47	23-Apr		x				
NR-47	19-May		x				

NR-47	27-Jun		x				
NR-47	25-Jul		x				
NR-47	27-Aug		x				
NR-47	26-Sep		x				
NR-47	31-Oct		x				
NR-47	15-Nov		x				
NR-47	26-Dec		x				
NR-48	24-Jan		x				
NR-48	18-Feb		x				
NR-48	25-Mar		x				
NR-48	23-Apr		x				
NR-48	19-May		x				
NR-48	27-Jun		x				
NR-48	25-Jul		x				
NR-48	27-Aug		x				
NR-48	26-Sep		x				
NR-48	31-Oct		x				
NR-48	15-Nov		x				
NR-48	26-Dec		x				
NR-49	24-Jan		x				
NR-49	18-Feb		x				
NR-49	25-Mar		x				
NR-49	23-Apr		x				
NR-49	19-May		x				
NR-49	27-Jun		x				
NR-49	25-Jul		x				
NR-49	27-Aug		x				
NR-49	26-Sep		x				
NR-49	31-Oct		x				
NR-49	15-Nov		x				
NR-49	26-Dec		x				
NR-50	24-Jan		x				
NR-50	21-Feb		x				
NR-50	25-Mar	x	x				

NR-50	23-Apr		x				
NR-50	19-May		x				
NR-50	27-Jun		x				
NR-50	25-Jul		x				
NR-50	27-Aug		x				
NR-50	26-Sep		x				
NR-50	31-Oct		x				
NR-50	15-Nov		x				
NR-50	26-Dec		x				
NR-51	24-Jan		x				
NR-51	21-Feb		x				
NR-51	25-Mar		x				
NR-51	23-Apr		x				
NR-51	19-May		x				
NR-51	27-Jun		x				
NR-51	25-Jul		x				
NR-51	27-Aug		x				
NR-51	26-Sep		x				
NR-51	31-Oct		x				
NR-51	15-Nov		x				
NR-51	26-Dec		x				
NR-52	24-Jan		x				
NR-52	21-Feb		x				
NR-52	25-Mar		x				
NR-52	23-Apr		x				
NR-53	10-May	x	x	x			flushed & vactored
NR-52	19-May		x				
NR-52	27-Jun		x				
NR-52	25-Jul		x				
NR-52	27-Aug		x				
NR-52	26-Sep		x				
NR-52	31-Oct		x				
NR-52	15-Nov		x				
NR-52	17-Nov	x	x	x			flushed & vactored

NR-52	26-Dec		x				
NR-54	24-Jan		x				
NR-54	21-Feb		x				
NR-54	25-Mar		x				
NR-54	23-Apr		x				
NR-54	19-May		x				
NR-54	27-Jun		x				
NR-54	25-Jul		x				
NR-54	27-Aug		x				
NR-54	sept		x				no/access
NR-54	31-Oct		x				
NR-54	15-Nov		x				
NR-54	29-Dec		x				
NR-55	24-Jan		x				
NR-55	21-Feb		x				
NR-55	25-Mar		x				
NR-55	23-Apr		x				
NR-55	19-May		x				
NR-55	27-Jun		x				
NR-55	25-Jul		x				
NR-55	27-Aug		x				
NR-55	26-Sep		x				
NR-55	31-Oct		x				
NR-55	15-Nov						
NR-55	29-Dec		x				
NR-56	24-Jan		x				
NR-56	21-Feb		x				
NR-56	25-Mar		x				
NR-56	23-Apr		x				no/access
NR-56	19-May		x				
NR-56	27-Jun		x				
NR-56	25-Jul		x				
NR-56	27-Aug		x				
NR-56	26-Sep		x				

NR-56	31-Oct		x				
NR-56	15-Nov		x				
NR-56	29-Dec		x				

OAKWOOD BEACH LOCATIONS 2022

Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OB-1	20-Jan	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
OB-1	2-Feb				N/A		Inspection
OB-1	9-Mar				N/A		Inspection
OB-1	13-Apr				N/A		Inspection
OB-1	19-May				N/A		Inspection
OB-1	27-Jun				N/A		Inspection
OB-1	19-Jul				N/A		Inspection
OB-1	4-Aug				N/A		Inspection
OB-1	14-Sep	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
OB-1	6-Oct				N/A		Inspection
OB-1	2-Nov	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
OB-1	15-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OB-2	20-Jan				N/A		Inspection
OB-2	2-Feb				N/A		Inspection
OB-2	9-Mar				N/A		Inspection
OB-2	13-Apr				N/A		Inspection
OB-2	19-May	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
OB-2	27-Jun				N/A		Inspection
OB-2	19-Jul				N/A		Inspection
OB-2	4-Aug				N/A		Inspection
OB-2	14-Sep				N/A		Inspection
OB-2	6-Oct				N/A		Inspection
OB-2	2-Nov				N/A		Inspection
OB-2	15-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OB-3	20-Jan				N/A		Inspection
OB-3	2-Feb				N/A		Inspection
OB-3	9-Mar				N/A		Inspection
OB-3	13-Apr				N/A		Inspection
OB-3	19-May	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
OB-3	25-May				N/A	X	Inspection-Chloride Run
OB-3	27-Jun				N/A		Inspection
OB-3	19-Jul				N/A		Inspection
OB-3	4-Aug				N/A		Inspection
OB-3	14-Sep				N/A		Inspection
OB-3	6-Oct				N/A		Inspection
OB-3	2-Nov				N/A		Inspection
OB-3	15-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OB-4	20-Jan				N/A		Inspection
OB-4	2-Feb				N/A		Inspection
OB-4	9-Mar				N/A		Inspection
OB-4	13-Apr				N/A		Inspection
OB-4	19-May				N/A		Inspection
OB-4	25-May				N/A	X	Inspection-Chloride Run
OB-4	27-Jun				N/A		Inspection
OB-4	19-Jul				N/A		Inspection
OB-4	4-Aug				N/A		Inspection
OB-4	14-Sep				N/A		Inspection
OB-4	6-Oct				N/A		Inspection
OB-4	2-Nov	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A, B, C and D.
OB-4	29-Apr				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OB-5	20-Jan				N/A		Inspection
OB-5	2-Feb				N/A		Inspection
OB-5	9-Mar				N/A		Inspection
OB-5	13-Apr				N/A		Inspection
OB-5	19-May				N/A		Inspection
OB-5	27-Jun				N/A		Inspection
OB-5	19-Jul				N/A		Inspection
OB-5	4-Aug				N/A		Inspection
OB-5	14-Sep				N/A		Inspection
OB-5	6-Oct				N/A		Inspection
OB-5	2-Nov				N/A		Inspection
OB-5	15-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments

OB-6	20-Jan				N/A		Inspection	
OB-6	2-Feb				N/A		Inspection	
OB-6	9-Mar				N/A		Inspection	
OB-6	13-Apr				N/A		Inspection	
OB-6	19-May				N/A		Inspection	
OB-6	27-Jun		X	X	N/A		Inspection-Found Open Gate, Installed New Pin, Exercised and Closed Gate	
OB-6	19-Jul				N/A		Inspection	
OB-6	4-Aug				N/A		Inspection	
OB-6	14-Sep				N/A		Inspection	
OB-6	6-Oct	X	X		N/A		Inspection-Found Broken Gate Replace Pin, Grease, scrape, and exercise tide gate A,B,C and D.	
OB-6	2-Nov				N/A		Inspection	
OB-6	15-Dec				N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OB-7	20-Jan				N/A		Inspection	
OB-7	2-Feb				N/A		Inspection	
OB-7	9-Mar				N/A		Inspection	
OB-7	13-Apr				N/A		Inspection	
OB-7	19-May				N/A		Inspection	
OB-7	25-May				N/A	X	Inspection-Chloride Run	
OB-7	27-Jun				N/A		Inspection	
OB-7	19-Jul				N/A		Inspection	
OB-7	4-Aug				N/A		Inspection	
OB-7	14-Sep				N/A		Inspection	
OB-7	6-Oct				N/A		Inspection	
OB-7	2-Nov				N/A		Inspection	
OB-7	15-Dec				N/A		Inspection	

OWLS HEAD LOCATIONS 2022

Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OH-1	20-Jan		N/A	N/A			Inspection
OH-1	25-Feb		N/A	N/A			Inspection
OH-1	30-Mar		N/A	N/A			Inspection
OH-1	24-Apr		N/A	N/A			Inspection
OH-1	29-May		N/A	N/A			Inspection
OH-1	28-Jun		N/A	N/A			Inspection
OH-1	28-Jul		N/A	N/A			Inspection
OH-1	28-Aug		N/A	N/A			Inspection
OH-1	15-Sep		N/A	N/A			Inspection
OH-1	19-Oct		N/A	N/A			Inspection
OH-1	29-Nov		N/A	N/A			Inspection
OH-1	13-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OH-2	20-Jan		N/A	N/A	N/A		Inspection
OH-2	25-Feb		N/A	N/A	N/A		Inspection
OH-2	30-Mar		N/A	N/A	N/A		Inspection
OH-2	24-Apr		N/A	N/A	N/A		Inspection
OH-2	29-May		N/A	N/A	N/A		Inspection
OH-2	28-Jun		N/A	N/A	N/A		Inspection
OH-2	28-Jul		N/A	N/A	N/A		Inspection
OH-2	28-Aug		N/A	N/A	N/A		Inspection
OH-2	15-Sep		N/A	N/A	N/A		Inspection
OH-2	19-Oct		N/A	N/A	N/A		Inspection
OH-2	29-Nov		N/A	N/A	N/A		Inspection
OH-2	13-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OH-3	20-Jan				N/A		Inspection
OH-3	25-Feb				N/A		Inspection
OH-3	30-Mar				N/A		Inspection
OH-3	24-Apr				N/A		Inspection
OH-3	29-May				N/A		Inspection
OH-3	28-Jun				N/A		Inspection
OH-3	28-Jul				N/A		Inspection
OH-3	28-Aug				N/A		Inspection
OH-3	9-Sep				N/A	X	Inspection-Chloride run
OH-3	15-Sep				N/A		Inspection
OH-3	19-Oct				N/A		Inspection
OH-3	29-Nov				N/A		Inspection
OH-3	13-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OH-4	20-Jan				N/A		Inspection
OH-4	25-Feb				N/A		Inspection
OH-4	30-Mar				N/A		Inspection
OH-4	24-Apr				N/A		Inspection
OH-4	29-May				N/A		Inspection
OH-4	28-Jun				N/A		Inspection
OH-4	28-Jul				N/A		Inspection
OH-4	28-Aug				N/A		Inspection
OH-4	9-Sep				N/A	X	Inspection-Chloride run
OH-4	15-Sep				N/A		Inspection
OH-4	19-Oct				N/A		Inspection
OH-4	29-Nov				N/A		Inspection
OH-4	13-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OH-5	20-Jan		N/A	N/A			Inspection
OH-5	25-Feb		N/A	N/A			Inspection
OH-5	30-Mar		N/A	N/A			Inspection
OH-5	24-Apr		N/A	N/A			Inspection
OH-5	29-May		N/A	N/A			Inspection
OH-5	28-Jun		N/A	N/A			Inspection
OH-5	28-Jul		N/A	N/A			Inspection
OH-5	28-Aug		N/A	N/A			Inspection
OH-5	9-Sep		N/A	N/A		X	Inspection-Chloride run
OH-5	15-Sep		N/A	N/A			Inspection
OH-5	19-Oct		N/A	N/A			Inspection
OH-5	29-Nov		N/A	N/A			Inspection
OH-5	13-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OH-6	20-Jan		N/A	N/A	N/A		Inspection

OH-6	24-Feb		N/A	N/A	N/A		Inspection
OH-6	23-Mar		N/A	N/A	N/A		Inspection
OH-6	24-Apr		N/A	N/A	N/A		Inspection
OH-6	29-May		N/A	N/A	N/A		Inspection
OH-6	28-Jun		N/A	N/A	N/A		Inspection
OH-6	22-Jul		N/A	N/A	N/A		Inspection
OH-6	28-Aug		N/A	N/A	N/A		Inspection
OH-6	15-Sep		N/A	N/A	N/A		Inspection
OH-6	25-Oct		N/A	N/A	N/A		Inspection
OH-6	29-Nov		N/A	N/A	N/A		Inspection
OH-6	13-Dec		N/A	N/A	N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
OH-6A	20-Jan		N/A	N/A	N/A		Inspection
OH-6A	24-Feb		N/A	N/A	N/A		Inspection
OH-6A	23-Mar		N/A	N/A	N/A		Inspection
OH-6A	24-Apr		N/A	N/A	N/A		Inspection
OH-6A	29-May		N/A	N/A	N/A		Inspection
OH-6A	28-Jun		N/A	N/A	N/A		Inspection
OH-6A	22-Jul		N/A	N/A	N/A		Inspection
OH-6A	28-Aug		N/A	N/A	N/A		Inspection
OH-6A	15-Sep		N/A	N/A	N/A		Inspection
OH-6A	25-Oct		N/A	N/A	N/A		Inspection
OH-6A	29-Nov		N/A	N/A	N/A		Inspection
OH-6A	13-Dec		N/A	N/A	N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
OH-6B	20-Jan		N/A	N/A	N/A		Inspection
OH-6B	24-Feb		N/A	N/A	N/A		Inspection
OH-6B	23-Mar		N/A	N/A	N/A		Inspection
OH-6B	24-Apr		N/A	N/A	N/A		Inspection
OH-6B	29-May		N/A	N/A	N/A		Inspection
OH-6B	28-Jun		N/A	N/A	N/A		Inspection
OH-6B	22-Jul		N/A	N/A	N/A		Inspection
OH-6B	28-Aug		N/A	N/A	N/A		Inspection
OH-6B	15-Sep		N/A	N/A	N/A		Inspection
OH-6B	25-Oct		N/A	N/A	N/A		Inspection
OH-6B	29-Nov		N/A	N/A	N/A		Inspection
OH-6B	13-Dec		N/A	N/A	N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
OH-6C	20-Jan				N/A		Inspection
OH-6C	24-Feb				N/A		Inspection
OH-6C	23-Mar				N/A		Inspection
OH-6C	24-Apr				N/A		Inspection
OH-6C	29-May				N/A		Inspection
OH-6C	28-Jun				N/A		Inspection
OH-6C	22-Jul				N/A		Inspection
OH-6C	28-Aug				N/A		Inspection
OH-6C	9-Sep				N/A	X	Inspection-Chloride run
OH-6C	14-Sep				N/A	X	Inspection-Found Tide gate broke off of frame.
OH-6C	15-Sep			X	N/A		Inspection-Clamped gate back on Frame.
OH-6C	25-Oct				N/A		Inspection
OH-6C	29-Nov				N/A		Inspection
OH-6C	13-Dec				N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
OH-7	20-Jan		N/A	N/A	N/A		Inspection
OH-7	24-Feb		N/A	N/A	N/A		Inspection
OH-7	23-Mar		N/A	N/A	N/A		Inspection
OH-7	19-Apr		N/A	N/A	N/A		Inspection
OH-7	29-May		N/A	N/A	N/A		Inspection
OH-7	28-Jun		N/A	N/A	N/A		Inspection
OH-7	22-Jul		N/A	N/A	N/A		Inspection
OH-7	28-Aug		N/A	N/A	N/A		Inspection
OH-7	10-Sep		N/A	N/A	N/A		Inspection
OH 7	25-Oct		N/A	N/A	N/A		Inspection
OH 7	13-Nov		N/A	N/A	N/A		Inspection
OH 7	13-Dec		N/A	N/A	N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
OH-7A	20-Jan				N/A		Inspection
OH-7A	24-Feb				N/A		Inspection
OH-7A	23-Mar				N/A		Inspection
OH-7A	19-Apr				N/A		Inspection
OH-7A	29-May				N/A		Inspection
OH-7A	28-Jun				N/A		Inspection

OH-7A	22-Jul				N/A		Inspection	
OH-7A	28-Aug				N/A		Inspection	
OH-7A	10-Sep		X		N/A		Inspection-Removed wood and closed Tide Gate post rain event.	
OH-7A	25-Oct				N/A		Inspection	
OH-7A	13-Nov				N/A		Inspection	
OH-7A	13-Dec				N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OH-7B	20-Jan		N/A	N/A	N/A		Inspection	
OH-7B	24-Feb		N/A	N/A	N/A		Inspection	
OH-7B	23-Mar		N/A	N/A	N/A		Inspection	
OH-7B	19-Apr		N/A	N/A	N/A		Inspection	
OH-7B	29-May		N/A	N/A	N/A		Inspection	
OH-7B	28-Jun		N/A	N/A	N/A		Inspection	
OH-7B	22-Jul		N/A	N/A	N/A		Inspection	
OH-7B	28-Aug		N/A	N/A	N/A		Inspection	
OH-7B	10-Sep		N/A	N/A	N/A		Inspection	
OH-7B	25-Oct		N/A	N/A	N/A		Inspection	
OH-7B	13-Nov		N/A	N/A	N/A		Inspection	
OH-7B	13-Dec		N/A	N/A	N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OH-7C	20-Jan		N/A	N/A	N/A		Inspection	
OH-7C	24-Feb		N/A	N/A	N/A		Inspection	
OH-7C	23-Mar		N/A	N/A	N/A		Inspection	
OH-7C	19-Apr		N/A	N/A	N/A		Inspection	
OH-7C	29-May		N/A	N/A	N/A		Inspection	
OH-7C	28-Jun		N/A	N/A	N/A		Inspection	
OH-7C	22-Jul		N/A	N/A	N/A		Inspection	
OH-7C	28-Aug		N/A	N/A	N/A		Inspection	
OH-7C	10-Sep		N/A	N/A	N/A		Inspection	
OH-7C	25-Oct		N/A	N/A	N/A		Inspection	
OH-7C	13-Nov		N/A	N/A	N/A		Inspection	
OH-7C	13-Dec		N/A	N/A	N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OH-7D	20-Jan		N/A	N/A	N/A		Inspection	
OH-7D	24-Feb		N/A	N/A	N/A		Inspection	
OH-7D	23-Mar		N/A	N/A	N/A		Inspection	
OH-7D	19-Apr		N/A	N/A	N/A		Inspection	
OH-7D	29-May		N/A	N/A	N/A		Inspection	
OH-7D	28-Jun		N/A	N/A	N/A		Inspection	
OH-7D	22-Jul		N/A	N/A	N/A		Inspection	
OH-7D	28-Aug		N/A	N/A	N/A		Inspection	
OH-7D	10-Sep		N/A	N/A	N/A		Inspection	
OH-7D	25-Oct		N/A	N/A	N/A		Inspection	
OH-7D	13-Nov		N/A	N/A	N/A		Inspection	
OH-7D	13-Dec		N/A	N/A	N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OH-8	28-Jan		N/A	N/A	N/A		Inspection	
OH-8	27-Feb		N/A	N/A	N/A		Inspection	
OH-8	23-Mar		N/A	N/A	N/A		Inspection	
OH-8	24-Apr		N/A	N/A	N/A		Inspection	
OH-8	30-May		N/A	N/A	N/A		Inspection	
OH-8	29-Jun		N/A	N/A	N/A		Inspection	
OH-8	30-Jul		N/A	N/A	N/A		Inspection	
OH-8	20-Aug		N/A	N/A	N/A		Inspection	
OH-8	25-Sep		N/A	N/A	N/A		Inspection	
OH-8	30-Oct		N/A	N/A	N/A		Inspection	
OH-8	13-Nov		N/A	N/A	N/A		Inspection	
OH-8	29-Dec		N/A	N/A	N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OH-8A	28-Jan		N/A	N/A	N/A		Inspection	
OH-8A	27-Feb		N/A	N/A	N/A		Inspection	
OH-8A	23-Mar		N/A	N/A	N/A		Inspection	
OH-8A	24-Apr		N/A	N/A	N/A		Inspection	
OH-8A	30-May		N/A	N/A	N/A		Inspection	
OH-8A	29-Jun		N/A	N/A	N/A		Inspection	
OH-8A	30-Jul		N/A	N/A	N/A		Inspection	
OH-8A	20-Aug		N/A	N/A	N/A		Inspection	
OH-8A	25-Sep		N/A	N/A	N/A		Inspection	
OH-8A	30-Oct		N/A	N/A	N/A		Inspection	
OH-8A	13-Nov		N/A	N/A	N/A		Inspection	
OH-8A	29-Dec		N/A	N/A	N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	

OH-8B	28-Jan		N/A	N/A	N/A		Inspection	
OH-8B	27-Feb		N/A	N/A	N/A		Inspection	
OH-8B	23-Mar		N/A	N/A	N/A		Inspection	
OH-8B	24-Apr		N/A	N/A	N/A		Inspection	
OH-8B	30-May		N/A	N/A	N/A		Inspection	
OH-8B	29-Jun		N/A	N/A	N/A		Inspection	
OH-8B	30-Jul		N/A	N/A	N/A		Inspection	
OH-8B	20-Aug		N/A	N/A	N/A		Inspection	
OH-8B	25-Sep		N/A	N/A	N/A		Inspection	
OH-8B	30-Oct		N/A	N/A	N/A		Inspection	
OH-8B	13-Nov		N/A	N/A	N/A		Inspection	
OH-8B	29-Dec		N/A	N/A	N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OH-9	28-Jan	N/A	N/A	N/A	N/A		Inspection	
OH 9	5-Feb	N/A	N/A	N/A	N/A		Responded to callout- DRY WEATHER BYPASS- FALSE alarm	
OH-9	25-Feb	N/A	N/A	N/A	N/A		Inspection	
OH-9	30-Mar	N/A	N/A	N/A	N/A		Inspection	
OH-9	24-Apr	N/A	N/A	N/A	N/A		Inspection	
OH-9	30-May	N/A	N/A	N/A	N/A		Inspection	
OH-9	29-Jun	N/A	N/A	N/A	N/A		Inspection	
OH-9	30-Jul	N/A	N/A	N/A	N/A		Inspection	
OH-9	20-Aug	N/A	N/A	N/A	N/A		Inspection	
OH-9	25-Sep	N/A	N/A	N/A	N/A		Inspection	
OH-9	30-Oct	N/A	N/A	N/A	N/A		Inspection	
OH-9	27-Nov	N/A	N/A	N/A	N/A		Inspection	
OH-9	29-Dec	N/A	N/A	N/A	N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OH-9A	28-Jan		N/A	N/A	N/A		Inspection	
OH-9A	5-Feb		N/A	N/A	N/A		Responded to callout- DRY WEATHER BYPASS- FALSE alarm	
OH-9A	25-Feb		N/A	N/A	N/A		Inspection	
OH-9A	30-Mar		N/A	N/A	N/A		Inspection	
OH-9A	24-Apr		N/A	N/A	N/A		Inspection	
OH-9A	30-May		N/A	N/A	N/A		Inspection	
OH-9A	29-Jun		N/A	N/A	N/A		Inspection	
OH-9A	30-Jul		N/A	N/A	N/A		Inspection	
OH-9A	20-Aug		N/A	N/A	N/A		Inspection	
OH-9A	25-Sep		N/A	N/A	N/A		Inspection	
OH-9A	30-Oct		N/A	N/A	N/A		Inspection	
OH-9A	27-Nov		N/A	N/A	N/A		Inspection	
OH-9A	29-Dec		N/A	N/A	N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OH-9B	28-Jan		N/A	N/A	N/A		Inspection	
OH-9B	5-Feb		N/A	N/A	N/A		Responded to callout- DRY WEATHER BYPASS- FALSE alarm	
OH-9B	25-Feb		N/A	N/A	N/A		Inspection	
OH-9B	30-Mar		N/A	N/A	N/A		Inspection	
OH-9B	24-Apr		N/A	N/A	N/A		Inspection	
OH-9B	30-May		N/A	N/A	N/A		Inspection	
OH-9B	29-Jun		N/A	N/A	N/A		Inspection	
OH-9B	30-Jul		N/A	N/A	N/A		Inspection	
OH-9B	20-Aug		N/A	N/A	N/A		Inspection	
OH-9B	25-Sep		N/A	N/A	N/A		Inspection	
OH-9B	30-Oct		N/A	N/A	N/A		Inspection	
OH-9B	27-Nov		N/A	N/A	N/A		Inspection	
OH-9B	29-Dec		N/A	N/A	N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OH-9C	28-Jan		N/A	N/A	N/A		Inspection	
OH-9C	5-Feb		N/A	N/A	N/A		Responded to callout- DRY WEATHER BYPASS- FALSE alarm	
OH-9C	25-Feb		N/A	N/A	N/A		Inspection	
OH-9C	30-Mar		N/A	N/A	N/A		Inspection	
OH-9C	24-Apr		N/A	N/A	N/A		Inspection	
OH-9C	30-May		N/A	N/A	N/A		Inspection	
OH-9C	29-Jun		N/A	N/A	N/A		Inspection	
OH-9C	30-Jul		N/A	N/A	N/A		Inspection	
OH-9C	20-Aug		N/A	N/A	N/A		Inspection	
OH-9C	25-Sep		N/A	N/A	N/A		Inspection	
OH-9C	30-Oct		N/A	N/A	N/A		Inspection	
OH-9C	27-Nov		N/A	N/A	N/A		Inspection	
OH-9C	29-Dec		N/A	N/A	N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
OH-9D	28-Jan		N/A	N/A	N/A		Inspection	
OH-9D	5-Feb		N/A	N/A	N/A		Responded to callout- DRY WEATHER BYPASS- FALSE alarm	
OH-9D	25-Feb		N/A	N/A	N/A		Inspection	

OH-9D	30-Mar		N/A	N/A	N/A		Inspection
OH-9D	24-Apr		N/A	N/A	N/A		Inspection
OH-9D	30-May		N/A	N/A	N/A		Inspection
OH-9D	29-Jun		N/A	N/A	N/A		Inspection
OH-9D	30-Jul		N/A	N/A	N/A		Inspection
OH-9D	20-Aug		N/A	N/A	N/A		Inspection
OH-9D	25-Sep		N/A	N/A	N/A		Inspection
OH-9D	30-Oct		N/A	N/A	N/A		Inspection
OH-9D	27-Nov		N/A	N/A	N/A		Inspection
OH-9D	29-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OH-10	28-Jan		N/A	N/A	N/A		Inspection
OH-10	27-Feb		N/A	N/A	N/A		Inspection
OH-10	31-Mar		N/A	N/A	N/A		Inspection
OH-10	24-Apr		N/A	N/A	N/A		Inspection
OH-10	30-May		N/A	N/A	N/A		Inspection
OH-10	29-Jun		N/A	N/A	N/A		Inspection
OH-10	29-Jul		N/A	N/A	N/A		Inspection
OH-10	20-Aug		N/A	N/A	N/A		Inspection
OH-10	25-Sep		N/A	N/A	N/A		Inspection
OH-10	30-Oct		N/A	N/A	N/A		Inspection
OH-10	27-Nov		N/A	N/A	N/A		Inspection
OH-10	29-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
OH-11	28-Jan				N/A		Inspection
OH-11	27-Feb				N/A		Inspection
OH-11	31-Mar				N/A		Inspection
OH-11	24-Apr				N/A		Inspection
OH-11	29-May				N/A		Inspection
OH-11	29-Jun				N/A		Inspection
OH-11	29-Jul				N/A		Inspection
OH-11	20-Aug				N/A		Inspection
OH-11	9-Sep				N/A	X	Inspection-Chloride run
OH-11	30-Oct				N/A		Inspection
OH-11	27-Nov				N/A		Inspection
OH-11	29-Dec	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
CSO-2	2-Jan			X	N/A		Close tide gates A and B post rain event.
CSO-2	20-Jan				N/A		Inspection
CSO-2	5-Feb			X	N/A		Close tide gates A and B post rain event.
CSO-2	18-Feb			X	N/A		Close tide gates A and B post rain event.
CSO-2	24-Feb				N/A		Inspection
CSO-2	26-Feb			X	N/A		Close tide gates A and B post rain event.
CSO-2	10-Mar			X	N/A		Close tide gates A and B post rain event.
CSO-2	11-Mar			X	N/A		Close tide gates A and B post rain event.
CSO-2	20-Mar			X	N/A		Close tide gates A and B post rain event.
CSO-2	23-Mar				N/A		Inspection
CSO-2	24-Mar			X	N/A		Close tide gates A and B post rain event.
CSO-2	25-Mar			X	N/A		Close tide gates A and B post rain event.
CSO-2	2-Apr			X	N/A		Close tide gates A and B post rain event.
CSO-2	7-Apr			X	N/A		Close tide gates A and B post rain event.
CSO-2	8-Apr			X	N/A		Close tide gates A and B post rain event.
CSO-2	10-Apr			X	N/A		Close tide gates A and B post rain event.
CSO-2	15-Apr			X	N/A		Close tide gates A and B post rain event.
CSO-2	20-Apr			X	N/A		Close tide gates A and B post rain event.
CSO-2	24-Apr				N/A		Inspection
CSO-2	3-May			X	N/A		Close tide gates A and B post rain event.
CSO-2	4-May			X	N/A		Close tide gates A and B post rain event.
CSO-2	7-May			X	N/A		Close tide gates A and B post rain event.
CSO-2	8-May			X	N/A		Close tide gates A and B post rain event.
CSO-2	15-May			X	N/A		Close tide gates A and B post rain event.
CSO-2	20-May			X	N/A		Close tide gates A and B post rain event.
CSO-2	21-May			X	N/A		Close tide gates A and B post rain event.
CSO-2	29-May	X	X	X	N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
CSO-2	2-Jun			X	N/A		Close tide gates A and B post rain event.
CSO-2	9-Jun			X	N/A		Close tide gates A and B post rain event.
CSO-2	17-Jun			X	N/A		Close tide gates A and B post rain event.
CSO-2	28-Jun			X	N/A		Inspection-Close tide gates A and B post rain event.
CSO-2	3-Jul			X	N/A		Close tide gates A and B post rain event.
CSO-2	28-Jul				N/A		Inspection
CSO-2	30-Jul	X	X	X	N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
CSO-2	2-Aug			X	N/A		Close tide gates A and B post rain event.

CSO-2	20-Aug				N/A		Inspection
CSO-2	27-Aug			X	N/A		Close tide gates A and B post rain event.
CSO-2	31-Aug			X	N/A		Close tide gates A and B post rain event.
CSO-2	7-Sep			X	N/A		Close tide gates A and B post rain event.
CSO-2	10-Sep				N/A		Inspection
CSO-2	13-Sep			X	N/A		Close tide gates A and B post rain event.
CSO-2	22-Sep			X	N/A		Close tide gates A and B post rain event.
CSO-2	23-Sep			X	N/A		Close tide gates A and B post rain event.
CSO-2	26-Sep			X	N/A		Close tide gates A and B post rain event.
CSO-2	2-Oct			X	N/A		Close tide gates A and B post rain event.
CSO-2	3-Oct			X	N/A		Close tide gates A and B post rain event.
CSO-2	4-Oct			X	N/A		Close tide gates A and B post rain event.
CSO-2	5-Oct			X	N/A		Close tide gates A and B post rain event.
CSO-2	14-Oct			X	N/A		Close tide gates A and B post rain event.
CSO-2	25-Oct	X	X	X	N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
CSO-2	1-Nov			X	N/A		Close tide gates A and B post rain event.
CSO-2	13-Nov	X	X	X	N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
CSO-2	16-Nov			X	N/A		Close tide gates A and B post rain event.
CSO-2	17-Nov			X	N/A		Close tide gates A and B post rain event.
CSO-2	28-Nov			X	N/A		Close tide gates A and B post rain event.
CSO-2	1-Dec			X	N/A		Close tide gates A and B post rain event.
CSO-2	7-Dec			X	N/A		Close tide gates A and B post rain event.
CSO-2	17-Dec			X	N/A		Close tide gates A and B post rain event.
CSO-2	24-Dec			X	N/A		Close tide gates A and B post rain event.
CSO-2	29-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
REG	20-Jan				N/A		Inspection
REG	24-Feb				N/A		Inspection
REG	23-Mar				N/A		Inspection
REG	19-Apr				N/A		Inspection
REG	29-May				N/A		Inspection
REG	28-Jun				N/A		Inspection
REG	22-Jul				N/A		Inspection
REG	28-Aug				N/A		Inspection
REG	10-Sep				N/A		Inspection
REG	25-Oct				N/A		Inspection
REG	29-Nov				N/A		Inspection
REG	29-Dec				N/A		Inspection

PORT RICHMOND EAST LOCATIONS 2022

Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-1E	19-Jan				N/A		Inspection
PR-1E	15-Feb				N/A		Inspection
PR-1E	3-Mar				N/A		Inspection
PR-1E	14-Apr				N/A		Inspection
PR-1E	12-May				N/A		Inspection
PR-1E	9-Jun				N/A		Inspection
PR-1E	20-Jul	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
PR-1E	2-Aug				N/A		Inspection
PR-1E	7-Sep				N/A		Inspection
PR-1E	26-Oct				N/A		Inspection
PR-1E	8-Nov				N/A		Inspection
PR-1E	1-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-2E	19-Jan		N/A	N/A	N/A		Inspection
PR-2E	15-Feb		N/A	N/A	N/A		Inspection
PR-2E	3-Mar		N/A	N/A	N/A		inspection
PR-2E	14-Apr		N/A	N/A	N/A		Inspection
PR-2E	12-May		N/A	N/A	N/A		Inspection
PR-2E	9-Jun		N/A	N/A	N/A		Inspection
PR-2E	20-Jul		N/A	N/A	N/A		Inspection
PR-2E	2-Aug		N/A	N/A	N/A		Inspection
PR-2E	7-Sep		N/A	N/A	N/A		Inspection
PR-2E	26-Oct		N/A	N/A	N/A		Inspection
PR-2E	8-Nov		N/A	N/A	N/A		Inspection
PR-2E	1-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-3E	19-Jan				N/A		Inspection
PR-3E	15-Feb				N/A		Inspection
PR-3E	3-Mar				N/A		Inspection
PR-3E	14-Apr				N/A		Inspection
PR-3E	12-May				N/A		Inspection
PR-3E	9-Jun				N/A		Inspection
PR-3E	2-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
PR-3E	7-Sep				N/A		Inspection
PR-3E	26-Oct				N/A		Inspection
PR-3E	8-Nov				N/A		Inspection
PR-3E	1-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-4E	19-Jan				N/A		Inspection
PR-4E	15-Feb				N/A		Inspection
PR-4E	3-Mar				N/A		Inspection
PR-4E	14-Apr				N/A		Inspection
PR-4E	12-May				N/A		Inspection
PR-4E	9-Jun				N/A		Inspection
PR-4E	20-Jul	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
PR-4E	2-Aug				N/A		Inspection
PR-4E	7-Sep				N/A		Inspection
PR-4E	26-Oct				N/A		Inspection
PR-4E	8-Nov				N/A		Inspection
PR-4E	1-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-5E	19-Jan		N/A	N/A			Inspection
PR-5E	15-Feb		N/A	N/A			Inspection
PR-5E	3-Mar		N/A	N/A			Inspection
PR-5E	14-Apr		N/A	N/A			Inspection
PR-5E	12-May		N/A	N/A			Inspection
PR-5E	9-Jun	X	N/A	N/A	X		Inspection-PM Duck Bill, Checked For Loose Bolts, Deformities, Wear, Blockages
PR-5E	20-Jul		N/A	N/A			Inspection
PR-5E	2-Aug		N/A	N/A			Inspection
PR-5E	7-Sep		N/A	N/A			Inspection
PR-5E	26-Oct		N/A	N/A			Inspection
PR-5E	8-Nov		N/A	N/A			Inspection
PR-5E	1-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-6E	19-Jan		N/A	N/A			Inspection

PR-6E	15-Feb		N/A	N/A			Inspection
PR-6E	3-Mar		N/A	N/A			Inspection
PR-6E	14-Apr		N/A	N/A			Inspection
PR-6E	12-May		N/A	N/A			Inspection
PR-6E	28-Jun		N/A	N/A			Inspection
PR-6E	26-Jul		N/A	N/A			Inspection
PR-6E	2-Aug	X	N/A	N/A	X		Inspection-PM Duck Bill, Checked For Loose Bolts, Deformities, Wear, Blockages
PR-6E	7-Sep		N/A	N/A			Inspection
PR-6E	26-Oct		N/A	N/A			Inspection
PR-6E	8-Nov		N/A	N/A			Inspection
PR-6E	1-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-7E	19-Jan				N/A		Inspection
PR-7E	15-Feb				N/A		Inspection
PR-7E	3-Mar				N/A		Inspection
PR-7E	8-Mar	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
PR-7E	14-Apr				N/A		Inspection
PR-7E	11-May	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
PR-7E	28-Jun				N/A		Inspection
PR-7E	26-Jul				N/A		Inspection
PR-7E	9-Aug				N/A		Inspection
PR-7E	7-Sep	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
PR-7E	26-Oct				N/A		Inspection
PR-7E	9-Nov				N/A		Inspection
PR-7E	17-Nov				N/A	X	Inspection-Chloride Run
PR-7E	6-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-8E	19-Jan				N/A		Inspection
PR-8E	15-Feb				N/A		Inspection
PR-8E	3-Mar				N/A		Inspection
PR-8E	8-Mar	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
PR-8E	20-Apr				N/A		Inspection
PR-8E	11-May				N/A		Inspection
PR-8E	28-Jun				N/A	X	Inspection-Chloride Run
PR-8E	26-Jul				N/A		Inspection
PR-8E	9-Aug				N/A		Inspection
PR-8E	7-Sep				N/A		Inspection
PR-8E	26-Oct				N/A		Inspection
PR-8E	9-Nov				N/A		Inspection
PR-8E	17-Nov				N/A	X	Inspection-Chloride Run
PR-8E	6-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-9E	19-Jan				N/A		Inspection
PR-9E	15-Feb				N/A		Inspection
PR-9E	3-Mar				N/A		Inspection
PR-9E	20-Apr				N/A		Inspection
PR-9E	12-May				N/A		Inspection
PR-9E	28-Jun				N/A		Inspection
PR-9E	26-Jul				N/A		Inspection
PR-9E	9-Aug				N/A		Inspection
PR-9E	23-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
PR-9E	22-Sep				N/A		Inspection
PR-9E	26-Oct				N/A		Inspection
PR-9E	15-Nov				N/A		Inspection
PR-9E	6-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-10E	21-Jan		N/A	N/A			Inspection
PR-10E	1-Feb	X	N/A	N/A			Inspection-Contractor Flushed out Duck Bill andd outfall
PR-10E	10-Mar		N/A	N/A			Inspection
PR-10E	20-Apr		N/A	N/A			Inspection
PR-10E	24-May		N/A	N/A			Inspection
PR-10E	28-Jun		N/A	N/A			Inspection
PR-10E	26-Jul		N/A	N/A			Inspection
PR-10E	9-Aug		N/A	N/A			Inspection
PR-10E	22-Sep		N/A	N/A			Inspection
PR-10E	20-Oct	X	N/A	N/A	X		Inspection-PM Duck Bill, Checked For Loose Bolts, Deformities, Wear, Blockages
PR-10E	15-Nov		N/A	N/A			Inspection
PR-10E	8-Dec		N/A	N/A			Inspection

Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-11E	21-Jan				N/A		Inspection
PR-11E	1-Feb				N/A		Inspection
PR-11E	10-Mar				N/A		Inspection
PR-11E	20-Apr				N/A		Inspection
PR-11E	24-May				N/A		Inspection
PR-11E	28-Jun				N/A		Inspection
PR-11E	26-Jul				N/A		Inspection
PR-11E	9-Aug				N/A		Inspection
PR-11E	22-Sep				N/A		Inspection
PR-11E	20-Oct				N/A		Inspection
PR-11E	15-Nov				N/A		Inspection
PR-11E	8-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-13E	21-Jan				N/A		Inspection
PR-13E	16-Feb				N/A		Inspection
PR-13E	10-Mar				N/A		Inspection
PR-13E	20-Apr				N/A		Inspection
PR-13E	11-May				N/A	X	Inspection-Chloride Run
PR-13E	28-Jun				N/A		Inspection
PR-13E	26-Jul				N/A		Inspection
PR-13E	27-Jul	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A, B and C.
PR-13E	9-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A, B and C.
PR-13E	22-Sep				N/A		Inspection
PR-13E	26-Oct				N/A		Inspection
PR-13E	9-Nov				N/A		Inspection
PR-13E	17-Nov				N/A	X	Inspection-Chloride Run
PR-13E	6-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-15E	21-Jan				N/A		Inspection
PR-15E	16-Feb				N/A		Inspection
PR-15E	10-Mar				N/A		Inspection
PR-15E	20-Apr				N/A		Inspection
PR-15E	11-May				N/A	X	Inspection-Chloride Run
PR-15E	28-Jun				N/A		Inspection
PR-15E	26-Jul				N/A		Inspection
PR-15E	3-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A, B and C.
PR-15E	22-Sep				N/A		Inspection
PR-15E	20-Oct				N/A		Inspection
PR-15E	15-Nov				N/A		Inspection
PR-15E	17-Nov				N/A	X	Inspection-Chloride Run
PR-15E	8-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-16E	21-Jan				N/A		Inspection
PR-16E	16-Feb				N/A		Inspection
PR-16E	10-Mar				N/A		Inspection
PR-16E	20-Apr				N/A		Inspection
PR-16E	24-May	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
PR-16E	28-Jun				N/A		Inspection
PR-16E	27-Jul				N/A		Inspection
PR-16E	3-Aug				N/A		Inspection
PR-16E	22-Sep				N/A		Inspection
PR-16E	26-Oct				N/A		Inspection
PR-16E	9-Nov				N/A		Inspection
PR-16E	17-Nov				N/A	X	Inspection-Chloride Run
PR-16E	6-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-17E	21-Jan				N/A		Inspection
PR-17E	16-Feb				N/A		Inspection
PR-17E	10-Mar				N/A		Inspection
PR-17E	20-Apr				N/A		Inspection
PR-17E	11-May				N/A		Inspection
PR-17E	1-Jun	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
PR-17E	27-Jul				N/A		Inspection
PR-17E	3-Aug				N/A		Inspection
PR-17E	22-Sep				N/A		Inspection
PR-17E	26-Oct				N/A		Inspection
PR-17E	9-Nov				N/A		Inspection

PR-17E	17-Nov				N/A	X	Inspection-Chloride Run
PR-17E	6-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-18E	21-Jan		N/A	N/A	N/A		Inspection
PR-18E	16-Feb		N/A	N/A	N/A		Inspection
PR-18E	10-Mar		N/A	N/A	N/A		Inspection
PR-18E	20-Apr		N/A	N/A	N/A		Inspection
PR-18E	24-May		N/A	N/A	N/A		Inspection
PR-18E	1-Jun		N/A	N/A	N/A		Inspection
PR-18E	27-Jul		N/A	N/A	N/A		Inspection
PR-18E	3-Aug		N/A	N/A	N/A		Inspection
PR-18E	22-Sep		N/A	N/A	N/A		Inspection
PR-18E	20-Oct		N/A	N/A	N/A		Inspection
PR-18E	15-Nov		N/A	N/A	N/A		Inspection
PR-18E	8-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-19E	21-Jan		N/A	N/A	N/A		Inspection
PR-19E	16-Feb		N/A	N/A	N/A		Inspection
PR-19E	10-Mar		N/A	N/A	N/A		Inspection
PR-19E	20-Apr		N/A	N/A	N/A		Inspection
PR-19E	24-May		N/A	N/A	N/A		Inspection
PR-19E	1-Jun		N/A	N/A	N/A		Inspection
PR-19E	27-Jul		N/A	N/A	N/A		Inspection
PR-19E	3-Aug		N/A	N/A	N/A		Inspection
PR-19E	22-Sep		N/A	N/A	N/A		Inspection
PR-19E	20-Oct		N/A	N/A	N/A		Inspection
PR-19E	16-Nov		N/A	N/A	N/A		Inspection
PR-19E	8-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-20E	21-Jan				N/A		Inspection
PR-20E	16-Feb				N/A		Inspection
PR-20E	10-Mar				N/A		Inspection
PR-20E	21-Apr				N/A		Inspection
PR-20E	11-May				N/A		Inspection
PR-20E	1-Jun				N/A		Inspection
PR-20E	27-Jul				N/A		Inspection
PR-20E	11-Aug				N/A		Inspection
PR-20E	23-Sep				N/A		Inspection
PR-20E	27-Oct				N/A		Inspection
PR-20E	16-Nov				N/A	X	Inspection-Chloride Run
PR-20E	12-Dec				N/A		Inspection
PR-20E	13-Dec	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-21E	24-Jan		N/A	N/A	N/A		Inspection
PR-21E	23-Feb		N/A	N/A	N/A		Inspection
PR-21E	15-Mar		N/A	N/A	N/A		Inspection
PR-21E	21-Apr		N/A	N/A	N/A		Inspection
PR-21E	24-May		N/A	N/A	N/A		Inspection
PR-21E	1-Jun		N/A	N/A	N/A		Inspection
PR-21E	21-Jul		N/A	N/A	N/A		Inspection
PR-21E	11-Aug		N/A	N/A	N/A		Inspection
PR-21E	23-Sep		N/A	N/A	N/A		Inspection
PR-21E	27-Oct		N/A	N/A	N/A		Inspection
PR-21E	16-Nov		N/A	N/A	N/A		Inspection
PR-21E	12-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-22E	24-Jan		N/A	N/A	N/A		Inspection
PR-22E	23-Feb		N/A	N/A	N/A		Inspection
PR-22E	15-Mar		N/A	N/A	N/A		Inspection
PR-22E	21-Apr		N/A	N/A	N/A		Inspection
PR-22E	24-May		N/A	N/A	N/A		Inspection
PR-22E	29-Jun		N/A	N/A	N/A		Inspection
PR-22E	27-Jul		N/A	N/A	N/A		Inspection
PR-22E	11-Aug		N/A	N/A	N/A		Inspection
PR-22E	23-Sep	X	N/A	N/A	N/A		Inspection-Hosed Out Chambers
PR-22E	27-Oct		N/A	N/A	N/A		Inspection
PR-22E	16-Nov	X	N/A	N/A	N/A		Inspection-Hosed Out Chambers
PR-22E	12-Dec		N/A	N/A	N/A		Inspection

Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-23E	24-Jan		N/A	N/A	N/A		Inspection
PR-23E	23-Feb		N/A	N/A	N/A		Inspection
PR-23E	15-Mar		N/A	N/A	N/A		Inspection
PR-23E	21-Apr		N/A	N/A	N/A		Inspection
PR-23E	24-May		N/A	N/A	N/A		Inspection
PR-23E	29-Jun		N/A	N/A	N/A		Inspection
PR-23E	27-Jul		N/A	N/A	N/A		Inspection
PR-23E	11-Aug		N/A	N/A	N/A		Inspection
PR-23E	23-Sep		N/A	N/A	N/A		Inspection
PR-23E	27-Oct		N/A	N/A	N/A		Inspection
PR-23E	16-Nov		N/A	N/A	N/A		Inspection
PR-23E	12-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-24E	24-Jan		N/A	N/A	N/A		Inspection
PR-24E	23-Feb		N/A	N/A	N/A		Inspection
PR-24E	15-Mar		N/A	N/A	N/A		Inspection
PR-24E	21-Apr		N/A	N/A	N/A		Inspection
PR-24E	24-May		N/A	N/A	N/A		Inspection
PR-24E	29-Jun		N/A	N/A	N/A		Inspection
PR-24E	27-Jul		N/A	N/A	N/A		Inspection
PR-24E	11-Aug	X	N/A	N/A	N/A		Inspection-Hosed Out Chambers
PR-24E	23-Sep		N/A	N/A	N/A		Inspection
PR-24E	27-Oct		N/A	N/A	N/A		Inspection
PR-24E	16-Nov		N/A	N/A	N/A		Inspection
PR-24E	12-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-27E	24-Jan		N/A	N/A	N/A		Inspection
PR-27E	23-Feb		N/A	N/A	N/A		Inspection
PR-27E	15-Mar		N/A	N/A	N/A		Inspection
PR-27E	24-Apr		N/A	N/A	N/A		Inspection
PR-27E	25-May		N/A	N/A	N/A		Inspection
PR-27E	29-Jun	X	N/A	N/A	N/A		Inspection- Hose Out Chambers
PR-27E	27-Jul		N/A	N/A	N/A		Inspection
PR-27E	11-Aug		N/A	N/A	N/A		Inspection
PR-27E	23-Sep		N/A	N/A	N/A		Inspection
PR-27E	31-Oct		N/A	N/A	N/A		Inspection
PR-27E	16-Nov		N/A	N/A	N/A		Inspection
PR-27E	12-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-28E	24-Jan		N/A	N/A			Inspection
PR-28E	23-Feb	X	N/A	N/A	X		Inspection-PM Duck Bill, Checked For Loose Bolts, Deformities, Wear, Blockages
PR-28E	15-Mar		N/A	N/A			Inspection
PR-28E	21-Apr		N/A	N/A			Inspection
PR-28E	12-May		N/A	N/A		X	Inspection- Chloride Run
PR-28E	29-Jun		N/A	N/A			Inspection
PR-28E	14-Jul		N/A	N/A			Inspection
PR-28E	11-Aug		N/A	N/A			Inspection
PR-28E	23-Sep		N/A	N/A			Inspection
PR-28E	31-Oct		N/A	N/A			Inspection
PR-28E	16-Nov		N/A	N/A			Inspection
PR-28E	12-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-29E	24-Jan		N/A	N/A			Inspection
PR-29E	24-Feb	X	N/A	N/A	X		Inspection-PM Duck Bill, Checked For Loose Bolts, Deformities, Wear, Blockages
PR-29E	15-Mar		N/A	N/A			Inspection
PR-29E	21-Apr		N/A	N/A			Inspection
PR-29E	12-May	X	N/A	N/A		X	Inspection- Chloride Run, Cleared Blockage in Regulator
PR-29E	29-Jun		N/A	N/A			Inspection
PR-29E	28-Jul		N/A	N/A			Inspection
PR-29E	11-Aug	X	N/A	N/A			Inspection-Cleared Blockage in Regulator
PR-29E	24-Aug	X	N/A	N/A	X		Inspection-PM Duck Bill, Checked For Loose Bolts, Deformities, Wear, Blockages
PR-29E	23-Sep		N/A	N/A			Inspection
PR-29E	31-Oct		N/A	N/A			Inspection
PR-29E	22-Nov	X	N/A	N/A			Inspection-Cleared Blockage in Regulator
PR-29E	13-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-31E	24-Jan	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.

PR-31E	23-Feb				N/A		Inspection
PR-31E	17-Mar				N/A		Inspection
PR-31E	21-Apr				N/A		Inspection
PR-31E	11-May	X	X		N/A	X	Inspection-Chloride Run, Grease, scrape, and exercise tide gate.
PR-31E	29-Jun				N/A		Inspection
PR-31E	28-Jul				N/A		Inspection
PR-31E	23-Aug				N/A		Inspection
PR-31E	24-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
PR-31E	28-Sep				N/A		Inspection
PR-31E	31-Oct				N/A		Inspection
PR-31E	17-Nov				N/A	X	Inspection-Chloride Run
PR-31E	13-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-32E	25-Jan		N/A	N/A			Inspection
PR-32E	23-Feb	X	N/A	N/A	X		Inspection-PM Duck Bill, Checked For Loose Bolts, Deformities, Wear, Blockages
PR-32E	17-Mar		N/A	N/A			Inspection
PR-32E	26-Apr		N/A	N/A			Inspection
PR-32E	25-May		N/A	N/A			Inspection
PR-32E	29-Jun		N/A	N/A			Inspection
PR-32E	28-Jul		N/A	N/A			Inspection
PR-32E	23-Aug		N/A	N/A			Inspection
PR-32E	28-Sep		N/A	N/A			Inspection
PR-32E	31-Oct		N/A	N/A			Inspection
PR-32E	22-Nov		N/A	N/A			Inspection
PR-32E	13-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-33E	25-Jan		N/A	N/A			Inspection
PR-33E	24-Feb		N/A	N/A			Inspection
PR-33E	17-Mar		N/A	N/A			Inspection
PR-33E	26-Apr		N/A	N/A			Inspection
PR-33E	12-May		N/A	N/A		X	Inspection-Chloride Run
PR-33E	29-Jun		N/A	N/A			Inspection
PR-33E	28-Jul		N/A	N/A			Inspection
PR-33E	23-Aug		N/A	N/A			Inspection
PR-33E	28-Sep		N/A	N/A			Inspection
PR-33E	31-Oct		N/A	N/A			Inspection
PR-33E	22-Nov		N/A	N/A			Inspection
PR-33E	13-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-34E	25-Jan				N/A		Inspection
PR-34E	24-Feb				N/A		Inspection
PR-34E	17-Mar				N/A		Inspection
PR-34E	26-Apr				N/A		inspection
PR-34E	25-May				N/A		Inspection
PR-34E	29-Jun				N/A		Inspection
PR-34E	28-Jul				N/A		Inspection
PR-34E	23-Aug				N/A		Inspection
PR-34E	28-Sep				N/A		Inspection
PR-34E	31-Oct				N/A		Inspection
PR-34E	22-Nov				N/A		Inspection
PR-34E	13-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-TF			N/A	N/A	N/A		Inspection
PR-TF			N/A	N/A	N/A		Inspection
PR-TF			N/A	N/A	N/A		Inspection
PR-TF			N/A	N/A	N/A		inspection
PR-TF			N/A	N/A	N/A		Inspection
PR-TF			N/A	N/A	N/A		Inspection
PR-TF			N/A	N/A	N/A		Inspection
PR-TF			N/A	N/A	N/A		Inspection
PR-TF			N/A	N/A	N/A		Inspection
PR-TF			N/A	N/A	N/A		Inspection
PR-TF			N/A	N/A	N/A		Inspection
PR-TF			N/A	N/A	N/A		Inspection

PORT RICHMOND WEST LOCATIONS 2022

Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-35W	25-Jan				N/A		Inspection
PR-35W	24-Feb				N/A		Inspection
PR-35W	16-Mar				N/A		Inspection
PR-35W	26-Apr				N/A		Inspection
PR-35W	25-May				N/A		Inspection
PR-35W	30-Jun				N/A		Inspection
PR-35W	28-Jul				N/A		Inspection
PR-35W	17-Aug				N/A		Inspection
PR-35W	12-Sep				N/A	X	Inspection-Chloride Run
PR-35W	12-Oct				N/A		Inspection
PR-35W	14-Nov				N/A		Inspection
PR-35W	14-Dec				N/A	X	Inspection-Chloride Run
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-36W	25-Jan	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
PR-36W	24-Feb				N/A		Inspection
PR-36W	16-Mar				N/A		Inspection
PR-36W	26-Apr				N/A	X	Inspection-Chloride Run
PR-36W	25-May				N/A		Inspection
PR-36W	30-Jun				N/A		Inspection
PR-36W	28-Jul				N/A		Inspection
PR-36W	17-Aug				N/A		Inspection
PR-36W	15-Sep	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.
PR-36W	12-Oct				N/A		Inspection
PR-36W	17-Nov				N/A	X	Inspection-Chloride Run
PR-36W	14-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-37W	25-Jan				N/A		Inspection
PR-37W	24-Jan	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
PR-37W	16-Mar				N/A		Inspection
PR-37W	26-Apr				N/A	X	Inspection-Chloride Run
PR-37W	25-May				N/A		Inspection
PR-37W	30-Jun				N/A		Inspection
PR-37W	28-Jul				N/A		Inspection-Grease, scrape, and exercise tide gate A, B and C.
PR-37W	17-Aug				N/A		Inspection
PR-37W	24-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
PR-37W	15-Sep				N/A		Inspection
PR-37W	12-Oct				N/A		Inspection
PR-37W	14-Nov				N/A		Inspection
PR-37W	14-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-1W	26-Jan		N/A	N/A	X		Inspection-PM Duck Bill, Checked For Loose Bolts, Deformities, Wear, Blockages
PR-1W	24-Feb		N/A	N/A			Inspection
PR-1W	16-Mar		N/A	N/A			Inspection
PR-1W	26-Apr		N/A	N/A			Inspection
PR-1W	25-May		N/A	N/A			Inspection
PR-1W	30-Jun		N/A	N/A			Inspection
PR-1W	14-Jul		N/A	N/A			Inspection
PR-1W	17-Aug		N/A	N/A			Inspection
PR-1W	15-Sep		N/A	N/A			Inspection
PR-1W	12-Oct		N/A	N/A			Inspection
PR-1W	14-Nov		N/A	N/A		X	Inspection-Chloride Run
PR-1W	14-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
PR-2W	26-Jan		N/A	N/A	X		Inspection-PM Duck Bill, Checked For Loose Bolts, Deformities, Wear,Blockages
PR-2W	24-Feb		N/A	N/A			Inspection
PR-2W	16-Mar		N/A	N/A			Inspection
PR-2W	26-Apr	X	N/A	N/A	X		Inspection-PM Duck Bill, Checked For Loose Bolts, Deformities, Wear,Blockages
PR-2W	25-May		N/A	N/A			Inspection
PR-2W	30-Jun		N/A	N/A			Inspection
PR-2W	14-Jul		N/A	N/A			Inspection
PR-2W	17-Aug		N/A	N/A			Inspection
PR-2W	15-Sep		N/A	N/A			Inspection
PR-2W	12-Oct		N/A	N/A			Inspection
PR-2W	14-Nov		N/A	N/A			Inspection
PR-2W	14-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments

PR-3W	26-Jan		N/A	N/A			Inspection	
PR-3W	24-Feb		N/A	N/A			Inspection	
PR-3W	16-Mar		N/A	N/A			Inspection	
PR-3W	5-Apr	X	N/A	N/A	X		Inspection-PM 3 Duck Bill, Checked For Loose Bolts, Deformities, Wear,Blockages	
PR-3W	25-May		N/A	N/A			Inspection	
PR-3W	30-Jun		N/A	N/A			Inspection	
PR-3W	14-Jul		N/A	N/A			Inspection	
PR-3W	17-Aug		N/A	N/A			Inspection	
PR-3W	12-Sep		N/A	N/A		X	Inspection-Chloride Run	
PR-3W	12-Oct		N/A	N/A			Inspection	
PR-3W	14-Nov		N/A	N/A			Inspection	
PR-3W	14-Dec		N/A	N/A		X	Inspection-Chloride Run	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
PR-4W	26-Jan				N/A		Inspection	
PR-4W	24-Feb				N/A		Inspection	
PR-4W	16-Mar				N/A		Inspection	
PR-4W	5-Apr				N/A		Inspection	
PR-4W	11-May				N/A	X	Inspection-Chloride Run	
PR-4W	30-Jun				N/A		Inspection	
PR-4W	14-Jul				N/A		Inspection	
PR-4W	17-Aug				N/A		Inspection	
PR-4W	12-Sep				N/A	X	Inspection-Chloride Run	
PR-4W	12-Oct				N/A		Inspection	
PR-4W	14-Nov	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A and B.	
PR-4W	17-Nov				N/A	X	Inspection-Chloride Run	
PR-4W	14-Dec				N/A		Inspection	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
PR-5W	26-Jan				N/A		Inspection	
PR-5W	24-Feb				N/A		Inspection	
PR-5W	16-Mar				N/A		Inspection	
PR-5W	5-Apr				N/A		Inspection	
PR-5W	11-May				N/A	X	Inspection-Chloride Run	
PR-5W	30-Jun				N/A		Inspection	
PR-5W	14-Jul				N/A		Inspection	
PR-5W	17-Aug				N/A		Inspection	
PR-5W	12-Sep				N/A	X	Inspection-Chloride Run	
PR-5W	12-Oct				N/A		Inspection	
PR-5W	14-Nov				N/A		Inspection	
PR-5W	17-Nov				N/A	X	Inspection-Chloride Run	
PR-5W	1-Dec	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A, B, C and D.	
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments	
PR-6W	26-Jan				N/A		Inspection	
PR-6W	24-Feb				N/A		Inspection	
PR-6W	16-Mar				N/A		Inspection	
PR-6W	5-Apr				N/A		Inspection	
PR-6W	11-May				N/A	X	Inspection-Chloride Run	
PR-6W	30-Jun				N/A		Inspection	
PR-6W	14-Jul				N/A		Inspection	
PR-6W	17-Aug				N/A		Inspection	
PR-6W	15-Sep				N/A	X	Inspection-Chloride Run	
PR-6W	12-Oct				N/A		Inspection	
PR-6W	14-Nov				N/A		Inspection	
PR-6W	17-Nov				N/A	X	Inspection-Chloride Run	
PR-6W	14-Dec				N/A		Inspection	

RED HOOK LOCATIONS 2022

Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-1	25-Jan				N/A		Inspection/No Access To Regulator/Checked In and Out Going
RH-1	2-Feb				N/A		Inspection
RH-1	2-Mar	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate and Slice Gate.
RH-1	28-Apr				N/A		Inspection
RH-1	3-May				N/A		Inspection
RH-1	24-Jun				N/A		Inspection
RH-1	29-Jul				N/A		Inspection
RH-1	16-Aug				N/A		Inspection
RH-1	17-Sep	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-1	20-Oct				N/A		Inspection
RH-1	6-Nov				N/A		Inspection
RH-1	14-Dec	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-2	25-Jan				N/A		Inspection
RH-2	2-Feb				N/A		Inspection
RH-2	2-Mar				N/A		inspection
RH-2	28-Apr	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-2	3-May				N/A		Inspection
RH-2	24-Jun				N/A		Inspection
RH-2	29-Jul				N/A		Inspection
RH-2	16-Aug				N/A		Inspection
RH-2	17-Sep				N/A		Inspection
RH-2	20-Oct				N/A		Inspection
RH-2	6-Nov				N/A		Inspection
RH-2	14-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-5	25-Jan		N/A	N/A			Inspection
RH-5	2-Feb		N/A	N/A			Inspection
RH-5	2-Mar		N/A	N/A			Inspection
RH-5	28-Apr		N/A	N/A			Inspection
RH-5	3-May		N/A	N/A			Inspection
RH-5	24-Jun		N/A	N/A			Inspection
RH-5	29-Jul		N/A	N/A			Inspection
RH-5	16-Aug		N/A	N/A			Inspection
RH-5	17-Sep		N/A	N/A			Inspection
RH-5	20-Oct		N/A	N/A			Inspection
RH-5	6-Nov		N/A	N/A			Inspection
RH-5	14-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-6	25-Jan		N/A	N/A			Inspection
RH-6	15-Feb		N/A	N/A			Inspection
RH-6	2-Mar		N/A	N/A			Inspection
RH-6	28-Apr		N/A	N/A			Inspection
RH-6	3-May		N/A	N/A			Inspection
RH-6	24-Jun		N/A	N/A			Inspection-No Access
RH-6	29-Jul		N/A	N/A			Inspection
RH-6	16-Aug		N/A	N/A			Inspection
RH-6	17-Sep	X	N/A	N/A			Inspection-Removed Debris from Channel
RH-6	20-Oct		N/A	N/A			Inspection
RH-6	6-Nov		N/A	N/A			Inspection
RH-6	14-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-7	25-Jan		N/A	N/A			Inspection
RH-7	15-Feb		N/A	N/A			Inspection
RH-7	2-Mar		N/A	N/A			Inspection
RH-7	28-Apr		N/A	N/A			Inspection
RH-7	3-May		N/A	N/A			Inspection
RH-7	24-Jun		N/A	N/A			Inspection
RH-7	29-Jul		N/A	N/A			Inspection
RH-7	16-Aug		N/A	N/A			Inspection
RH-7	17-Sep		N/A	N/A			Inspection
RH-7	20-Oct		N/A	N/A			Inspection
RH-7	6-Nov		N/A	N/A			Inspection
RH-7	14-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments

RH-8	25-Jan		N/A	N/A			Inspection
RH-8	15-Feb		N/A	N/A			Inspection
RH-8	2-Mar		N/A	N/A			Inspection
RH-8	28-Apr		N/A	N/A			Inspection
RH-8	3-May		N/A	N/A			Inspection
RH-8	24-Jun		N/A	N/A			Inspection
RH-8	29-Jul		N/A	N/A			Inspection
RH-8	16-Aug		N/A	N/A			Inspection
RH-8	17-Sep		N/A	N/A			Inspection
RH-8	20-Oct		N/A	N/A			Inspection
RH-8	6-Nov		N/A	N/A			Inspection
RH-8	14-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-9	25-Jan				N/A		Inspection
RH-9	15-Feb				N/A		Inspection
RH-9	2-Mar				N/A		Inspection
RH-9	28-Apr				N/A		Inspection
RH-9	3-May				N/A		Inspection
RH-9	24-Jun				N/A		Inspection
RH-9	29-Jul				N/A		Inspection
RH-9	16-Aug				N/A		Inspection
RH-9	23-Sep			X	N/A		Inspection-Removed debris from tide gate chamber
RH-9	20-Oct				N/A		Inspection
RH-9	25-Nov				N/A		Inspection
RH-9	14-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-10	25-Jan		N/A	N/A			Inspection
RH-10	15-Feb		N/A	N/A			Inspection
RH-10	2-Mar		N/A	N/A			Inspection
RH-10	28-Apr		N/A	N/A			Inspection
RH-10	3-May		N/A	N/A			Inspection
RH-10	24-Jun		N/A	N/A			Inspection
RH-10	29-Jul		N/A	N/A			Inspection
RH-10	23-Aug		N/A	N/A			Inspection
RH-10	17-Sep		N/A	N/A			Inspection
RH-10	20-Oct		N/A	N/A			Inspection
RH-10	6-Nov		N/A	N/A			Inspection
RH-10	14-Dec		N/A	N/A			Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-11	25-Jan				N/A		Inspection
RH-11	15-Feb	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-11	2-Mar				N/A		Inspection
RH-11	28-Apr				N/A		Inspection
RH-11	3-May				N/A		Inspection
RH-11	24-Jun				N/A		Inspection
RH-11	29-Jul				N/A		Inspection
RH-11	16-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-11	23-Sep				N/A		Inspection
RH-11	20-Oct	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-11	25-Nov				N/A		Inspection
RH-11	14-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-12	25-Jan				N/A		Inspection
RH-12	15-Feb				N/A		Inspection
RH-12	24-Mar				N/A		Inspection
RH-12	28-Apr				N/A		Inspection
RH-12	10-May				N/A		Inspection
RH-12	24-Jun				N/A		Inspection
RH-12	29-Jul				N/A		Inspection
RH-12	24-Aug				N/A		Inspection
RH-12	23-Sep				N/A		Inspection
RH-12	28-Oct				N/A		Inspection
RH-12	6-Nov				N/A		Inspection
RH-12	14-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-13	25-Jan				N/A		Inspection
RH-13	15-Feb				N/A		Inspection
RH-13	24-Mar				N/A		Inspection

RH-13	28-Apr				N/A		Inspection
RH-13	10-May	X			N/A		Inspection, Removed Debris from Channel
RH-13	26-Jun	X			N/A		Inspection, Removed Debris from Channel
RH-13	29-Jul	X			N/A		Inspection, Removed Debris from Channel
RH-13	24-Aug				N/A		Inspection
RH-13	17-Sep				N/A		Inspection
RH-13	28-Oct	X			N/A		Inspection, Removed Debris from Channel
RH-13	6-Nov				N/A		Inspection
RH-13	14-Dec				N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
RH-14	25-Jan				N/A		Inspection
RH-14	15-Feb				N/A		Inspection
RH-14	24-Mar				N/A		Inspection
RH-14	28-Apr				N/A		Inspection
RH-14	10-May				N/A		Inspection
RH-14	26-Jun				N/A		Inspection
RH-14	29-Jul				N/A		Inspection
RH-14	24-Aug				N/A		Inspection
RH-14	23-Sep				N/A		Inspection
RH-14	28-Oct				N/A		Inspection
RH-14	30-Nov	X			N/A		Inspection, Removed Debris from Channel
RH-14	14-Dec				N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
RH-15	25-Jan	X	X		N/A		Inspection
RH-15	15-Feb				N/A		Inspection
RH-15	24-Mar				N/A		Inspection
RH-15	28-Apr				N/A		Inspection
RH-15	10-May				N/A		Inspection
RH-15	26-Jun				N/A		Inspection
RH-15	29-Jul				N/A		Inspection
RH-15	24-Aug				N/A		Inspection
RH-15	23-Sep	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-15	28-Oct	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-15	30-Nov				N/A		Inspection
RH-15	14-Dec				N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
RH-16	25-Jan	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-16	15-Feb				N/A		Inspection
RH-16	24-Mar				N/A		Inspection
RH-16	28-Apr				N/A		Inspection
RH-16	10-May				N/A		Inspection
RH-16	26-Jun				N/A		Inspection
RH-16	29-Jul				N/A		Inspection
RH-16	24-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-16	23-Sep				N/A		Inspection
RH-16	28-Oct				N/A		Inspection
RH-16	30-Nov				N/A		Inspection
RH-16	14-Dec				N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
RH-17	25-Jan	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-17	15-Feb				N/A		Inspection
RH-17	24-Mar				N/A		Inspection
RH-17	28-Apr				N/A		Inspection
RH-17	10-May				N/A		Inspection
RH-17	26-Jun				N/A		Inspection
RH-17	27-Jul				N/A		Inspection
RH-17	24-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-17	23-Sep				N/A		Inspection
RH-17	21-Oct	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-17	30-Nov				N/A		Inspection
RH-17	14-Dec				N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
RH-18	6-Jan				N/A		Inspection
RH-18	17-Feb				N/A		Inspection
RH-18	24-Mar				N/A		Inspection
RH-18	28-Apr				N/A		Inspection
RH-18	10-May				N/A		Inspection
RH-18	26-Jun				N/A		Inspection

RH-18	26-Jul				N/A		Inspection
RH-18	24-Aug				N/A		Inspection
RH-18	23-Sep				N/A		Inspection
RH-18	21-Oct	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-18	25-Nov				N/A		Inspection
RH-18	14-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-18A	6-Jan				N/A		Inspection
RH-18A	17-Feb				N/A		Inspection
RH-18A	24-Mar				N/A		Inspection
RH-18A	28-Apr				N/A		Inspection
RH-18A	10-May	X	X	X	N/A		Inspection-Found T/G open Grease, scrape, and exercise tide gate.
RH-18A	26-Jun				N/A		Inspection
RH-18A	26-Jul				N/A		Inspection
RH-18A	24-Aug				N/A		Inspection
RH-18A	29-Sep				N/A		Inspection
RH-18A	21-Oct				N/A		Inspection
RH-18A	25-Nov				N/A		Inspection
RH-18A	14-Dec	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-19	6-Jan	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	17-Feb	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	24-Mar	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	28-Apr	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	10-May	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	26-Jun	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	26-Jul	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	24-Aug	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	29-Sep	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	21-Oct	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	25-Nov	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	14-Dec	N/A	N/A	N/A	N/A		Inspection,City sewer lines were replaced and regulator was eliminated
RH-19	15-Dec	N/A	N/A	N/A	N/A		Removed Wood From Drop Pipe
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-19A	6-Jan		N/A	N/A			Inspection
RH-19A	17-Feb		N/A	N/A			Inspection
RH-19A	24-Mar		N/A	N/A			Inspection
RH-19A	28-Apr		N/A	N/A			Inspection
RH-19A	10-May		N/A	N/A			Inspection
RH-19A	26-Jun		N/A	N/A			Inspection
RH-19A	26-Jul		N/A	N/A			Inspection
RH-19A	24-Aug		N/A	N/A			Inspection
RH-19A	29-Sep		N/A	N/A			Inspection
RH-19A	21-Oct		N/A	N/A			Inspection
RH-19A	25-Nov		N/A	N/A			Inspection
RH-19A	14-Dec		N/A	N/A			Inspection
RH-19A	15-Dec	X	N/A	N/A			Removed Corrugated Plastic Pipe from Sewer Line Going To Drop Pipe
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-20	6-Jan		N/A	N/A	N/A		Inspection
RH-20	17-Feb		N/A	N/A	N/A		Inspection
RH-20	24-Mar		N/A	N/A	N/A		Inspection
RH-20	28-Apr		N/A	N/A	N/A		Inspection
RH-20	10-May		N/A	N/A	N/A		Inspection
RH-20	26-Jun		N/A	N/A	N/A		Inspection
RH-20	26-Jul		N/A	N/A	N/A		Inspection
RH-20	24-Aug		N/A	N/A	N/A		Inspection
RH-20	29-Sep		N/A	N/A	N/A		Inspection
RH-20	21-Oct		N/A	N/A	N/A		Inspection
RH-20	25-Nov		N/A	N/A	N/A		Inspection
RH-20	14-Dec		N/A	N/A	N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-20A	6-Jan				N/A		Inspection
RH-20A	17-Feb				N/A		Inspection
RH-20A	24-Mar				N/A		Inspection
RH-20A	28-Apr				N/A		Inspection
RH-20A	10-May				N/A		Inspection
RH-20A	26-Jun				N/A		Inspection
RH-20A	26-Jul				N/A		Inspection

RH-20A	24-Aug				N/A		Inspection
RH-20A	29-Sep				N/A		Inspection
RH-20A	21-Oct				N/A		Inspection
RH-20A	25-Nov				N/A		Inspection
RH-20A	14-Dec				N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
RH-21	6-Jan		N/A	N/A	N/A		Inspection
RH-21	17-Feb		N/A	N/A	N/A		Inspection
RH-21	24-Mar		N/A	N/A	N/A		Inspection
RH-21	28-Apr		N/A	N/A	N/A		Inspection
RH-21	10-May		N/A	N/A	N/A		Inspection
RH-21	26-Jun		N/A	N/A	N/A		Inspection
RH-21	26-Jul		N/A	N/A	N/A		Inspection
RH-21	24-Aug		N/A	N/A	N/A		Inspection
RH-21	29-Sep		N/A	N/A	N/A		Inspection
RH-21	21-Oct		N/A	N/A	N/A		Inspection
RH-21	25-Nov		N/A	N/A	N/A		Inspection
RH-21	14-Dec		N/A	N/A	N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
RH-21A	6-Jan				N/A		Inspection
RH-21A	17-Feb				N/A		Inspection
RH-21A	24-Mar				N/A		Inspection
RH-21A	28-Apr				N/A		Inspection
RH-21A	10-May				N/A		Inspection
RH-21A	26-Jun				N/A		Inspection
RH-21A	26-Jul				N/A		Inspection
RH-21A	24-Aug				N/A		Inspection
RH-21A	29-Sep				N/A		Inspection
RH-21A	21-Oct				N/A		Inspection
RH-21A	25-Nov				N/A		Inspection
RH-21A	14-Dec				N/A		Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
RH-22	6-Jan		N/A	N/A			Inspection
RH-22	17-Feb		N/A	N/A			Inspection
RH-22	30-Mar		N/A	N/A			Inspection
RH-22	14-Apr		N/A	N/A			Inspection
RH-22	26-May		N/A	N/A			Inspection
RH-22	27-Jun		N/A	N/A			Inspection
RH-22	27-Jul		N/A	N/A			Inspection
RH-22	23-Aug		N/A	N/A			Inspection
RH-22	28-Sep		N/A	N/A			Inspection
RH-22	29-Oct		N/A	N/A			Inspection
RH-22	18-Nov		N/A	N/A			Inspection
RH-22	15-Dec		N/A	N/A			Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
RH-23	6-Jan		N/A	N/A			Inspection
RH-23	17-Feb		N/A	N/A			Inspection
RH-23	30-Mar		N/A	N/A			Inspection
RH-23	14-Apr		N/A	N/A			Inspection
RH-23	26-May		N/A	N/A			Inspection
RH-23	27-Jun		N/A	N/A			Inspection
RH-23	27-Jul		N/A	N/A			Inspection
RH-23	23-Aug		N/A	N/A			Inspection
RH-23	28-Sep		N/A	N/A			Inspection
RH-23	29-Oct		N/A	N/A			Inspection
RH-23	18-Nov		N/A	N/A			Inspection
RH-23	15-Dec		N/A	N/A			Inspection
Number	**REG PM**	**REG CM**	**TG PM**	**TG CM**	**DB**	**Cl Runs**	**Comments**
RH-24	6-Jan				N/A		Inspection
RH-24	17-Feb				N/A		Inspection
RH-24	30-Mar				N/A		Inspection
RH-24	14-Apr				N/A		Inspection
RH-24	26-May				N/A		Inspection
RH-24	27-Jun				N/A		Inspection
RH-24	27-Jul	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-24	23-Aug				N/A		Inspection
RH-24	28-Sep				N/A		Inspection
RH-24	29-Oct				N/A		Inspection

RH-24	18-Nov				N/A		Inspection
RH-24	15-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-25	6-Jan				N/A		Inspection
RH-25	17-Feb	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-25	30-Mar				N/A		Inspection
RH-25	14-Apr				N/A		Inspection
RH-25	26-May				N/A		Inspection
RH-25	27-Jun				N/A		Inspection
RH-25	27-Jul	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate.
RH-25	23-Aug				N/A		Inspection
RH-25	28-Sep				N/A		Inspection
RH-25	29-Oct				N/A		Inspection
RH-25	18-Nov				N/A		Inspection
RH-25	15-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-26	6-Jan				N/A		Inspection
RH-26	17-Feb				N/A		Inspection
RH-26	30-Mar				N/A		Inspection
RH-26	30-Apr				N/A		Inspection
RH-26	10-May				N/A		Inspection
RH-26	27-Jun				N/A		Inspection
RH-26	26-Jul				N/A		Inspection
RH-26	23-Aug				N/A		Inspection
RH-26	29-Sep	X	X		N/A		Inspection-Closed tide gate-Grease, scrape, and exercise tide gate
RH-26	28-Oct	X	X		N/A		Inspection-Changed Grease Fittings-Grease, scrape, and exercise tide gate
RH-26	18-Nov				N/A		Inspection
RH-26	14-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
RH-GPS	6-Jan				N/A		Inspection
RH-GPS	17-Feb				N/A		Inspection
RH-GPS	30-Mar	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate A,B,C,D.
RH-GPS	30-Apr				N/A		inspection
RH-GPS	26-May				N/A		Inspection
RH-GPS	27-Jun				N/A		Inspection
RH-GPS	27-Jul				N/A		Inspection
RH-GPS	23-Aug	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate
RH-GPS	28-Sep				N/A		Inspection
RH-GPS	29-Oct				N/A		Inspection
RH-GPS	18-Nov	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate B and C.
RH-GPS	15-Dec	X	X		N/A		Inspection-Grease, scrape, and exercise tide gate
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
CSO-1	6-Jan				N/A		Inspection
CSO-1	17-Feb				N/A		Inspection
CSO-1	30-Mar				N/A		Inspection
CSO-1	30-Apr				N/A		Inspection
CS0-1	26-May				N/A		Inspection
CSO-1	27-Jun				N/A		Inspection
CSO-1	27-Jul				N/A		Inspection
CSO-1	23-Aug				N/A		Inspection
CSO-1	28-Sep				N/A		Inspection
CSO-1	29-Oct				N/A		Inspection
CSO-1	18-Nov				N/A		Inspection
CSO-1	15-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
CS0-2	6-Jan				N/A		Inspection
CSO-2	17-Feb				N/A		Inspection
CSO-2	24-Mar				N/A		Inspection
CSO-2	30-Apr				N/A		Inspection
CSO-2	26-May				N/A		Inspection
CSO-2	27-Jun				N/A		Inspection
CSO-2	27-Jul				N/A		Inspection
CSO-2	23-Aug				N/A		Inspection
CSO-2	28-Sep				N/A		Inspection
CSO-2	29-Oct				N/A		Inspection
CSO-2	18-Nov				N/A		Inspection
CSO-2	15-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments

CSO-3	6-Jan				N/A		Inspection
CSO-3	17-Feb				N/A		Inspection
CSO-3	30-Mar				N/A		Inspection
CSO-3	30-Apr				N/A		Inspection
CSO-3	26-May				N/A		Inspection
CSO-3	27-Jun				N/A		Inspection
CSO-3	27-Jul				N/A		Inspection
CSO-3	23-Aug				N/A		Inspection
CSO-3	28-Sep				N/A		Inspection
CSO-3	29-Oct				N/A		Inspection
CSO-3	18-Nov				N/A		Inspection
CSO-3	15-Dec				N/A		Inspection
Number	REG PM	REG CM	TG PM	TG CM	DB	Cl Runs	Comments
GFT	25-Jan	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	15-Feb	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	2-Mar	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	28-Apr	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	3-May	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	24-Jun	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	27-Jul	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	16-Aug	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	23-Sep	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	20-Oct	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	25-Nov	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris
GFT	14-Dec	N/A	N/A	N/A	N/A	N/A	Inspection-No Boom-Bar Screens Filled With Debris

RK - REGULATOR LOCATIONS - 2022

LOCATION	REG PM	REG CM	TG PM	TG CM	EBPP	Cl Runs	ACTIONS TAKEN
ROCK-01	01/01/22						
ROCK-01	02/06/22						
ROCK-01	03/15/22						
ROCK-01	04/03/22						
ROCK-01	05/01/22						
ROCK-01	06/04/22						
ROCK-01	07/02/22						
ROCK-01	08/13/22						
ROCK-01	09/03/22						
ROCK-01	10/16/22		X				PM Tide Gate. No leaks.
ROCK-01	11/05/22						
ROCK-01	12/06/22						
ROCK-02	01/01/22						
ROCK-02	02/06/22						
ROCK-02	03/15/22						
ROCK-02	04/03/22						
ROCK-02	05/14/22						
ROCK-02	06/04/22						
ROCK-02	07/02/22						
ROCK-02	08/13/22						
ROCK-02	09/03/22						
ROCK-02	10/16/22		X				PM Tide Gate. No leaks.
ROCK-02	11/05/22						
ROCK-02	12/06/22						
ROCK-D10	01/01/22						Removed debris from top side with boat hook.
ROCK-D10	02/06/22						
ROCK-D10	03/15/22						Flushed with flusher truck - removed debris.
ROCK-D10	04/03/22						
ROCK-D10	05/14/22						
ROCK-D10	06/04/22						
ROCK-D10	07/02/22						
ROCK-D10	08/13/22						Cleared partial blockage, rags, debris with boat hook from top side (Diversion).
ROCK-D10	09/03/22						
ROCK-D10	10/16/22						
ROCK-D10	11/05/22						
ROCK-D10	12/06/22						
ROCK-D11	01/01/22						
ROCK-D11	02/06/22						
ROCK-D11	03/15/22						Flushed with flusher truck - removed debris.
ROCK-D11	04/03/22						
ROCK-D11	05/14/22						
ROCK-D11	06/04/22						
ROCK-D11	07/02/22						
ROCK-D11	08/13/22						

ROCK-D11	09/03/22						
ROCK-D11	10/16/22						
ROCK-D11	11/05/22						
ROCK-D11	12/06/22						
ROCK-D12	01/01/22						
ROCK-D12	02/06/22						
ROCK-D12	03/15/22						
ROCK-D12	04/03/22						
ROCK-D12	05/14/22						
ROCK-D12	06/04/22						
ROCK-D12	07/02/22						
ROCK-D12	08/13/22						
ROCK-D12	09/03/22						
ROCK-D12	10/16/22						
ROCK-D12	11/05/22						
ROCK-D12	12/06/22						
ROCK-D15	01/01/22						
ROCK-D15	02/06/22						
ROCK-D15	03/15/22						
ROCK-D15	04/03/22						
ROCK-D15	05/14/22						
ROCK-D15	06/04/22						
ROCK-D15	07/02/22						
ROCK-D15	08/13/22						
ROCK-D15	09/03/22						
ROCK-D15	10/16/22						
ROCK-D15	11/05/22						
ROCK-D15	12/06/22						
ROCK-D2	01/01/22						
ROCK-D2	02/06/22						
ROCK-D2	03/15/22						
ROCK-D2	04/03/22						
ROCK-D2	05/14/22						
ROCK-D2	06/04/22						
ROCK-D2	07/02/22						
ROCK-D2	08/13/22						
ROCK-D2	09/03/22						
ROCK-D2	10/16/22						
ROCK-D2	11/05/22						
ROCK-D2	12/06/22						
ROCK-D3	01/01/22						Needs new man hole ring.
ROCK-D3	02/06/22						
ROCK-D3	03/15/22						
ROCK-D3	04/03/22						
ROCK-D3	05/14/22						
ROCK-D3	06/04/22						
ROCK-D3	07/02/22						
ROCK-D3	08/13/22						

ROCK-D3	09/03/22						
ROCK-D3	10/16/22						
ROCK-D3	11/05/22						
ROCK-D3	12/06/22						
ROCK-D4	01/01/22						
ROCK-D4	02/06/22						
ROCK-D4	03/15/22						
ROCK-D4	04/03/22						
ROCK-D4	05/14/22						
ROCK-D4	06/04/22						
ROCK-D4	07/02/22						
ROCK-D4	08/13/22						
ROCK-D4	09/03/22						
ROCK-D4	10/16/22						
ROCK-D4	11/05/22						
ROCK-D4	12/06/22						
ROCK-D5	01/01/22						
ROCK-D5	02/06/22						
ROCK-D5	03/15/22						
ROCK-D5	04/03/22						
ROCK-D5	05/14/22						
ROCK-D5	06/04/22						Removed debris and rags from Diversion Chamber with boat hook.
ROCK-D5	07/02/22						
ROCK-D5	08/13/22						
ROCK-D5	09/03/22						
ROCK-D5	10/16/22						
ROCK-D5	11/05/22						
ROCK-D5	12/06/22						
ROCK-D6	01/01/22						
ROCK-D6	02/06/22						
ROCK-D6	03/15/22						
ROCK-D6	04/03/22						
ROCK-D6	05/14/22						Removed debris.
ROCK-D6	06/04/22						
ROCK-D6	07/02/22						Removed debris from the hole.
ROCK-D6	08/13/22						
ROCK-D6	09/03/22						Removed rags and debris from Diversion.
ROCK-D6	10/16/22						
ROCK-D6	11/05/22						
ROCK-D6	12/06/22						
ROCK-D7	01/01/22						
ROCK-D7	02/06/22						
ROCK-D7	03/15/22						Flushed with flusher truck - removed debris.
ROCK-D7	04/03/22						
ROCK-D7	05/14/22						
ROCK-D7	06/04/22						
ROCK-D7	07/02/22						
ROCK-D7	08/13/22						

ROCK-D7	09/03/22						Removed rope and debris from Diversion.
ROCK-D7	10/16/22						
ROCK-D7	11/05/22						
ROCK-D7	12/06/22						
ROCK-D8	01/01/22						
ROCK-D8	02/06/22						Removed partial blockage with boat hook from top side.
ROCK-D8	03/15/22						
ROCK-D8	04/03/22						
ROCK-D8	05/14/22						
ROCK-D8	06/04/22						
ROCK-D8	07/02/22						
ROCK-D8	08/13/22						
ROCK-D8	09/03/22						
ROCK-D8	10/16/22						
ROCK-D8	11/05/22						
ROCK-D8	12/06/22						
ROCK-D9	01/01/22						Removed debris from top side with boat hook.
ROCK-D9	02/06/22						Removed partial blockage with boat hook from top side.
ROCK-D9	03/15/22						
ROCK-D9	04/03/22						
ROCK-D9	05/14/22						
ROCK-D9	06/04/22						
ROCK-D9	07/02/22						
ROCK-D9	08/13/22						
ROCK-D9	09/03/22						
ROCK-D9	10/16/22						
ROCK-D9	10/16/22						
ROCK-D9	11/05/22						
ROCK-D9	12/06/22						

Note:
Only ROC-01 & 02 have tide gates

TI - REGULATOR LOCATIONS - 2022

LOCATION	REG PM	REG CM	TG PM	TG CM	EBPP	Cl Runs	ACTIONS TAKEN
TI1	N/A						
TI2	N/A						
TI3	01/04/22		X				exercised tide gate
TI3	01/17/22						
TI3	02/03/22		X				full entry inspection exercised tide gate
TI3	03/05/22		X				exercised tide gate
TI3	04/02/22		X				full entry inspection,greased and exercised tide gate
TI3	05/29/22		X				exercised tide gate
TI3	06/05/22		X				exercised tide gate
TI3	07/04/22		X				full entry inspection,greased and exercised tide gate
TI3	08/12/22		X				exercised tide gate
TI3	09/10/22		X				exercised tide gate
TI3	09/22/22						
TI3	09/24/22					X	
TI3	10/10/22		X				full entry inspection,exercised tide gate
TI3	11/10/22						
TI3	12/12/22		X				full entry inspection,greased and exercised tide gate
TI4	01/04/22		X				exercised tide gate
TI4	01/30/22						
TI4	01/31/22						no comms
TI4	02/03/22		X				full entry inspection exercised tide gate
TI4	03/05/22		X				exercised tide gate
TI4	04/02/22		X				exercised tide gate
TI4	05/29/22		X				exercised tide gate
TI4	06/05/22		X				exercised tide gate
TI4	07/04/22		X				exercised tide gate
TI4	08/21/22		X				exercised tide gate
TI4	09/10/22						
TI4	09/22/22						
TI4	09/24/22					X	
TI4	10/10/22	X	X				full entry,exercised tide gate,removed partial blockage from regulator
TI4	11/10/22						
TI4	12/12/22						
TI5	01/04/22						

TI5	02/03/22						
TI5	03/05/22						
TI5	04/02/22		X				full entry inspection,greased and exercised tide gate
TI5	05/29/22						
TI5	06/05/22						
TI5	07/04/22						
TI5	08/12/22						
TI5	09/10/22						
TI5	N/A						10/1/22 to 12/31/22 under construction
TI6	01/04/22						
TI6	02/03/22						
TI6	03/05/22						
TI6	04/02/22						
TI6	05/29/22						
TI6	06/05/22						
TI6	07/04/22						
TI6	08/12/22						
TI6	09/10/22						
TI6	09/22/22						
TI6	10/10/22						
TI6	11/10/22						
TI6	12/12/22						removed partial blockage in diversion
TI7	01/04/22		X				exercised tide gate
TI7	02/03/22		X				full entry inspection exercised tide gate
TI7	03/05/22		X				exercised tide gate
TI7	04/02/22						full entry inspection removed debris from diversion chamber
TI7	04/13/22		X				exercised tide gate,removed debris from diversion chamber
TI7	05/29/22		X				exercised tide gate
TI7	06/05/22		X				exercised tide gate
TI7	07/04/22	X	X				full entry,removed partial blockage at regulator,greased&exercised gate
TI7	08/12/22		X				exercised tide gate
TI7	09/10/22		X				exercised tide gate
TI7	09/22/22		X				exercised tide gate
TI7	09/24/22		X			X	tide gate was held open,removed sticks exercised tide gate
TI7	10/10/22	X	X				exercised tide gate,removed partial blockage from regulator

TI7	11/10/22		X				exercised tide gate
TI7	12/12/22		X				exercised tide gate
TI9	01/04/22		N/A	N/A			full entry inspection cleaned sonic cone
TI9	02/03/22		N/A	N/A			full entry inspection
TI9	03/26/22		N/A	N/A			full entry inspection
TI9	04/28/22		N/A	N/A			
TI9	05/26/22		N/A	N/A			full entry inspection
TI9	06/05/22		N/A	N/A			full entry inspection
TI9	07/01/22		N/A	N/A			no comms
TI9	07/04/22		N/A	N/A			
TI9	08/12/22		N/A	N/A			full entry inspection
TI9	08/31/22		N/A	N/A			
TI9	09/01/22		N/A	N/A			no comms checked twice
TI9	09/10/22		N/A	N/A			full entry inspection
TI9	09/24/22		N/A	N/A			
TI9	10/10/22		N/A	N/A			full entry inspection
TI9	11/10/22		N/A	N/A			full entry inspection
TI9	12/12/22		N/A	N/A			full entry inspection
TI10A	01/25/22		N/A	N/A			
TI10A	02/02/22		N/A	N/A			full entry inspection
TI10A	03/05/22		N/A	N/A			full entry inspection cleaned floats
TI10A	04/02/22		N/A	N/A			
TI10A	05/14/22		N/A	N/A			full entry inspection,no comms checked twice
TI10A	06/20/22		N/A	N/A			
TI10A	07/04/22		N/A	N/A			
TI10A	08/12/22		N/A	N/A			
TI10A	09/10/22		N/A	N/A			
TI10A	10/10/22		N/A	N/A			
TI10A	11/10/22		N/A	N/A			
TI10A	12/12/22		N/A	N/A			
TI10B	01/25/22		N/A	N/A			
TI10B	02/02/22		N/A	N/A			
TI10B	03/05/22		N/A	N/A			
TI10B	04/02/22		N/A	N/A			
TI10B	05/26/22		N/A	N/A			

TI10B	06/20/22		N/A	N/A			
TI10B	07/04/22		N/A	N/A			
TI10B	08/12/22		N/A	N/A			
TI10B	09/10/22		N/A	N/A			
TI10B	10/10/22		N/A	N/A			
TI10B	11/10/22		N/A	N/A			
TI10B	12/12/22		N/A	N/A			
TI11	01/25/22		N/A	N/A			
TI11	02/26/22		N/A	N/A			
TI11	03/05/22	X	N/A	N/A			full entry inspection removed partial blockage from regulator
TI11	04/28/22		N/A	N/A			
TI11	05/29/22		N/A	N/A			
TI11	06/20/22		N/A	N/A			
TI11	07/04/22		N/A	N/A			
TI11	08/29/22		N/A	N/A			
TI11	09/25/22		N/A	N/A			
TI11	09/29/22		N/A	N/A			
TI11	10/10/22		N/A	N/A			
TI11	11/24/22		N/A	N/A			
TI11	12/30/22		N/A	N/A			
TI12	01/17/22						
TI12	02/03/22						
TI12	03/05/02		X				full entry, exercised tide gate,removed rocks & grit from diversion
TI12	04/20/22		X				full entry inspection,exercised tide gate
TI12	05/08/22		X				exercised tide gate
TI12	05/09/22		X				removed wood from outfall,exercised tide gate
TI12	05/21/22		X				exercised tide gate
TI12	05/22/22		X				exercised tide gate
TI12	05/29/22						
TI12	06/03/22		X				exercised tide gate
TI12	07/31/22		X				exercised tide gate
TI12	08/29/22		X				exercised tide gate
TI12	09/11/22		X				exercised tide gate
TI12	09/24/22					X	
TI12	09/27/22		X				exercised tide gate

TI12	10/02/22		X				full entry inspection,exercised tide gate
TI12	10/10/22						
TI12	11/19/22		X	X			full entry,exercised tide gate and removed debris from chamber
TI12	12/23/22		X				exercised tide gate
TI13	01/04/22		N/A	N/A			full entry inspection cleaned sonic cone
TI13	02/28/22		N/A	N/A			
TI13	03/27/22		N/A	N/A			
TI13	04/28/22		N/A	N/A			
TI13	05/30/22		N/A	N/A			
TI13	06/20/22		N/A	N/A			
TI13	07/31/22		N/A	N/A			
TI13	08/29/22		N/A	N/A			
TI13	09/25/22		N/A	N/A			
TI13	09/29/22		N/A	N/A			
TI13	10/30/22		N/A	N/A			
TI13	11/24/22		N/A	N/A			
TI13	12/25/22		N/A	N/A			
TI14	01/27/22		N/A	N/A			
TI14	02/28/22		N/A	N/A			
TI14	03/27/22		N/A	N/A			
TI14	04/28/22		N/A	N/A			
TI14	05/30/22		N/A	N/A			
TI14	06/20/22		N/A	N/A			
TI14	07/31/22		N/A	N/A			
TI14	08/29/22		N/A	N/A			
TI14	09/29/22		N/A	N/A			
TI14	10/30/22		N/A	N/A			
TI14	11/24/22		N/A	N/A			
TI14	12/25/22		N/A	N/A			
TI15	01/27/22		N/A	N/A			
TI15	02/28/22		N/A	N/A			
TI15	03/27/22		N/A	N/A			
TI15	04/28/22		N/A	N/A			
TI15	05/30/22		N/A	N/A			
TI15	06/20/22		N/A	N/A			

TI15	07/31/22		N/A	N/A			
TI15	08/29/22		N/A	N/A			
TI15	09/29/22		N/A	N/A			
TI15	10/30/22		N/A	N/A			
TI15	11/24/22		N/A	N/A			
TI15	12/25/22		N/A	N/A			
TI16	01/27/22		N/A	N/A			
TI16	02/28/22		N/A	N/A			
TI16	03/27/22		N/A	N/A			
TI16	04/28/22		N/A	N/A			
TI16	05/30/22		N/A	N/A			
TI16	06/20/22		N/A	N/A			
TI16	07/31/22		N/A	N/A			
TI16	08/29/22		N/A	N/A			
TI16	09/29/22		N/A	N/A			
TI16	10/30/22		N/A	N/A			
TI16	11/24/22		N/A	N/A			
TI16	12/25/22		N/A	N/A			
TI17	01/27/22		N/A	N/A			
TI17	02/28/22		N/A	N/A			
TI17	03/27/22		N/A	N/A			
TI17	04/28/22		N/A	N/A			
TI17	05/30/22		N/A	N/A			
TI17	06/20/22		N/A	N/A			
TI17	07/31/22		N/A	N/A			
TI17	08/29/22		N/A	N/A			
TI17	09/29/22		N/A	N/A			
TI17	10/30/22		N/A	N/A			
TI17	11/24/22		N/A	N/A			
TI17	12/25/22		N/A	N/A			
TI18	01/27/22		N/A	N/A			
TI18	02/28/22		N/A	N/A			
TI18	03/27/22		N/A	N/A			
TI18	04/28/22		N/A	N/A			
TI18	05/30/22		N/A	N/A			

TI18	06/20/22		N/A	N/A			
TI18	07/31/22		N/A	N/A			
TI18	08/29/22		N/A	N/A			
TI18	09/29/22		N/A	N/A			
TI18	10/30/22		N/A	N/A			
TI18	11/24/22		N/A	N/A			
TI18	12/25/22		N/A	N/A			
TI19	01/27/22		N/A	N/A			
TI19	02/28/22		N/A	N/A			
TI19	03/27/22		N/A	N/A			
TI19	04/28/22		N/A	N/A			
TI19	05/30/22		N/A	N/A			
TI19	06/20/22		N/A	N/A			
TI19	07/31/22		N/A	N/A			
TI19	08/29/22		N/A	N/A			
TI19	09/29/22		N/A	N/A			
TI19	10/30/22		N/A	N/A			
TI19	11/24/22		N/A	N/A			
TI19	12/25/22		N/A	N/A			
TI20	01/27/22		N/A	N/A			
TI20	02/28/22		N/A	N/A			
TI20	03/27/22		N/A	N/A			
TI20	04/28/22		N/A	N/A			
TI20	05/30/22		N/A	N/A			
TI20	06/20/22		N/A	N/A			
TI20	07/31/22		N/A	N/A			
TI20	08/29/22		N/A	N/A			
TI20	09/29/22		N/A	N/A			
TI20	10/30/22		N/A	N/A			
TI20	11/24/22		N/A	N/A			
TI20	12/25/22		N/A	N/A			
TI21	01/27/22		N/A	N/A			
TI21	02/28/22		N/A	N/A			
TI21	03/27/22		N/A	N/A			
TI21	04/28/22		N/A	N/A			

TI21	05/30/22		N/A	N/A			
TI21	06/20/22		N/A	N/A			
TI21	07/31/22		N/A	N/A			
TI21	08/29/22		N/A	N/A			
TI21	09/29/22		N/A	N/A			
TI21	10/30/22		N/A	N/A			
TI21	11/24/22		N/A	N/A			
TI21	12/25/22		N/A	N/A			
TI22	01/27/22		N/A	N/A			
TI22	02/28/22		N/A	N/A			
TI22	03/27/22		N/A	N/A			
TI22	04/28/22		N/A	N/A			
TI22	05/30/22		N/A	N/A			
TI22	06/20/22		N/A	N/A			
TI22	07/31/22		N/A	N/A			
TI22	08/29/22		N/A	N/A			
TI22	09/29/22		N/A	N/A			
TI22	10/30/22		N/A	N/A			
TI22	11/24/22		N/A	N/A			
TI22	12/25/22		N/A	N/A			
TI23	01/27/22		N/A	N/A			
TI23	02/28/22		N/A	N/A			
TI23	03/27/22		N/A	N/A			
TI23	04/28/22		N/A	N/A			
TI23	05/30/22		N/A	N/A			
TI23	06/20/22		N/A	N/A			
TI23	07/21/22		N/A	N/A			
TI23	07/31/22		N/A	N/A			
TI23	08/29/22		N/A	N/A			
TI23	09/29/22		N/A	N/A			
TI23	10/30/22		N/A	N/A			
TI23	11/24/22		N/A	N/A			
TI23	12/25/22		N/A	N/A			
TI24	01/27/22		N/A	N/A			
TI24	02/28/22		N/A	N/A			

TI24	03/27/22		N/A	N/A			
TI24	04/28/22		N/A	N/A			
TI24	05/30/22		N/A	N/A			
TI24	06/20/22		N/A	N/A			
TI24	07/31/22		N/A	N/A			
TI24	08/29/22		N/A	N/A			
TI24	09/29/22		N/A	N/A			
TI24	10/30/22		N/A	N/A			
TI24	11/24/22		N/A	N/A			
TI24	12/25/22		N/A	N/A			
TI25	01/27/22		N/A	N/A			
TI25	02/28/22		N/A	N/A			
TI25	03/27/22		N/A	N/A			
TI25	04/28/22		N/A	N/A			
TI25	05/30/22		N/A	N/A			
TI25	06/20/22		N/A	N/A			
TI25	07/31/22		N/A	N/A			
TI25	08/29/22		N/A	N/A			
TI25	09/29/22		N/A	N/A			
TI25	10/30/22		N/A	N/A			
TI25	11/24/22		N/A	N/A			
TI25	12/25/22		N/A	N/A			
TI26	01/27/22		N/A	N/A			
TI26	02/28/22		N/A	N/A			
TI26	03/27/22		N/A	N/A			
TI26	04/28/22		N/A	N/A			
TI26	05/30/22		N/A	N/A			
TI26	06/20/22		N/A	N/A			
TI26	07/31/22		N/A	N/A			
TI26	08/29/22		N/A	N/A			
TI26	09/29/22		N/A	N/A			
TI26	10/30/22		N/A	N/A			
TI26	11/24/22		N/A	N/A			
TI26	12/25/22		N/A	N/A			
TI27	01/27/22		N/A	N/A			

TI27	02/28/22		N/A	N/A			
TI27	03/27/22		N/A	N/A			
TI27	04/28/22		N/A	N/A			
TI27	05/30/22		N/A	N/A			
TI27	06/20/22		N/A	N/A			
TI27	07/31/22		N/A	N/A			
TI27	08/29/22		N/A	N/A			
TI27	09/29/22		N/A	N/A			
TI27	10/30/22		N/A	N/A			
TI27	11/24/22		N/A	N/A			
TI27	12/25/22		N/A	N/A			
TI28	01/27/22		N/A	N/A			
TI28	02/28/22		N/A	N/A			
TI28	03/27/22		N/A	N/A			
TI28	04/28/22		N/A	N/A			
TI28	05/30/22		N/A	N/A			
TI28	06/20/22		N/A	N/A			
TI28	07/31/22		N/A	N/A			
TI28	08/29/22		N/A	N/A			
TI28	09/29/22		N/A	N/A			
TI28	10/30/22		N/A	N/A			
TI28	11/24/22		N/A	N/A			
TI28	12/25/22		N/A	N/A			
TI29	01/13/22		N/A	N/A			
TI29	02/26/22		N/A	N/A			
TI29	03/14/22		N/A	N/A			
TI29	04/20/22		N/A	N/A			
TI29	05/02/22		N/A	N/A			
TI29	06/12/22		N/A	N/A			
TI29	07/10/22		N/A	N/A			
TI29	08/10/22		N/A	N/A			
TI29	09/29/22		N/A	N/A			
TI29	10/07/22		N/A	N/A			
TI29	11/09/22		N/A	N/A			
TI29	12/20/22		N/A	N/A			

TI30	01/13/22		N/A	N/A			full entry inspection
TI30	02/26/22		N/A	N/A			
TI30	03/14/22		N/A	N/A			full entry inspections
TI30	04/20/22		N/A	N/A			full entry inspections
TI30	05/02/22		N/A	N/A			
TI30	06/14/22		N/A	N/A			full entry inspection
TI30	07/10/22		N/A	N/A			full entry inspection,removed partial blockage from diversion
TI30	08/10/22		N/A	N/A			full entry inspection,removed debris from diversion
TI30	09/28/22	X	N/A	N/A			full entry inspection,removed partial blockage in regulator
TI30	10/07/22		N/A	N/A			
TI30	11/09/22		N/A	N/A			full entry inspection
TI30	12/20/22		N/A	N/A			
TI31	01/25/22		N/A	N/A			
TI31	02/02/22		N/A	N/A			
TI31	03/02/22		N/A	N/A			
TI31	04/20/22		N/A	N/A			
TI31	05/25/22		N/A	N/A			
TI31	06/02/22		N/A	N/A			
TI31	07/08/22		N/A	N/A			
TI31	08/31/22		N/A	N/A			
TI31	09/22/22		N/A	N/A			
TI31	10/07/22		N/A	N/A			
TI31	11/09/22		N/A	N/A			
TI31	12/13/22		N/A	N/A			
TI32	01/13/22		N/A	N/A			
TI32	02/02/22		N/A	N/A			removed partial blockage from diversion
TI32	03/14/22		N/A	N/A			removed partial blockage from diversion
TI32	04/20/22		N/A	N/A			removed partial blockage from diversion with boat hook
TI32	05/02/22		N/A	N/A			
TI32	06/02/22		N/A	N/A			
TI32	07/08/22		N/A	N/A			
TI32	08/10/22		N/A	N/A			
TI32	09/30/22		N/A	N/A			
TI32	10/07/22		N/A	N/A			
TI32	11/04/22		N/A	N/A			

TI32	12/05/22		N/A	N/A			
TI33	01/13/22		N/A	N/A			
TI33	02/02/22		N/A	N/A			
TI33	03/14/22		N/A	N/A			
TI33	04/20/22		N/A	N/A			
TI33	05/02/22		N/A	N/A			
TI33	06/02/22		N/A	N/A			
TI33	07/08/22		N/A	N/A			
TI33	08/10/22		N/A	N/A			
TI33	09/30/22		N/A	N/A			
TI33	10/07/22		N/A	N/A			
TI33	11/04/22		N/A	N/A			
TI33	12/05/22		N/A	N/A			
TI34	01/13/22		N/A	N/A			full entry inspection removed debris from diversion
TI34	02/02/22		N/A	N/A			full entry inspection removed partiol blockage from diversion
TI34	03/14/22		N/A	N/A			remove partial blockage from diversion
TI34	04/20/22		N/A	N/A			remove partial blockage from diversion with boat hook
TI34	05/02/22		N/A	N/A			
TI34	06/02/22		N/A	N/A			
TI34	07/04/22		N/A	N/A			removed partial blockage from diversion with boat hook
TI34	08/10/22		N/A	N/A			
TI34	09/30/22		N/A	N/A			
TI34	10/07/22		N/A	N/A			
TI34	11/04/22		N/A	N/A			removed partial blockage in diversion with boat hook
TI34	12/05/22		N/A	N/A			
TI35	01/13/22		N/A	N/A			
TI35	02/28/22		N/A	N/A			
TI35	03/14/22		N/A	N/A			
TI35	04/20/22		N/A	N/A			
TI35	05/02/22		N/A	N/A			
TI35	06/12/22		N/A	N/A			
TI35	07/10/22		N/A	N/A			
TI35	08/10/22		N/A	N/A			
TI35	09/30/22		N/A	N/A			
TI35	10/07/22		N/A	N/A			

TI35	11/04/22		N/A	N/A			
TI35	12/05/22		N/A	N/A			
TI36	01/13/22		N/A	N/A			
TI36	02/28/22		N/A	N/A			
TI36	03/14/22		N/A	N/A			
TI36	04/20/22		N/A	N/A			
TI36	05/02/22		N/A	N/A			
TI36	06/12/22		N/A	N/A			
TI36	07/10/22		N/A	N/A			
TI36	08/10/22		N/A	N/A			
TI36	09/30/22		N/A	N/A			
TI36	10/07/22		N/A	N/A			
TI36	11/04/22		N/A	N/A			
TI36	12/05/22		N/A	N/A			
TI37	01/13/22		N/A	N/A			
TI37	02/28/22		N/A	N/A			
TI37	03/14/22		N/A	N/A			
TI37	04/20/22		N/A	N/A			
TI37	05/02/22		N/A	N/A			
TI37	06/12/22		N/A	N/A			
TI37	07/10/22		N/A	N/A			
TI37	08/10/22		N/A	N/A			
TI37	09/30/22		N/A	N/A			
TI37	10/07/22		N/A	N/A			
TI37	11/04/22		N/A	N/A			
TI37	12/05/22		N/A	N/A			
TI38	01/13/22		N/A	N/A			removed debris with boat hook
TI38	02/28/22	X	N/A	N/A			full entry inspection removed partial blockage in regulator
TI38	03/14/22		N/A	N/A			
TI38	04/21/22		N/A	N/A			
TI38	05/10/22		N/A	N/A			
TI38	06/12/22		N/A	N/A			
TI38	07/10/22		N/A	N/A			
TI38	08/10/22		N/A	N/A			
TI38	09/30/22		N/A	N/A			

TI38	10/07/22		N/A	N/A			removed partial blockage in diversion with boat hook
TI38	11/04/22		N/A	N/A			
TI38	12/05/22		N/A	N/A			
TI39	01/13/22		N/A	N/A			
TI39	02/28/22		N/A	N/A			
TI39	03/14/22		N/A	N/A			
TI39	04/21/22		N/A	N/A			
TI39	05/10/22		N/A	N/A			
TI39	06/12/22		N/A	N/A			
TI39	07/10/22		N/A	N/A			
TI39	08/10/22		N/A	N/A			
TI39	09/30/22		N/A	N/A			
TI39	10/07/22		N/A	N/A			
TI39	11/04/22		N/A	N/A			
TI39	12/05/22		N/A	N/A			
TI40	01/14/22		N/A	N/A			
TI40	02/12/22		N/A	N/A			
TI40	03/14/22		N/A	N/A			
TI40	04/27/22		N/A	N/A			
TI40	05/10/22		N/A	N/A			
TI40	06/13/22		N/A	N/A			
TI40	07/10/22		N/A	N/A			
TI40	08/10/22		N/A	N/A			
TI40	09/29/22		N/A	N/A			
TI40	10/08/22		N/A	N/A			full entry inspection
TI40	11/04/22		N/A	N/A			
TI40	11/24/22		N/A	N/A			full entry inspection
TI40	12/13/22		N/A	N/A			full entry inspection
TI40A	01/14/22		N/A	N/A			
TI40A	02/12/22		N/A	N/A			
TI40A	03/14/22		N/A	N/A			
TI40A	04/21/22		N/A	N/A			
TI40A	05/10/22		N/A	N/A			
TI40A	06/13/22		N/A	N/A			
TI40A	07/10/22		N/A	N/A			

TI40A	08/10/22		N/A	N/A			
TI40A	09/29/22		N/A	N/A			
TI40A	10/08/22		N/A	N/A			
TI40A	11/04/22		N/A	N/A			
TI40A	12/13/22		N/A	N/A			
TI41	01/14/22		N/A	N/A			
TI41	02/20/22		N/A	N/A			
TI41	03/20/22		N/A	N/A			
TI41	04/21/22		N/A	N/A			
TI41	05/10/22		N/A	N/A			
TI41	06/13/22		N/A	N/A			
TI41	07/09/22		N/A	N/A			
TI41	08/28/22		N/A	N/A			
TI41	09/04/22		N/A	N/A			
TI41	10/08/22		N/A	N/A			
TI41	11/09/22		N/A	N/A			
TI41	12/13/22		N/A	N/A			
TI42	01/14/22		N/A	N/A			
TI42	02/20/22		N/A	N/A			
TI42	03/20/22		N/A	N/A			
TI42	04/21/22		N/A	N/A			
TI42	05/10/22		N/A	N/A			
TI42	06/13/22		N/A	N/A			
TI42	07/09/22		N/A	N/A			
TI42	8/28/2022		N/A	N/A			
TI42	9/4/2022		N/A	N/A			
TI42	10/8/2022		N/A	N/A			
TI42	11/9/2022		N/A	N/A			
TI42	12/13/2022		N/A	N/A			
TI43	1/14/2022		N/A	N/A			
TI43	2/20/2022		N/A	N/A			
TI43	3/20/2022		N/A	N/A			
TI43	4/17/2022		N/A	N/A			
TI43	5/10/2022		N/A	N/A			
TI43	6/13/2022		N/A	N/A			

TI43	7/9/2022		N/A	N/A			
TI43	8/24/2022		N/A	N/A			
TI43	9/4/2022		N/A	N/A			
TI43	10/8/2022		N/A	N/A			removed partial blockage from diversin with boat hook
TI43	11/9/2022		N/A	N/A			
TI43	12/13/2022		N/A	N/A			
TI44	1/14/2022		N/A	N/A			
TI44	2/20/2022		N/A	N/A			
TI44	3/20/2022		N/A	N/A			
TI44	4/16/2022		N/A	N/A			DWB used flusher truck to clear blockage in the line
TI44	4/17/2022		N/A	N/A			
TI44	5/10/2022		N/A	N/A			
TI44	6/13/2022		N/A	N/A			
TI44	7/9/2022		N/A	N/A			
TI44	8/24/2022		N/A	N/A			
TI44	9/5/2022		N/A	N/A			
TI44	10/8/2022		N/A	N/A			
TI44	11/3/2022		N/A	N/A			
TI44	12/13/2022		N/A	N/A			
TI45	1/14/2022		N/A	N/A			
TI45	2/20/2022		N/A	N/A			
TI45	3/21/2022		N/A	N/A			
TI45	4/21/2022		N/A	N/A			
TI45	5/10/2022		N/A	N/A			
TI45	6/13/2022		N/A	N/A			
TI45	7/9/2022		N/A	N/A			
TI45	8/28/2022		N/A	N/A			
TI45	9/4/2022		N/A	N/A			
TI45	10/8/2022		N/A	N/A			
TI45	11/3/2022		N/A	N/A			
TI45	12/13/2022		N/A	N/A			
TI45A	1/14/2022		N/A	N/A			
TI45A	2/20/2022		N/A	N/A			
TI45A	3/21/2022		N/A	N/A			
TI45A	4/21/2022		N/A	N/A			

TI45A	5/10/2022		N/A	N/A			
TI45A	6/13/2022		N/A	N/A			
TI45A	7/9/2022		N/A	N/A			
TI45A	8/28/2022		N/A	N/A			
TI45A	9/4/2022		N/A	N/A			
TI45A	10/8/2022		N/A	N/A			
TI45A	11/3/2022		N/A	N/A			
TI45A	12/13/2022		N/A	N/A			
TI46	1/14/2022		N/A	N/A			
TI46	2/20/2022		N/A	N/A			
TI46	3/21/2022		N/A	N/A			
TI46	4/17/2022		N/A	N/A			
TI46	5/10/2022		N/A	N/A			
TI46	6/13/2022		N/A	N/A			
TI46	7/9/2022		N/A	N/A			
TI46	8/24/2022		N/A	N/A			
TI46	9/4/2022		N/A	N/A			
TI46	10/8/2022		N/A	N/A			
TI46	11/3/2022		N/A	N/A			
TI46	12/20/2022		N/A	N/A			
TI47	1/14/2022		N/A	N/A			
TI47	2/20/2022		N/A	N/A			
TI47	3/21/2022		N/A	N/A			full entry inspection,removed debris from diversion
TI47	4/17/2022		N/A	N/A			
TI47	5/10/2022		N/A	N/A			full entry inspection
TI47	6/13/2022		N/A	N/A			full entry inspection
TI47	7/9/2022		N/A	N/A			
TI47	8/24/2022		N/A	N/A			full entry inspection
TI47	8/25/2022		N/A	N/A			
TI47	9/4/2022		N/A	N/A			
TI47	10/8/2022		N/A	N/A			
TI47	11/3/2022		N/A	N/A			full entry inspection
TI47	12/20/2022		N/A	N/A			full entry inspection
TI48	1/14/2022		N/A	N/A			
TI48	2/20/2022		N/A	N/A			

TI48	3/21/2022		N/A	N/A			
TI48	4/16/2022		N/A	N/A			
TI48	5/10/2022		N/A	N/A			
TI48	6/13/2022		N/A	N/A			
TI48	7/9/2022		N/A	N/A			
TI48	8/24/2022		N/A	N/A			
TI48	9/4/2022		N/A	N/A			
TI48	10/8/2022		N/A	N/A			
TI48	11/3/2022		N/A	N/A			
TI48	12/20/2022		N/A	N/A			
TI49	1/14/2022		N/A	N/A			
TI49	2/20/2022		N/A	N/A			
TI49	3/21/2022		N/A	N/A			
TI49	4/17/2022		N/A	N/A			
TI49	5/10/2022		N/A	N/A			
TI49	6/13/2022		N/A	N/A			
TI49	7/9/2022		N/A	N/A			
TI49	8/24/2022		N/A	N/A			
TI49	9/1/2022		N/A	N/A			no comms checked twice
TI49	9/4/2022		N/A	N/A			
TI49	10/8/2022		N/A	N/A			
TI49	11/3/2022		N/A	N/A			
TI49	12/20/2022		N/A	N/A			
TI50	1/14/2022		N/A	N/A			
TI50	2/12/2022		N/A	N/A			
TI50	3/26/2022		N/A	N/A			
TI50	4/26/2022		N/A	N/A			
TI50	5/28/2022		N/A	N/A			
TI50	6/14/2022		N/A	N/A			
TI50	7/10/2022		N/A	N/A			
TI50	8/28/2022		N/A	N/A			full entry inspection
TI50	9/29/2022		N/A	N/A			
TI50	10/9/2022		N/A	N/A			
TI50	11/3/2022		N/A	N/A			
TI50	12/20/2022		N/A	N/A			

TI51	1/25/2022		N/A	N/A			
TI51	2/28/2022		N/A	N/A			
TI51	3/26/2022		N/A	N/A			
TI51	4/26/2022		N/A	N/A			
TI51	5/28/2022		N/A	N/A			
TI51	6/14/2022		N/A	N/A			
TI51	7/24/2022		N/A	N/A			
TI51	8/28/2022		N/A	N/A			
TI51	9/22/2022		N/A	N/A			
TI51	10/9/2022		N/A	N/A			
TI51	11/3/2022		N/A	N/A			
TI51	12/20/2022		N/A	N/A			
TI52	1/25/2022		N/A	N/A			
TI52	2/28/2022		N/A	N/A			
TI52	3/26/2022		N/A	N/A			
TI52	4/26/2022	X	N/A	N/A			full entry,removed partial blockage (grease & rags) in regulator
TI52	5/28/2022		N/A	N/A			
TI52	6/14/2022		N/A	N/A			
TI52	7/24/2022		N/A	N/A			
TI52	8/28/2022		N/A	N/A			
TI52	9/22/2022		N/A	N/A			
TI52	10/9/2022		N/A	N/A			
TI52	11/3/2022		N/A	N/A			
TI52	12/20/2022		N/A	N/A			
TI53	1/4/2022		X				full entry inspection greased,exercised tide gate
TI53	2/3/2022		X				full entry inspection greased,exercised tide gate
TI53	3/5/2022		X				full entry inspection greased,exercised tide gate
TI53	4/2/2022		x				full entry inspection greased,exercised tide gate
TI53	5/28/2022		X				full entry inspection greased,exercised tide gate
TI53	6/5/2022		X				full entry inspection greased,exercised tide gate
TI53	7/4/2022		X				full entry inspection greased,exercised tide gate
TI53	8/12/2022		X				full entry inspection greased,exercised tide gate
TI53	9/10/2022		X				full entry inspection greased,exercised tide gate
TI53	9/22/2022						
TI53	9/24/2022					X	

TI53	10/9/2022		X				full entry inspection,greased and exercised tide gate
TI53	11/10/2022		X				full entry inspection,greased and exercised tide gate
TI53	12/12/2022		X				full entry inspection,greased and exercised tide gate
TI54	1/4/2022		X				full entry inspection,greased and exercised tide gate
TI54	2/3/2022		X				full entry inspection,greased and exercised tide gate
TI54	3/5/2022		X				full entry,greased and exercised tide gate,removed rags from diversion
TI54	4/2/2022		x				full entry inspection,greased and exercised tide gate
TI54	5/28/2022		X				full entry inspection,greased and exercised tide gate
TI54	6/5/2022		X				full entry inspection,greased and exercised tide gate
TI54	7/4/2022		X				full entry inspection,greased and exercised tide gate
TI54	8/12/2022		X				full entry inspection,greased and exercised tide gate
TI54	9/10/2022		X				full entry inspection,greased and exercised tide gate
TI54	9/22/2022						
TI54	9/24/2022					X	
TI54	10/9/2022		X				full entry inspection,greased and exercised tide gate
TI54	11/10/2022		X				full entry inspection,greased and exercised tide gate
TI54	12/12/2022		X				full entry inspection,greased and exercised tide gate
TI55	1/25/2022		N/A	N/A			
TI55	2/2/2022		N/A	N/A			
TI55	3/2/2022		N/A	N/A			
TI55	4/27/2022		N/A	N/A			
TI55	5/28/2022		N/A	N/A			
TI55	6/14/2022		N/A	N/A			
TI55	7/24/2022		N/A	N/A			
TI55	8/28/2022		N/A	N/A			
TI55	9/28/2022		N/A	N/A			
TI55	10/9/2022		N/A	N/A			
TI55	11/9/2022		N/A	N/A			
TI55	12/21/2022		N/A	N/A			
TI56	1/25/2022		N/A	N/A			
TI56	2/2/2022		N/A	N/A			
TI56	3/2/2022		N/A	N/A			
TI56	4/27/2022		N/A	N/A			
TI56	5/25/2022		N/A	N/A			
TI56	6/20/2022		N/A	N/A			

TI56	7/30/2022		N/A	N/A			
TI56	8/24/2022		N/A	N/A			
TI56	9/28/2022		N/A	N/A			
TI56	10/9/2022		N/A	N/A			
TI56	11/9/2022		N/A	N/A			
TI56	12/21/2022		N/A	N/A			
TI57	1/5/2022		N/A	N/A			
TI57	1/19/2022		N/A	N/A			
TI57	1/25/2022		N/A	N/A			
TI57	1/27/2022		N/A	N/A			
TI57	2/2/2022		N/A	N/A			
TI57	2/9/2022		N/A	N/A			
TI57	2/16/2022		N/A	N/A			
TI57	2/23/2022		N/A	N/A			
TI57	3/2/2022		N/A	N/A			
TI57	3/9/2022		N/A	N/A			
TI57	3/10/2022		N/A	N/A			flushed and vactored lines
TI57	3/16/2022		N/A	N/A			
TI57	3/23/2022		N/A	N/A			
TI57	3/30/2022		N/A	N/A			
TI57	4/6/2022		N/A	N/A			
TI57	4/13/2022		N/A	N/A			
TI57	4/20/2022		N/A	N/A			
TI57	4/27/2022		N/A	N/A			
TI57	5/4/2022		N/A	N/A			
TI57	5/11/2022		N/A	N/A			
TI57	5/25/2022		N/A	N/A			
TI57	6/2/2022		N/A	N/A			
TI57	6/8/2022		N/A	N/A			
TI57	6/14/2022		N/A	N/A			
TI57	6/23/2022		N/A	N/A			
TI57	6/29/2022		N/A	N/A			
TI57	7/6/2022		N/A	N/A			
TI57	7/14/2022		N/A	N/A			
TI57	7/23/2022		N/A	N/A			

TI57	7/27/2022		N/A	N/A			
TI57	8/3/2022		N/A	N/A			
TI57	8/10/2022		N/A	N/A			
TI57	8/17/2022	X	N/A	N/A			flushed and vactored lines
TI57	8/18/2022						flushed and vactored lines
TI57	8/24/2022		N/A	N/A			
TI57	8/31/2022	X	N/A	N/A			DWB - flushed and vactored blockage at regulator
TI57	9/7/2022		N/A	N/A			BWSO flushed and vactored lines
TI57	9/8/2022		N/A	N/A			
TI57	9/14/2022		N/A	N/A			
TI57	9/15/2022		N/A	N/A			
TI57	9/21/2022		N/A	N/A			
TI57	9/28/2022		N/A	N/A			
TI57	10/7/2022		N/A	N/A			
TI57	10/9/2022		N/A	N/A			
TI57	10/12/2022		N/A	N/A			
TI57	10/19/2022		N/A	N/A			flushed and vactored lines
TI57	10/26/2022		N/A	N/A			
TI57	11/2/2022		N/A	N/A			
TI57	11/9/2022		N/A	N/A			
TI57	11/16/2022		N/A	N/A			DWB - cleared blockage with flusher/vactor truck
TI57	11/23/2022		N/A	N/A			
TI57	11/30/2022		N/A	N/A			
TI57	12/7/2022		N/A	N/A			
TI57	12/14/2022		N/A	N/A			flushed and vactored lines
TI57	12/28/2022		N/A	N/A			
TI58	1/25/2022		N/A	N/A			
TI58	2/2/2022		N/A	N/A			
TI58	3/2/2022		N/A	N/A			
TI58	4/27/2022		N/A	N/A			
TI58	5/28/2022		N/A	N/A			
TI58	6/14/2022		N/A	N/A			
TI58	7/24/2022		N/A	N/A			
TI58	8/28/2022		N/A	N/A			
TI58	9/27/2022		N/A	N/A			

TI58	10/9/2022		N/A	N/A			
TI58	11/9/2022		N/A	N/A			
TI58	12/21/2022		N/A	N/A			
TI59	1/25/2022		N/A	N/A			
TI59	2/2/2022		N/A	N/A			
TI59	3/2/2022		N/A	N/A			
TI59	4/27/2022		N/A	N/A			
TI59	5/25/2022		N/A	N/A			
TI59	6/14/2022		N/A	N/A			
TI59	7/24/2022		N/A	N/A			
TI59	8/27/2022		N/A	N/A			
TI59	9/27/2022		N/A	N/A			
TI59	10/9/2022		N/A	N/A			
TI59	11/9/2022		N/A	N/A			
TI59	12/21/2022		N/A	N/A			
TI60	1/25/2022		N/A	N/A			
TI60	2/2/2022		N/A	N/A			
TI60	3/2/2022		N/A	N/A			
TI60	4/27/2022		N/A	N/A			
TI60	5/25/2022		N/A	N/A			
TI60	6/14/2022		N/A	N/A			
TI60	7/24/2022		N/A	N/A			
TI60	8/27/2022		N/A	N/A			
TI60	9/27/2022		N/A	N/A			
TI60	10/9/2022		N/A	N/A			
TI60	11/9/2022		N/A	N/A			
TI60	12/21/2022		N/A	N/A			

WARDS ISLAND - BRONX REGULATOR LOCATIONS - 2022							
NUMBER	REG PM	REG CM	TG PM	TG CM	EBPP	CL RUN	COMMENTS
WIB-53	8-Jan		x				
WIB-53	7-Feb		x				
WIB-53	5-Mar		x				
WIB-62T	6-Mar	x	x	x			cleaned, exercised,lubricated,adjusted
WIB-53	3-Apr		x				
WIB-53	14-May		x				
WIB-53	12-Jun		x				
WIB-53	12-Jul		x				
WIB-53	11-Aug		x				
WIB-53	9-Sep		x				
WIB-53	13-Oct		x				
WIB-53	6-Nov		x				
WIB-53	3-Dec		x				
WIB-54	8-Jan		x				
WIB-54	7-Feb		x				
WIB-54	5-Mar		x				
WIB-54	3-Apr		x				
WIB-54	14-May		x				
WIB-54	12-Jun		x				
WIB-54	12-Jul		x				
WIB-54	11-Aug		x				
WIB-54	9-Sep		x				
WIB-54	13-Oct		x				
WIB-54	6-Nov	x	x				cleared partial blockage
WIB-54	3-Dec		x				
WIB-55	8-Jan		x				
WIB-55	6-Feb		x				
WIB-55	5-Mar		x				
WIB-55	3-Apr		x				
WIB-55	14-May		x				
WIB-55	12-Jun		x				

WIB-55	10-Jul		x				
WIB-55	10-Aug		x				
WIB-55	9-Sep		x				
WIB-55	12-Oct		x				
WIB-55	6-Nov		x				
WIB-55	4-Dec		x				
WIB-56	8-Jan		x				no/access
WIB-56	6-Feb		x				
WIB-56	4-Mar		x				
WIB-56	3-Apr		x				no/access
WIB-56	14-May		x				
WIB-56	11-Jun		x				
WIB-56	10-Jul		x				
WIB-56	10-Aug	x	x	x			flushed & vactored
WIB-56	14-Aug	x	x	x			blockage flushed & vactored
WIB-56	9-Sep		x				
WIB-56	10-Oct	x	x	x			flushed & vactored
WIB-56	12-Oct		x				
WIB-56	14-Oct	x	x	x			flushed & vactored
WIB-56	5-Nov		x				
WIB-56	4-Dec		x				
WIB-57	4-Jan		x				
WIB-57	6-Feb		x				
WIB-57	4-Mar		x				
WIB-57	4-Apr		x				
WIB-57	14-May		x				
WIB-57	11-Jun		x				
WIB-57	july		x				no/access
WIB-57	10-Aug		x				
WIB-57	9-Sep		x				
WIB-57	12-Oct		x				
WIB-57	5-Nov		x				
WIB-57	4-Dec		x				
WIB-58	4-Jan		x				

WIB-58	6-Feb		x				
WIB-58	4-Mar		x				
WIB-58	3-Apr		x				
WIB-58	14-May		x				
WIB-58	12-Jun		x				
WIB-58	10-Jul		x				
WIB-58	10-Aug		x				
WIB-58	9-Sep		x				
WIB-58	12-Oct		x				
WIB-58	5-Nov		x				
WIB-58	4-Dec		x				
WIB-59	4-Jan		x				no/access
WIB-59	6-Feb		x				no/access
WIB-59	4-Mar		x				
WIB-59	8-Mar	x	x				replaced cover
WIB-59	4-Apr		x				
WIB59	14-Apr		x				
WIB-59	14-May		x				no/access
WIB-59	11-Jun		x				
WIB-59	10-Jul		x				
WIB-59	10-Aug		x				
WIB-59	9-Sep		x				
WIB-59	12-Oct		x				
WIB-59	5-Nov		x				
WIB-59	4-Dec		x				no/access
WIB-60	4-Jan		x				
WIB-60	6-Feb		x				
WIB-60	4-Mar		x				
WIB-60	4-Apr		x				
WIB-60	8-May		x				
WIB-60	11-Jun		x				
WIB-60	10-Jul		x				
WIB-60	10-Aug		x				
WIB-60	9-Sep		x				

WIB-60	12-Oct		x				
WIB-60	5-Nov		x				
WIB-60	6-Dec		x				
WIB-60	4-Jan		x				
WIB-60A	4-Jan		x				
WIB-60A	6-Feb		x				
WIB-60A	8-Feb	x	x	x			cleaned, exercised,lubricated,adjusted
WIB-60A	4-Mar		x				
WIB-60A	4-Apr		x				
WIB-60A	8-May		x				
WIB-60A	11-Jun		x				
WIB-60A	10-Jul		x				
WIB-60A	10-Aug		x				
WIB-60A	9-Sep		x				
WIB-60A	12-Oct		x				
WIB-60A	5-Nov		x				
WIB-60A	6-Dec		x				no/access
WIB-61	4-Jan		n/a				
WIB-61	6-Feb		n/a				
WIB-61	5-Mar		n/a				
WIB-61	4-Apr		n/a				
WIB-61	8-May		n/a				
WIB-61	11-Jun		n/a				
WIB-61	10-Jul		n/a				
WIB-61	9-Aug		n/a				
WIB-61	9-Sep		n/a				
WIB-61	12-Oct		n/a				
WIB-61	5-Nov		n/a				
WIB-61	4-Dec		n/a				
WIB-62T	4-Jan		x				
WIB-62T	6-Feb		x				
WIB-62T	5-Mar		x				
WIB-62T	6-Mar	x	x	x			cleaned, exercised,lubricated,adjusted
WIB-62T	4-Apr		x				

WIB-62T	8-May		x				
WIB-62T	11-Jun		x				
WIB-62T	10-Jul		x				
WIB-62T	9-Aug		x				
WIB-62T	9-Sep		x				
WIB-62T	12-Oct		x				
WIB-62T	5-Nov		x				
WIB-62T	16-Nov		x		x		telemetry alarm
WIB-62T	4-Dec		x				
WIB-62R	4-Jan		n/a	n/a			
WIB-62R	6-Feb		n/a	n/a			
WIB-62R	5-Mar		n/a	n/a			
WIB-62R	4-Apr		n/a	n/a			
WIB-62R	8-May		n/a	n/a			
WIB-62R	11-Jun	x	n/a	n/a			replaced broken covers
WIB-62R	10-Jul		n/a	n/a			
WIB-62R	9-Aug		n/a	n/a			
WIB-62R	9-Sep		n/a	n/a			
WIB-62R	12-Oct		n/a	n/a			
WIB-62R	5-Nov		n/a	n/a			
WIB-62R	4-Dec		n/a	n/a			
WIB-64	4-Jan		n/a	n/a			
WIB-64	6-Feb		n/a	n/a			
WIB-64	5-Mar		n/a	n/a			
WIB-64	4-Apr		n/a	n/a			
WIB-64	8-May		n/a	n/a			
WIB-64	11-Jun		n/a	n/a			
WIB-64	10-Jul		n/a	n/a			
WIB-64	9-Aug	x	n/a	n/a			cleared partial blockage
WIB-64	9-Sep		n/a	n/a			
WIB-64	12-Oct		n/a	n/a			
WIB-64	5-Nov		n/a	n/a			
WIB-64	4-Dec		n/a	n/a			
WIB-65	4-Jan		x				

WIB-65	6-Feb		x				
WIB-65	4-Mar		x				
WIB-65	4-Apr		x				
WIB-65	8-May		x				
WIB-65	11-Jun		x				
WIB-65	10-Jul		x				
WIB-65	10-Aug		x				
WIB-65	9-Sep		x				
WIB-65	12-Oct		x				
WIB-65	5-Nov		x				
WIB-65	4-Dec		x				
WIB-66	4-Jan		x				
WIB-66	6-Feb		x				
WIB-66	4-Mar		x				
WIB-66	4-Apr		x				
WIB-66	8-May		x				
WIB-66	11-Jun		x				
WIB-66	10-Jul		x				
WIB-66	9-Aug		x				
WIB-66	9-Sep		x				
WIB-66	12-Oct		x				
WIB-66	5-Nov		x				
WIB-66	4-Dec		x				
WIB-67	4-Jan		x				
WIB-67	6-Feb		x				
WIB-67	8-Feb	x	x	x			cleaned, exercised,lubricated,adjusted
WIB-67	15-Feb	X	x				installed new frame & covers
WIB-67	4-Mar		x				
WIB-67	4-Apr		x				no/access
WIB-67	8-May		x				
WIB-67	12-Jun		x				
WIB-67	10-Jul		x				
WIB-67	9-Aug		x				
WIB-67	5-Sep		x				

WIB-67	12-Oct		x				
WIB-67	20-Oct		x	x			telemetry alarm
WIB-67	20-Oct		x	x			telemetry alarm
WIB-67	5-Nov		x				
WIB-67	26-Nov		x				
WIB-67	4-Dec		x				
WIB-68	8-Jan		x				
WIB-68	7-Feb		x				
WIB-68	5-Mar		x				
WIB-68	4-Apr		x				
WIB-68	14-May		x				
WIB-68	14-Jun		x				
WIB-68	12-Jul		x				
WIB-68	11-Aug		x				
WIB-68	5-Sep		x				
WIB-68	16-Oct		x				
WIB-68	6-Nov		x				
WIB-68	6-Dec		x				
WIB-69	8-Jan		x				
WIB-69	7-Feb		x				
WIB-69	5-Mar		x				
WIB-69	4-Apr		x				
WIB-69	14-May		x				
WIB-69	14-Jun		x				
WIB-69	12-Jul		x				
WIB-69	11-Aug		x				
WIB-69	5-Sep		x				
WIB-69	16-Oct		x				
WIB-69	6-Nov		x				
WIB-69	6-Dec		x				
WIB-70	8-Jan		x				
WIB-70	7-Feb		x				
WIB-70	5-Mar		x				no/access
WIB-70	4-Apr		x				

WIB-70	14-May		x				
WIB-70	14-Jun		x				
WIB-70	12-Jul		x				
WIB-70	11-Aug	x	x				cleared partial blockage
WIB-70	5-Sep		x				
WIB-70	16-Oct		x				
WIB-70	6-Nov		x				
WIB-70	6-Dec		x				
WIB-71	8-Jan		x				
WIB-71	7-Feb		x				
WIB-71	5-Mar		x				
WIB-71	4-Apr		x				
WIB-71	14-May		x				
WIB-71	14-Jun		x				
WIB-71	12-Jul		x				
WIB-71	11-Aug		x				
WIB-71	5-Sep		x				
WIB-71	16-Oct		x				
WIB-71	6-Nov		x				
WIB-71	6-Dec		x				
WIB-72	4-Jan		x				
WIB-72	6-Feb		x				
WIB-72	4-Mar		x				
WIB-72	4-Apr		x				
WIB-72	14-May		x				
WIB-72	14-Jun		x				
WIB-72	12-Jul		x				
WIB-72	11-Aug		x				
WIB-72	10-Sep		x				
WIB-72	16-Oct		x				
WIB-72	5-Nov		x				
WIB-72	4-Dec		x				
WIB-73	8-Jan		x				
WIB-73	7-Feb		x				

WIB-73	5-Mar		x				
WIB-73	3-Apr		x				
WIB-73	14-May		x				
WIB-73	12-Jun		x				
WIB-73	12-Jul		x				
WIB-73	10-Aug		x				
WIB-73	5-Sep		x				
WIB-73	16-Oct		x				
WIB-73	6-Nov		x				
WIB-73	3-Dec		x				

WARDS ISLAND-MANHATTAN REGULATOR LOCATIONS - 2022

NUMBER	REG PM	REG CM	TG PM	TG CM	EBPP	CL RUN	COMMENTS
WIM-1	16-Jan		x				
WIM-1	20-Feb		x				
WIM-1	13-Mar		x				
WIM-1	10-Apr		x				
WIM-1	22-May		x				
WIM-1	19-Jun		x				
WIM-1	24-Jul		x				
WIM-1	21-Aug		x				
WIM-1	25-Sep		x				
WIM-1	30-Oct		x				
WIM-1	11-Nov		x				
WIM-1	7-Dec		x				
WIM-2A	16-Jan		n/a	n/a			
WIM-2A	20-Feb		n/a	n/a			
WIM-2A	13-Mar		n/a	n/a			
WIM-2A	10-Apr		n/a	n/a			
WIM-2A	22-May		n/a	n/a			
WIM-2A	19-Jun		n/a	n/a			
WIM-2A	24-Jul		n/a	n/a			
WIM-2A	21-Aug		n/a	n/a			
WIM-2A	25-Sep		n/a	n/a			
WIM-2A	30-Oct		n/a	n/a			
WIM-2A	20-Nov		n/a	n/a			
WIM-2A	11-Dec		n/a	n/a			
WIM-2B	16-Jan		n/a	n/a			
WIM-2B	20-Feb		n/a	n/a			
WIM-2B	13-Mar		n/a	n/a			
WIM-2B	10-Apr		n/a	n/a			
WIM-2B	22-May		n/a	n/a			
WIM-2B	19-Jun		n/a	n/a			
WIM-2B	24-Jul		n/a	n/a			
WIM-2B	21-Aug		n/a	n/a			
WIM-2B	25-Sep		n/a	n/a			

WIM-2B	30-Oct		n/a	n/a			
WIM-2B	20-Nov		n/a	n/a			
WIM-2B	11-Dec		n/a	n/a			
WIM-3	16-Jan		x				
WIM-3	20-Feb		x				
WIM-3	13-Mar		x				
WIM-3	10-Apr		x				
WIM-3	22-May		x				
WIM-3	19-Jun		x				
WIM-3	24-Jul		x				
WIM-3	21-Aug		x				
WIM-3	25-Sep		x				
WIM-3	30-Oct		x				
WIM-3	20-Nov		x				
WIM-3	11-Dec		x				
WIM-4	16-Jan		x				
WIM-4	20-Feb		x				
WIM-4	13-Mar		x				
WIM-4	10-Apr		x				
WIM-4	22-May		x				
WIM-4	19-Jun		x				
WIM-4	24-Jul		x				
WIM-4	21-Aug		x				
WIM-4	25-Sep		x				
WIM-4	30-Oct		x				
WIM-4	20-Nov		x				
WIM-4	11-Dec		x				
WIM-5	16-Jan		x				
WIM-5	20-Feb		x				
WIM-5	13-Mar		x				
WIM-5	10-Apr		x				
WIM-5	22-May		x				
WIM-5	19-Jun		x				
WIM-5	24-Jul		x				
WIM-5	21-Aug		x				
WIM-5	25-Sep		x				

WIM-5	30-Oct		x				
WIM-5	20-Nov		x				
WIM-5	11-Dec		x				
WIM-6	16-Jan		x				
WIM-6	20-Feb		x				
WIM-6	13-Mar		x				
WIM-6	10-Apr		x				
WIM-6	22-May		x				
WIM-6	19-Jun		x				
WIM-6	24-Jul		x				
WIM-6	21-Aug		x				
WIM-6	25-Sep		x				
WIM-6	30-Oct		x				
WIM-6	20-Nov		x				
WIM-6	11-Dec		x				
WIM-7	16-Jan		x				
WIM-7	20-Feb		x				
WIM-7	13-Mar		x				
WIM-7	10-Apr		x				
WIM-7	22-May		x				
WIM-7	19-Jun		x				
WIM-7	24-Jul		x				
WIM-7	21-Aug		x				
WIM-7	25-Sep		x				
WIM-7	30-Oct		x				
WIM-7	20-Nov		x				
WIM-7	11-Dec		x				
WIM-8	15-Jan		n/a	n/a			
WIM-8	22-Feb		n/a	n/a			
WIM-8	13-Mar		n/a	n/a			
WIM-8	10-Apr		n/a	n/a			
WIM-8	22-May		n/a	n/a			
WIM-8	21-Jun		n/a	n/a			
WIM-8	13-Jul		n/a	n/a			
WIM-8	19-Aug		n/a	n/a			
WIM-8	25-Sep		n/a	n/a			

WIM-8	30-Oct		n/a	n/a			
WIM-8	13-Nov		n/a	n/a			
WIM-8	11-Dec		n/a	n/a			
WIM-9	15-Jan		n/a	n/a			
WIM-9	22-Feb		n/a	n/a			
WIM-9	13-Mar		n/a	n/a			
WIM-9	10-Apr		n/a	n/a			
WIM-9	22-May		n/a	n/a			
WIM-9	21-Jun		n/a	n/a			
WIM-9	13-Jul		n/a	n/a			
WIM-9	19-Aug		n/a	n/a			
WIM-9	25-Sep		n/a	n/a			
WIM-9	30-Oct		n/a	n/a			
WIM-9	13-Nov		n/a	n/a			
WIM-9	11-Dec		n/a	n/a			
WIM-10	15-Jan		n/a	n/a			
WIM-10	22-Feb		n/a	n/a			
WIM-10	13-Mar		n/a	n/a			
WIM-10	10-Apr		n/a	n/a			
WIM-10	22-May		n/a	n/a			
WIM-10	21-Jun		n/a	n/a			
WIM-10	13-Jul		n/a	n/a			
WIM-10	19-Aug		n/a	n/a			
WIM-10	25-Sep		n/a	n/a			
WIM-10	30-Oct		n/a	n/a			
WIM-10	13-Nov		n/a	n/a			
WIM-10	18-Dec		n/a	n/a			
WIM-11	15-Jan		x				
WIM-11	20-Feb		x				
WIM-11	12-Mar		x				
WIM-11	10-Apr		x				
WIM-11	22-May		x				
WIM-11	21-Jun		x				
WIM-11	22-Jun		x				
WIM-11	13-Jul		x				
WIM-11	19-Aug		x				

WIM-11	25-Sep		x				
WIM-11	30-Oct		x				
wIM-11	13-Nov		x				
WIM-11	18-Dec		x				
WIM-12	15-Jan		x				
WIM-12	20-Feb		x				
WIM-12	12-Mar		x				
WIM-12	13-Apr		x				
WIM-12	22-May		x				
WIM-12	22-Jun		x				
WIM-12	13-Jul	x	x				cleared partial blockage
WIM-12	19-Aug		x				
WIM-12	25-Sep	x	x				cleared partial blockage
WIM-12	30-Oct		x				
WIM-12	13-Nov		x				
WIM-12	18-Dec		x				
WIM-13	15-Jan		x				
WIM-13	20-Feb		x				
WIM-13	12-Mar		x				
WIM-13	13-Apr		x				
WIM-13	22-May		x				
WIM-13	22-Jun		x				
WIM-13	13-Jul		x				
WIM-13	19-Aug		x				
WIM-13	25-Sep		x				
WIM-13	30-Oct		x				
WIM-13	13-Nov		x				
WIM-13	18-Dec		x				
WIM-14	15-Jan		x				
WIM-14	20-Feb		x				
WIM-14	13-Mar		x				
WIM-14	10-Apr		x				
WIM-14	22-May		x				
WIM-14	19-Jun		x				
WIM-14	24-Jul		x				
WIM-14	21-Aug		x				

WIM-14	25-Sep		x				
WIM-14	30-Oct		x				
WIM-14	20-Nov		x				
WIM-14	11-Dec		x				
WIM-14	15-Jan	x	x				cleared partial blockage
WIM-15	27-Jan		x				
WIM-15	12-Feb		x				
WIM-15	12-Mar		x				
WIM-15	24-Apr		x				
WIM-15	22-May		x				
WIM-15	21-Jun		x				
WIM-15	13-Jul		x				
WIM-15	19-Aug		x				
WIM-15	25-Sep		x				
WIM-15	30-Oct		x				
WIM-15	9-Nov		x				
WIM-15	7-Dec		x				
WIM-16	12-Jan		x				
WIM-16	20-Feb		x				
WIM-16	12-Mar		x				
WIM-16	13-Apr		x				
WIM-16	22-May		x				
WIM-16	21-Jun	x	x	x			cleaned, exercised,lubricated,adjusted
WIM-16	13-Jul		x				
WIM-16	19-Aug		x				
WIM-16	25-Sep		x				
WIM-16	24-Oct		x				
WIM-16	9-Nov		x				
WIM-16	7-Dec		x				
WIM-17	12-Jan		x				
WIM-17	12-Feb		x				
WIM-17	12-Mar		x				
WIM-17	13-Apr		x				
WIM-17	22-May		x				
WIM-17	21-Jun		x				
WIM-17	12-Jul		x				

WIM-17	19-Aug		x				
WIM-17	21-Sep		x				
WIM-17	24-Oct		x				
WIM-17	9-Nov		x				
WIM-17	7-Dec		x				
WIM-18	12-Jan		x				
WIM-18	12-Feb		x				
WIM-18	13-Mar		x				
WIM-18	10-Apr		x				
WIM-18	22-May		x				
WIM-18	21-Jun		x				
WIM-18	12-Jul		x				
WIM-18	21-Aug		x				
WIM-18	21-Sep		x				
WIM-18	24-Oct		x				
WIM-18	9-Nov		x				
WIM-18	7-Dec		x				
WIM-19	12-Jan		x				
WIM-19	12-Feb		x				
WIM-19	12-Mar		x				
WIM-19	9-Apr		x				
WIM-19	17-Apr		x				
WIM-19	21-Jun	x	x	x			cleaned, exercised,lubricated,adjusted
WIM-19	24-Jun	x	x	x			blockage flushed & vactored
WIM-19	12-Jul		x				
WIM-19	19-Aug	x	x				cleared partial blockage
WIM-19	21-Sep		x				
WIM-19	24-Oct		x				
WIM-19	9-Nov		x				
WIM-19	7-Dec		x				
WIM-20	12-Jan		x				
WIM-20	12-Feb		x				
WIM-20	12-Mar		x				
WIM-20	9-Apr		x				
WIM-20	17-Apr		x				
WIM-20	21-Jun	x	x	x			blockage flushed & vactored

WIM-20	12-Jul	x	x				cleared partial blockage
WIM-20	19-Aug		x				
WIM-20	21-Sep		x				
WIM-20	24-Oct		x				
WIM-20	9-Nov		x				
WIM-20	7-Dec		x				
WIM-21	12-Jan		x				
WIM-21	12-Feb		x				
WIM-21	12-Mar		x				
WIM-21	9-Apr		x				
WIM-21	17-Apr		x				
WIM-21	21-Jun		x				cleaned, exercised,lubricated,adjusted
WIM-21	12-Jul		x				
WIM-21	21-Sep		x				
WIM-21	24-Oct		x				
WIM-21	9-Nov		x				
WIM-21	7-Dec		x				
WIM-22	12-Jan		x				
WIM-22	12-Feb		x				
WIM-22	5-Mar	x	x	x			flushed & vactored
WIM-22	12-Mar	x	x				cleared partial blockage
WIM-22	9-Apr		x				
WIM-22	17-Apr		x				
WIM-22	21-Jun		x				
WIM-22	12-Jul		x				
WIM-22	19-Aug		x				
WIM-22	21-Sep		x				
WIM-22	24-Oct		x				
WIM-22	9-Nov		x				
WIM-22	7-Dec		x				
WIM-23	12-Jan		x				
WIM-23	12-Feb		x				
WIM-23	12-Mar		x				
WIM-23	9-Apr		x				
WIM-23	17-Apr		x				
WIM-23	21-Jun	x	x	x			cleaned, exercised,lubricated,adjusted

WIM-23	12-Jul		x				
WIM-23	19-Aug		x				
WIM-23	21-Sep		x				
WIM-23	24-Oct		x				
WIM-23	9-Nov		x				
WIM-23	7-Dec		x				
WIM-24	12-Jan		x				
WIM-24	12-Feb		x				
WIM-24	12-Mar		x				
WIM-24	9-Apr		x				
WIM-24	17-Apr		x				
WIM-24	21-Jun	x	x	x			cleaned, exercised,lubricated,adjusted
WIM-24	12-Jul		x				
WIM-24	19-Aug		x				
WIM-24	21-Sep		x				
WIM-24	24-Oct		x				
WIM-24	9-Nov		x				
WIM-24	7-Dec		x				
WIM-25	12-Jan		x				
WIM-25	12-Feb		x				
WIM-25	12-Mar		x				
WIM-25	9-Apr	x	x				
WIM-25	17-Apr		x				
WIM-25	21-Jun		x				
WIM-25	3-Jul		x				
WIM-25	19-Aug		x				
WIM-25	21-Sep		x				
WIM-25	24-Oct		x				
WIM-25	9-Nov		x				
WIM-25	7-Dec		x				
WIM-26	12-Jan		x				
WIM-26	12-Feb		x				
WIM-26	12-Mar		x				
WIM-26	9-Apr	x	x				
WIM-26	17-Apr		x				
WIM-26	21-Jun		x				

WIM-26	30-Jul		x				
WIM-26	19-Aug		x				
WIM-26	21-Sep		x				
WIM-26	24-Oct		x				
WIM-26	9-Nov		x				
WIM-26	11-Dec		x				
WIM-27	12-Jan		x				
WIM-27	12-Feb	x	x				cleared partial blockage
WIM-27	12-Mar		x				
WIM-27	9-Apr	x	x				
WIM-27	17-Apr		x				
WIM-27	21-Jun		x				
WIM-27	3-Jul		x				
WIM-27	31-Aug		x				
WIM-27	21-Sep		x				
WIM-27	24-Oct		x				
WIM-27	9-Nov	x	x				cleared partial blockage
WIM-27	7-Dec		x				
WIM-28	12-Jan		x	n/a			
WIM-28	12-Feb		x	n/a			
WIM-28	11-Mar		x	n/a			
WIM-28	8-Apr		x	n/a			
WIM-28	17-Apr		x	n/a			
WIM-28	21-Jun		x	n/a			
WIM-28	3-Jul		x	n/a			
WIM-28	19-Aug		x	n/a			
WIM-28	21-Sep		x	n/a			
WIM-28	24-Oct		x	n/a			
WIM-28	9-Nov		x	n/a			
WIM-28	11-Dec		x	n/a			
WIM-29	12-Jan		x	n/a			
WIM-29	12-Feb		x	n/a			
WIM-29	11-Mar		x	n/a			
WIM-29	8-Apr		x	n/a			
WIM-29	17-Apr		x	n/a			
WIM-29	21-Jun		x	n/a			

WIM-29	3-Jul		x	n/a			
WIM-29	31-Aug		x	n/a			
WIM-29	21-Sep		x	n/a			
WIM-29	24-Oct		x	n/a			
WIM-29	9-Nov		x				
WIM-29	7-Dec		x				
WIM-30	9-Jan		x				
WIM-30	7-Feb		x				
WIM-30	11-Mar		x				
WIM-30	8-Apr		x				
WIM-30	17-Apr		x				
WIM-30	21-Jun		x				
WIM-30	3-Jul		x				
WIM-30	19-Aug		x				
WIM-30	21-Sep		x				
WIM-30	24-Oct		x				
WIM-30	7-Nov		x				
WIM-30	6-Dec		x				
WIM-31	9-Jan		x				
WIM-31	7-Feb		x				
WIM-31	11-Mar		x				
WIM-31	8-Apr	x	x				cleared partial blockage
WIM-31	17-May	x	x				cleared partial blockage
WIM-31	21-Jun		x				
WIM-31	3-Jul		x				
WIM-31	19-Aug		x				
WIM-31	21-Sep		x				
WIM-31	24-Oct		x				
WIM-31	7-Nov		x				
WIM-31	6-Dec		x				
WIM-32	9-Jan		x				
WIM-32	7-Feb		x				
WIM-32	11-Mar		x				
WIM-32	8-Apr		x				
WIM-32	17-May		x				
WIM-32	21-Jun		x				

WIM-32	3-Jul		x				
WIM-32	19-Aug		x				
WIM-32	21-Sep		x				
WIM-32	24-Oct		x				
WIM-32	7-Nov		x				
WIM-32	6-Dec		x				
WIM-33	9-Jan		x				
WIM-33	7-Feb		x				
WIM-33	11-Mar		x				
WIM-33	8-Apr		x				
WIM-33	17-May		x				
WIM-33	21-Jun		x				
WIM-33	3-Jul		x				
WIM-33	19-Aug		x				
WIM-33	21-Sep		x				
WIM-33	24-Oct		x				
WIM-33	7-Nov		x				
WIM-33	11-Dec		x				
WIM-34	9-Jan		x				
WIM-34	12-Feb		x				
WIM-34	11-Mar		x				
WIM-34	8-Apr		x				
WIM-34	19-May		x				
WIM-34	20-Jun		x				
WIM-34	3-Jul		x				
WIM-34	15-Aug		x				
WIM-34	10-Sep		x				
WIM-34	24-Oct		x				
WIM-34	7-Nov		x				
WIM-34	6-Dec		x				
WIM-35	9-Jan		x				
WIM-35	7-Feb		x				
WIM-35	11-Mar		x				
WIM-35	8-Apr		x				
WIM-35	16-May		x				
WIM-35	22-Jun		x				

WIM-35	3-Jul		x				
WIM-35	19-Aug		x				
WIM-35	10-Sep		x				
WIM-35	24-Oct		x				
WIM-35	7-Nov		x				
WIM-35	6-Dec		x				
WIM-36	9-Jan		x				
WIM-36	11-Feb		x				
WIM-36	11-Mar		x				
WIM-36	5-Apr		x				
WIM-36	16-May		x				
WIM-36	20-Jun		x				
WIM-36	3-Jul		x				
WIM-36	19-Aug		x				
WIM-36	21-Sep		x				
WIM-36	24-Oct		x				
WIM-36	7-Nov		x				
WIM-36	6-Dec		x				
WIM-37	9-Jan		x				
WIM-37	11-Feb		x				
WIM-37	11-Mar		x				
WIM-37	5-Apr		x				
WIM-37	16-May		x				
WIM-37	20-Jun		x				
WIM-37	3-Jul		x				
WIM-37	19-Aug		x				
WIM-37	21-Sep		x				
WIM-37	24-Oct		x				
WIM-37	7-Nov		x				
WIM-37	6-Dec		x				
WIM-38	9-Jan		x				
WIM-38	11-Feb		x				
WIM-38	11-Mar		x				
WIM-38	8-Apr		x				
WIM-38	16-May		x				
WIM-38	20-Jun		x				

WIM-38	3-Jul		x				
WIM-38	15-Aug		x				
WIM-38	21-Sep		x				
WIM-38	24-Oct		x				
WIM-38	7-Nov		x				
WIM-38	21-Dec		x				
WIM-39	9-Jan		x				
WIM-39	11-Feb	x	x				cleared partial blockage
WIM-39	11-Mar		x				
WIM-39	5-Apr		x				
WIM-39	16-May		x				
WIM-39	20-Jun	x	x				cleared partial blockage
WIM-39	2-Jul		x				
WIM-39	15-Aug	x	x	x			blockage flushed & vactored
WIM-39	15-Jun		x				
WIM-39	20-Jun	x	x	x			blockage flushed & vactored
WIM-39	10-Sep		x				
WIM-39	24-Oct		x				
WIM-39	7-Nov		x				
WIM-39	6-Dec		x				
WIM-40	9-Jan		x				
WIM-40	11-Feb		x				
WIM-40	11-Mar		x				
WIM-40	5-Apr		x				
WIM-40	16-May		x				
WIM-40	20-Jun		x				
WIM-40	2-Jul		x				
WIM-40	15-Aug		x				
WIM-40	10-Sep		x				
WIM-40	24-Oct		x				
WIM-40	7-Nov		x				
WIM-40	6-Dec		x				
WIM-41	9-Jan		x				
WIM-41	11-Feb		x				
WIM-41	11-Mar		x				
WIM-41	5-Apr		x				

WIM-41	16-May		x				
WIM-41	20-Jun		x				
WIM-41	2-Jul		x				
WIM-41	15-Aug						
WIM-41	10-Sep		x				
WIM-41	24-Oct	x	x				cleared partial blockage
WIM-41	7-Nov	x	x				cleared partial blockage
WIM-41	6-Dec		x				
WIM-42	9-Jan		x				
WIM-42	11-Feb		x				
WIM-42	11-Mar		x				
WIM-42	5-Apr	x	x				cleared partial blockage
WIM-42	16-May		x				
WIM-42	20-Jun		x				
WIM-42	2-Jul		x				
WIM-42	15-Aug		x				
WIM-42	10-Sep		x				
WIM-42	24-Oct		x				
WIM-42	7-Nov		x				
WIM-42	16-Nov		x		x		telemetry alarm
WIM-42	6-Dec		x				
WIM-44	9-Jan		x				
WIM-44	11-Feb		x				
WIM-44	11-Mar		x				
WIM-44	5-Apr		x				
WIM-44	16-May		x				
WIM-44	22-Jun		x				
WIM-44	24-Jun	x	x	x			blockage flushed & vactored
WIM-44	3-Jul		x				
WIM-44	15-Aug		x				
WIM-44	10-Sep		x				
WIM-44	24-Oct		x				
WIM-44	3-Nov	x	x	x			flushed & vactored
WIM-44	7-Nov		x				
WIM-44	6-Dec		x				
WIM-45	9-Jan		x				

WIM-45	11-Feb		x				
WIM-45	11-Mar		x				
WIM-45	5-Apr		x				
WIM-45	16-May		x				
WIM-45	4-Jun		x		x		telemetry alarm
WIM-45	20-Jun		x				
WIM-45	29-Jun		x		x		telemetry alarm
WIM-45	30-Jun		x		x		telemetry alarm
WIM-45	1-Jul		x		x		telemetry alarm
WIM-45	2-Jul		x		x		telemetry alarm
WIM-45	3-Jul		x		x		telemetry alarm
WIM-45	4-Jul		x		x		telemetry alarm
WIM-45	5-Jul		x		x		telemetry alarm
WIM-45	7-Jul		x		x		telemetry alarm
WIM-45	16-Jul		x		x		telemetry alarm
WIM-45	15-Aug		x				
WIM-45	21-Sep		x				
WIM-45	24-Oct		x				
WIM-45	27-Oct		x		x		telemetry alarm
WIM-45	6-Nov		x				
WIM-45	6-Dec		x				
WIM-46	5-Jan		x		x		telemetry alarm
WIM-46	9-Jan		x				
WIM-46	11-Feb		x				
WIM-46	11-Mar		x				
WIM-46	5-Apr		x				
WIM-46	16-May		x				
WIM-46	20-Jun		x				
WIM-46	2-Jul		x				
WIM-46	15-Aug		x				no/access
WIM-46	10-Sep		x				
WIM-46	24-Oct		x				
WIM-46	17-Nov		x				
WIM-46	18-Dec		x				
WIM-47	8-Jan		x				
WIM-47	11-Feb		x				

WIM-47	11-Mar		x				
WIM-47	5-Apr		x				
WIM-47	16-May		x				
WIM-47	20-Jun		x				
WIM-47	2-Jul		x				
WIM-47	15-Aug		x				no/access
WIM-47	10-Sep		x				
WIM-47	24-Oct		x				
WIM-47	17-Nov		x				
WIM-47	18-Dec		x				
WIM-48	8-Jan		x				
WIM-48	11-Feb		x				
WIM-48	11-Mar		x				
WIM-48	5-Apr		x				
WIM-48	16-May		x				
WIM-48	20-Jun		x				
WIM-48	2-Jul		x				
WIM-48	15-Aug		x				
WIM-48	10-Sep		x				
WIM-48	24-Oct		x				
WIM-48	6-Nov		x				
WIM-48	6-Dec		x				
WIM-50	8-Jan		x				
WIM-50	11-Feb		x				
WIM-50	11-Mar		x				
WIM-50	5-Apr		x				
WIM-50	16-May		x				
WIM-50	20-Jun		x				
WIM-50	2-Jul		x				
WIM-50	15-Aug		x				
WIM-50	10-Sep		x				
WIM-50	24-Oct		x				
WIM-50	6-Nov		x				
WIM-50	6-Dec		x				
WIM-51	8-Jan		n/a	n/a			
WIM-51	11-Feb		n/a	n/a			

WIM-51	11-Mar		n/a	n/a			
WIM-51	5-Apr		n/a	n/a			
WIM-51	16-May		n/a	n/a			
WIM-51	20-Jun		n/a	n/a			
WIM-51	2-Jul		n/a	n/a			
WIM-51	15-Aug		n/a	n/a			
WIM-51	10-Sep		n/a	n/a			
WIM-51	24-Oct		n/a	n/a			
WIM-51	6-Nov		n/a	n/a			
WIM-51	6-Dec		n/a	n/a			
WIM-52	8-Jan		n/a	n/a			
WIM-52	11-Feb		n/a	n/a			
WIM-52	11-Mar		n/a	n/a			
WIM-52	5-Apr		n/a	n/a			
WIM-52	16-May		n/a	n/a			
WIM-52	20-Jun		n/a	n/a			
WIM-52	2-Jul		n/a	n/a			
WIM-52	25-Aug		n/a	n/a			
WIM-52	10-Sep		n/a	n/a			
WIM-52	24-Oct		n/a	n/a			
WIM-52	6-Nov		n/a	n/a			
WIM-52	6-Dec		n/a	n/a			

FORCE MAIN LOCATIONS - 2022

NUMBER	FORCE MAIN	PM	COMMENTS
RIFM	27-Jan	x	
RIFM	22-Feb	x	
RIFM	27-Mar	x	
RIFM	22-Apr	x	
RIFM	26-May	x	
RIFM	14-Jun	x	
RIFM	12-Jul	x	
RIFM	8-Aug	x	
RIFM	27-Sep	x	
RIFM	16-Oct	x	
RIFM	30-Nov	x	
RIFM	10-Dec	x	
OBFM	27-Jan	x	
OBFM	22-Feb	x	
OBFM	27-Mar	x	
OBFM	22-Apr	x	
OBFM	26-May	x	
OBFM	14-Jun	x	
OBFM	12-Jul	x	
OBFM	8-Aug	x	
OBFM	27-Sep	x	
OBFM	16-Oct	x	
OBFM	7-Nov	x	
OBFM	12-Nov	x	
OBFM	30-Dec	x	
OBFM	10-Dec	x	
CIFM-1	27-Jan	x	
CIFM	22-Feb	x	
CIFM	28-Feb	x	vactored flushed
CIFM	1-Mar	x	vactored flushed
CIFM	27-Mar	x	
CIFM	7-Apr	x	vactored flushed

CIFM	22-Apr	x	
CIFM	26-May	x	vactored flushed
CIFM	14-Jun	x	
CIFM	12-Jul	x	
CIFM	8-Aug	x	vactored flushed
CIFM	27-Sep	x	vactored flushed
CIFM	16-Oct	x	
CIFM	7-Nov	x	
CIFM	7-Nov	x	vactored flushed
CIFM	30-Dec	x	vactored flushed
CIFM	10-Dec	x	vactored flushed
CIFM-2	27-Jan	x	
CIFM	22-Feb	x	
CIFM	28-Feb	x	vactored flushed
CIFM	1-Mar	x	vactored flushed
CIFM	27-Mar	x	
CIFM	7-Apr	x	vactored flushed
CIFM	22-Apr	x	
CIFM	26-May	x	vactored flushed
CIFM	14-Jun	x	
CIFM	12-Jul	x	
CIFM	8-Aug	x	vactored flushed
CIFM	27-Sep	x	vactored flushed
CIFM	16-Oct	x	
CIFM	7-Nov	x	
CIFM	7-Nov	x	vactored flushed
CIFM	30-Dec	x	vactored flushed
CIFM	10-Dec	x	vactored flushed
CIFM-3	1-Jan	x	
CIFM	2-Jan	x	
CIFM	3-Jan	x	
CIFM	4-Jan	x	
CIFM	5-Jan	x	
CIFM	6-Jan	x	

CIFM	7-Jan	x	
CIFM	8-Jan	x	
CIFM	9-Jan	x	
CIFM	10-Jan	x	
CIFM	11-Jan	x	
CIFM	12-Jan	x	
CIFM	13-Jan	x	
CIFM	14-Jan	x	
CIFM	15-Jan	x	
CIFM	16-Jan	x	
CIFM	17-Jan	x	
CIFM	18-Jan	x	
CIFM	19-Jan	x	
CIFM	20-Jan	x	
CIFM	21-Jan	x	
CIFM	22-Jan	x	
CIFM	23-Jan	x	
CIFM	24-Jan	x	
CIFM	25-Jan	x	
CIFM	26-Jan	x	
CIFM	27-Jan	x	
CIFM	28-Jan	x	
CIFM	29-Jan	x	
CIFM	30-Jan	x	
CIFM	31-Jan	x	
CIFM	1-Feb	x	
CIFM	2-Feb	x	
CIFM	3-Feb	x	
CIFM	4-Feb	x	
CIFM	5-Feb	x	
CIFM	6-Feb	x	
CIFM	7-Feb	x	
CIFM	8-Feb	x	
CIFM	9-Feb	x	

CIFM	10-Feb	x	
CIFM	11-Feb	x	
CIFM	12-Feb	x	
CIFM	13-Feb	x	
CIFM	14-Feb	x	
CIFM	15-Feb	x	
CIFM	16-Feb	x	
CIFM	17-Feb	x	
CIFM	18-Feb	x	
CIFM	19-Feb	x	
CIFM	20-Feb	x	
CIFM	21-Feb	x	
CIFM	22-Feb	x	
CIFM	23-Feb	x	
CIFM	24-Feb	x	
CIFM	25-Feb	x	
CIFM	26-Feb	x	
CIFM	27-Feb	x	
CIFM	28-Feb	x	
CIFM	1-Mar	x	
CIFM	2-Mar	x	
CIFM	3-Mar	x	
CIFM	4-Mar	x	
CIFM	5-Mar	x	
CIFM	6-Mar	x	
CIFM	7-Mar	x	
CIFM	8-Mar	x	
CIFM	9-Mar	x	
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CIFM	16-Mar	x	
CIFM	17-Mar	x	
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CIFM	19-Mar	x	
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CIFM	24-Mar	x	
CIFM	25-Mar	x	
CIFM	26-Mar	x	
CIFM	27-Mar	x	
CIFM	28-Mar	x	
CIFM	29-Mar	x	
CIFM	30-Mar	x	
CIFM	31-Mar	x	
CIFM	1-Apr	x	
CIFM	2-Apr	x	
CIFM	3-Apr	x	
CIFM	4-Apr	x	
CIFM	5-Apr	x	
CIFM	6-Apr	x	
CIFM	7-Apr	x	
CIFM	8-Apr	x	
CIFM	9-Apr	x	
CIFM	10-Apr	x	
CIFM	11-Apr	x	
CIFM	12-Apr	x	
CIFM	13-Apr	x	
CIFM	14-Apr	x	
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CIFM	16-Apr	x	
CIFM	17-Apr	x	
CIFM	18-Apr	x	

CIFM	19-Apr	x	
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CIFM	24-Apr	x	
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CIFM	26-Apr	x	
CIFM	27-Apr	x	
CIFM	28-Apr	x	
CIFM	29-Apr	x	
CIFM	30-Apr	x	
CIFM	1-May	x	
CIFM	2-May	x	
CIFM	3-May	x	
CIFM	4-May	x	
CIFM	5-May	x	
CIFM	6-May	x	
CIFM	7-May	x	
CIFM	8-May	x	
CIFM	9-May	x	
CIFM	10-May	x	
CIFM	11-May	x	
CIFM	12-May	x	
CIFM	13-May	x	
CIFM	14-May	x	
CIFM	15-May	x	
CIFM	16-May	x	
CIFM	17-May	x	
CIFM	18-May	x	
CIFM	19-May	x	
CIFM	20-May	x	
CIFM	21-May	x	
CIFM	22-May	x	

CIFM	23-May	x	
CIFM	24-May	x	
CIFM	25-May	x	
CIFM	26-May	x	vactored flushed
CIFM	27-May	x	
CIFM	28-May	x	
CIFM	29-May	x	
CIFM	30-May	x	
CIFM	31-May	x	
CIFM	1-Jun	x	
CIFM	2-Jun	x	
CIFM	3-Jun	x	
CIFM	4-Jun	x	
CIFM	5-Jun	x	
CIFM	6-Jun	x	
CIFM	7-Jun	x	
CIFM	8-Jun	x	
CIFM	9-Jun	x	
CIFM	10-Jun	x	
CIFM	11-Jun	x	
CIFM	12-Jun	x	
CIFM	13-Jun	x	
CIFM	14-Jun	x	
CIFM	15-Jun	x	
CIFM	16-Jun	x	
CIFM	17-Jun	x	
CIFM	18-Jun	x	
CIFM	19-Jun	x	
CIFM	20-Jun	x	
CIFM	21-Jun	x	
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CIFM	23-Jun	x	
CIFM	24-Jun	x	
CIFM	25-Jun	x	

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CIFM	29-Jun	x	
CIFM	30-Jun	x	
CIFM	1-Jul	x	
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CIFM	3-Jul	x	
CIFM	4-Jul	x	
CIFM	5-Jul	x	
CIFM	6-Jul	x	
CIFM	7-Jul	x	
CIFM	8-Jul	x	
CIFM	9-Jul	x	
CIFM	10-Jul	x	
CIFM	11-Jul	x	
CIFM	12-Jul	x	
CIFM	13-Jul	x	
CIFM	14-Jul	x	
CIFM	15-Jul	x	
CIFM	16-Jul	x	
CIFM	17-Jul	x	
CIFM	18-Jul	x	
CIFM	19-Jul	x	
CIFM	20-Jul	x	
CIFM	21-Jul	x	
CIFM	22-Jul	x	
CIFM	23-Jul	x	
CIFM	24-Jul	x	
CIFM	25-Jul	x	
CIFM	26-Jul	x	
CIFM	27-Jul	x	
CIFM	28-Jul	x	
CIFM	29-Jul	x	

CIFM	30-Jul	x	
CIFM	31-Jul	x	
CIFM	1-Aug	x	
CIFM	2-Aug	x	
CIFM	3-Aug	x	
CIFM	4-Aug	x	
CIFM	5-Aug	x	
CIFM	6-Aug	x	
CIFM	7-Aug	x	
CIFM	8-Aug	x	
CIFM	9-Aug	x	
CIFM	10-Aug	x	
CIFM	11-Aug	x	
CIFM	12-Aug	x	
CIFM	13-Aug	x	
CIFM	14-Aug	x	
CIFM	15-Aug	x	
CIFM	16-Aug	x	
CIFM	17-Aug	x	
CIFM	18-Aug	x	
CIFM	19-Aug	x	
CIFM	20-Aug	x	
CIFM	21-Aug	x	
CIFM	22-Aug	x	
CIFM	23-Aug	x	
CIFM	24-Aug	x	
CIFM	25-Aug	x	
CIFM	26-Aug	x	
CIFM	27-Aug	x	
CIFM	28-Aug	x	
CIFM	29-Aug	x	
CIFM	30-Aug	x	
CIFM	31-Aug	x	
CIFM	1-Sep	x	

CIFM	2-Sep	x	
CIFM	3-Sep	x	
CIFM	4-Sep	x	
CIFM	5-Sep	x	
CIFM	6-Sep	x	
CIFM	7-Sep	x	
CIFM	8-Sep	x	
CIFM	9-Sep	x	
CIFM	10-Sep	x	
CIFM	11-Sep	x	
CIFM	12-Sep	x	
CIFM	13-Sep	x	
CIFM	14-Sep	x	
CIFM	15-Sep	x	
CIFM	16-Sep	x	
CIFM	17-Sep	x	
CIFM	18-Sep	x	
CIFM	19-Sep	x	
CIFM	20-Sep	x	
CIFM	21-Sep	x	
CIFM	22-Sep	x	
CIFM	23-Sep	x	
CIFM	24-Sep	x	
CIFM	25-Sep	x	
CIFM	26-Sep	x	
CIFM	27-Sep	x	
CIFM	28-Sep	x	
CIFM	29-Sep	x	
CIFM	30-Sep	x	
CIFM	1-Oct	x	
CIFM	2-Oct	x	
CIFM	3-Oct	x	
CIFM	4-Oct	x	
CIFM	5-Oct	x	

CIFM	6-Oct	x	
CIFM	7-Oct	x	
CIFM	8-Oct	x	
CIFM	9-Oct	x	
CIFM	10-Oct	x	
CIFM	11-Oct	x	
CIFM	12-Oct	x	
CIFM	13-Oct	x	
CIFM	14-Oct	x	
CIFM	15-Oct	x	
CIFM	16-Oct	x	
CIFM	17-Oct	x	
CIFM	18-Oct	x	
CIFM	19-Oct	x	
CIFM	20-Oct	x	
CIFM	21-Oct	x	
CIFM	22-Oct	x	
CIFM	23-Oct	x	
CIFM	24-Oct	x	
CIFM	25-Oct	x	
CIFM	26-Oct	x	
CIFM	27-Oct	x	
CIFM	28-Oct	x	
CIFM	29-Oct	x	
CIFM	30-Oct	x	
CIFM	31-Oct	x	
CIFM	1-Nov	x	
CIFM	2-Nov	x	
CIFM	3-Nov	x	
CIFM	4-Nov	x	
CIFM	5-Nov	x	
CIFM	6-Nov	x	
CIFM	7-Nov	x	
CIFM	8-Nov	x	

CIFM	9-Nov	x	
CIFM	10-Nov	x	
CIFM	11-Nov	x	
CIFM	12-Nov	x	
CIFM	13-Nov	x	
CIFM	14-Nov	x	
CIFM	15-Nov	x	
CIFM	16-Nov	x	
CIFM	17-Nov	x	
CIFM	18-Nov	x	
CIFM	19-Nov	x	
CIFM	20-Nov	x	
CIFM	21-Nov	x	
CIFM	22-Nov	x	
CIFM	23-Nov	x	
CIFM	24-Nov	x	
CIFM	25-Nov	x	
CIFM	26-Nov	x	
CIFM	27-Nov	x	
CIFM	28-Nov	x	
CIFM	29-Nov	x	
CIFM	30-Nov	x	
CIFM	1-Dec	x	
CIFM	2-Dec	x	
CIFM	3-Dec	x	
CIFM	4-Dec	x	
CIFM	5-Dec	x	
CIFM	6-Dec	x	
CIFM	7-Dec	x	
CIFM	8-Dec	x	
CIFM	9-Dec	x	
CIFM	10-Dec	x	
CIFM	11-Dec	x	
CIFM	12-Dec	x	

CIFM	13-Dec	x	
CIFM	14-Dec	x	
CIFM	15-Dec	x	
CIFM	16-Dec	x	
CIFM	17-Dec	x	
CIFM	18-Dec	x	
CIFM	19-Dec	x	
CIFM	20-Dec	x	
CIFM	21-Dec	x	
CIFM	22-Dec	x	
CIFM	23-Dec	x	
CIFM	24-Dec	x	
CIFM	25-Dec	x	
CIFM	26-Dec	x	
CIFM	27-Dec	x	
CIFM	28-Dec	x	
CIFM	29-Dec	x	
CIFM	30-Dec	x	
CIFM	31-Dec	x	

MARBLE HILL REGULATOR LOCATIONS - 2022							
NUMBER	REG PM	REG CM	TG PM	TG CM	EBPP	CI RUN	COMMENTS
MH-1	27-Jan		x				
MH-1	16-Feb		x				
MH-1	27-Mar		x				
MH-1	20-Apr		x				
MH-1	24-May		x				
MH-1	12-Jun		x				
MH-1	6-Jul		x				
MH-1	11-Aug		x				
MH-1	6-Sep		x				
MH-1	13-Oct		x				
MH-1	12-Nov		x				
MH-1	10-Dec		x				
MH-2	27-Jan		x				
MH-2	16-Feb		x				
MH-2	27-Mar		x				
MH-2	20-Apr		x				
MH-2	24-May		x				
MH-2	12-Jun	x	x				replaced broken covers
MH-2	6-Jul		x				
MH-2	11-Aug		x				
MH-2	6-Sep		x				
MH-2	13-Oct		x				
MH-2	12-Nov		x				
MH-2	10-Dec		x				
MH-3	27-Jan		x				
MH-3	16-Feb		x				
MH-3	27-Mar		x				
MH-3	20-Apr		x				
MH-3	24-May		x				
MH-3	12-Jun		x				
MH-3	6-Jul		x				
MH-3	11-Aug		x				

MH-3	13-Oct		x				
MH-3	12-Nov		x				
MH-3	10-Dec		x				

RIVERDALE REGULATOR LOCATIONS - 2022

NUMBER	REG PM	REG CM	TG PM	TG CM	EBPP	CI RUN	COMMENTS
RD-1	19-Jan		n/a	n/a			
RD-1	16-Feb		n/a	n/a			
RD-1	27-Mar		n/a	n/a			
RD-1	20-Apr		n/a	n/a			
RD-1	24-May		n/a	n/a			
RD-1	12-Jun		n/a	n/a			
RD-1	6-Jul		n/a	n/a			
RD-1	11-Aug		n/a	n/a			
RD-1	6-Sep		n/a	n/a			
RD-1	13-Oct		n/a	n/a			
RD-1	12-Nov		n/a	n/a			
RD-1	10-Dec		n/a	n/a			
RD-2	19-Jan		n/a	n/a			
RD-2	16-Feb		n/a	n/a			
RD-2	27-Mar		n/a	n/a			
RD-2	20-Apr		n/a	n/a			
RD-2	24-May		n/a	n/a			
RD-2	12-Jun		n/a	n/a			
RD-2	6-Jul		n/a	n/a			
RD-2	11-Aug		n/a	n/a			
RD-2	6-Sep		n/a	n/a			
RD-2	8-Oct		n/a	n/a			
RD-2	12-Nov		n/a	n/a			
RD-2	10-Dec		n/a	n/a			
RD-3	19-Jan		n/a	n/a			
RD-3	16-Feb		n/a	n/a			
RD-3	27-Mar		n/a	n/a			
RD-3	20-Apr		n/a	n/a			
RD-3	24-May		n/a	n/a			
RD-3	12-Jun		n/a	n/a			
RD-3	6-Jul		n/a	n/a			
RD-3	11-Aug		n/a	n/a			

RD-3	6-Sep		n/a	n/a			
RD-3	13-Oct	x	n/a	n/a			cleared partial blockage
RD-3	12-Nov		n/a	n/a			
RD-3	10-Dec		n/a	n/a			
RD-4	19-Jan	x	n/a	n/a			cleared partial blockage
RD-4	21-Jan	x	n/a	n/a			flushed & vactored
RD-4	16-Feb	x	n/a	n/a			cleared partial blockage
RD-4	27-Mar		n/a	n/a			
RD-4	20-Apr		n/a	n/a			
RD-4	24-May		n/a	n/a			
RD-4	12-Jun		n/a	n/a			
RD-4	6-Jul		n/a	n/a			
RD-4	11-Aug		n/a	n/a			
RD-4	6-Sep		n/a	n/a			
RD-4	8-Oct		n/a	n/a			
RD-4	12-Nov		n/a	n/a			
RD-4	10-Dec		n/a	n/a			

Van Cortlandt Park Screen - 2022			
Van Cortlandt Park Screen	PM	CM	Comments
Jan	x		
Feb	x		
11-Mar	x	x	Cleaned Bars
30-Apr	x	x	Cleaned Bars
30-May	x	x	Cleaned Bars
5-Jul	x		
20-Jul	x	x	Cleaned Bars
21-Jul	x	x	Cleaned Bars
21-Aug	x		
23-Sep	x	x	Cleaned Bars
8-Oct	x	x	Cleaned Bars
15-Oct	x		
23-Nov	x	x	Cleaned Bars
6-Dec	x		

Miscellaneous - REGULATOR LOCATIONS - 2022

LOCATION	REG PM	REG CM	TG PM	TG CM	EBPP	Cl Runs	ACTIONS TAKEN
Alley Creek	01/27/22						
Tide Gates	02/28/22						
	03/21/22		X				full entry inspection,greased and exercised tide gates
	04/21/22						
	05/22/22		X				full entry inspection,greased and exercised tide gates
	06/05/22		X				full entry inspection,greased and exercised tide gates
	07/30/22		X				full entry inspection,greased and exercised tide gates
	08/14/22		X				full entry inspection,greased and exercised tide gates
	09/02/22		X				full entry inspection,greased and exercised tide gates
	10/15/22		X				full entry inspection,greased and exercised tide gates
	11/05/22						
	11/28/22						
	12/13/22		X				full entry inspection,greased and exercised tide gates
Flushing	01/27/22						
Tide Gates	02/28/22		X				full entry inspection greased and exercised tide gates
	03/20/22		X				full entry inspection greased and exercised tide gates
	04/21/22		X				full entry inspection greased tide gates
	05/22/22						full entry inspection,greased and exercised tide gates
	06/26/22						
	07/24/22		X				full entry inspection,greased and exercised tide gates
	08/14/22		X				full entry inspection,greased and exercised tide gates
	09/02/22		X				full entry inspection,greased and exercised tide gates
	10/15/22		X				full entry inspection,greased and exercised tide gates
	11/28/22						
	12/13/22		X				full entry inspection,greased and exercised tide gates
Rec Center	01/27/22						
Tide Gates	02/28/22		X				full entry inspection greased and exercised tide gates
	03/20/22		X				full entry inspection greased and exercised tide gates
	04/16/22		X				full entry inspection greased and exercised tide gates
	05/29/22						full entry inspection
	06/26/22		X				full entry inspection,greased and exercised tide gates
	07/24/22		X				full entry inspection,greased and exercised tide gates

	08/20/22		X				full entry inspection,greased and exercised tide gate
	09/25/22						
	10/30/22						
	11/20/22		X				full entry inspection,greased tide gates
	12/22/22		X				full entry inspection,greased tide gates
Roosevelt	01/26/22						
Force Main	02/09/22						
	03/22/22						
	04/05/22						
	05/05/22						
	06/25/22						
	07/27/22						
	08/04/22						
	09/17/22						
	10/26/22						
	11/26/22						
	12/26/22						
Rikers South	N/A						no access due to contractors upgrading pump station
Force main							

BRONX ZOO CSO SCREENING FACILITY - 2022			
BRONX ZOO CSO	PM	CM	COMMENTS
27-Jan	X		
22-Feb	X	x	Cleaned Bars
31-Mar	X	x	Cleaned Bars
22-Apr	X		
31-May	X		
30-Jun	X	x	Cleaned Bars
30-Jul	X	x	Cleaned Bars
31-Aug	x		
oct	X		no/access
30-Nov	X		cleaned Bars
Dec	x		no/access

HP-13 CSO NETTING FACILITY - 2022												
HP-13 CSO	PM	CM	TG CM	N-1	N-2	N-3	N-4	N-5	N-6	N-7	N-8	COMMENTS
17-Jan	x											
27-Jan	x											
18-Jan	x			x	x	x	x	x	x	x	x	nets changed flushed & vactored
22-Feb	x											
3-Mar	x	x		x	x	x	x	x	x	x	x	nets changed
2-Apr	x											
6-May	x											
5-Jun	x											
5-Jul	x											
7-Aug	x	x		x	x	x	x	x	x	x	x	nets changed
5-Sep	x											
28-Sep	x	x		x	x	x	x	x	x	x	x	nets changed
10-Oct	x	x		x	x	x	x	x	x	x	x	nets changed
11-Oct	x	x		x	x	x	x	x	x	x	x	flushed & vactored
12-Nov	x											
30-Nov	x											
3-Dec	x											

BRONX PARK AVE CSO SCREENING FACILITY -2022			
BRONX PARK AVE CSO	PM	CM	COMMENTS
27-Jan	x		no/access
22-Feb	x		no/access
31-Mar	x	x	cleaned bars
22-Apr	x		no/access
26-May	x	x	cleaned bars
30-Jun	x	x	cleaned bars
30-Jul	x		
31-Aug	x		no/access
sept	x		no/access
oct	x		no/access
30-Nov	x		no/access
1-Dec	x	x	cleaned bars

WEST FARM CSO NETTING FACILITY - 2022							
WEST FARM CSO	PM	CM	Net-1	N-2	N-3	N-4	COMMENTS
27-Jan	x						
22-Feb	x						
31-Mar	x						
22-Apr	x	x	x	x	x	x	
10-May	x						
7-Jun	x	x	x	x	x	x	
30-Jul	x						
31-Aug	x						
27-Sep	x						
27-Sep	x						
11-Oct	x						vactored
15-Oct	x	x	x	x	x	x	
30-Nov	x						
3-Dec	x						
10-Dec	x						

CONTENTS

Appendix 1:

- Appendix 1.1: Exhibit 1 - CSO Maintenance Program
- Appendix 1.2: Exhibit 2 - Rockaway Sanitary and Storm Sewer Projects
- Appendix 1.2.1: Completed Projects
- Appendix 1.2.2: Active Projects
- Appendix 1.3: Table 1 - 2022 12 Month Rolling Average Influent Chlorides

Appendix 1.1: EXHIBIT 1 - CSO MAINTENANCE PROGRAM

August 14, 2003

Mr. Robert Elburn
Regional Water Engineer
New York State Department of
Environmental Conservation, Region 2
Division of Water
47-40 21st Street - 2nd Floor
Long Island City, New York 11101

Re: **NY0026131** **NY0026115**
NY0026191 **NY0026239**
NY0026204 **NY0026158**
NY0026182 **NY0026221**
NY0026166 **NY0026107**
NY0026212 **NY0026247**
NY0027073

Dear Mr. Elburn:

The attached CSO Maintenance and Inspection Program is submitted in compliance with the CSO Best Management Practice #1 contained in the SPDES permits for the following New York City WPCPs: Bowery Bay (Section XV(e)), Coney Island (Section XV(d)), Tallman Island (Section XV(e)), Jamaica (Section XIV(d)), Newtown Creek (Section XIV(e)), 26th Ward (Section XIV(e)), Hunts Point (Section XIV(e)), Rockaway (Section XIV(e), Owls Head (Section XIII(e)), Port Richmond (Section XIII(e)), Red Hook (Section XIII(e)), Wards Island (Section XIII(e)) and North River (Section XII(e)).

Sincerely yours,

Alfonso R. Lopez, P.E.
Deputy Commissioner

SR/fk

xc: Quinn/Sapienza/Rozelman/Volgende/Eckels/Hammerman/Kulcsar

CSO MAINTENANCE & INSPECTION PROGRAM
BEST MANAGEMENT PRACTICE #1 SPDES PERMIT

Section VIII (26W, HP, JA, NC, RK);
Section IX (BB, CI, TI);
Section VI (NR);
Section VII (OH, PR, RH, WI)

(a) *The permittee shall develop and implement a written maintenance and inspection program for all CSO's listed beginning on page 3 of this permit. This program shall include all regulators tributary to these CSOs. This is to insure that no discharge or leakage occurs during dry weather and that the maximum amount of wet weather flow is conveyed to the WPCP for treatment. This program shall consist of scheduled inspections with required repair, cleaning and maintenance performed as needed to prevent dry weather overflow and leakage and ensure maximum wet weather flow is conveyed in accordance with CSO BMP#4. Inspection reports shall contain a record of visual inspections, any observed flow, incidence of rain or snowmelt, condition of equipment and work required.*

Regulator / Tide Gate Maintenance Inspection Schedule

High priority regulators shall be inspected four times per month.
High Priority Regulators are regulators that convey at least five million gallons per day and / or inherently require high maintenance, or pose a threat to beaches because of their locations.

Normal priority regulators shall be inspected once per month.

Items of Inspection

The field crews inspect the entire regulator including, tide gates, sluice gates, access ways, electrical controls and any mechanical equipment and instrumentation located within each site. An inspection report must be completed for each CSO facility. This form is attached in appendix A.

During the inspection, the crews are responsible for correcting any conditions that they encounter which may have adverse effects on the proper operation of the regulator. Examples of these conditions include blockages or obstructions caused by debris that may result in partial or full dry weather bypassing.

Any blockage that the crew is not capable of removing is referred to an emergency Contractor, who is retained by the NYC DEP for such cases. The contractor is required to respond to the site within twenty-four hours of notification.
Furthermore, any structural damage noticed during the inspections upstream of the

regulators is referred to the appropriate group within DEP for repairs.

(b) *The permittee shall include in the maintenance and inspection program a plan to maintain CSO tide gates to prevent infiltration of seawater into the collection system such that the WPCP influent concentration of chlorides does not exceed a twelvemonth rolling average of 400 mg/l. The maintenance and inspection program shall specify corrective actions to be taken within twelve months of the influent chloride exceedance of 400 mg/l.*

CSO Tide Gate Maintenance Program

All tide gates are maintained and inspected on the same schedule as regulators. Antiquated tide gates are earmarked for replacement or reconstruction.

The maximum twelve-month rolling average of influent chloride concentration in the SPDES permits at all the applicable WPCPs except North River is 400-mg/L. The influent chloride concentration in the SPDES permit for North River WPCP is 250-mg/L.

In order to maintain CSO tide gates to prevent inflow of seawater into collection system the crews are responsible for correcting any conditions that they encounter during the inspections that may have adverse effects on the proper operation of the tide gates.

DEP is responsible for developing a drainage area evaluation program to identify possible sources of seawater infiltration. Chloride sampling and tide gate repairs are performed immediately by the CFO crews when seawater inflow is discovered and result in elevated levels of chlorides at the WPCPs. Corrective actions are taken within twelve months of influent chloride exceedance of 400 mg/l.

(c) *The permittee shall include in the maintenance and inspection program a schedule for telemetering regulators and a plan to report the telemetering results. Within six months after the completion of the telemetering of regulators required in the NYSDEC/NYCDEP Omnibus IV Consent Order Compliance Schedule (as noted in the outfall description page) the permittee shall record and report the number and duration of events that cause a discharge at an outfall during dry weather conditions.*

Regulator Telemetering

The installation of the telemetering equipment at one hundred and two regulators was completed in May, 2001 in accordance with the compliance schedule in Schedule B to the Omnibus IV Order on Consent.

The system is currently maintained through a service contract. The contractor is responsible for all maintenance work.

DEP records and reports the number and duration of events that cause a discharge during dry weather conditions.

(d) CSO maintenance and inspection program reports shall be available for DEC review no later than 9 AM on the day following the day of the inspection was conducted and shall be available for DEC review at the associated WPCP no later than 30 days following the inspection

Maintenance and Inspection Reports

The CSO maintenance and inspection program reports are kept at each respective crew quarters and are available for DEC by 9:00 AM on the day following an inspection. Rather than store these reports at WPCP's where they may get misplaced, we have centralized the storage into 5 collection crew quarters.

These crew quarters are located as follows:

Tallman Island WPCP
Wards Island WPCP
Paedergat Pump Station
Gowanus Pump Station
Oakwood Beach WPCP

We believe this record storage policy is more condusive to record retention and retrieval than storing at WPCP's, many of which are undergoing massive upgrades.

Regulator Truck # : _____ REGULATOR and TIDE GATE Inspection Log Backup Truck # : _____

DATE: _____ RUN : _____ WEATHER : _____

	Regulator Tide Gate Number	Inspection Level 1 / 2 / 3 ?	Inspection y / n Diversion	Inspection Of Regulator	Inspection y / n Tide Gate
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

Reporting System for Regulator and Tide Gate Locations

INSPECTION LEVEL :

LEVEL 1):	Diversion, Regulator and Tide Gate Manhole Inspections performed from above ground which DO NOT involve entry into regulator or tide gate chambers
LEVEL 2) :	FULL ENTRY Regulator and Tide Gate inspections which DO NOT involve the use of back - up trucks
LEVEL 3) :	FULL ENTRY Regulator and Tide Gate inspections which DO involve the use of back - up trucks

REGULATOR CHAMBERS :

A 1):	Regulator flow O.K. No visible flow obstruction through regulator. Gate operational in automatic mode.
A 2):	Regulator flow O.K. No visible flow obstruction through regulator. Gate operational in manual mode ONLY ! **Explanation of problem required on log sheet**
A 3):	Regulator flow O.K. No visible flow obstruction through regulator. Gate NOT OPERATIONAL ! **Explanation of problem required on log sheet**
A 4):	Partial Blockage in Regulator. When flow through regulator is partially obstructed by debris, which may result in dry weather by-passing **Explanation required**
A 5):	Blockage in Regulator causing partial or full dry weather by-passing. **Explanation of problem required on log sheet**

TIDE GATE CHAMBERS :

INSPECTIONS DURING HIGH TIDE :

B 1):	No leak from TIDE GATE. When the gate is properly closed and there is no tidal flow
B 2):	Minor leak from TIDE GATE. When tidal inflow is small and acceptable.
B 3):	Mild leak from TIDE GATE. When tidal inflow is noticeably higher than a Minor leak.
B 4):	MAJOR LEAK from TIDE GATE. When tidal inflow is significantly high and may impact treatment plant processes with high chlorides

INSPECTIONS DURING LOW TIDE :

C 1):	No leak from TIDE GATE. When the gate is properly closed and there is no evidence of any potential tidal inflow problem.
C 2):	TIDE GATE is visibly held open by DEBRIS or FROZEN HINGES etc. **Explanation of problem required on log sheet**
C 3):	TIDE GATE Vulnerable to inflow. When gate is closed, damaged seals, warping or other factors likely to allow leakage. **Explanation of problem required on log sheet**

S.S.T.W. : _____ S.E.E. : _____ S.S.E.E. _____ CHIEF : _____

Appendix A

Appendix 1.2: EXHIBIT 2 - ROCKAWAY SANITARY AND STORM SEWER PROJECTS

Appendix 1.2.1: Completed Projects

Project No. Locations Status

PS-312Q Beach Channel. Completed in Sep-2017

SEQ-002516/ 200352 Cornaga Ave. Completed in Jun-2006, part of QED-965

SE-196/372 Camp Road, etc. Completed in Jun-1991

SE-378A/379A B. 130th Street, etc. Completed in Mar-1989

SE-378B/379B Rockaway Beach Blvd. etc. Completed in Nov-1998

SE-422A/423A B. 121st Street, etc. Completed in Jun-1989

SE-422B/423B B. 123rd Street, etc. Completed in Apr-1990

SE-422C/423C B. 127th Street, etc. Completed in Apr-1991

SE-424A/425A B. 132nd Street, etc. Completed in Apr-1993

SE-426A/427A B. 135th Street, etc. Completed in Dec-1990

SE-426B/427B B. 138th Street, etc. Completed in Nov-1990

SE-426C/427C B. 140th Street, etc. Completed in Jun-2003

SE-424B/425B B. 134th Street, etc. Completed in Aug-1999

SE-426C/427C Beach 69th St. Completed in Jan-2003

SE-772/87HW Formerly SEQ-200350 Beach 71st Str. Completed in Dec-2004

SE-789/ HWQ631B1 Sommerville Area. Completed in May-2014

SE-795 Chandler St. Completed in Jun-2017

SE-817 Beach 29th St. Completed in Aug-2015

SEQ-002546/ 200425 Grandview Terrace. Completed in Mar-2004

SEQ-200358 Beach 87th St. Completed in Sep-2002

SEQ-200368 Redfern Ave. Completed in Jun-2006

SEQ-002348 Rockaway Blvd., etc. Completed in May-1997

SEQ-002355 Beach 43rd Street, etc. Completed in Apr-1991

SEQ-002363 Beach 37th Street, etc. Completed in Apr-1996

SEQ-002380 Rockaway Beach Blvd. Completed in Nov-1996

SEQ-002402 Beach 45th Street, etc. Completed in Sep-1997

SEQ-002413/ 200275 R. Collier Avenue, etc. Completed in Mar-2005

SEQ-002426 Bay 25th Street, etc. Completed in Sep-1998

SEQ-002427 Cold Spring Road, etc. Completed in May-1998

SEQ-002428 Healy Avenue, etc. Completed in Jan-2000

SEQ-002460 West Bourne Ave, etc. Completed in Nov-2000

SEQ-002499 Beach 61st St. Completed in Sep-2000

SEQ-002511/ 200347 Beach 36th St. Completed in Jan-2003

SEQ-002538/ 200371 Beach 18th St. Completed in Aug-2003

SEQ-002550/ 200390 Beach 40 St. (Edgemere Phase HD153B). Completed in Nov-2005

SEQ-002551/ 200398 (HD153B1) Edgemere Phase B1. Completed in Jun-2007

SEQ-002571/ 200412 Hope VI Phase A. Completed in Apr-2004

SEQ-02479/ QED-983/ SEQ-200341 Rockaway Beach Blvd. Completed in Sep-2014

SEQ-200239 Rockaway Freeway, etc. Completed in Aug-1996

SEQ-200240 Rockaway Freeway, etc. Completed in Aug-1996

SEQ-200251 Rockaway Beach Blvd. Completed in May-1997

SEQ-200254 Beach 108th Street, etc. Completed in Nov-1998

SEQ-200305 Amstel Blvd, etc. Completed in May-2000

SEQ-200311 Beach 35th St. Edgemere. Completed in Apr-2002

SEQ-200378 Seagirt Blvd. Completed in Sep-2002

SEQ-200453 Thursby Ave. Completed in Jun-2007

SEQ-200508 Beach 32nd St. Completed in Jun-2015

SEQ-200523 New Haven Avenue, etc. Completed in Aug-2013

SEQ-200524 Beach 21st St. Completed in Apr-2020

SEQ-200533 Beach 42nd St. Completed in Jun-2012

HD153C1/ SEQ-002562/ SEQ-200406 Edgemere C1. Completed in Nov-2016

HD153C2/ SEQ-200421/ SEQ-002576 Edgemere C2. Completed in Sep-2014

HD153C1/ SEQ-200406/ 2562 Edgemere C1. Completed in Apr-2009

HWQ631 Beach 72 St. Completed in Dec-2004

SEQ-002442 Burchell Ave. Completed in Jun-2000

SEQ-002443 Beach 87 St. Completed in Apr-2000

SEQ-200251 Rockaway Beach Blvd. Completed in May-1997

SEQ-0201A6 Burchell Ave. Completed in May-2001

SEQ-0201A7 Beach 67 St. Completed in Aug-2002

SEQ-0201B3 Beach 86 St. Completed

SE-569U Thursby Ave. Completed in May-2004

SE-569V Almeda Ave. Completed in May-2005

SE-569W Shore Front Parkway. Completed in May-2006

SE-569Y Beach 80 St. Completed

SEQ-0201B5 Beach 113 St. Completed

SEQ-201BS4 Beach 87th St. Completed

SEQ-201BS2 Beach 114 St. Completed

SEC-20004I Seaside Ave. Completed

SEQ-200381R Beach 53 St. Completed in Mar-2004

HWQ230GR Cornaga Ave. Completed in Sep-2005

HWQ1126A Almeda Ave. Completed in Apr-2004

SEQ-002413R Collier Ave. Completed in Mar-2005

QED-973 Rockaway Turnpike. Completed in Jul-2002

SE-196B Camp Road. Completed in Jun-1998

SE-610 Granada Place. Completed in Dec-1996

SEQ-200364 Edgemere Ave. Completed in Apr-2003

QED-988 Channing Road. Completed in Jan-2007

SEQ-002623 Nameoke St. Completed in Jun-2007

SEQ-200550 Beach 99th St. Completed in May-2018

SEQ-002453 B. 47th Street, etc. Canceled Dec-1997

SEQ-002507 Beach 69th St. Canceled, included SEQ-200356 in HWQ641 Completed in Dec-2004

SEQ-200381 Beach 53th St. Canceled due to LIPA issues, was scheduled for FY2002

HWQ1682/ SE-884 Shore Front Parkway. Canceled Mar-2015

QED-982/ SANDHW13 Rockaway Beach Blvd. & B. 73rd St. Completed in Jun-2020

SEQ-200524 B. 21st St. Completed in Jun-2020

SEQ-200582/ HWQ1182A Broad Channel Phase I. Completed in May-2020

QED-1007 Rockaway Beach Blvd. & B. 49 St. Completed in Mar-2021

SANDHW11/ QED-1030 Beach Channel. Completed in May-2021

HWQ1126C Rockaway Beach. Canceled

SEQ-200426/ HWQ1126B Hope VI Phase B. Canceled

SANDR02/ SE-830 Far Rockaway Business District. Completed in August-2022

Appendix 1.2.2: Active Projects

Project No. Locations Status

SEQ-200595/ HWQ1187 Westbourne Norton Drive Reconstruction - Final CPI, FY2027

HD-153C3/ SEQ-002682 Edgemere C3 - on hold

SEQ-200597/ HWQ631B2 Somerville Area - CPI development, FY2027

SEQ-200598/ HWQ631B3 Somerville - CPI development, FY2031

SEQ200599/ HWQ631B3 Somerville Area - CPI development, FY2033

SEQ-200586/ HWQ1182B Broad Channel Phase II - Construction started 6/15/20, projected completion 10/18/24

SE-829 Brunswick Ave. - CPI development, FY2029

SE-886/ HWQ1079 Beach Channel Dr. area - CPI development, FY2026

SE-887/ HWQ1079 Cornaga Ave area - CPI development, FY2030

SE-900 Beach 22 Street area - CPI development, FY2032

SANDR04/ QED-1044 Beach 108th Street - Construction started 4/20/20, Substantially Completed in June-2022

SANDHW11B/ QED-1030B Beach Channel Phase 2 - Design, FY2025

Appendix 1.3: TABLE 1 - 2022 12 MONTH ROLLING AVERAGE INFLUENT CHLORIDES (MG/L)

2022 12-Month Rolling Average Influent Chlorides (mg/L)												
	Jan-22	**Feb-22**	**Mar-22**	**Apr-22**	**May-22**	**Jun-22**	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**
Wards Island	520	450	380	260	410	420	370	490	660	520	370	480
North River	280	360	250	140	330	370	370	380	710	420	300	250
Hunts Point	810	720	620	510	500	390	330	280	620	600	550	470
26th Ward	267	537	303	321	336	230	227	266	432	302	191	191
Coney Island	670	700	660	750	830	750	820	1,090	1,290	1,400	1,120	990
Owls Head	500	400	210	280	370	270	270	0	350	190	200	190
Newtown Creek	860	650	500	520	860	810	870	860	1000	1280	980	900
Red Hook	520	450	380	260	410	420	370	490	660	520	370	480
Jamaica	318	269	215	211	215	222	252	288	304	260	286	272
Tallman Island	420	410	320	230	440	440	310	400	720	410	290	290
Bowery Bay	1,270	360	280	160	400	370	340	440	560	460	160	330
Rockaway	2,700	2,000	1,800	1,775	2,000	1,900	2,100	2,400	2,500	2,200	2,200	2,400
Oakwood Beach	600	600	220	250	250	250	240	220	280	280	210	190
Port Richmond	620	496	305	287	741	396	435	562	690	519	807	502

(*) The chloride concentration action level for WRRFs is 400 mg/L with the exception of Rockaway that has a plant specific action level of 3,000 mg/L.

TABLE 2 **YEARLY AVERAGE TIDAL INFLOW COMPARISON FOR CY '21-'22**

WWRF	JANUARY - DECEMBER 21		JANUARY - DECEMBER 22		VARIANCE (CY22-CY21)		REMARKS*
	INFLOW (MGD)	% DWF	INFLOW (MGD)	% DWF	INFLOW (MGD)	% DWF	
WARDS ISLAND	4.6	2.4%	5.1	2.5%	0.47	0.2%	10.2% Increase
NORTH RIVER	2.7	2.5%	2.8	2.7%	0.13	0.1%	4.7% Increase
HUNTS POINT	3.8	2.8%	2.9	2.2%	-0.89	-0.5%	23.7% Decrease
26th WARD	0.9	1.8%	0.6	1.3%	-0.31	-0.5%	33.1% Decrease
CONEY ISLAND	3.4	4.1%	2.7	3.4%	-0.61	-0.7%	18% Decrease
OWLS HEAD	1.5	1.6%	0.9	1.1%	-0.54	-0.5%	36.6% Decrease
NEWTOWN CREEK	7.4	3.8%	8.1	4.1%	0.73	0.4%	9.9% Increase
RED HOOK	0.5	1.9%	0.5	1.7%	-0.03	-0.2%	6.4% Decrease
JAMAICA	0.8	1.0%	0.9	1.1%	0.04	0.1%	5.1% Increase
TALLMAN ISLAND	0.9	1.4%	1.0	1.6%	0.15	0.2%	17.7% Increase
BOWERY BAY	1.4	1.3%	1.8	1.8%	0.45	0.5%	33% Increase
ROCKAWAY	2.0	9.8%	1.8	9.4%	-0.18	-0.4%	9.2% Decrease
OAKWOOD BEACH	0.4	1.4%	0.3	1.1%	-0.09	-0.3%	21.1% Decrease
PORT RICHMOND	0.7	2.4%	0.7	2.6%	0.03	0.3%	3.7% Increase

WRRF Dry Weather Flows (MGD)

WRRF	CY2021	CY2022	Variance
WARDS ISLAND	193	198	2.7%
NORTH RIVER	106	105	-0.8%
HUNTS POINT	137	129	-5.7%
26th WARD	51	48	-6.2%
CONEY ISLAND	81	80	-0.7%
OWLS HEAD	94	88	-6.4%
NEWTOWN CREEK	197	197	0.3%
RED HOOK	27	28	4.1%
JAMAICA	81	77	-5.3%
TALLMAN ISLAND	59	62	3.7%
BOWERY BAY	103	102	-1.4%
ROCKAWAY	21	19	-5.7%
OAKWOOD BEACH	30	29	-2.7%
PORT RICHMOND	30	28	-7.7%
			-1.60%

WRRF Influent Chlorides

WRRF	CY2021	CY2022	Variance
WARDS ISLAND	423	444	4.8%
NORTH RIVER	331	349	5.5%
HUNTS POINT	688	534	-22.4%
26th WARD	424	302	-28.7%
CONEY ISLAND	1118	923	-17.5%
OWLS HEAD	436	295	-32.4%
NEWTOWN CREEK	848	847	-0.1%
RED HOOK	471	406	-13.7%
JAMAICA	233	259	11.1%
TALLMAN ISLAND	360	392	9.0%
BOWERY BAY	330	428	29.5%
ROCKAWAY	2255	2171	-3.7%
OAKWOOD BEACH	367	298	-18.8%
PORT RICHMOND	471	529	12.4%
			-6.60%

Receiving Waters

WRRF	CY2021	CY2022	East River	Harlem & Hudson	New York Bay	Jamaica Bay	Newtown Creek	Arthur and Kill Van Kull	Check
WARDS ISLAND	17,800	17,400	40%	60%					100%
NORTH RIVER	13,000	13,000		100%					100%
HUNTS POINT	25,000	24,000	100%						100%
26th WARD	23,000	23,000				100%			100%
CONEY ISLAND	27,000	27,000			80%	20%			100%
OWLS HEAD	28,000	28,000			100%				100%
NEWTOWN CREEK	22,600	20,600	50%	20%			30%		100%
RED HOOK	25,000	24,000	100%						100%
JAMAICA	23,000	23,000				100%			100%
TALLMAN ISLAND	25,000	24,000	100%						100%
BOWERY BAY	25,000	24,000	100%						100%
ROCKAWAY	23,000	23,000				100%			100%
OAKWOOD BEACH	26,400	26,400			80%			20%	100%
PORT RICHMOND	20,000	20,000						100%	100%

Receiving Water Salinity

Waterbody	WRRF	Salinity
East River	WI, TI, HP, BB, NC, RH	24,000
Newtown Creek	NC	20,000
New York Bay	OH, CI, OB	28,000
Arthur & Kill Van Kull	PR & OB	20,000
Harlem & Hudson River	NR & WI	13,000
Jamaica Bay	JA, 26W, RK	23,000

Appendix 2:

Appendix 2.1: BWSO

- Appendix 2.1.1: Maps of Cleaning Activities for NYC DDC: TV Inspection and Cleaning

Appendix 2.2: BWT

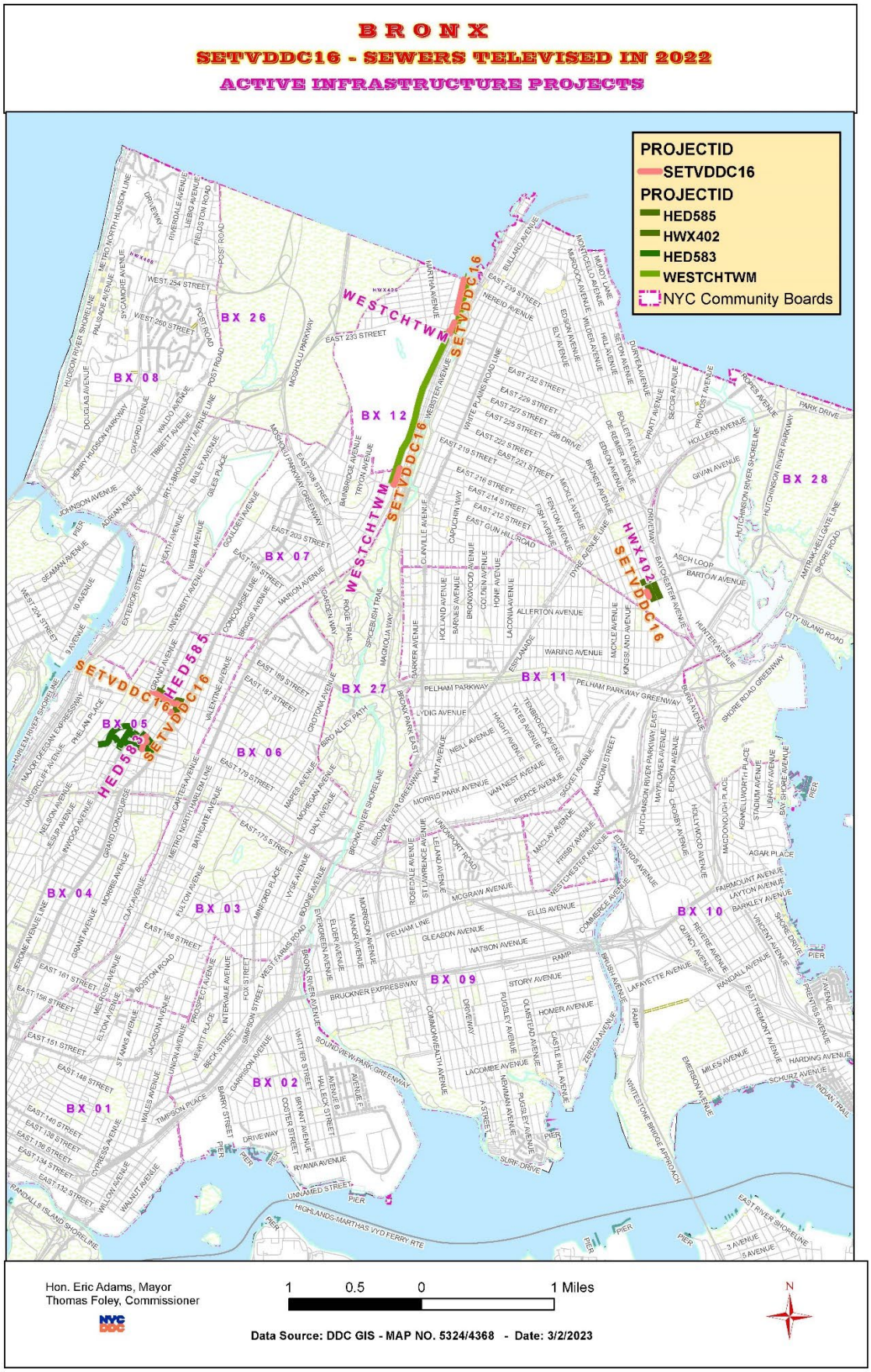
- Appendix 2.2.1: Table 1 – Summary of 100 Telemetered Regulators
- Appendix 2.2.2: Table 2 – Sediments Removed from Non-Interceptor Assets
- Appendix 2.2.3: Table 3 – Intercepting Sewer Inspections 2022 – Pipe Rating Index and Ranking
- Appendix 2.2.4 2022 Asset Repair List
- Appendix 2.2.5: Map 1 - 2022 BMP Interceptors and Local Sewers CCTV/SONAR, Pump Stations, Regulators and Interceptors/Local Sewers Cleaned Map

Appendix 2.1: BWSO

Appendix 2.1.1: Maps of Cleaning Activities for NYC DDC

Appendix 2.1.1.1: *Brooklyn*

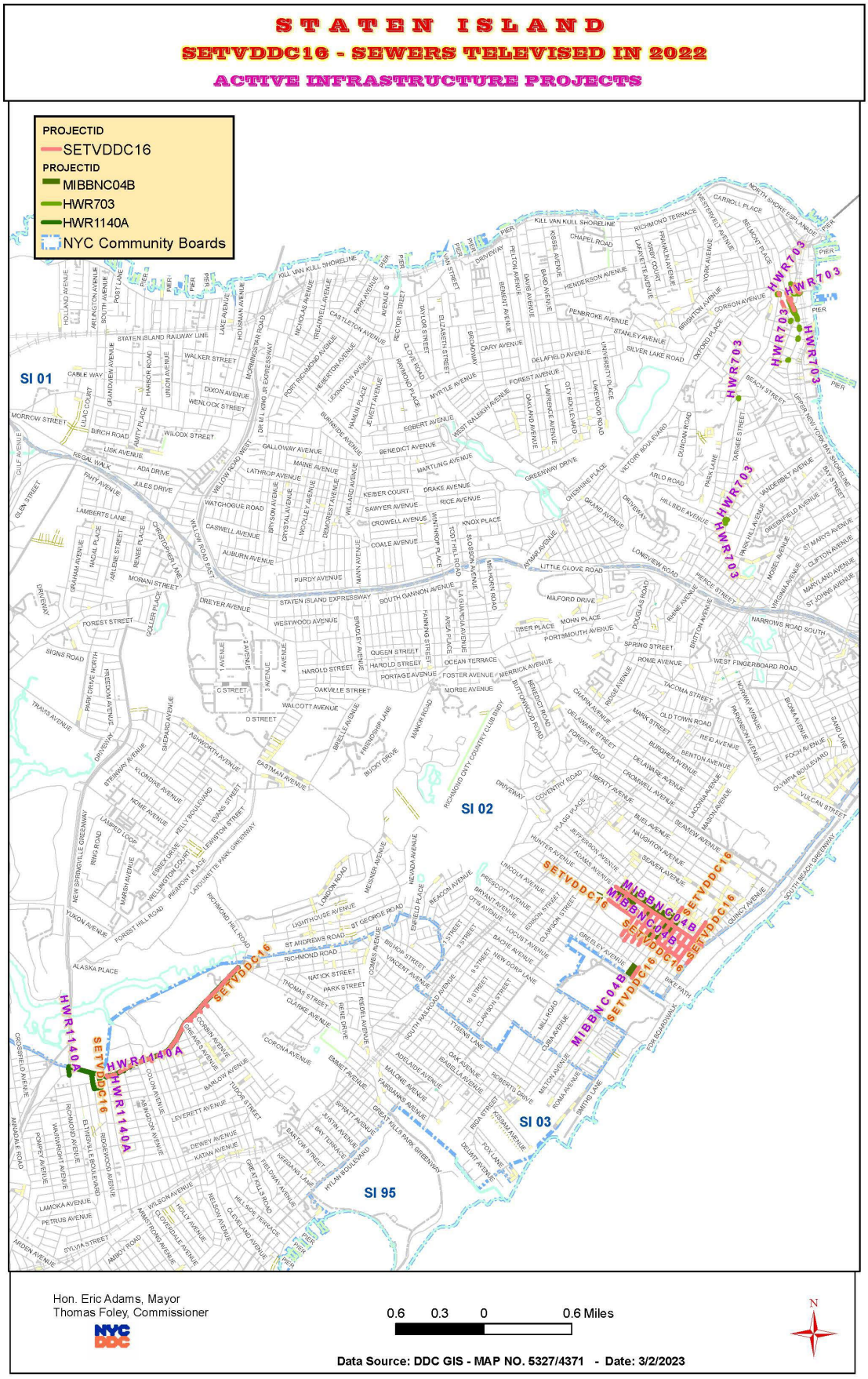
Appendix 2.1.1.2: ***Bronx***



Appendix 2.1.1.3 Manhattan

Appendix 2.1.1.4 Queens

Appendix 2.1.1.5 Staten Island



Appendix 2.2.1: Table 1 - Summary of 100 Telemetered Regulators (2022)

Summary of 100 Telemetered Regulators

= 17 with Inclinometers

= 27 Key Regulators*

05/01/16

No.	WPCP	Reg. No.	Regulator Location	Outfall SPDES No.	Reg. Type	Flow Compartment	Weir Data		Hydraulic Capacity (mgd)	Flow Data	
							Length (ft)	Elev. (ft)		Peak (mgd)	Mean DWF (mgd)
1	26W	01	TIDE GATE (26 WARD WPCP)	004	TG.	S.G./72"x56"			N/A	21.71	19.15
2	26W	02	WILLIAMS & FLATLANDS AVES.	003	HYD.	S.G./48"x36"	68'-0"	-6.00	32.85	11.34	9.80
3	26W	03	CRESENT ST. & FLATLANDS AVE.	005	HYD.	S.G./48"x36"	76'-0"	-6.85	38.53	29.72	24.64
3 Subtotal											
1	BBL	L-04	47th AV. BETW. 28th & 29th ST.	026	HYD	SG/36"x30"	9'-0"	-2.50	24.46	9.57	6.67
2	BBL	L-21	37th AVE. & VERNON BLVD.	028	HYD	SG/30"x24"	22'-6"	-4.00	20.00	14.50	11.19
3	BBL	L-22	VRNON BLVD. & BROADWAY	029	HYD	SG/30"x24"	12'-0"	-5.00	19.72	12.18	9.06
4	BBL	L-23	30th RD. & VERNON BLVD.	030	DC/TG	FO/12"DIA.	2'-0"	-1.75	1.36	N/A	0.21
5	BBL	L-30	ASTORIA PARKS E/O SHORE BLVD.	034	HYD	SG/24"x24"	13'-0"	-0.25	12.67	15.48	12.28
6	BBH	02	45th ST. & PLANT	002	DC/TG	AT THE PLANT	9'-0"	-3.50	N/A	89.08	61.32
7	BBH	03	HAZEN ST. & 19th ST. AVE.	003	DC/TG	FO /18" DIA.	5'-6"	+4.00	7.45	2.16	1.54
8	BBH	06	108th ST. & DITMARS BLVD.	008	DC	FO,DP	4'-0"	+9.00	94.94	N/A	33.29
9	BBH	09	108th ST. & 43rd. AVE.	008	DC	FO,DP	5'-0"	+14.80	99.58	49.71	40.27
9 Subtotal											
1	HP	01	E.177th ST. E/O TIERNEY PL.	022	HYD.	S.G./18"x12"	9'-2"	-5.00	4.35	1.52	0.61
2	HP	02	SHORE DR. S/O PENNYFIELD AVE.	021	HYD.	S.G./30"x30"	8'-0"	-4.77	13.17	6.56	5.61
3	HP	03	CALHOUN AVE. S/O SCHURZ AVE.	019	HYD.	S.G./12"x12"	8'-0"	-2.88	2.71	1.84	1.30
4	HP	04	BRUSH AVE. & BRUCKNER BLVD.	016	HYD.	S.G./30"x30"	8'-10"	-4.50	9.84	4.18	3.18
5	HP	05	WHITE PL. RD. S/O RIVER AVE.	011	HYD.	S.G./18"x12"	26'-0"	-4.50	1.87	N/A	0.50
6	HP	06	WHITE PL. RD. & O'BRIEN AVE.	011	HYD.	S.G./2EA.72"x48"	8'-0"	-5.00	150.13	81.41	66.49
7	HP	08	TRUXTON ST. & OAKPOINT AVE.	025	HYD.	S.G./24"x24"	9'-0"	-2.92	15.27	6.86	5.30
8	HP	09	TIFFANY ST. & EAST BAY AVE.	002	HYD.	S.G.48"x36"	12'-0"	-3.60	52.54	15.41	11.94
9	HP	10	HUNTS POINT AVE. & RYAWA AVE.	003	HYD.	S.G./2EA.36"x30"	15'-0"	-3.65	56.38	18.01	15.58
10	HP	11	EMERSON & SCHURZ AVENUES	017	HYD.	S.G.18"x18"	16'-6"	-4.00	5.58	2.33	1.40
11	HP	12	ROBINSON & SCHURZ AVENUES	018	HYD.	S.G./12"x12"	4'-0"	-2.72	3.48	0.17	0.09
12	HP	13	METCALF AVE. & SOUNDVIEW PARK	009	HYD.	S.G./2EA.36"x30"	21'-0"	-5.00	51.37	44.07	21.63
13	HP	14	EDGEWATER PARK	026	TG.	F.O.			N/A	N/A	N/A
13 Subtotal											
1	JA	01	JFK AIRPORT	006	DC/TG.	F.O.	12'-0"	+1.00	N/A	N/A	53.95
2	JA	02	79th ST. N. CONDUIT AVE.	26W-005	HYD. MAN	S.G./36"x24" S.G./36"x48"	5'-0"	-0.21	23.14	N/A	2.82
3	JA	03	123rd. PLACE & 150th AVE.	003	HYD.	S.G./36"x48"	16'-3"	+3.15	40.92	14.20	11.06
4	JA	09	LINDEN BLVD. & SPRINGFIELD BLVD.	005	DC.	F.O.	22'-0"	+27.77	N/A	N/A	8.30
5	JA	14	124th ST. & N.CONDUIT AVE.	003a	HYD.	S.G./24"x18"	30'-0"	-1.35	N/A	3.70	2.69
5 Subtotal											
1	NC(Q)	Q-01	RUST ST. & 56th ST.	077	HYD.	S.G./24"x24"	16'-0"	+1.00	15.14	8.07	4.92
2	NC(B)	B-01	JOHNSON AVE. W/O PORTER AVE.	015	HYD.	S.G./2ea.48"x36"		-4.68	157.45	44.53	36.57
3	NC(B)	B-04	KENT AVE. & TAYLOR ST.	014	HYD.	S.G./48"x36"	12'-3"	-8.57	41.08	47.68	40.91
4	NC(B)	B-05	DIVISION AVE. W/O KENT AVE.	013	HYD.	S.G./48"x36"	12'-0"	-4.59	52.86	20.17	17.27
5	NC(B)	B-06	S.5th AVE. W/O KENT AVE.	012	HYD.	S.G./36"x24"	16'-6"	-2.59	20.95	15.99	11.98

1	RK	01	B.106th ST. & BEACH CHANNEL DR.	029	MECH.	S.G./2EA.40.75"x20	5'-6"	-6.00	103.98	13.89	10.99
1 Subtotal											
1	TI	09	LINDEN PL & 32nd AVE.	011	HYD.	F.O. 60"DIA.	15'-9"	+4.75	103.40	46.74	32.56
2	TI	10A	144th ST. & 7th AVE.	003	DC.	F.O./12"DIA.	5'-0"	+8.50	30.34	9.89	N/A
3	TI	13	15th DR. & WILLETS POINT BLVD.	023	HYD.	S.G./24"x18"	9'-0"	+24.65	12.78	3.87	2.81
4	TI	30	QUINCE AVE. & KISSENA BLVD.	010	MECH.	S.G./9"x33"	10'-0"	+1.88	5.45	5.27	2.10
5	TI	40	FRESH MEADOW LA. & PECK AVE.	010	HYD.	S.G./36"x28"	11'-6"	+19.05	24.31	7.56	5.00
6	TI	46	210 th ST. & LIE (N.S)	008	DC.	F.O./30"DIA.	12'-0"	+51.10	15.91	4.90	2.54
7	TI	47	218th ST & LIE (N.S)	008	DC.	F.O.	7'-6"	+69.40	12.48	0.80	0.61
8	TI	49	220th PL. & 46th AVE.	008	DC.	F.O./12"DIA.	6'-6"	+44.50	1.57	0.43	0.23
8 Subtotal											
1	WI(M)	02B	N/O E. 74th ST. & FDR DR.	003	HYD.	S.G./30"x24"			26.00	N/A	N/A
2	WI(M)	07	E.79th ST. & FDR DR.	008	HYD.	S.G./30"x24"	4'-4"	-2.14	22.27	11.98	8.00
3	WI(M)	23	E.106th ST. & FDR DR.	023	HYD.	S.G./30"x24"	15'-0"	-3.82	16.84	10.17	6.81
4	WI(M)	24	E.110th ST. & FDR DR.	024	HYD.	S.G./48"x36"	17'-0"	-4.57	38.28	14.63	10.70
5	WI(M)	38	E.135th ST. & E/O HARLEM R. DR.	038	HYD.	S.G./24"x24"	5'-0"	-4.30	15.36	13.38	10.63
6	WI(M)	45	W.147th ST. & IRT YARD	045	MAN.	S.G./18"x18"	7'-6"	-4.47	7.29	6.88	5.28
7	WI(M)	46	W.151st ST. & PLAYGROUND	046	HYD.	S.G./30"x24"	13'-0"	-3.50	19.36	11.37	10.20
8	WI(M)	51	N/S HARLEM R. DR. (W.167th ST.)	051	HYD.	S.G./18"x18"	3'-6"	+9.80	10.81	5.69	3.98
9	WI(M)	52	N/S HARLEM R. DR. (W.176th ST.)	052	HYD.	S.G./18"x18"	7'-0"	+43.88	8.32	6.20	3.94
10	WI(B)	53	BRUCKNER BLVD. & BROOK AVE.	068	HYD.	S.G./42"x42"	25'-0"	-7.42	248.67	62.39	52.64
11	WI(B)	58	MAJOR DEEGAN S/S 138th ST.	075	HYD.	S.G./30"x24"	11'-2"	-3.75	16.06	17.47	7.79
12	WI(B)	60	JEROME AVE. & McCOMBS DAM PARK	062	HYD.	S.G./42"x42"	9'-3"	-2.81	67.29	16.10	13.42
13	WI(B)	62	UNDERCLIFF & SEDGEWICK AVE.	060	HYD.	S.G./30"x24"	12'-8"	-3.83	16.36	36.24	22.66
14	WI(B)	67	E.192nd ST. W/O BAYLEY AVE.	056	HYD.	S.G./48"x36"	28'-0"	-3.55	57.85	49.05	36.38
15	WI(B)	68	E.149th ST. & EAST RIVER	072	HYD.	S.G./24"x24"	8'-0"	-3.00	13.6	9.14	8.27
15 Subtotal											
100 Total											

*Original count of 28 Key Regulators temporaily included PR-35W while PR-13E and PR-06W were out of service for repair.

Appendix 2.2.2: Table 2 - Sediments From Non-interceptor Assets 2022

Plant Name	Asset Type Cleaned	Tons Cleaned
BB	BB Sludge well + Thickener	30.8
NC	Digester Tank	10
PR	Floor	36.37
WI	Train #1 Sharon Building	142
Total		**218.68**

CSO Name	Asset Type Cleaned	Tons Removed
Holding Tank	Paerdegat Facility	53.5
Total		**53.5**

Pump Station	Asset Type Cleaned	Tons Cleaned
108th st	Wet Well & Bar Screens	158.80
FBCSO PS	Wet Well & Bar Screens	14.56
Gowanus PS	Wet Well & Bar Screens	15.47
Merserau	Wet Well & Bar Screens	68.94
Nautilus	Wet Well & Bar Screens	8.63
Park Drive E	Wet Well & Bar Screens	50.10
Pleasant	Wet Well & Bar Screens	6.11
South Beach	Wet Well & Bar Screens	9.15
Victory Blvd	Wet Well & Bar Screens	13.83
Total		**345.59**

Appendix 2.2.3: Intercepting Sewer Inspections 2022 – Pipe Rating Index and Ranking

Table 3 - Intercepting Sewer Inspections 2022 – Pipe Rating Index and Ranking

Pipeline segment ref:	O_M Pipe Rating	Structural Pipe Rating	O&M Rank	Structural Rank
26_W_15	2.8	0.0	4	4
26W_E_02	2.1	3.0	4	3
26W_E_10	2.7	0.0	4	4
26W_E_11	2.2	0.0	4	4
26W_E_3	2.0	0.0	4	4
26W_E_4	2.4	3.0	4	3
26W_E_5	2.0	0.0	4	4
26W_E_6	2.5	0.0	4	4
26W_E_7	2.5	0.0	4	4
26W_E_8	2.0	0.0	4	4
26W_E_9	2.4	3.0	4	3
26W_W_1	2.2	0.0	4	4
BB_E_68	2.0	0.0	4	4
CI_N_41	2.0	0.0	4	4
CI_W_44	2.1	3.2	4	3
HP_E_100	2.3	0.0	4	4
HP_E_101	2.3	3.0	4	3
HP_E_108	2.2	3.0	4	3
HP_E_110	2.0	3.0	4	3
HP_E_66A	2.0	3.0	4	3
HP_E_68A	2.0	3.0	4	3
HP_E_9	2.4	3.0	4	3
JA_W_10	2.8	2.9	4	4
JA_W_11	2.0	3.0	4	3
JA_W_12	1.8	3.0	4	3
NCB__W_16	2.8	3.0	4	3
NCB_E_15_i	2.1	0.0	4	4
NCB_E_20	2.3	3.0	4	3
NCB_NW_ 1	2.3	0.0	4	4
NCB_W_2	2.0	3.0	4	3
NCB_W_3	2.0	3.0	4	3
NCB_W_4	2.2	3.0	4	3
NCB_W_5	2.0	3.0	4	4
NCM_N_1	2.0	4.0	4	3
NCM_N_2	2.0	2.0	4	4
NCM_N_7_3	2.5	0.0	4	4
NCM_N_7_4	2.2	3.0	4	3
NCM_N_ADIT_16_1	2.0	3.0	4	4
NCM_S_10	2.0	0.0	4	4
NR_N_10	2.1	3.0	4	3
NR_S_18	1.9	1.0	4	4
NR_S_27	2.0	5.0	4	3
OB_E_37	2.0	0.0	4	4
OB_E_38	2.0	0.0	4	4
OB_E_39	2.0	0.0	4	4
OB_E_40	2.1	0.0	4	4

Pipeline segment ref:	O_M Pipe Rating	Structural Pipe Rating	O&M Rank	Structural Rank
OB_E_41	3.0	0.0	3	4
OB_E_42	2.5	0.0	4	4
OB_E_4	2.0	0.0	4	4
OB_E_5	2.0	0.0	4	4
OB_FK_W_10	2.0	0.0	4	4
OB_FK_W_11	2.0	0.0	4	4
OB_FK_W_6	3.0	0.0	3	4
OB_FK_W_7	2.4	0.0	4	4
OB_FK_W_8	2.0	0.0	4	4
OB_FK_W_9	2.0	0.0	4	4
OB_W_3	2.7	0.0	4	4
OB_W_4	3.0	0.0	4	4
OB_W_46	2.3	0.0	4	4
OB_W_89	2.0	0.0	4	4
OB_W_90	2.2	0.0	4	4
OB_W_91	1.9	0.0	4	4
OB_W_92	2.0	0.0	4	4
OB_W_93	2.0	0.0	4	4
PR_E_33	2.0	0.0	4	4
PR_E_45	2.0	0.0	4	4
PR_E_46	2.2	0.0	4	4
PR_E_47	2.7	1.0	4	4
PR_E_66	2.5	3.0	4	3
PR_E_67	5.0	0.0	2	4
PR_E_6	1.9	0.0	4	4
PR_W_2	2.2	5.0	4	3
PR_W_27	2.0	4.3	4	3
RK_W_50	2.0	0.0	4	4
RK_W_51	1.9	0.0	4	4
WIB_MH_9	2.2	0.0	4	4
WIB_W_10	2.0	0.0	4	4
WIB_W_11	2.4	0.0	4	4
WIB_W_11A	2.5	0.0	4	4
WIB_W_3	2.0	0.0	4	4
WIB_W_4	2.0	0.0	4	4
WIB_W_5	2.0	0.0	4	4
WIB_W_6	2.2	0.0	4	4
WIB_W_7	2.1	0.0	4	4
WIB_W_8	2.4	0.0	4	4
WIB_W_9	2.0	0.0	4	4

Appendix 2.2.4: 2022 Asset Repair List

Asset Name	Date Inspected	Length (ft)	Defect	Structural Index	Comments	Final Decision	Corrective Action By
N/A					No assets found in need of repair in 2022		

Appendix 2.2.5: Map 1 - 2022 BMP Interceptors and Local Sewers CCTV/SONAR, Pump Stations, Regulators and Interceptors/Local Sewers Cleaned Map


Legend
Interceptors Inspected 2022
Interceptors Cleaned 2022
Pump Stations Cleaned 2022
WRRF's Cleaned 2022
CSO's Cleaned 2022
N
Wards Island
Hunts Point
North River
Tallman Island
Bowery Bay
Newtown Creek
Red Hook
Jamaica
26th Ward
Owls Head
Coney Island
Rockaway
Port Richmond
Oakwood Beach

Appendix 3:

- Appendix 3.1: Critical Wet Weather Event Summary – CY2022
- Appendix 3.2: Estimation of Wet-Weather Capture

Appendix 3.1: CRITICAL WET WEATHER EVENT SUMMARY – CY 2022

26TH WARD - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	WET WEATHER PLANT CAPACITY (MGD)	Did Plant Throttle? Yes/No	Flow at Start of Throttling (MGD)	Throttling Max Flow (MGD)	Throttling Avg Flow (MGD)	Bypass Item No.	Critical Event Start Date & Time		Critical Event End Date & Time		Critical Event Max Flow (MGD)	Critical Event Avg Flow (MGD)
1/1/2022 - 1/2/2022	170	YES	180	182	178	N/A	1/1/2022	10:30 PM	1/2/2022	12:45 AM	182	177
1/16/2022 - 1/17/2022	170	YES	172	192	174	N/A	1/6/2022	11:45 PM	1/7/2022	6:45 AM	192	175
1/25/2022	170	YES	173	173	135	N/A	1/25/2022	9:45 AM	1/25/2022	11:00 AM	173	162
2/25/2022	170	NO	171	N/A	N/A	N/A	2/25/2022	9:30 AM	2/25/2022	11:00 AM	173	172
3/24/2022 - 3/25/2022	170	YES	179	179	168	N/A	3/24/2022	10:30 PM	3/25/2022	1:15 AM	181	171
4/1/2022	170	YES	175	178	170	N/A	4/1/2022	1:00 AM	4/1/2022	2:15 AM	178	170
4/8/2022	170	NO	171	N/A	N/A	N/A	4/8/2022	12:00 AM	4/8/2022	12:30 AM	179	178
4/18/2022 - 4/19/2022	170	YES	176	177	172	N/A	4/18/2022	11:00 PM	4/19/2022	7:30 AM	177	163
5/7/2022	170	YES	176	176	172	N/A	5/7/2022	1:00 PM	5/7/2022	4:15 PM	176	171
5/19/2022	170	YES	176	176	175	N/A	5/19/2022	5:30 AM	5/19/2022	8:30 AM	176	174
5/20/2022	170	YES	175	N/A	N/A	N/A	5/20/2022	6:15 PM	5/20/2022	7:30 PM	178	174
6/1/2022	170	YES	179	185	177	N/A	6/1/2022	9:15 PM	6/2/2022	12:30 AM	185	178
6/1/2022 - 06/02/2022	170	YES	185	185	177	N/A	6/1/2022	9:15 PM	6/2/2022	12:30 AM	185	178
6/9/2022	170	YES	175	179	174	N/A	6/9/2022	6:00 AM	6/9/2022	7:30 AM	179	174
7/25/2022	170	NO	N/A	N/A	N/A	N/A	7/25/2022	5:15 PM	7/25/2022	6:15 PM	178	176
9/6/2022	170	YES	175	171	170	N/A	9/6/2022	4:45 PM	9/6/2022	5:15 PM	171	170
9/13/2022	170	YES	181	194	180	N/A	9/13/2022	5:00 AM	9/13/2022	6:00 AM	194	180
9/25/2022	170	YES	178	184	173	N/A	9/25/2022	10:30 PM	9/26/2022	12:15 AM	184	173
10/1/2022	170	YES	174	177	175	N/A	10/1/2022	7:00 AM	10/1/2022	8:15 AM	177	175
10/2/2022	170	YES	177	177	174	N/A	10/2/2022	1:00 PM	10/2/2022	2:15 PM	177	173
10/4/2022	170	YES	173	177	172	N/A	10/4/2022	2:30 AM	10/4/2022	9:30 AM	182	174
10/13/2022	170	NO	N/A	N/A	N/A	N/A	10/13/2022	7:00 PM	10/13/2022	7:45 PM	177	176
10/13/2022	170	YES	177	179	176	N/A	10/13/2022	9:15 PM	10/13/2022	11:00 PM	179	175
11/11/2022	170	YES	175	175	170	N/A	11/11/2022	5:15 PM	11/11/2022	7:00 PM	175	170
11/27/2022	170	YES	175	180	172	N/A	11/27/2022	3:45 PM	11/27/2022	4:30 PM	180	172
12/7/2022	170	YES	176	176	173	N/A	12/7/2022	2:00 PM	12/7/2022	3:00 PM	176	173
12/23/2022	170	NO	N/A	N/A	N/A	N/A	12/23/2022	5:15 AM	12/23/2022	6:00 AM	172	171

BOWERY BAY - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	**WET WEATHER PLANT CAPACITY (MGD)**	**Did Plant Throttle? Yes/No**	**Flow at Start of Throttling (MGD)**	**Throttling Max Flow (MGD)**	**Throttling Avg Flow (MGD)**	**Bypass Item No.**	**Critical Event Start Date & Time**		**Critical Event End Date & Time**		**Critical Event Max Flow (MGD)**	**Critical Event Avg Flow (MGD)**
1/1/2022	270	YES	290	306	294	N/A	1/1/2022	9:45 PM	1/2/2022	2:45 AM	306	294
1/17/2022	300	YES	305	**305**	**294**	N/A	1/17/2022	12:15 AM	1/17/2022	8:00 AM	314	305
2/4/2022	300	YES	309	321	308	N/A	2/4/2022	4:00 PM	2/4/2022	7:30 PM	321	308
2/18/2022	300	NO	N/A	N/A	N/A	N/A	2/18/2022	12:15 AM	2/18/2022	3:30 AM	327	307
2/25/2022	225	YES	243	303	251	N/A	2/25/2022	5:45 AM	2/25/2022	4:30 PM	306	263
3/12/2022	300	YES	302	323	312	N/A	3/12/2022	9:45 AM	3/12/2022	2:00 PM	323	310
3/24/2022	300	YES	306	326	310	N/A	3/24/2022	10:45 PM	3/25/2022	2:45 AM	326	311
3/28/2022	300	NO	N/A	N/A	N/A	N/A	3/28/2022	2:15 PM	3/28/2022	2:30 PM	302	301
4/7/2022-4/8/2022	300	NO	N/A	N/A	N/A	N/A	4/7/2022	4:15 PM	4/8/2022	2:45 AM	353	312
4/18/2022 - 4/19/2022	300	YES	309	322	309	N/A	4/18/2022	11:45 PM	4/19/2022	7:30 AM	322	309
5/2/2022	300	NO	N/A	N/A	N/A	N/A	5/2/2022	7:30 AM	5/2/2022	9:00 AM	311	307
5/6/2022 - 5/7/2022	300	NO	N/A	N/A	N/A	N/A	5/6/2022	8:00 PM	5/7/2022	3:45 AM	341	315
5/7/2022	300	YES	300	323	318	N/A	5/7/2022	12:00 PM	5/7/2022	6:30 PM	232	317
5/16/2022	300	NO	N/A	N/A	N/A	N/A	5/16/2022	7:15 PM	5/16/2022	9:45 PM	317	309
5/19/2022	300	YES	317	319	309	N/A	5/19/2022	5:45 AM	5/19/2022	9:00 AM	322	310
5/20/2022	300	NO	N/A	N/A	N/A	N/A	5/20/2022	6:30 PM	5/20/2022	8:30 PM	341	319
6/1/2022 - 6/2/2022	300	NO	N/A	N/A	N/A	N/A	6/1/2022	9:15 PM	6/2/2022	2:00 AM	328	318
6/2/2022	300	NO	N/A	N/A	N/A	N/A	6/2/2022	6:00 PM	6/2/2022	7:45 PM	316	310
6/9/2022	300	YES	306	319	312	N/A	6/9/2022	5:30 AM	6/9/2022	9:15 AM	319	312
6/16/2022	300	NO	N/A	N/A	N/A	N/A	6/16/2022	8:45 AM	6/16/2022	9:45 AM	333	316
7/16/2022	300	YES	318	318	307	N/A	7/16/2022	3:45 PM	7/16/2022	6:45 PM	323	309
7/21/2022	300	YES	315	363	319	N/A	7/21/2022	2:45 PM	7/21/2022	5:15 PM	363	321
7/25/2022	300	YES	302	314	306	N/A	7/25/2022	2:00 PM	7/25/2022	5:00 PM	314	303
8/1/2022	300	NO	N/A	N/A	N/A	N/A	8/1/2022	5:45 AM	8/1/2022	6:45 AM	316	308
8/7/2022	300	YES	317	319	303	N/A	8/7/2022	3:30 PM	8/7/2022	4:45 PM	319	305
9/6/2022	300	YES	311	327	311	N/A	9/6/2022	12:00 PM	9/6/2022	2:45 PM	327	311
9/6/2022	300	NO	N/A	304	303	N/A	9/6/2022	6:45 PM	9/6/2022	7:00 PM	304	303
9/12/2022	300	NO	N/A	319	308	N/A	9/12/2022	1:30 AM	9/12/2022	4:45 AM	319	308
9/13/2022	300	YES	304	322	310	N/A	9/13/2022	1:45 AM	9/13/2022	7:30 AM	322	309
9/25/2022	300	YES	302	315	310	N/A	9/25/2022	10:30 PM	9/26/2022	1:30 AM	315	310
10/1/2022	300	NO	N/A	N/A	N/A	N/A	10/1/2022	7:30 AM	10/1/2022	8:30 AM	334	308
10/1/2022	300	NO	N/A	N/A	N/A	N/A	10/1/2022	12:15 PM	10/1/2022	2:00 PM	316	311

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	WET WEATHER PLANT CAPACITY (MGD)	Did Plant Throttle? Yes/No	Flow at Start of Throttling (MGD)	Throttling Max Flow (MGD)	Throttling Avg Flow (MGD)	Bypass Item No.	Critical Event Start Date & Time		Critical Event End Date & Time		Critical Event Max Flow (MGD)	Critical Event Avg Flow (MGD)
10/3/2022	300	NO	N/A	N/A	N/A	N/A	10/3/2022	7:00 PM	10/3/2022	9:30 PM	324	307
10/4/2022	300	YES	320	338	310	N/A	10/4/2022	3:00 AM	10/4/2022	11:30 AM	338	312
10/5/2022	300	YES	317	317	306	N/A	10/5/2022	6:30 AM	10/5/2022	10:45 AM	317	306
10/13/2022	300	NO	N/A	N/A	N/A	N/A	10/13/2022	9:15 PM	10/14/2022	4:45 AM	177	176
10/24/2022	300	NO	N/A	N/A	N/A	N/A	10/24/2022	11:00 PM	10/24/2022	11:45 PM	328	312
11/11/2022	300	YES	303	303	297	N/A	11/11/2022	5:15 PM	11/11/2022	7:00 PM	303	297
11/15/2022 -11/16/2022	300	NO	N/A	N/A	N/A	N/A	11/15/2022	10:15 PM	11/16/2022	1:45 AM	318	309
11/27/2022	300	NO	N/A	N/A	N/A	N/A	11/27/2022	3:30 PM	11/27/2022	4:30 PM	308	304
12/3/2022	300	NO	N/A	N/A	N/A	N/A	12/3/2022	1:15 PM	12/3/2022	3:15 PM	316	312
12/6/2022-12/7/2022	300	NO	N/A	N/A	N/A	N/A	12/6/2022	9:15 PM	12/7/2022	4:30 AM	322	317
12/15/2022-12/16/2022	300	NO	N/A	N/A	N/A	N/A	12/15/2022	9:15 PM	12/16/2022	12:30 AM	310	305
12/16/2022	300	YES	318	318	309	N/A	12/16/2022	7:15 AM	12/16/2022	12:15 PM	318	306
12/16/2022	300	NO	N/A	N/A	N/A	N/A	12/16/2022	3:00 PM	12/16/2022	4:15 PM	310	305
12/23/2022	300	NO	N/A	N/A	N/A	N/A	12/23/2022	4:45 AM	12/23/2022	6:30 AM	318	306

CONEY ISLAND - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	**WET WEATHER PLANT CAPACITY (MGD)**	**Did Plant Throttle? Yes/No**	**Flow at Start of Throttling (MGD)**	**Throttling Max Flow (MGD)**	**Throttling Avg Flow (MGD)**	**Bypass Item No.**	**Critical Event Start Date & Time**		**Critical Event End Date & Time**		**Critical Event Max Flow (MGD)**	**Critical Event Avg Flow (MGD)**
1/1/2022 - 01/02/2022	165	YES	171	177	152	N/A	1/1/2022	11:15 PM	1/2/2022	12:15 PM	177	152
1/16/2022 - 01/17/2022	165	YES	168	179	148	N/A	1/16/2022	11:15 PM	1/17/2022	7:45 AM	179	148
2/4/2022	165	NO	N/A	N/A	N/A	N/A	2/4/2022	4:45 PM	2/4/2022	8:15 PM	173	171
2/25/2022	165	YES	171	175	172	N/A	2/25/2022	9:45 AM	2/25/2022	5:00 PM	175	172
3/12/2022	165	NO	N/A	N/A	N/A	N/A	3/12/2022	11:00 AM	3/12/2022	1:30 PM	173	171
3/25/2022	165	YES	169	174	170	N/A	3/25/2022	12:00 AM	3/25/2022	8:00 AM	174	170
4/1/2022	165	YES	171	171	160	N/A	4/1/2022	4:00 AM	4/1/2022	3:30 PM	171	160
4/7/2022 - 4/8/2022	165	NO	N/A	N/A	N/A	N/A	4/7/2022	5:00 PM	4/8/2022	6:45 AM	177	172
4/18/2022	165	YES	172	183	176	N/A	4/18/2022	11:45 PM	4/19/2022	5:45 PM	183	176
5/2/2022	165	YES	165	165	113	N/A	5/2/2022	8:00 AM	5/2/2022	2:15 PM	165	117
5/6/2022	165	YES	172	173	100	N/A	5/6/2022	2:30 AM	5/7/2022	7:15 AM	173	100
5/6/2022	165	YES	176	176	145	N/A	5/7/2022	1:00 PM	5/8/2022	6:00 PM	176	145
5/7/2022	165	NO	N/A	N/A	N/A	N/A	5/7/2022	12:00 AM	5/7/2022	6:00 AM	174	171
5/7/2022	165	NO	N/A	N/A	N/A	N/A	5/7/2022	12:30 PM	5/7/2022	11:45 PM	176	169
5/8/2022	165	NO	N/A	N/A	N/A	N/A	5/8/2022	12:30 AM	5/8/2022	5:45 AM	168	166
5/19/2022	165	YES	179	179	174	N/A	5/19/2022	5:45 AM	5/19/2022	7:30 PM	179	174
5/19/2022	165	NO	N/A	N/A	N/A	N/A	5/19/2022	5:45 AM	5/19/2022	7:00 PM	177	174
5/20/2022 - 5/21/2022	165	YES	172	179	169	N/A	5/20/2022	6:45 PM	5/21/2022	3:30 AM	179	169
5/20/2022 - 5/21/2022	165	NO	N/A	N/A	N/A	N/A	5/20/2022	7:00 PM	5/21/2022	3:00 AM	179	170
6/1/2022	165	YES	171	171	165	N/A	6/1/2022	9:30 PM	6/2/2022	11:45 AM	171	165
6/9/2022	168	YES	175	175	171	N/A	6/9/2022	6:45 AM	6/9/2022	3:30 PM	175	171
9/6/2022	165	YES	173	173	166	N/A	9/6/2022	5:00 PM	9/6/2022	9:30 PM	173	166
9/11/2022	165	NO	N/A	169	167	N/A	9/11/2022	10:30 PM	9/11/2022	11:00 PM	169	167
9/13/2022	165	YES	171	174	171	N/A	9/13/2022	5:00 AM	9/13/2022	5:45 PM	174	171
9/20/2022	165	NO	N/A	167	166	N/A	9/20/2022	5:00 AM	9/20/2022	6:00 AM	167	166
10/1/2022	165	YES	172	228	219	N/A	10/1/2022	6:30 AM	10/1/2022	4:15 PM	228	214
10/2/2022	165	YES	175	175	164	N/A	10/2/2022	2:00 PM	10/3/2022	4:30 AM	175	164
10/3/2022-10/5/2022	165	YES	173	234	226	N/A	10/3/2022	3:00 PM	10/5/2022	3:15 AM	234	219
10/5/2022	165	NO	N/A	N/A	N/A	N/A	10/5/2022	5:45 PM	10/5/2022	9:00 PM	216	196
10/13/2022	165	YES	171	175	170	N/A	10/13/2022	10:30 PM	10/13/2022	9:15 AM	175	170
11/11/2022-11/12/2022	198	YES	203	203	200	N/A	11/11/2022	5:15 PM	11/12/2022	4:30 AM	203	200
11/27/2022	198	NO	N/A	N/A	N/A	N/A	11/27/2022	4:00 PM	11/27/2022	4:15 PM	183	174
11/30/2022	165	NO	N/A	N/A	N/A	N/A	11/30/2022	6:00 PM	11/30/2022	7:00 PM	179	171
12/16/2022	198	YES	205	213	203	N/A	12/16/2022	6:30 AM	16/16/2022	7:15 PM	213	201
12/23/2022	198	YES	210	220	205	N/A	12/23/2022	5:15 AM	12/23/2022	9:30 PM	220	205

HUNTS POINT - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	**WET WEATHER PLANT CAPACITY (MGD)**	**Did Plant Throttle? Yes/No**	**Flow at Start of Throttling (MGD)**	**Throttling Max Flow (MGD)**	**Throttling Avg Flow (MGD)**	**Bypass Item No.**	**Critical Event Start Date & Time**		**Critical Event End Date & Time**		**Critical Event Max Flow (MGD)**	**Critical Event Avg Flow (MGD)**
1/1/2022	400	YES	423	423	413	N/A	1/1/2022	10:30 PM	1/1/2022	11:15 PM	423	413
1/17/2022	400	YES	418	418	397	N/A	1/17/2022	12:45 AM	1/17/2022	2:15 AM	418	397
2/25/2022	400	YES	423	423	415	N/A	2/25/2022	10:00 AM	2/25/2022	10:30 AM	423	415
3/25/2022	400	YES	413	415	415	N/A	3/25/2022	12:00 AM	3/25/2022	12:15 AM	415	415
4/7/2022 - 4/8/2022	400	YES	418	424	411	N/A	4/7/2022	11:00 PM	4/8/2022	1:45 AM	424	411
4/19/2022	400	YES	422	422	398	N/A	4/18/2022	11:30 PM	4/19/2022	7:15 AM	422	392
5/7/2022	400	YES	417	423	408	N/A	5/7/2022	12:45 PM	5/7/2022	5:30 PM	423	409
5/19/2022	330	YES	332	332	330	N/A	5/19/2022	6:15 AM	5/19/2022	9:00 AM	332	330
5/20/2022	330	YES	328	358	311	N/A	5/20/2022	6:00 PM	5/20/2022	8:45 PM	358	311
5/28/2022	330	YES	338	340	325	N/A	5/28/2022	2:30 PM	5/28/2022	3:45 PM	340	325
6/1/2022 -6/2/2022	330	YES	323	361	314	N/A	6/1/2022	8:45 PM	6/2/2022	3:30 AM	361	314
6/2/2022	330	YES	328	328	321	N/A	6/2/2022	5:15 PM	6/2/2022	8:30 PM	328	321
6/9/2022	330	YES	325	335	320	N/A	6/9/2022	5:30 AM	6/9/2022	9:45 AM	335	320
7/18/2022	400	YES	423	423	404	N/A	7/18/2022	3:30 PM	7/18/2022	6:15 PM	423	404
7/21/2022	400	YES	423	423	412	N/A	7/21/2022	2:15 PM	7/21/2022	3:15 PM	423	407
7/25/2022	400	YES	418	429	424	N/A	7/25/2022	1:45 PM	7/25/2022	2:00 PM	429	424
9/13/2022	400	YES	423	430	396	N/A	9/13/2022	1:15 AM	9/13/2022	6:00 AM	430	396
9/25/2022	400	YES	423	423	410	N/A	9/25/2022	10:15 PM	9/26/2022	12:00 AM	423	398
10/4/2022	400	YES	415	415	399	N/A	10/4/2022	3:30 AM	10/4/2022	9:45 AM	415	399
11/11/2022	400	NO	N/A	N/A	N/A	N/A	11/11/2022	5:00 PM	11/11/2022	5:30 PM	411	407
11/27/2022	400	NO	N/A	N/A	N/A	N/A	11/27/2022	4:00 PM	11/27/2022	4:30 PM	409	408
12/6/2022	400	YES	418	N/A	N/A	N/A	12/6/2022	9:45 PM	12/6/2022	2:00 AM	425	414
12/15/2022	400	NO	N/A	N/A	N/A	N/A	12/15/2022	10:00 PM	12/15/2022	10:15 PM	405	403
12/23/2022	400	NO	N/A	N/A	N/A	N/A	12/23/2022	5:00 AM	12/23/2022	7:00 AM	422	411

JAMAICA - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	**WET WEATHER PLANT CAPACITY (MGD)**	**Did Plant Throttle? Yes/No**	**Flow at Start of Throttling (MGD)**	**Throttling Avg Flow (MGD)**	**Throttling Max Flow (MGD)**	**Bypass Item No.**	**Critical Event Start Date & Time**		**Critical Event End Date & Time**		**Critical Event Max Flow (MGD)**	**Critical Event Avg Flow (MGD)**
1/1/2022	200	NO	N/A	N/A	N/A	N/A	1/1/2022	11:30 PM	1/2/2022	12:30 AM	208	204
4/19/2022	200	NO	N/A	N/A	N/A	N/A	4/19/2022	1:00 AM	4/19/2022	3:15 AM	212	206
5/7/2022	200	NO	N/A	N/A	N/A	N/A	5/7/2022	2:15 PM	5/7/2022	3:30 PM	204	203

NEWTOWN CREEK - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information							Critical Wet Weather Event					
Storm Dates	WET WEATHER PLANT CAPACITY (MGD)	Did Plant Throttle? Yes/No (BQ)	CCT Flow at Start of B/Q Throttling	Did Plant Throttle? Yes/No (MPS)	CCT Flow at Start of MPS Throttling	Throttling Max Flow (MGD)	Throttling Avg Flow (MGD)	Bypass Item No.	Critical Event Start Date & Time		Critical Event End Date & Time		Critical Event Max Flow (MGD)	Critical Event Avg Flow (MGD)
1/1/2022 - 01/02/2022	620	YES	665	YES	380	765	716	N/A	1/1/2022	10:30 PM	1/2/2022	12:45 AM	765	716
1/17/2022	700	YES	725	YES	432	773	713	N/A	1/17/2022	12:15 AM	1/17/2022	6:30 AM	776	713
2/25/2022	700	YES	726	NO	n/a	730	703	N/A	2/25/2022	9:30 AM	2/25/2022	11:15 AM	730	703
3/12/2022	700	NO	746	NO	n/a	N/A	N/A	N/A	3/12/2022	10:00 AM	3/12/2022	11:30 AM	768	732
3/19/2022 - 3/20/2022	700	NO	494	NO	n/a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
03/24/2022 - 03/25/2022	700	YES	770	YES	484	770	709	N/A	3/24/2022	11:00 PM	3/25/2022	2:15 AM	770	713
04/07/2022 - 04/08/2022	700	YES	735	YES	400	735	721	N/A	4/7/2022	11:30 PM	4/8/2022	1:15 AM	735	720
04/18/2022 - 04/19/2022	700	YES	723	YES	373	725	714	N/A	4/18/2022	11:15 PM	4/19/2022	5:15 AM	725	715
5/2/2022	700	NO	483	NO	n/a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5/7/2022	700	Yes	764	YES	381	818	792	N/A	5/7/2022	12:30 PM	5/7/2022	4:15 PM	818	782
5/19/2022	700	Yes	827	YES	390	804	719	N/A	5/19/2022	5:30 AM	5/19/2022	8:30 AM	804	720
6/1/2022 -6/2/2022	700	YES	778	YES	380	778	687	N/A	6/1/2022	9:00 PM	6/2/2022	1:15 AM	778	687
6/9/2022	700	YES	757	YES	480	812	775	N/A	6/9/2022	6:00 AM	6/9/2022	7:15 AM	812	775
6/16/2022	700	NO	654	NO	n/a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/27/2022	700	NO	645	NO	n/a			N/A						
7/16/2022	700	Yes	371	NO	n/a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7/21/2022	700	Yes	752	YES	380	752	712	N/A	7/21/2022	2:45 PM	7/21/2022	3:45 PM	752	712
7/28/2022	700	Yes	394	NO	n/a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9/6/2022	700	Yes	720	YES	374	744	714	N/A	9/6/2022	11:45 AM	9/6/2022	1:00 PM	744	714
	700	Yes	737	NO	n/a	740	727	N/A	9/6/2022	5:45 PM	9/6/2022	6:15 PM	740	727
9/13/2022	700	NO	624	NO	n/a	797	758	N/A	9/13/2022	5:15 AM	9/13/2022	6:00 AM	797	758
9/13/2022	700	NO	n/a	YES	348			N/A						
9/25/2022 - 09/26/2022	485	Yes	520	YES	340	559	521	N/A	9/25/2022	10:00 PM	9/26/2022	2:00 AM	559	521
10/1/2022	485	Yes	502	YES	315	902	534	N/A	10/1/2022	11:45 AM	10/1/2022	4:00 PM	902	534
10/4/2022	485	Yes	614	YES	356	613	534	N/A	10/4/2022	2:30 AM	10/4/2022	1:00 PM	613	534
10/5/2022	485	Yes	515	YES	317	541	489	N/A	10/5/2022	5:45 AM	10/5/2022	10:30 AM	541	515
10/13/22 - 10/14/22	485	Yes	646	YES	325	646	576	N/A	10/13/2022	6:45 PM	10/14/2022	3:45 AM	646	549
11/1/2022	485	YES	512	NO	n/a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11/11/2022	611	YES	682	YES	345	682	573	N/A	11/11/2022	4:00 PM	11/11/2022	9:15 PM	682	570
11/15/2022-11/16/2022	485	NO	622	NO	n/a	643	590	N/A	11/15/2022	8:00 PM	11/16/2022	12:00 AM	643	590
11/27/2022	611	Yes	625	YES	343	631	582	N/A	11/27/2022	3:30 PM	11/27/2022	5:45 PM	631	582
11/30/2022	611	NO	470	NO	n/a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12/6/2022	611	YES	485	YES	342	651	575	N/A	12/6/2022	10:45 PM	12/7/2022	3:30 AM	651	574
12/15/2022-12/16/2022	550	NO	612	NO	n/a	N/A	N/A	N/A	12/16/2022	9:30 AM	12/16/2022	11:45 AM	590	577
12/16/2022	550	NO	486	NO	n/a	N/A	N/A	N/A	12/16/2022	9:30 AM	12/16/2022	11:45 AM	590	577
12/23/2022	485	YES	618	YES	384	618	481	N/A	12/23/2022	4:30 AM	12/23/2022	1:45 PM	618	481

NORTH RIVER - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	WET WEATHER PLANT CAPACITY (MGD)	Did Plant Throttle? Yes/No	Flow at Start of Throttling (MGD)	Throttling Max Flow (MGD)	Throttling Avg Flow (MGD)	Bypass Item No.	Critical Event Start Date & Time		Critical Event End Date & Time		Critical Event Max Flow (MGD)	Critical Event Avg Flow (MGD)
1/2/2022	340	YES	344	353	325	N/A	1/1/2022	11:00 PM	1/2/2022	2:00 AM	353	325
1/17/2022	340	YES	370	350	326	N/A	1/17/2022	12:45 AM	1/17/2022	10:15 AM	350	326
2/25/2022	340	NO	N/A	N/A	N/A	N/A	2/25/2022	10:00 AM	2/25/2022	10:30 AM	359	351
3/24/2022-3/25/2022	340	NO	N/A	N/A	N/A	N/A	3/24/2022	11:45 PM	3/25/2022	2:00 AM	377	365
4/7/2022	340	NO	N/A	N/A	N/A	N/A	4/7/2022	5:15 PM	4/7/2022	6:4t5 PM	363	354
4/7/2022	340	YES	371	382	357	N/A	4/7/2022	11:45 PM	4/8/2022	3:00 AM	383	359
4/18/2022	255	YES	350	389	326	N/A	4/18/2022	11:30 PM	4/19/2022	10:30 AM	389	326
5/7/2022	340	YES	374	379	346	N/A	5/7/2022	12:45 PM	5/7/2022	6:45 PM	379	347
5/19/2022	340	YES	356	356	338	N/A	5/19/2022	6:00 AM	5/19/2022	9:15 AM	356	340
6/1/2022 - 6/2/2022	340	NO	N/A	N/A	N/A	N/A	6/1/2022	8:45 PM	6/2/2022	1:00 AM	449	426
6/2/2022	340	NO	N/A	N/A	N/A	N/A	6/2/2022	4:45 PM	6/2/2022	6:45 PM	449	412
6/9/2022	340	NO	N/A	N/A	N/A	N/A	6/9/2022	5:45 AM	6/9/2022	8:15 AM	439	412
7/18/2022	340	NO	N/A	N/A	N/A	N/A	7/18/2022	4:00 PM	7/18/2022	6:00 PM	357	350
7/25/2022	340	NO	N/A	N/A	N/A	N/A	7/25/2022	2:00 PPM	7/25/2022	2:00 PPM	340	340
9/13/2022	340	YES	342	342	327	N/A	9/13/2022	2:30 AM	9/13/2022	5:00 AM	342	327
9/25/2022	340	YES	374	374	307	N/A	9/25/2022	10:15 PM	9/26/2022	3:30 AM	374	307
10/4/2022	340	YES	358	361	332	N/A	10/4/2022	3:00 AM	10/4/2022	1:15 PM	361	332
11/11/2022-11/12/2022	340	YES	314	322	181	N/A	11/11/2022	5:00 PM	11/12/2022	6:00 AM	322	181
12/6/2022	255	YES	352	N/A	N/A	N/A	12/6/2022	10:15 PM	12/7/2022	3:00 AM	362	352
12/23/2022	340	YES	358	358	270	N/A	12/23/2022	4:45 AM	12/23/2022	2:30 PM	358	270

OAKWOOD BEACH - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information									Critical Wet Weather Event					
Storm Dates	**WET WEATHER PLANT CAPACITY (MGD)**	**Did Plant Throttle? Yes/No**	**Throttling Start Date & Time**		**Throttling End Date & Time**		**Flow at Start of Throttling (MGD)**	**Throttling Max Flow (MGD)**	**Throttling Avg Flow (MGD)**	**Bypass Item No.**	**Critical Event Start Date & Time**		**Critical Event End Date & Time**		**Critical Event Max Flow (MGD)**	**Critical Event Avg Flow (MGD)**
4/19/2022	79.8	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4/19/2022	1:30 AM	4/19/2022	7:45 AM	104	97
5/7/2022	79.8	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5/7/2022	2:00 PM	5/7/2022	3:15 PM	84	83
5/7/2022	79.8	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5/19/2022	8:45 AM	5/19/2022	9:00 AM	82	81
6/17/2022	79.8	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6/17/2022	6:00 AM	6/17/2022	6:30 AM	93	88
9/13/2022	79.8	NO	N/A	N/A	N/A	N/A	N/A	114	97	N/A	9/13/2022	5:45 AM	9/13/2022	7:15 AM	114	97
12/23/2022	79.8	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12/23/2022	5:00 AM	12/23/2022	8:00 AM	82	81

OWLS HEAD - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	**WET WEATHER PLANT CAPACITY (MGD)**	**Did Plant Throttle? Yes/No**	**Flow at Start of Throttling (MGD)**	**Throttling Max Flow (MGD)**	**Throttling Avg Flow (MGD)**	**Bypass Item No.**	**Critical Event Start Date & Time**		**Critical Event End Date & Time**		**Critical Event Max Flow (MGD)**	**Critical Event Avg Flow (MGD)**
1/1/2022	180	YES	182	183	180	N/A	1/1/2022	8:00 PM	1/2/2022	3:15 AM	183	180
1/9/2022	180	YES	183	183	180	N/A	1/9/2022	8:00 PM	1/9/2022	11:00 PM	183	180
1/16/2022	240	YES	241	243	236	N/A	1/16/2022	10:30 PM	1/17/2022	8:00 AM	243	236
2/4/2022	240	YES	240	244	239	N/A	2/4/2022	11:45 AM	2/4/2022	8:00 PM	244	240
2/17/2022 - 2/18/2022	240	YES	244	246	235	N/A	2/17/2022	11:15 PM	2/18/2022	4:15 AM	246	236
2/18/2022	240	NO	N/A	N/A	N/A	N/A	2/18/2022	9:00 AM	2/18/2022	9:00 AM	243	243
2/25/2022	240	YES	240	241	240	N/A	2/25/2022	5:00 AM	2/25/2022	6:30 AM	241	240
2/25/2022	240	YES	240	241	240	N/A	2/25/2022	8:15 AM	2/25/2022	12:45 PM	241	240
3/9/2022	240	YES	241	244	242	N/A	3/9/2022	11:30 AM	3/9/2022	5:00 PM	244	242
3/12/2022	240	YES	244	244	237	N/A	3/12/2022	9:30 AM	3/12/2022	2:00 PM	244	237
3/24/2022	240	YES	244	244	237	N/A	3/24/2022	4:45 AM	3/24/2022	6:15 AM	244	237
3/24/2022 - 3/25/2022	240	YES	240	243	238	N/A	3/24/2022	11:15 PM	3/25/2022	3:30 AM	243	238
4/1/2022	240	YES	245	246	243	N/A	4/1/2022	12:30 AM	4/1/2022	2:30 AM	246	243
4/1/2022	240	NO	N/A	N/A	N/A	N/A	4/1/2022	3:45 AM	4/1/2022	5:00 AM	246	244
4/6/2022	240	YES	240	241	240	N/A	4/6/2022	8:00 AM	4/6/2022	12:45 PM	241	240
4/7/2022	180	YES	180	188	182	N/A	4/7/2022	1:15 PM	4/8/2022	4:30 AM	188	182
4/9/2022	180	YES	182	198	188	N/A	4/9/2022	9:00 PM	4/10/2022	12:45 AM	198	188
4/14/2022	240	YES	247	247	244	N/A	4/14/2022	6:45 PM	4/14/2022	10:00 PM	247	243
4/18/2022 - 4/19/2022	240	YES	244	244	242	N/A	4/18/2022	10:45 PM	4/19/2022	7:00 AM	244	242
5/2/2022	240	YES	240	240	238	N/A	5/2/2022	7:00 AM	5/2/2022	9:45 AM	241	238
5/6/2022 - 5/7/2022	240	YES	241	243	241	N/A	5/6/2022	5:00 PM	5/7/2022	7:45 AM	243	241
5/7/2022	240	YES	245	245	239	N/A	5/7/2022	9:30 AM	5/8/2022	12:00 AM	245	240
5/7/2022	240	YES	241	244	243	N/A					245	240
5/19/2022	240	YES	244	244	241	N/A	5/19/2022	4:30 AM	5/19/2022	10:00 AM	244	241
5/20/2022	240	YES	175	247	243	N/A	5/20/2022	5:45 PM	5/20/2022	8:15 PM	247	243
6/1/2022 - 6/2/2022	240	YES	245	248	244	N/A	6/1/2022	9:15 PM	6/2/2022	2:00 AM	248	244
6/9/2022	240	YES	241	250	245	N/A	6/9/2022	5:45 AM	6/9/2022	8:30 AM	250	245
6/16/2022	240	YES	245	247	244	N/A	6/16/2022	8:215 AM	6/16/2022	11:15 AM	247	244
6/25/2022	240	YES	257	257	242	N/A	6/25/2022	4:45 PM	6/25/2022	7:00 PM	257	242
8/11/2022	240	NO	N/A	N/A	N/A	N/A	8/11/2022	8:00 AM	8/11/2022	9:30 AM	249	245
9/6/2022	240	YES	242	245	243	N/A	9/6/2022	9:00 AM	9/6/2022	7:45 PM	246	243
9/11/2022	240	YES	241	248	243	N/A	9/11/2022	9:45 PM	9/12/2022	12:45 AM	248	243

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	WET WEATHER PLANT CAPACITY (MGD)	Did Plant Throttle? Yes/No	Flow at Start of Throttling (MGD)	Throttling Max Flow (MGD)	Throttling Avg Flow (MGD)	Bypass Item No.	Critical Event Start Date & Time		Critical Event End Date & Time		Critical Event Max Flow (MGD)	Critical Event Avg Flow (MGD)
9/13/2022	240	YES	242	242	241	N/A	9/13/2022	4:30 AM	9/13/2022	6:15 AM	242	241
9/22/2022	240	YES	240	240	237	N/A	9/22/2022	1:15 PM	9/22/2022	1:30 PM	240	237
9/25/2022	240	YES	240	241	240	N/A	9/25/2022	10:30 PM	9/25/2022	11:45 PM	247	240
10/1/2022	240	YES	243	244	239	N/A	10/1/2022	6:15 AM	10/1/2022	9:45 AM	244	239
10/1/2022	240	YES	242	243	241	N/A	10/1/2022	11:00 AM	10/1/2022	1:15 PM	243	241
10/2/2022	240	YES	242	244	242	N/A	10/2/2022	12:00 PM	10/2/2022	6:15 PM	244	242
10/3/2022	240	YES	246	246	241	N/A	10/3/2022	5:45 PM	10/4/2022	12:00 AM	246	241
10/4/2022	240	YES	243	245	241	N/A	10/4/2022	1:45 AM	10/4/2022	11:00 AM	245	241
10/13/2022	240	YES	241	244	241	N/A	10/13/2022	6:30 PM	10/13/2022	3:15 AM	244	241
10/24/2022	240	YES	241	241	240	N/A	10/24/2022	6:30 AM	10/24/2022	8:30 AM	241	240
11/1/2022	240	YES	246	246	242	N/A	11/1/2022	4:30 AM	11/1/2022	5:30 AM	246	242
11/11/2022	240	YES	241	244	241	N/A	11/11/2022	4:45 PM	11/11/2022	7:45 PM	244	241
11/15/2022-11/16/2022	240	YES	243	243	240	N/A	11/15/2022	8:30 PM	11/16/2022	2:45 AM	243	240
11/27/2022	240	YES	245	247	244	N/A	11/27/2022	5:15 PM	11/27/2022	5:45 PM	247	244
11/30/2022	240	NO	N/A	N/A	N/A	N/A	11/30/2022	5:30 PM	11/30/2022	6:15 PM	243	242
12/3/2022	240	YES	240	243	241	N/A	12/3/2022	1:15 PM	12/3/2022	2:45 PM	243	241
12/7/2022	240	YES	242	246	243	N/A	12/6/2022	11:45 PM	12/7/2022	3:15 AM	246	243
12/15/2022	240	YES	242	246	242	N/A	12/15/2022	5:15 PM	12/16/2022	12:15 AM	246	242
12/16/2022	240	YES	242	247	244	N/A	12/16/2022	4:30 AM	12/16/2022	5:00 PM	247	244
12/23/2022	240	YES	241	246	242	N/A	12/23/2022	4:00 AM	12/23/2022	7:45 AM	246	242

PORT RICHMOND - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	**WET WEATHER PLANT CAPACITY (MGD)**	**Did Plant Throttle? Yes/No**	**Flow at Start of Throttling (MGD)**	**Throttling Max Flow (MGD)**	**Throttling Avg Flow (MGD)**	**Bypass Item No.**	**Critical Event Start Date & Time**		**Critical Event End Date & Time**		**Critical Event Max Flow (MGD)**	**Critical Event Avg Flow (MGD)**
1/1/2022	N/A	NO	N/A	N/A	N/A	N/A	1/1/2022	10:45 PM	1/1/2022	11:30 PM	133	127
4/7/2022	N/A	NO	N/A	N/A	N/A	N/A	4/7/2022	2:30 PM	4/7/2022	7:00 PM	109	98
4/19/2022	120	YES	124.4	126	125	N/A	4/19/2022	12:45 AM	4/19/2022	6:00 AM	130	125
5/7/2022	N/A	NO	N/A	N/A	N/A	N/A	5/7/2022	1:00 PM	5/7/2022	2:30 PM	133	128
10/2/2022	90	YES	92.1	100	95	N/A	10/2/2022	12:45 PM	10/2/2022	5:15 PM	100	95
10/4/2022	90	YES	99	101	85	N/A	10/4/2022	2:30 AM	10/4/2022	1:00 PM	101	85
12/23/2022	N/A	NO	N/A	N/A	N/A	N/A	12/23/2022	5:00 AM	12/23/2022	5:45 AM	130	125

RED HOOK - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	**WET WEATHER PLANT CAPACITY (MGD)**	**Did Plant Throttle? Yes/No**	**Flow at Start of Throttling (MGD)**	**Throttling Max Flow (MGD)**	**Throttling Avg Flow (MGD)**	**Bypass Item No.**	**Critical Event Start Date & Time**		**Critical Event End Date & Time**		**Critical Event Max Flow (MGD)**	**Critical Event Avg Flow (MGD)**
1/1/2022	120	YES	130	127	120	N/A	1/1/2022	10:15 PM	1/2/2022	1:30 AM	127	120
1/16-17/2022	120	YES	126	126	121	N/A	1/16/2022	11:46 PM	1/17/2022	7:00 AM	126	121
2/4/2022	120	YES	126	126	124	N/A	2/4/2022	4:00 PM	2/4/2022	5:00 PM	126	124
2/25/2022	120	YES	132	132	128	N/A	2/25/2022	9:45 AM	2/25/2022	12:00 PM	132	127
3/12/2022	120	YES	126	126	124	N/A	3/12/2022	10:00 AM	3/12/2022	11:45 AM	126	123
3/24/2022 - 3/25/2022	120	YES	129	130	126	N/A	3/24/2022	11:15 PM	3/25/2022	2:45 AM	130	126
4/7/2022 - 4/8/2022	120	YES	126	126	123	N/A	4/7/2022	11:30 PM	4/8/2022	2:15 AM	126	123
4/18/2022 - 4/19/2022	120	YES	129	130	127	N/A	4/18/2022	11:15 PM	4/19/2022	6:15 AM	130	127
5/6/2022 - 5/7/2022	90	NO	N/A	N/A	N/A	N/A	5/6/2022	8:30 PM	5/7/2022	1:00 AM	104	97
5/7/2022	90	YES	129	130	126	N/A	5/7/2022	12:15 PM	5/7/2022	6:00 PM	130	119
5/19/2022	120	YES	128	128	126	N/A	5/19/2022	5:30 AM	5/19/2022	9:00 AM	128	126
5/20/2022	120	YES	126	126	123	N/A	5/20/2022	6:00 PM	5/20/2022	20:00 PM	126	123
6/1/2022 -6/2/2022	90	YES	97	101	96	N/A	6/1/2022	9:00 PM	6/2/2022	2:45 AM	101	96
6/9/2022	120	YES	127	130	124	N/A	6/9/2022	5:45 AM	6/9/2022	8:30 AM	130	124
7/25/2022	120	NO	N/A	N/A	N/A	N/A	7/25/2022	4:45 PM	7/25/2022	5:00 PM	127	127
7/28/2022	120	YES	129	129	125	N/A	7/28/2022	4:15 AM	7/28/2022	5:30 AM	129	125
9/6/2022	90	YES	97	99	94	N/A	9/6/2022	11:15 AM	9/6/2022	3:45 PM	99	94
9/6/2022	90	YES	99	99	94	N/A	9/6/2022	4:30 PM	9/6/2022	7:00 PM	99	94
9/12/2022	90	YES	97	98	95	N/A	9/12/2022	2:00 AM	9/12/2022	2:45 AM	98	95
9/13/2022	120	YES	128	129	127	N/A	9/13/2022	5:00 AM	9/13/2022	7:30 AM	129	127
9/22/2022	90	YES	99	104	101	N/A	9/22/2022	8:30 AM	9/22/2022	10:30 AM	104	101
9/25-26/2022	90	YES	103	105	100	N/A	9/25/2022	9:45 PM	9/26/2022	1:45 AM	105	100
10/2/2022	120	YES	128	130	126	N/A	10/2/2022	12:15 PM	10/2/2022	4:15 PM	130	126
10/4/2022	120	YES	127	128	126	N/A	10/4/2022	2:15 AM	10/4/2022	10:00 AM	128	125
10/13-14/2022	120	YES	128	128	125	N/A	10/13/2022	11:30 PM	10/14/2022	12:15 AM	128	124
11/11/2022	120	YES	128	128	125	N/A	11/11/2022	5:00 PM	11/11/2022	7:30 PM	128	125
11/27/2022	120	YES	124	N/A	N/A	N/A	11/27/2022	3:00 PM	11/27/2022	4:00 PM	125	124
12/7/2022	120	NO	N/A	N/A	N/A	N/A	12/6/2022	11:45 PM	12/7/2022	1:15 AM	126	125
12/23/2022	120	YES	128	N/A	N/A	N/A	12/23/2022	4:15 AM	12/23/2022	8:30 AM	130	125

ROCKAWAY - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	WET WEATHER PLANT CAPACITY (MGD)	Did Plant Throttle? Yes/No	Flow at Start of Throttling (MGD)	Throttling Max Flow (MGD)	Throttling Avg Flow (MGD)	Bypass Item No.	Critical Event Start Date & Time		Critical Event End Date & Time		Critical Event Max Flow (MGD)	Critical Event Avg Flow (MGD)
No Events												

TALLMAN ISLAND - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information					Critical Wet Weather Event					
Storm Dates	**WET WEATHER PLANT CAPACITY (MGD)**	**Did Plant Throttle? Yes/No**	**Flow at Start of Throttling (MGD)**	**Throttling Max Flow (MGD)**	**Throttling Avg Flow (MGD)**	**Bypass Item No.**	**Critical Event Start Date & Time**		**Critical Event End Date & Time**		**Critical Event Max Flow (MGD)**	**Critical Event Avg Flow (MGD)**
1/1/2022	160	YES	164	166	154	N/A	1/1/2022	10:55 PM	1/2/2022	12:30 AM	166	157
1/17/2022	160	YES	161	167	160	N/A	1/16/2022	11:15 PM	1/17/2022	7:00 AM	173	161
3/25/2022	160	YES	168	168	164	N/A	3/24/2022	11:00 PM	3/25/2022	1:30 AM	170	165
4/8/2022	160	NO	N/A	N/A	N/A	N/A	4/8/2022	12:00 AM	4/8/2022	1:15 AM	169	164
4/19/2022	160	YES	160	166	156	N/A	4/19/2022	12:15 AM	4/19/2022	6:30 AM	166	157
5/7/2022	160	YES	161	169	163	N/A	5/7/2022	1:00 PM	5/7/2022	5:30 PM	169	163
5/19/2022	160	YES	166	166	163	N/A	5/19/2022	6:30 AM	5/19/2022	8:00 AM	166	163
6/1/2022	160	NO	N/A	N/A	N/A	N/A	6/1/2022	11:30 PM	6/1/2022	11:45 PM	161	161
6/2/2022	160	NO	N/A	N/A	N/A	N/A	6/2/2022	5:45 PM	6/2/2022	6:45 PM	168	166
6/9/2022	160	NO	N/A	N/A	N/A	N/A	6/9/2022	6:30 AM	6/9/2022	7:15 AM	163	162
7/21/2022	160	YES	170	170	167	N/A	7/21/2022	3:00 PM	7/21/2022	5:00 PM	172	167
9/12/2022	160	NO	N/A	N/A	N/A	N/A	9/12/2022	2:30 AM	9/12/2022	2:45 AM	169	167
9/13/2022	160	YES	168	170	165	N/A	9/13/2022	5:00 AM	9/13/2022	8:45 AM	170	165
9/19/2022	80	NO	N/A	87	84	N/A	9/19/2022	7:30 PM	9/19/2022	9:15 PM	87	84
9/20/2022	80	NO	N/A	83	82	N/A	9/20/2022	9:15 AM	9/20/2022	9:30 AM	83	82
9/25/2022	160	NO	N/A	170	166	N/A	9/25/2022	10:30 PM	9/26/2022	12:00 AM	170	166
10/4/2022	160	YES	170	172	168	N/A	10/4/2022	3:00 AM	10/4/2022	8:15 AM	172	168
11/11/2022	160	YES	167	167	161	N/A	11/11/2022	4:30 PM	11/11/2022	7:15 PM	167	162
12/6/2022-12/7/2022	160	NO	N/A	N/A	N/A	N/A	12/6/2022	10:45 PM	12/7/2022	2:30 AM	165	164

WARDS ISLAND - WET WEATHER THROTTLING SUMMARY

		Plant Throttling Information							Critical Wet Weather Event					
Storm Dates	**WET WEATHER PLANT CAPACITY (MGD)**	**Did Plant Throttle? Yes/No (MGC)**	**CCT Flow at Start of MGC Throttling**	**Did Plant Throttle? Yes/No (BQ)**	**CCT Flow at Start of BQ Throttling**	**Throttling Max Flow (MGD)**	**Throttling Avg Flow (MGD)**	**Bypass Item No.**	**Critical Event Start Date & Time**		**Critical Event End Date & Time**		**Critical Event Max Flow (MGD)**	**Critical Event Avg Flow (MGD)**
01/01-02/2022	N/A	NO	N/A	NO	N/A	n/a	n/a	N/A	1/1/2022	9:00 PM	1/2/2022	12:00 AM	561	519
1/17/2022	440	YES	616	YES	639	667	579	N/A	1/16/2022	11:45 PM	1/17/2022	7:15 AM	667	556
3/12/2022	440	NO	N/A	NO	N/A	n/a	n/a	N/A	3/12/2022	10:00 AM	3/12/2022	12:30 AM	499	480
3/24/2022	440	YES	446	YES	535	531	513	N/A	3/24/2022	11:15 PM	3/25/2022	2:15 AM	535	494
4/7/2022	440	NO	N/A	NO	N/A	n/a	n/a	N/A	4/7/2022	8:00 PM	4/7/2022	8:45 PM	450	446
4/7/2022 - 4/8/2022	440	YES	604	YES	628	591	537	N/A	4/7/2022	10:00 PM	4/8/2022	2:00 AM	591	532
4/16/2022	440	NO	N/A	NO	N/A	n/a	n/a	N/A	4/16/2022	10:45 PM	4/16/2022	11:45 PM	515	477
4/18/2022	440	YES	522	YES	522	591	537	N/A	4/18/2022	11:30 PM	4/19/2022	6:45 AM	564	499
5/6/2022	440	NO	N/A	NO	N/A	n/a	n/a	N/A	5/6/2022	9:15 PM	5/6/2022	9:45 PM	572	500
5/6/2022	440	NO	N/A	NO	N/A	n/a	n/a	N/A	5/6/2022	11:15 PM	5/6/2022	11:45 PM	457	453
5/7/2022	440	YES	515	YES	538	555	508	N/A	5/7/2022	12:15 PM	5/7/2022	5:30 PM	555	510
5/19/2022	330	NO	N/A	NO	N/A	n/a	n/a	N/A	5/19/2022	5:30 AM	5/19/2022	9:30 AM	521	432
5/20/2022	330	YES	538	YES	483	528	467	N/A	5/20/2022	6:00 PM	5/20/2022	8:45 PM	528	467
5/28/2022	330	NO	N/A	YES	485	n/a	n/a	N/A	5/28/2022	1:30 PM	5/28/2022	2:30 PM	518	472
6/1/2022 - 6/2/2022	420	NO	N/A	YES	543	573	501	N/A	6/1/2022	8:45 PM	6/2/2022	12:30 AM	573	501
6/2/2022	420	YES	554	YES	495	570	516	N/A	6/2/2022	4:45 PM	6/2/2022	7:00 PM	570	502
6/9/2022	420	NO	N/A	YES	549	n/a	n/a	N/A	6/9/2022	5:30AM	6/9/2022	8:15 AM	549	491
6/16/2022	420	NO	N/A	NO	N/A	n/a	n/a	N/A	6/16/2022	8:30 AM	6/16/2022	9:15 AM	516	462
6/27/2022	420	NO	N/A	NO	N/A	n/a	n/a	N/A	6/27/2022	3:30 PM	6/27/2022	4:30 PM	540	493
7/16/2022	420	NO	N/A	YES	342	n/a	n/a	N/A	7/16/2022	3:30 PM	7/16/2022	5:30 PM	573	481
7/18/2022	420	YES	548	YES	548	548	442	N/A	7/18/2022	7:30 AM	7/18/2022	8:30 PM	548	442
7/21/2022	420	NO	N/A	YES	444	n/a	n/a	N/A	7/21/2022	1:30 PM	7/21/2022	4:00 PM	525	470
7/25/2022	420	YES	560	YES	560	560	497	N/A	7/25/2022	1:30 PM	7/25/2022	3:15 PM	560	488
8/1/2022	420	NO	N/A	NO	N/A	n/a	n/a	N/A	8/1/2022	4:00 AM	8/1/2022	6:15 AM	491	446
8/9/2022	420	YES	539	YES	539	506	468	N/A	8/9/2022	6:45 PM	8/9/2022	10:30 PM	506	458
8/17/2022	420	NO	N/A	NO	N/A	n/a	n/a	N/A	8/17/2022	10:00 PM	8/17/2022	11:15 PM	527	483
8/22/2022	420	NO	N/A	YES	510	n/a	n/a	N/A	8/22/2022	1:00 PM	8/22/2022	2:00 PM	527	494
9/13/2022	440	YES	496	YES	558	558	509	N/A	9/13/2022	1:00 AM	9/13/2022	5:30 AM	558	509
9/22/2022	440	YES	545	NO	N/A	562	532	N/A	9/22/2022	12:00 PM	9/22/2022	1:30 PM	562	532
9/25/2022 - 9/26/2022	420	YES	420	YES	420	464	427	N/A	9/25/2022	10:00 PM	9/26/2022	2:15 AM	464	427
10/4/2022	500	YES	614	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11/11/2022	500	NO	N/A	NO	N/A	N/A	N/A	N/A	11/11/2022	4:00 PM	11/11/2022	5:00 PM	532	519
11/27/2022	500	NO	N/A	NO	N/A	572	551	N/A	11/27/2022	2:00 PM	11/27/2022	3:15 PM	572	551
12/6/2022-12/7/2022	500	NO	N/A	YES	527	N/A	N/A	N/A	12/6/2022	9:30 PM	12/7/2022	12:30 AM	527	510
12/23/2022	500	YES	622	YES	617	622	490	N/A	12/23/202	4:30 AM	12/23/2022	8:30 AM	622	503

Appendix 3.2: Estimation of Wet-Weather Capture

This section provides a description of analyses used to calculate the wet-weather capture of combined-sewage (CS) flow and associated floatables at the New York City (NYC) treatment facilities (referred to as Wastewater Resource Recovery Facilities, WRRFs) during calendar year (CY) 2022. Section 3.1 describes the difference between runoff capture and combined-sewage capture. Section 3.2 discusses the scenarios used to evaluate the capture. Section 3.3 summarizes the modeling approach: InfoWorks ICM is an advanced integrated catchment modeling software used to calculate flow volume capture for CY2022 at all drainage areas served wholly or partially by combined sewers. Section 3.4 describes the 2022 wet-weather combined-sewage percent capture results for these drainage areas. References are listed in Section 3.5.

The Environmental Protection Agency (EPA) issued the current guidance pertaining to the intent and calculation of “combined-sewage capture” in 1995. Prior to that time, a different parameter, known as “runoff capture”, was used to assess the operation of the collection/treatment system. As detailed in a subsequent section, runoff capture measured the ratio of runoff treated to runoff collected in a sewer system. For the NYC WRRFs, historically speaking, the runoff capture values were typically about 15 percentage points less than the corresponding CS capture values. The runoff capture remains a useful parameter in the calculation of floatables capture. CS capture has replaced runoff capture as the pertinent measure of flow-capture performance, and as such, runoff capture is no longer reported. However, runoff capture is used in the calculation of floatables capture.

Since 1998, capture of CS floatables has also been calculated and reported. Initially, the basis for this measurement was the floatables passing into combined sewers from the catch basins (see Figure 3-1), but because the catch basins themselves are considered part of the sewer system, an estimate of catch basin retention was added to the calculation of the floatables-capture. As a result, the basis for floatables capture is now what enters the catch basins.

Historically, capture of flow and floatables has been simulated and reported for three different scenarios. The first simulation scenario reflects actual operation of the collection/treatment system (in terms of the flow rates treated at a WRRF during wet weather) and the actual rainfall (and tides) affecting the system during the subject, calendar-year period. The results of this simulation scenario indicate the actual capture performance for the period.

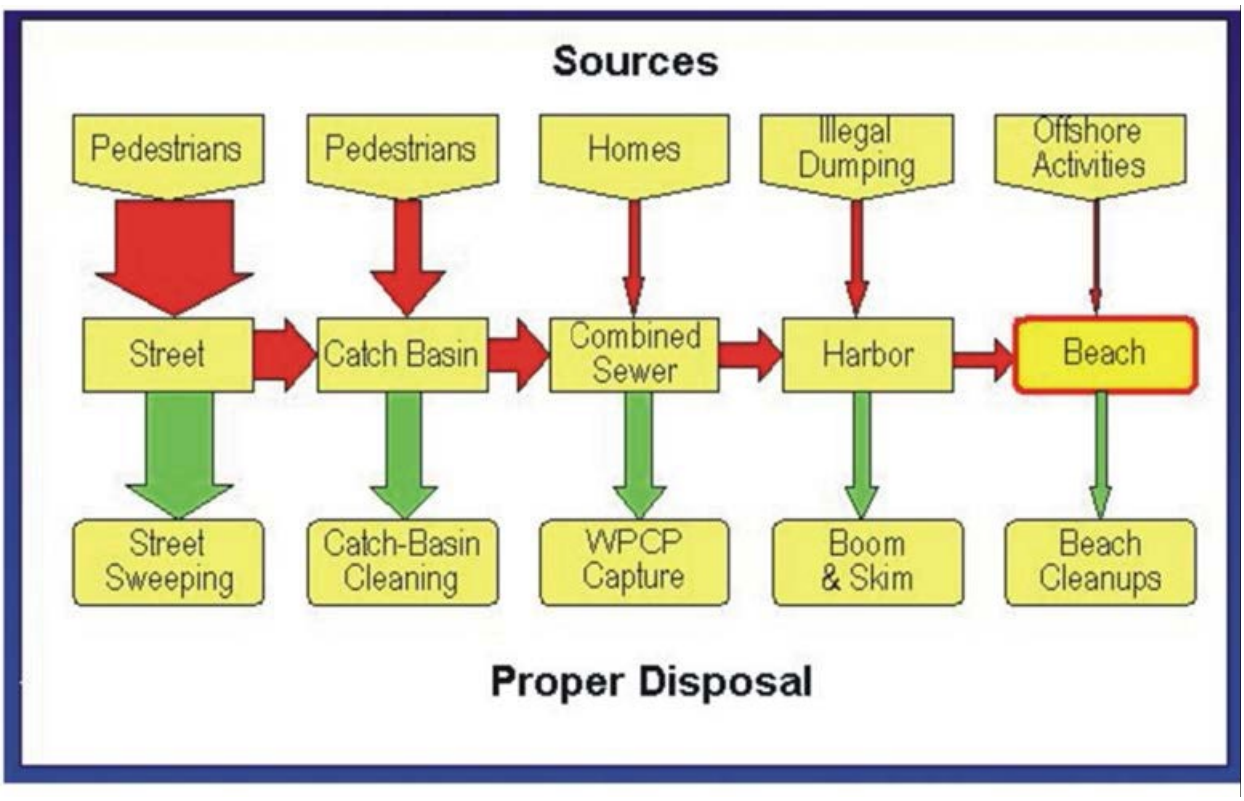


Figure 3-1. Sources and Fate of Floatables in New York City of New York DEP

The methodology for calculation of flow capture has evolved historically with the advent of improved modeling tools and increasing computing power. Initially, flow capture was estimated using the “Statistical Method” (Hydroscience, 1978), an approach relying on drainage area/runoff-coefficient information from a calibrated sewer-system rainfall-runoff model (such as the EPA’s Storm Water Management Model, SWMM), but which can be used without the complicated set-up and computational runtimes associated with those models. Finally, as part of the CSO Long Term Control Plan (LTCP) project, DEP adopted an InfoWorks modeling framework to support facility-planning analyses citywide. InfoWorks is a state-of-the-art hydrology and hydraulics linked model that will provide the most sophisticated and accurate representation of the NYC drainage areas. Although model set up and calibration do require extensive effort, advancements in computing have lessened run-time requirements so that the use of these models becomes reasonable for planning and design-level analyses.

For 2022, the percent-capture analyses utilize the InfoWorks modeling framework for all drainage areas wholly or partially served by combined sewers. Section 3.3 provides a more detailed discussion of the InfoWorks model.

InfoWorks models constructed for various WRRF drainage areas have undergone a major recalibration process in the 2009-11 period and the DEP had submitted a detailed

report on this recalibration effort to New York State DEC in June 2012 along with additional calibration and validation being done as part of developing the CSO Long Term Control Plans (LTCPs). DEP adopted the updated models to support the capture calculations for CY2022. Table 3-1 shows the rainfall statistics for the current year precipitation conditions. Based on the model updates and the use of different standard rainfall conditions, the percent capture information presented in this report may not be directly comparable with those reported in previous calendar years.

For the CY2022 analysis, a new rainfall dataset from NOAA/NSSL called Quantitative Precipitation Estimates (QPE) was used instead of DEP or NOAA rain gauges, as have been used in the past. This decision was made for several reasons. First, the NOAA rain gauges in CPK, JFK, LGA, and EWR are often very far from the WRRFs model areas to which they are applied. Second, the DEP WRRF rain gauges frequently suffer from outages and other reporting issues, leading to incomplete or inaccurate datasets. Therefore, the new NOAA/NSSL QPE data was used, which is described below:

- The new NOAA/NSSL product provides spatially distributed, hourly estimates of precipitation is based on multiple radars, satellite and numerical weather prediction models, surface and upper air observations, lightning detection systems and rain gauges. In addition to hourly, QPE is available in other time increments (such as 3 hr, 6 hr, 12 hr, daily, 48 hr and 72 hr) and in spatial resolution of roughly 1 km x 1 km.

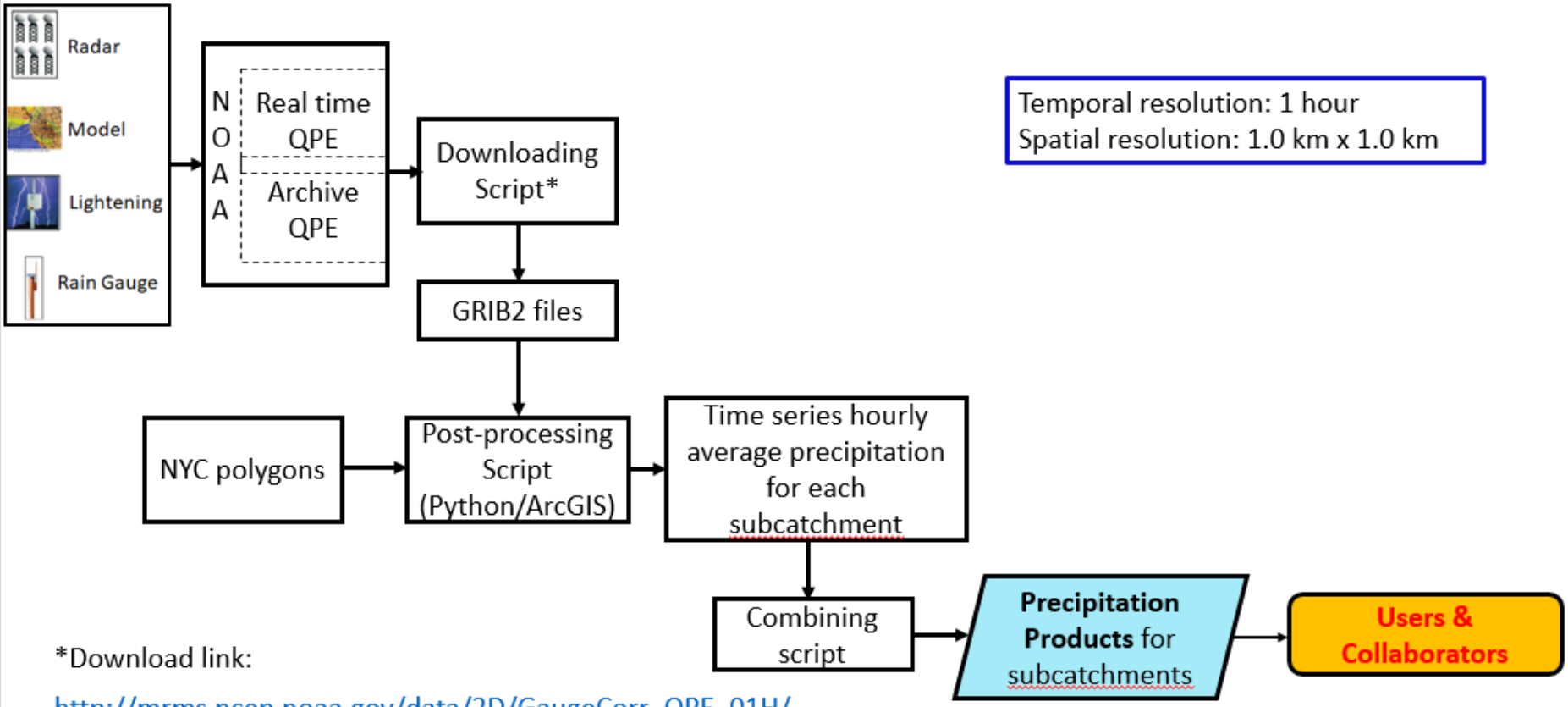
- Most common application of radar QPE data is to simulate or predict flash flood events using rainfall-runoff models [Willie, D. et al. 2017; Zhang et al. 2016; Rafieeinasab et al. 2015; Chen and Chandrasekar 2015].

- Validation of the high resolution radar QPE data was made against the ground-based precipitation data obtained from the NOAA stations rain gauge data: Central Park (CPK), Newark Airport (EWR), JFK Airport (JFK) and LaGuardia Airport (LGA).

- The high resolution and broad spatial coverage of the radar QPE data provides more realistic forcing at the time scales relevant to the CY2022 wet-weather capture modeling analyses.

- Processing methodology for NOAA/NSSL QPE data:

Processing Flowchart



*Download link:

http://mrms.ncep.noaa.gov/data/2D/GaugeCorr_QPE_01H/

http://mtarchive.geol.iastate.edu/2018/01/01/mrms/ncep/GaugeCorr_QPE_01H/

Table 3-1 Annual NYC Rainfall Statistics, 2022 [6]

Gage Location [1]	Period	Number of Storms Avg.	Precipitation (in.)			Storm Intensity (in/hr.)		Storm Duration (hour)		Delta [2] (hour)	
			Annual Total	Storm Avg.	Storm COV [3]	Avg.	COV [3]	Avg.	COV [3]	Avg.	COV [3]
26W	2022	118	41.61	0.35	1.32	0.0510	1.00	6.93	1.12	73.05	0.75
BB	2022	131	44.45	0.34	1.30	0.0525	1.17	6.44	1.18	65.66	0.85
CI	2022	129	41.01	0.32	1.45	0.0453	1.02	6.36	1.17	66.77	0.76
HP	2022	128	45.98	0.36	1.40	0.0532	1.49	6.76	1.08	67.21	0.78
JA	2022	121	40.03	0.33	1.24	0.0454	0.95	6.93	1.03	71.23	0.75
NC	2022	126	42.94	0.34	1.27	0.0498	1.16	6.71	1.05	68.37	0.80
NR	2022	128	42.70	0.33	1.33	0.0500	1.17	6.70	1.11	67.21	0.79
OH	2022	127	43.60	0.34	1.43	0.0514	1.07	6.40	1.17	67.83	0.77
PR	2022	132	43.34	0.33	1.41	0.0527	1.09	6.25	1.25	65.14	0.77
RH	2022	130	43.88	0.34	1.36	0.0532	1.09	6.19	1.18	66.21	0.80
TI	2022	130	46.16	0.36	1.26	0.0552	1.10	6.32	1.03	66.17	0.80
WI	2022	129	45.17	0.35	1.36	0.0527	1.26	6.81	1.06	66.68	0.78

[1] National Oceanic and Atmospheric Administration Data Center rain gauges

[2] Delta refers to time between storms midpoints

[3] Coefficient of Variation (average/standard deviation)

[4] Values reported as "Typical for NYC Metropolitan Area, circa 1950 through 1976" (from Hydroscience 1978)

[6] Statistics calculated using EPA's SYNOP package with inputs for interevent time of 4 hours and zero minimum rainfall depth

3.1 DEFINITIONS OF COMBINED-SEWAGE CAPTURE AND RUNOFF CAPTURE

Previous EPA guidance defined wet-weather capture at combined-sewer treatment facilities in terms of the ratio of runoff captured to the total runoff generated. This ratio, expressed as a percentage, is herein referred to as “runoff capture”. For the purposes of this study, the runoff capture is estimated as the ratio of total treated volume of runoff from combined-sewer areas (the sum of the runoff treated by the plant and the runoff treated by any off-line storage facilities) to the total volume of runoff generated from combined-sewer areas during wet weather. More recent EPA guidance (EPA 1995) suggests an alternate definition of capture in terms of both runoff and sanitary sewage. One of the Presumptive Approach criteria is:

> *“The elimination or the capture for treatment of no less than 85% by volume of the combined sewage collected in the CSS [combined-sewer system] during precipitation events on a system-wide annual basis.”*

This definition of capture, herein referred to as “combined-sewage capture,” is the ratio of CS volume captured at the WRRF to the total runoff and sanitary sewage entering the combined-sewer system during wet-weather periods.

Figure 3-2 presents a schematic representation of both runoff capture and CS capture. With runoff capture, WRRF flow rates exceeding average diurnal (dry-weather) sanitary flows during wet-weather periods were assumed to represent captured runoff. In reality, the flow in the sewer system is a mixture of runoff and sanitary flow, and a portion of CSOs is sanitary in nature. The combined-sewage capture definition takes into account the sanitary flow already in the sewer system during wet weather, and hence is a more realistic measure of the capture at WRRFs during wet-weather periods.

In NYC, values for CS capture are typically about 15 percent points higher than those for runoff capture. EPA’s CSO guidance (EPA 1995) has established a target criterion of 85 percent CS capture for the presumptive approach to CSO control.

3.2 PERCENT CAPTURE EVALUATION

Wet-weather capture depends upon the particular weather patterns within the subject period, the state of a sewer system and wet-weather operation of the WPCPs. Capture values tend to increase when storm patterns produce sustained, low-level flows to the plant. Capture values also increase when sewer-system restrictions are eliminated and flows to the WPCP are maximized. If the interceptors and combined sewers are not surcharged, when the plant inflows reach 2XDDWF levels in certain drainage areas, those may provide some additional in-line storage for wet-weather flow and, as such, can increase the wet weather capture rate. Although it is important to record the actual capture achieved at WRRFs each year, it is also useful to isolate the effect of the uncontrollable, year-to-year rainfall variations from the controllable aspects related to the operation and maintenance of the collection system and treatment plant. To address these issues, the model results presented herein represent

1. the “Actual” captures, reflecting the “state and operation of the collection/ treatment system” during the subject period, as well as the actual rainfall and tidal conditions during the subject period.

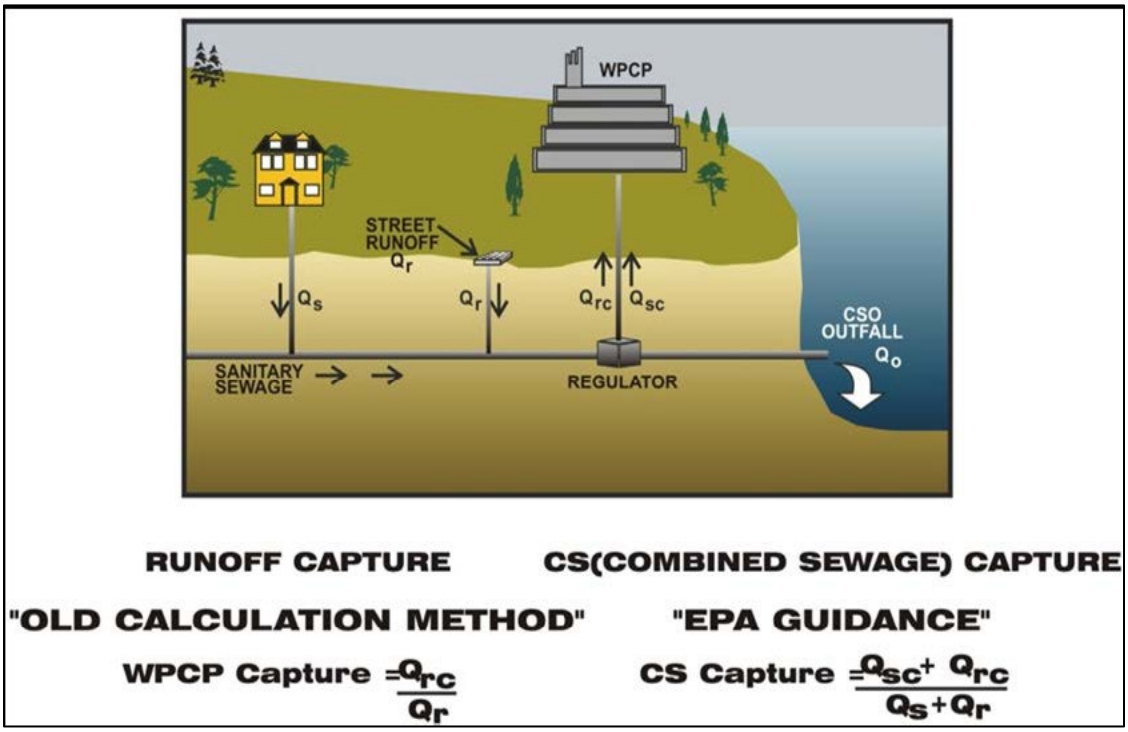


Figure 3-2. Wet Weather Flow Capture at WRRF

3.3 TOOLS TO CALCULATE WET-WEATHER FLOW CAPTURE

Although the definitions presented in Section 3.1 and the equations on Figure 3-2 are relatively simple, actual application to calculate CS capture can be rather complicated. Because the capture must be evaluated over a long-term (annual) period, and with hundreds of potential CSO outfalls City-wide, direct measurements of all parameters would be impractical. Furthermore, measurements of flow and rainfall distribution over a large geographical area have proved to be less than reliable. A more practical approach is to estimate the terms presented on Figure 3-2 using calibrated sewer-system models to simulate (instead of directly measuring through monitoring) system performance during the subject period. The following section describes the modeling approach applied for 2022 calculations, namely, InfoWorks ICM. As indicated earlier, InfoWorks was adopted for citywide use and has been calibrated for all service areas that are wholly or partially served by combined sewers.

3.3.1 InfoWorks Model

The InfoWorks model, distributed by Innovyze from the U.K., has been used in DEP projects since 2001. The model engine is a FORTRAN program, linked with a front interface that contains both relational databases of the sewer network and GIS databases of the geographic attributes such as latitude, longitude, and ground

elevations. Based on comparative evaluations performed in 2002-03 by the DEP and its consultants, this interface appeared to offer several advantages over other commercial models such as easy interfacing with GIS for graphical and input/output data analysis and faster computational times for annual simulations. The model utilizes an implicit finite difference-based numerical solution technique to provide more stable modeling of key elements of the sewer systems. The model incorporates full Saint-Venant's equations for continuity and momentum for hydraulic routing and, as such, is well suited for modeling of the backwater effects and reverse flow, open channels, sewers, detention ponds, complex pipe connections and complex ancillary structures such as culverts, orifices and weirs.

Similar to other urban drainage models, the InfoWorks model calculates runoff volumes first using the same algorithms used in the SWMM model and routes the runoff over sub-areas (subcatchments) to generate runoff hydrographs. The hydrographs are then applied to the channel-sewer system for hydraulic routing. Dry weather flows (DWF) are added at the respective manholes for routing towards the treatment plant. Figure 3-3 resents a schematic of the InfoWorks model linkage and outputs used to calculate the wet-weather and runoff percent captures.

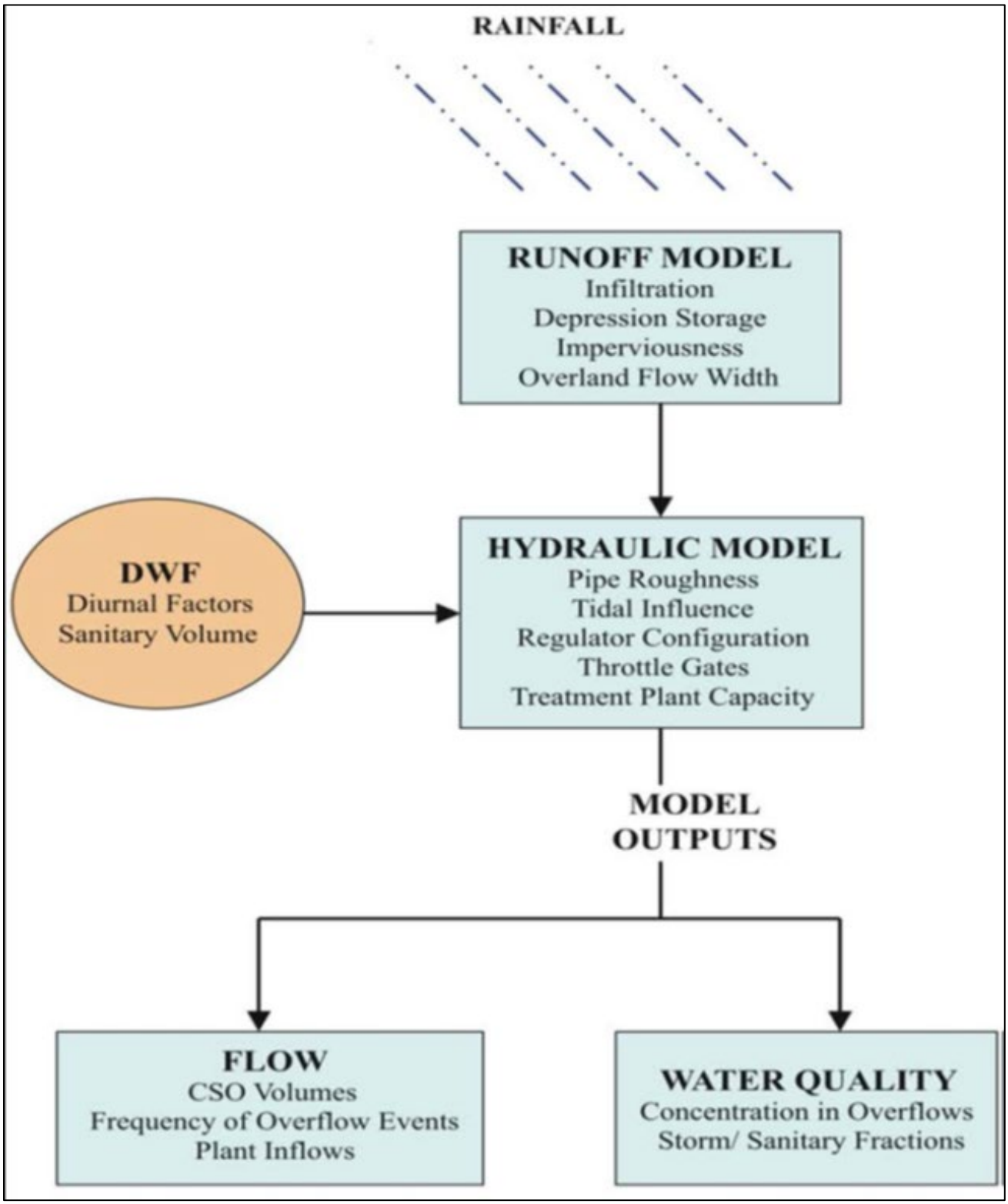


Figure 3-3. Schematic Representation of InfoWorks Model

The SWMM RUNOFF option has been chosen as the InfoWorks runoff simulation algorithm. Each WRRF drainage area was divided into component regulator drainage areas. All pipes larger than 48 inches were included in all WRRF models, and some pipes in the range of 12 to 42 inches in selected WRRF models that were expanded based on local hydraulic conditions. The pipe network was used to further divide the regulator drainage area into smaller sub-catchments that drain to individual manholes. Each sub-catchment was then divided into impervious and pervious areas, based on geographical features including rooftops, driveways, roadways, lawns, parking lots, and parks/open spaces. An example representation of pipes, manholes and surface features is shown in Figure 3-4.

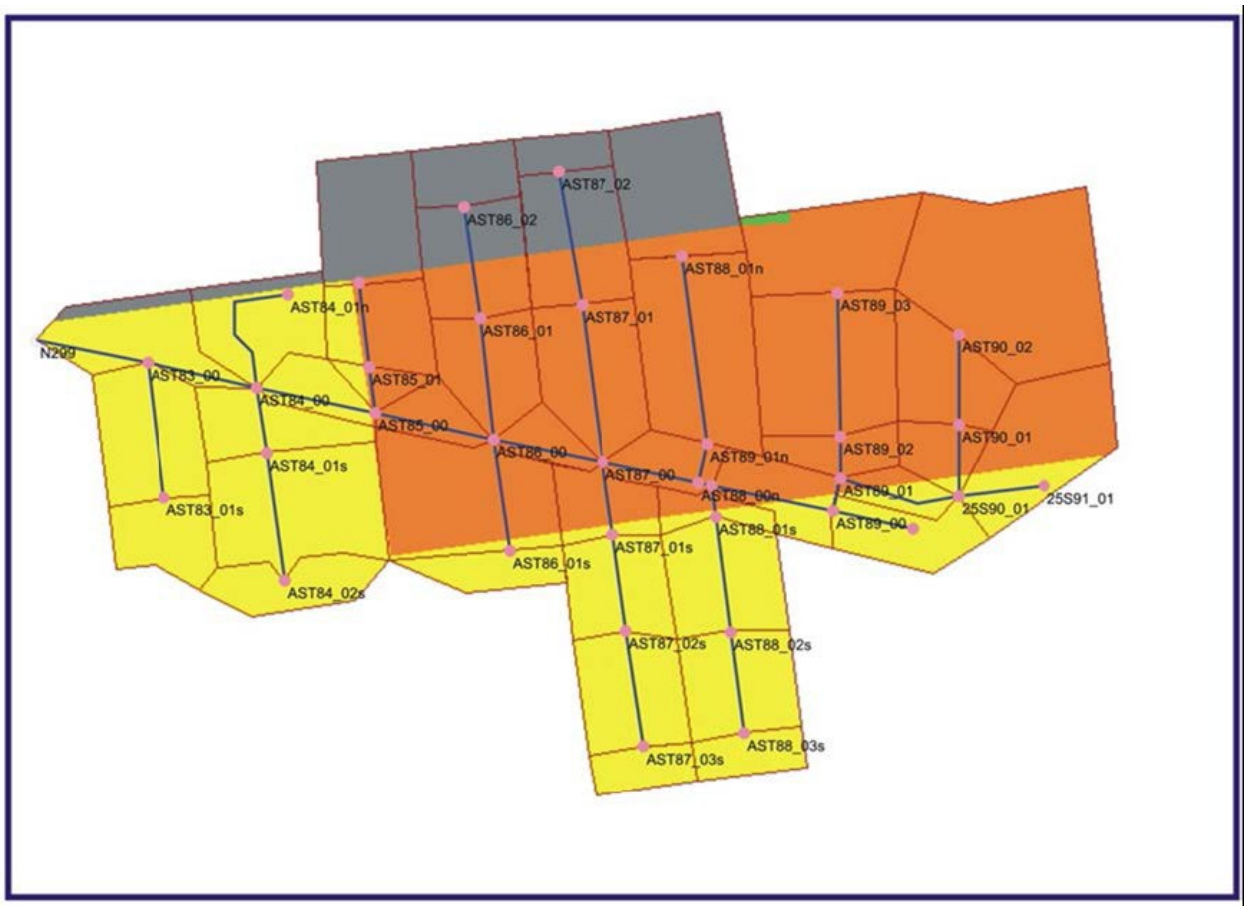


Figure 3-4. Geographical and Sewer System Data in InfoWorks Model

A major component of the 2011 InfoWorks model update was the satellite-imagery based imperviousness estimate. This process was well documented in the 2011 recalibration report submittal to the DEC. Although this estimate represents the total impervious area in each subcatchment, the flow monitoring performed by DEP confirmed that only a fraction of this area was contributing runoff directly to the sewer system. This fraction is referred to as the directly connected impervious area (DCIA) for each subcatchment, which is one of the calibration parameters. The DCIA, in essence,

is equivalent to the runoff coefficient used in traditional sewer design principles with a standard rational approach. Hydrologic parameters included in the InfoWorks model for impervious surfaces are: DCIA, depression storage (initial losses), and surface roughness.

Similarly, the pervious areas were represented with the same three parameters – only difference being that the pervious areas were divided into open surfaces (parks, cemeteries or large open areas) and non-open surfaces (pervious areas in residential, commercial, industrial land uses). Soil compaction due to several factors in these two distinct surfaces presents different runoff loss rates, which led to the explicit representation of open and non-open areas with different runoff coefficients in the InfoWorks models. Runoff is generated from each of these three surfaces within a subcatchment for a given rainfall intensity/volume. An example image and associated definition of pervious and impervious (complement of pervious areas) from the Newtown Creek WRRF drainage area is shown in Figure 3-5. The areas within red boundaries represent the catchment areas to two flow metering locations within this WRRF drainage area.

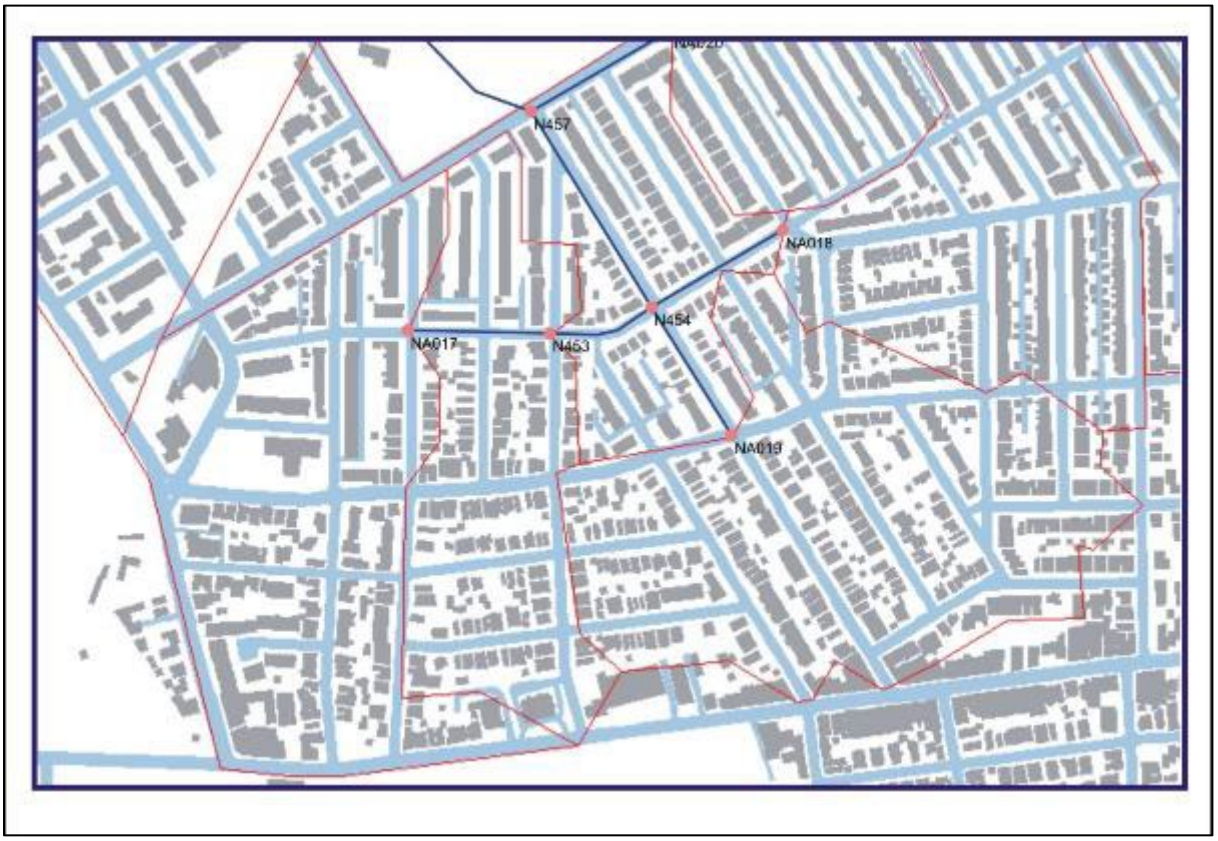


Figure 3-5. Landcover Definitions Using Remote Sensing Data

Monthly evaporation data was obtained from the Northeast Climate Center at Cornell University for all the four NOAA rain gage locations. This data was further processed

based on the geographical proximity of WRRF service areas and used to develop the inputs for evaporation rates in the model.

The InfoWorks model uses the SWMM's non-linear reservoir model to route the runoff through urban landscapes to the sewer entry-point (catch basin/manhole included in the model). Sub-catchments are modeled as idealized rectangular areas with the slope of a sub-basin perpendicular to the width. The routing is performed according to the equation:

$$Q = \frac{1.486}{n} W (d - d_s)^{\frac{5}{3}} S^{\frac{1}{2}}$$

where: Q is surface runoff (cfs);

W is width of sub-area (ft);

S is average slope of sub-area (ft/ft);

d is depth in the non-linear reservoir (ft);

d_s is the depression storage depth in the non-linear reservoir (ft); and

n is the Manning's roughness coefficients.

For hydraulic routing, the model uses the Saint-Venant equations to describe the conservation of mass and momentum:

$$\frac{\delta A}{\delta t} + \frac{\delta Q}{\delta x} = 0$$

$$\frac{\delta Q}{\delta t} + \frac{\delta}{\delta x}\left(\frac{Q^2}{A}\right) + gA\left(\cos\theta \frac{\delta g}{\delta x} - S_o + \frac{Q|Q|}{K^2}\right) = 0$$

with: Q Discharge (m^3/s)

A Cross-sectional area (m^2)

g Acceleration due to gravity (m/s^2)

2 Angle of bed to horizontal (º)

S_o Bed slope

K Conveyance

With the use of the Saint Venant equations, the following complex phenomena that occur in a sewer system can be dynamically characterized:

- Presence of sewer sediments
- Pump-station operations (variable, step-wise, etc.), along with wet-well controls
- Inverted siphon
- Bifurcations
- Regulator operations during tidal conditions
- Throttling at treatment plants during wet weather to limit inflows
- Behavior of in-line regulators
- Street and basement flooding
- Groundwater infiltration into combined and separately sewers.

Depending on the complexity of each WRRF drainage area, some or all of the above processes were modeled in InfoWorks. Available CSO and in-system flow and depth monitoring data compiled during development of waterbody-watershed facility planning studies and CSO LTCPs was used to update the sewer system models of the 12 WRRF drainage areas with combined sewers and the Rockaway WRRF service area with separate sewers. The system-wide calibration involved the use of flow and depth data compiled at several in-system locations, selected outfalls, DEP SCADA locations, and at the influent of a WRRF. The City has been using a grid-based radar rainfall data framework to characterize the spatial-temporal variability. Selected storms ranging in intensity and total volumes observed during the calibration period were used to calibrate the appropriate hydrologic (e.g., runoff coefficient (DCIA), depression storage, and roughness) and hydraulic (pipe roughness, pump operations, weir coefficients and gate controls) model parameters. Additional wet weather events (storms) were used to independently validate the model performance. DEP used a weight-of-evidence approach to assess the adequacy of model calibration including correlation plots between observed and modeled runoff volumes, flow rates, and water depths in sewers; and also the temporal comparisons of flows during wet events at various calibration points including the plant influent. Figure 3-6 illustrates the detailed calibration/validation approach that involves assessing correlations at different spatial scales and also using a variety of flow/depth monitoring data.

The input parameters necessary for InfoWorks application to compute percent capture include: (a) maximum WRRF capacity that can be varied on a monthly basis – represented in the form of a wet well elevation versus pump capacity curve; (b) precipitation at hourly or shorter intervals; (c) dry weather flow at each regulator and its diurnal pattern that can be varied on a monthly basis; (d) distribution of land uses within each subcatchment along with losses such as evaporation and depression storage; (e)

operation of throttling/sluice gates within a system; (f) tide conditions near the various outfalls within a system. Since the model accounts for surcharging and backups within sewers, such complex aspects as in-line storage are modeled accurately.

Tide data were developed from the three permanent tide gages maintained by NOAA near New York City – namely, King's Point, The Battery, and Sandy Hook. NOAA also publishes tidal correction factors in terms of differences in time and amplitude at several locations in the NY-NJ Harbor. The correction factors were tabulated for the locations of the waterbody near each or a set of outfalls, and then the data from the nearest NOAA station were used to develop the tidal boundary conditions for each or a set of outfalls within a drainage area.

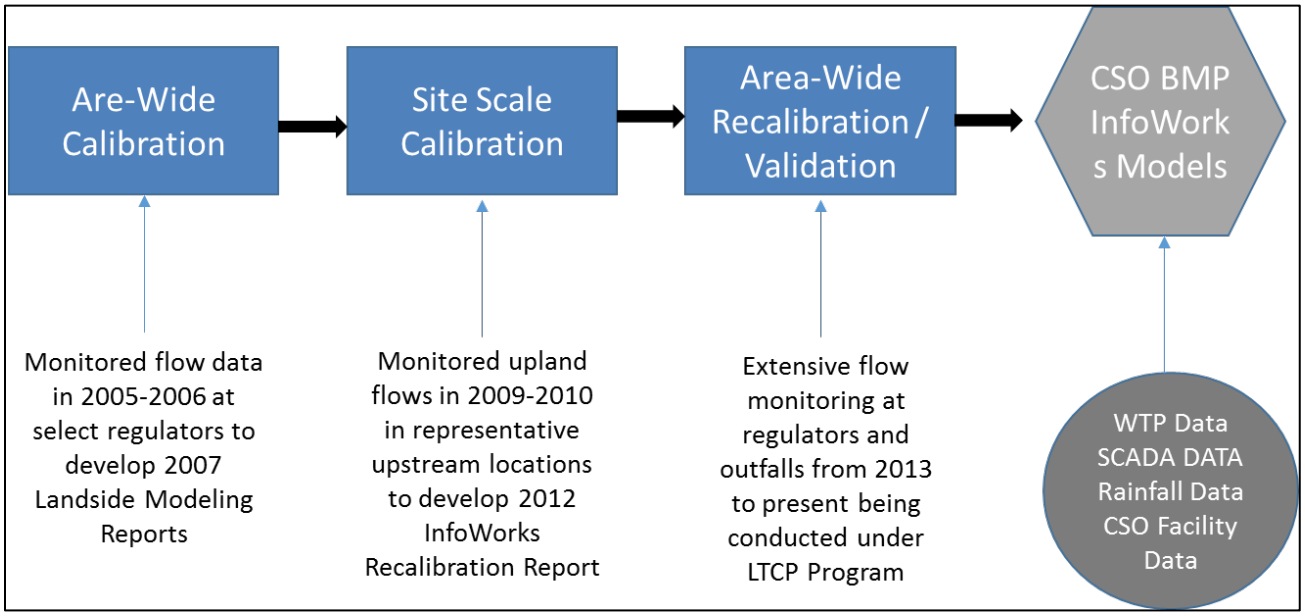


Figure 3-6. Comprehensive InfoWorks Model Calibration Approach

As a first step, the plant flow data at each WRRF was reviewed to develop the wet-well elevation versus pump discharge curves on a monthly basis. Appropriate dry weather flows and diurnal patterns were used for all regulators within the drainage area. The modeled and monitored plant flows were compared to confirm the adequacy of calibration of plant influent in the InfoWorks model for CY2022 conditions. If needed, the pump rating curves were adjusted to better match the monitored and modeled flows. Similarly, the rule curves associated with throttling gates, if appropriate, were modified to achieve better agreement between modeled and observed inflows at the plant. No other hydrologic or hydraulic model parameters were adjusted in the drainage area during this model application process. Specific hydraulic adjustments of the models have been made in select WRRF models to account for changes to the conveyance system, such as the operation of the Alley Creek, Flushing Creek, Paerdegat Basin and Spring Creek CSO retention facilities. The modeled inputs used in the InfoWorks model for all drainage areas with combined sewers are summarized in Table 3-2. Figure 3-7 shows an example correlation between measured and modeled inflows to the Bowery Bay WRRF, for CY2022.

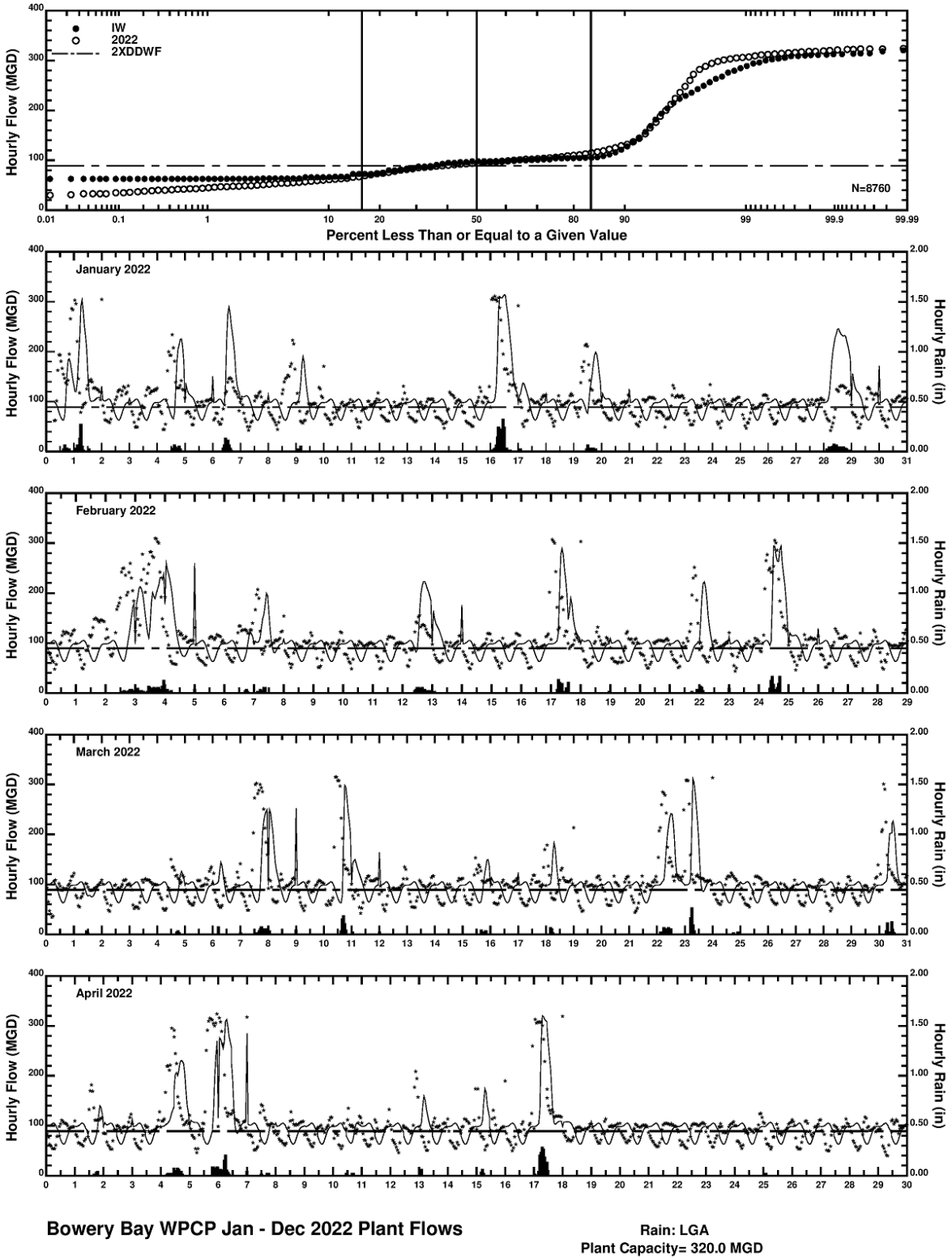


Figure 3-7. InfoWorks Sample Results 2022

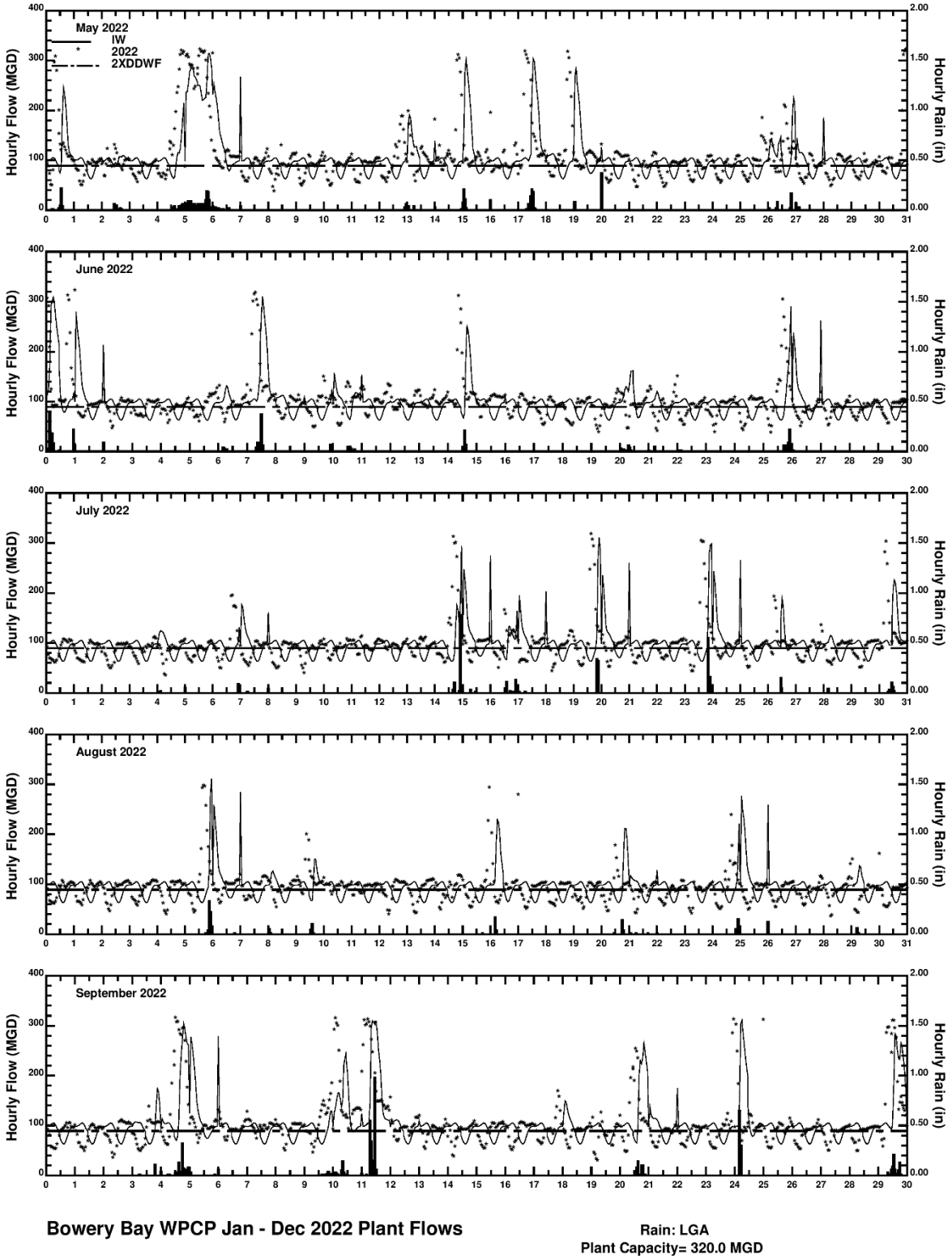


Figure 3-7. InfoWorks Sample Results 2022

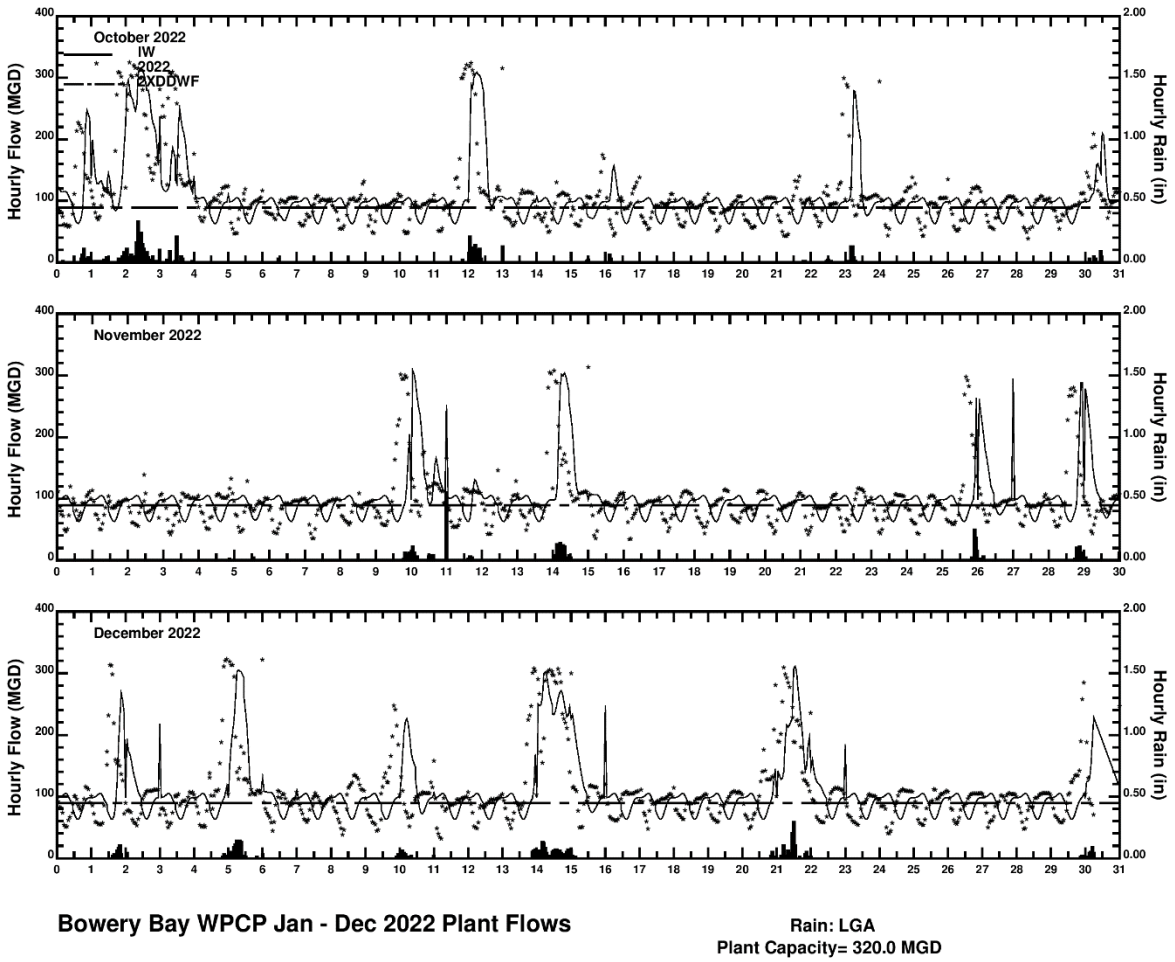


Figure 3-7. InfoWorks Sample Results 2022

3.4 COMBINED-SEWAGE CAPTURE RESULTS - 2022 FLOW VOLUME

Table 3-2 presents the results of the combined-sewage volume percent capture evaluation performed for CY2022. The InfoWorks models were used to analyze drainage areas for the two scenarios, as discussed in Section 3.2 - "Actual" refers to the actual conveyance/treatment system performance and rainfall in 2022.

As shown in Table 3-3, the “Actual” scenario capture of combined-sewage volume in 2022 averaged 85 percent citywide. Combined-sewage capture at individual, combined area WRRFs varied from a low at Owls Head (76 percent) to a high at North River (98 percent). Combined-sewage flow capture is not applicable at the separately sewered WPCPs (Oakwood Beach and Rockaway).

Table 3-2. As-Modeled WRRF Service Area Characteristics – CY 2022

WRRF	Total Drainage Area (acres)	Combined Sewage Drainage Area (acres)	Average Dry Weather Flow (MGD)	Design Dry Weather Flow (MGD)	Maximum Wet Weather Flow[(1)] (MGD)	Permitted Wet Weather Flow[(2)] (MGD)
26W	5,787	4,358	44	85	177	170
BB	14,232	12,446	89	150	320	300
CI	6,779	6,070	76	110	213	220
HP	22,543	11,546	119	200	395	400
JA	26,421	5,451	72	100	184	200
NC	15,103	13,562	196	350	728	700
NR	5,572	4,448	97	170	359	340
OH	10,078	9,448	87	120	244	240
PR	11,541	3,575	23	60	126	120
RH	3,738	2,991	28	60	128	120
TI	18,314	8,721	57	80	166	160
WI	15,799	12,822	186	275	570	550
NYC CS Total	155,907	95,438	1,075	1,760	3,611	
Separate Areas						
RO	5,710	NA	18	45	49	90
OB[(3)]	10,779	NA	27	40	89	80
NYC overall	172,396	95,438	1,120	1,845	3,749	

(1) The maximum 99.9th percentile wet weather flows were used to set the peak pumping capacity to be used in the InfoWorks model.
(2) Permitted flow is max design flow, or twice design dry-weather flow (2xDDWF), except as noted.
(3) Certain statistics excluded for RO and OB because these areas are separately sewered.

Table 3-3. Combined-Sewage Capture Results – Flow Volume Calendar Year 2022	
WRRF	**Actual [1] (2022)**
26W	97%
BB	77%
CI	96%
HP	78%
JA	90%
NC	92%
NR	98%
OH	76%
PR	84%
RH	86%
TI	78%
WI	88%
NYC Avg. [2]	85%

Notes:
(1) The "actual" case capture results reflect the —state and operation of the collection/treatment system during the subject period, as well as the actual rainfall patterns during the subject period.
(2) Averages are combined sewage drainage-area weighted, and exclude separately (Oakwood Beach and Rockaway).

3.5 REFERENCES

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https://www.nssl.noaa.gov/projects/mrms/

Appendix 4:

- Appendix 4.1: Table 1 - Wet Weather Operating Plan (WWOP) Submittal Schedule - WRRF's
- Appendix 4.2: Table 2 - Wet Weather Operating Plan (WWOP) Submittal Schedule - CSO Facilities

Appendix 4.1: TABLE 1 - WET WEATHER OPERATING PLAN (WWOP) SUBMITTAL SCHEDULE - WRRF'S

Appendix 4.1: Table 1 - Wet Weather Operating Plan (WWOP) Submittal Schedule - WRRF's

	Submittal Dates	
Facilities	**Original**	**Revisions**
WRRFs		
Wards Island	July 2003	Sept. 2004, April 2007, Aug. 2007, June 2008 (submitted Sept. 2008), Dec. 2008, June 2009, Jan. 2011, Oct. 2014, Dec 2014, Dec 2022
North River	April 2004	July 2011, Dec. 2014, Dec 2022
Hunts Point	July 2003	Sept. 2004, April 2010, Aug. 2010, Dec. 2014, Dec 2022
26th Ward	July 2003	Sept. 2004, May 2007, Oct. 2007, Feb. 2009, Aug. 2009, July 2010, Dec. 2014, Oct-2015, Mar-2016, Dec 2022
Coney Island	April 2005	Dec. 2007, May 2010, Oct. 2010, Dec. 2014, Dec 2022
Owls Head	April 2005	Dec. 2007, Sept. 2008, Dec. 2008, Dec. 2014, Dec 2022
Newtown Creek	June 2003	April 2005, March 2009, April 2010, Oct. 2011, April 2013, Dec. 2014, Dec 2022
Red Hook	Feb. 2005	Dec. 2014, Dec 2022
Jamaica	April 2005	April 2007, June 2007, Dec. 2014, Dec 2022
Tallman Island	July 2003	Sept. 2004, May 2007, Oct. 2007, Aug. 2009, April 2010, July 2010, July 2011, Dec. 2014, Dec 2022
Bowery Bay	July 2003	Sept. 2004, March 2009, Dec. 2014, Mar. 2016, Apr. 2019 (addendum), Dec 2022
Rockaway	April 2005	Dec. 2007, Dec. 2014, Dec 2022
Oakwood Beach	April 2005	Dec. 2007, Dec. 2014, Dec 2022
Port Richmond	April 2005	Dec. 2007, Dec. 2014, Dec 2022

Appendix 4.2: TABLE 2 - WET WEATHER OPERATING PLAN (WWOP) SUBMITTAL SCHEDULE - CSO FACILITIES

Appendix 4.2: Table 2 - Wet Weather Operating Plan (WWOP) Submittal Schedule - CSO Facilities

	Submittal Dates	
Facilities	**Original**	**Revisions**
CSO FACILITIES		
Spring Creek	June 2003	May 2007, Oct. 2007, Feb. 2009, Aug. 2009, July 2010, Dec 2014, Dec 2022
Flushing Bay	Dec. 2003	May 2007, Oct. 2007, Aug. 2009, April 2010, July 2010, July 2011, Dec 2014, Dec 2022
Alley Creek	Dec. 2003	May 2007, Oct. 2007, Aug. 2009, April 2010, July 2010, July 2011, Dec 2014, Dec 2022
Peardegat Basin	Dec. 2003	May 2010, Oct. 2010, Dec 2014, Dec 2022

Appendix 5:

- Appendix 5.1 Dry Weather Raw Sewage Bypass Summary
  - Figure 1: Dry Weather Raw Sewage Bypass Graph (CY2018-2022)
  - Table 1: Dry Weather Bypassing CY'18-CY'22
  - Table 2: Dry Weather Raw Sewage Bypasses CY-2022 - Pump Station
  - Table 3: Dry Weather Raw Sewage Bypasses CY-2022 - Regulator
  - Table 4: Dry Weather Raw Sewage Bypasses CY-2022 - WRRF
  - Table 5: Dry Weather Raw Sewage Bypasses CY-2022 - Other Location
  - Table 6: Pump Station Bypassing Summary CY2022 by Location
  - Table 7: Pump Station Bypassing Summary CY2022 by Cause Code
  - Table 8: Regulator Bypassing Summary CY2022 by Location
  - Table 9: Regulator Bypassing Summary CY2022 by Cause Code
  - Table 10: WRRF Bypass Summary CY2022
  - Table 11: WWTP Bypassing Summary CY2022 by Cause Code
  - Table 12: Other Bypassing Summary CY2022 by Location
  - Table 13: Other Bypassing Summary CY202 by Cause Code

Appendix 5.1: DRY WEATHER RAW SEWAGE BYPASS SUMMARY

Figure 1: Dry Weather Raw Sewage Bypass Graph (CY2018 – 2022)

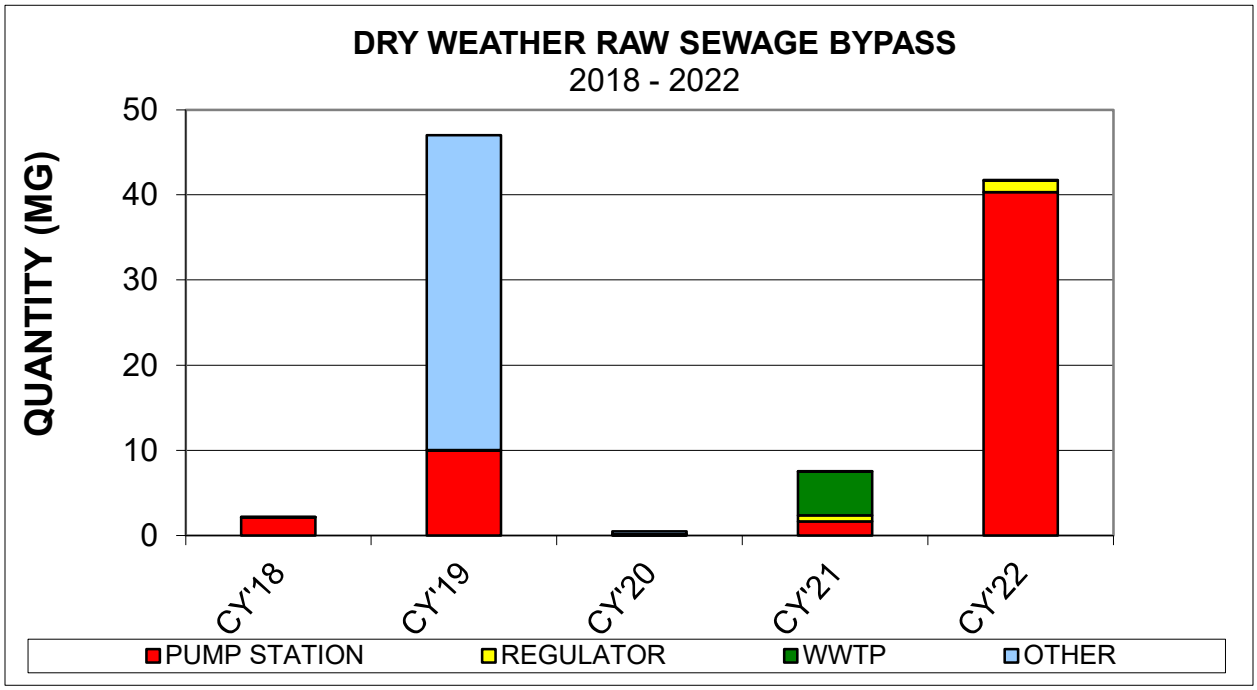


Table 1: Dry Weather Bypassing CY'18-CY'22

SOURCE	CY'18	CY'19	CY'20	CY'21	CY'22
PUMP STATION	2.13	10.00	0.05	1.65	40.31
REGULATOR	0.01	0.01	0.10	0.69	1.34
WWTP	0.00	0.00	0.00	5.16	0.00
OTHER	0.01	37.01	0.35	0.0027	0.0987
TOTAL	2.16	47.01	0.50	7.51	41.75

Other locations include: bypasses from outfalls, street locations, etc.

*In 2019, there was a Potential Raw Sewage Bypass at Jamaica, but it was not confirmed.

*In 2021, there was a Bypass during Wet Weather at Bowery Bay which is included in the above totals.

*In 2021, there were bypasses that occurred from private sewers which overflowed to DEP-owned catchbasins/outfalls which are included in the above totals. Some of these events had unknown amounts and end times; these are included in the # of events but the amount and duration are unknown.

Table 2: Dry Weather Raw Sewage Bypasses CY-2022 - Pump Station

Years	# of Events	Total Bypass (MG)	Duration (Hrs)
CY2018	2	2.13	13.33
CY2019	4	10.00	67.23
CY2020	3	0.05	5.50
CY2021	7	1.65	41.03
CY2022	8	40.31	718.92

Table 3: Dry Weather Raw Sewage Bypasses CY-2022 – Regulator

Years	# of Events	Total Bypass (MG)	Duration (Hrs)
CY2018	3	0.01	3.83
CY2019	3	0.009	5.92
CY2020	4	0.10	14.80
CY2021	6	0.69	33.05
CY2022	10	1.34	21.70

Table 4: Dry Weather Raw Sewage Bypasses CY-2022 – WRRF

Years	# of Events	Total Bypass (MG)	Duration (Hrs)
CY2018	0	0.00	0.0
CY2019 *	1	0.00	1.4
CY2020	0	0.00	0.0
CY2021 *	1	5.16	1.1
CY2022	0	0.00	0.0

*In 2019, there was a Potential Raw Sewage Bypass at Jamaica, but it was not confirmed.
*In 2021, there was a Bypass during Wet Weather at Bowery Bay which is included in the above totals.

Table 5: Dry Weather Raw Sewage Bypasses CY-2022 - Other Location

Years	# of Events	Total Bypass (MG)	Duration (Hrs)
CY2018 *	1	0.01	3.50
CY2019	6	37.01	395.47
CY2020	4	0.35	59.25
CY2021 *	5	0.0027	8.22
CY2022	1	0.0987	6.30

Other locations include: bypasses from outfalls, street locations, etc.

*In 2018 this includes illegal connections

*In 2021, there were bypasses that occurred from private sewers which overflowed to DEP-owned catchbasins/outfalls which are included in the above totals. Some of these events had unknown amounts and end times; these are included in the # of events but the amount and duration are unknown.

Table 6: Pump Station Bypassing Summary CY2022 by Location

LOCATION	EVENTS	% EVENTS	MG	% MG	HOURS	% HOURS
BB-Park Drive East PS	2	25%	0.36	1%	6.00	1%
RH-Van Brunt PS	2	25%	0.33	1%	9.25	1%
WI-235th Street PS	1	13%	0.59	1%	2.50	0%
HP-Throgs Neck PS	1	13%	1.80	4%	2.00	0%
HP-Hollers Avenue PS	1	13%	0.04	0%	3.00	0%
PR-Victory Boulevard PS	1	13%	37.20	92%	686.17	97%
TOTAL	8	100%	40.31	100%	708.92	100%

Table 7: Pump Station Bypassing Summary CY2022 by Cause Code

CAUSE CODE	CODE DESCRIPTION	EVENTS	% EVENTS	MG	% MG	HOURS	% HOURS
3A	Electrical Equipment Failure: Distribution on Equipment	1	14%	0.10	0%	5.25	1%
3C	Electrical Equipment Failure: MSP Control System	2	29%	2.39	6%	4.50	1%
6G	Blockages: Pumps	1	14%	0.04	0%	3.00	0%
7A	Rupture or Collapse: Pumping Station Force Main	2	29%	37.56	93%	692.17	98%
8A	Flooding: Wet Well Interconnection	1	14%	0.23	1%	4.00	1%
TOTAL		7	100%	40.31	100%	708.92	100%

Table 8: Regulator Bypassing Summary CY2022 by Location

LOCATION	EVENTS	% EVENTS	MG	% MG	HOURS	% HOURS
TI-Reg. No. 44	1	10%	0.04	3%	4.67	22%
BB-Reg. No. BBL-32B	3	30%	0.01	1%	2.95	14%
BB-Reg. No. BBL-20	1	10%	1.04	77%	0.83	4%
WI-Reg. No. M-20	1	10%	0.02	1%	4.00	18%
TI-Reg. No. 57	2	20%	0.19	14%	4.17	19%
NR-Reg. No. 36	1	10%	0.00	0%	0.75	3%
HP-Reg. No. 5	1	10%	0.05	3%	4.33	20%
TOTAL	10	100%	1.34	100%	21.70	100%

Table 9: Regulator Bypassing Summary CY2022 by Cause Code

CAUSE CODE	CODE DESCRIPTION	EVENTS	% EVENTS	MG	% MG	HOURS	% HOURS
6A	Blockages: Regulator	9	90%	0.30	23%	20.87	96%
8A	Flooding: Wet Well Interconnection	1	10%	1.04	77%	0.83	4%
TOTAL		10	100%	1.34	100%	21.70	100%

Table 10: WRRF Bypass Summary CY2022

LOCATION	EVENTS	% EVENTS	MG	% MG	HOURS	% HOURS
n/a	0	0%	0.00	0%	0.00	0%
TOTAL	0	0%	0.00	0%	0.00	0%

Table 11: WRRF Bypassing Summary CY2022 by Cause Code

CAUSE CODE	CODE DESCRIPTION	EVENTS	% EVENTS	MG	% MG	HOURS	% HOURS
n/a	n/a	0	0%	0.00	0%	0.00	0%
TOTAL		0	0%	0.00	0%	0.00	0%

Table 12: Other Location Bypass Summary CY2022

LOCATION	EVENTS	% EVENTS	MG	% MG	HOURS	% HOURS
Outfall HP-024	1	100%	0.10	100%	6.30	100%
TOTAL	1	100%	0.10	100.00%	6.30	100.00%

Table 13: Other Location Bypassing Summary CY2022 by Cause Code

CAUSE CODE	CODE DESCRIPTION	EVENTS	% EVENTS	MG	% MG	HOURS	% HOURS
6D	Blockages: Interceptor	1	100%	0.10	100%	6.30	100%
TOTAL		1	100%	0.10	100%	6.30	100%

Appendix 6:

- Appendix 6.1: Exhibit 1 – Letter to Industrial Users Amending Permits and Directives
- Appendix 6.2: Exhibit 2 – Trends in Metals Loadings to New York City WRRFs

Appendix 6.1: EXHIBIT 1 – LETTER TO INDUSTRIAL USERS AMENDING PERMITS AND DIRECTIVES

The City of New York
Department of Environmental Protection
59-17 Junction Boulevard
Flushing, New York
11373-5108

Christopher O. Ward
Commissioner

Alfonso R. Lopez, P.E.
Deputy Commissioner
Bureau of Wastewater Treatment
Tel (718) 595-5050
(Fax (718) 595-6950
Alopez@dep.nyc.gov

September 1, 2004

Re: Industrial Wastewater Discharge Permit/Commissioner's Order and Directive Amendments

Certified Mail/Return Receipt Requested

Dear Industrial User:

This is to notify you that the New York City Department of Environmental Protection (DEP) is hereby amending the requirements of your Industrial Wastewater Discharge Permit/Commissioner's Order and Directive (Permit/Directive) as follows:

1. Your establishment is now required to hold its process wastewater and non-contact cooling water to the maximum extent practicable during heavy wet weather events.

The reason for this is that in New York City, combined sewers carry both wastewater and storm water to the City's Water Pollution Control Plants (WPCP). Combined Sewer Overflows (CSOs) can occur during heavy wet weather events, causing wastewater and storm water to be discharged to the receiving waters, without treatment at a WPCP, due to the inability of the WPCP to accept the increased flow. This has an adverse affect on New York City's waterways. DEP has made significant reductions in the size and frequency of CSO events within the City; however, this problem can still occur during heavy rainfall.

2. Part II, Section A of your Permit/Directive is hereby amended, raising the maximum civil and misdemeanor penalties from $1,000.00 to $10,000.00, as per an amendment to the New York City Administrative Code.

3. Part II, Section C (2) (c) is amended to require inclusion of the dates of analysis for each sample and the laboratory's sample identification for each sample in the laboratory report. Please see the amended Industrial User Self Monitoring Report Form and the Sample Laboratory Report Form enclosed for all information establishment is required to submit.

All other requirements of your Permit/Directive remain in effect.

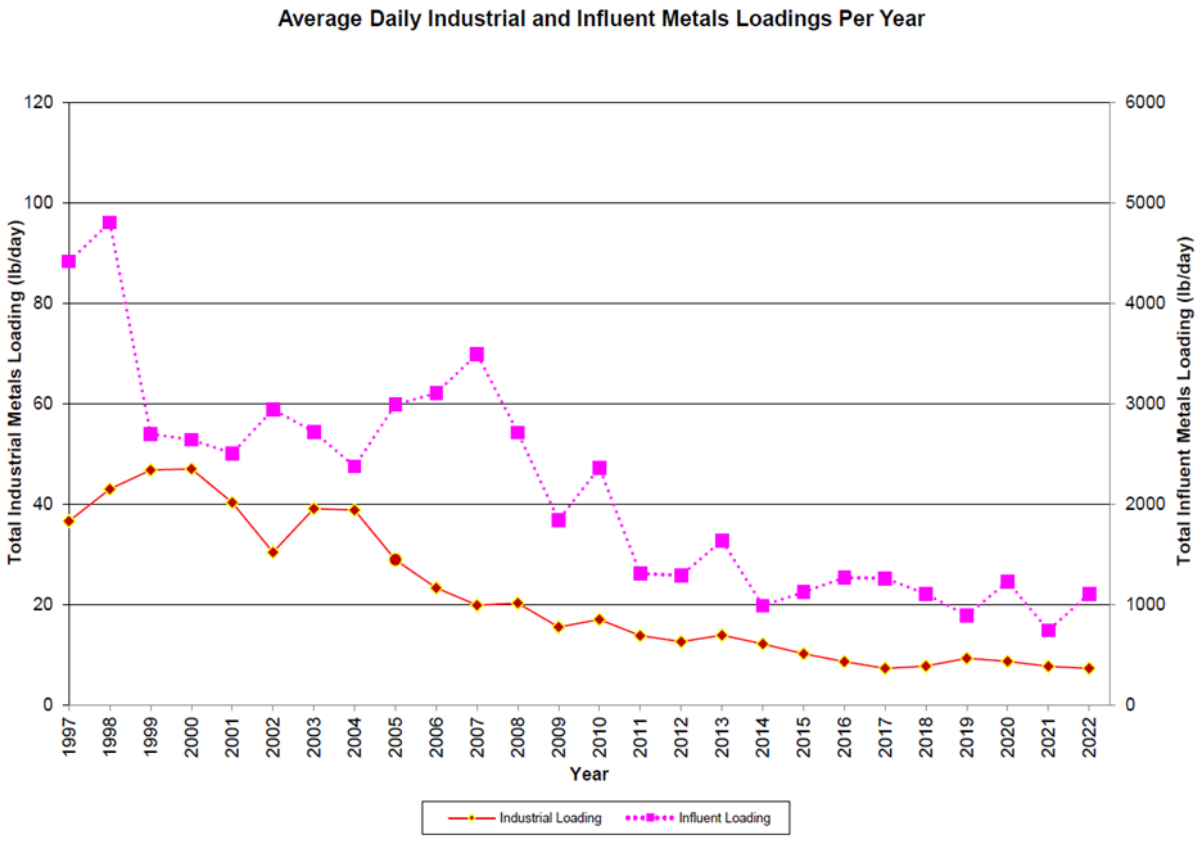
If you have any questions regarding this matter, please telephone Ms. Frances Leung at (718) 595-4763.

Sincerely,

Leslie Lipton, Esq., Chief
Division of Pollution Control and Monitoring

Enc. Industrial User Self Monitoring Report Form
Sample Laboratory Report Form

Appendix 6.2: Exhibit 2 – Trends in Metals Loadings to New York City WRRFs



Appendix 7

Appendix 7.1: BWSO

Appendix 7.1.1: Table 7.1-A - CY2022 Catch Basin (CB) Survey & Cleaning

Appendix 7.1.2: Table 7.1-B - CY2022 Catch Basin Hooding

Appendix 7.2: BWT

Appendix 7.2.1: Table 7.2-A - City-Wide Floatable Material Recovery 2004-2022

Appendix 7.2.2: 7.2-B - City-Wide Floatable Material Recovery Per CSO Floatable Containment Sites, 2022

Appendix 7.2.3: Table 7.2-C - City-Wide Floatable Material Recovery While Navigating to Containment Sites, 2022

Appendix 7.2.4: Table 7.2-D - NYCDEP CSO Floatables Removal Program via Skimmer Vessels Collection Summary

Appendix 7.2.5: Figure 7.2-E - Floatables Booming, Netting, and Offloading Sites

Appendix 7.2.6: Figure 7.2-F - City-Wide Floatables Material Recovery 2004-2022

Appendix 7.2.7: Figure 7.2-G - NYC DSNY Scorecard Fiscal 1975 - 2022

Appendix 7.1: BWSO

Appendix 7.1.1: Table 7.1-A - CY2022 Catch Basin (CB) Survey & Cleaning

Borough	Total CB Inspections	Scheduled CB Cleanings	Complaint Based CB Cleaned	Total CB Cleaned
Bronx	10,955	5,616	532	6,148
Brooklyn	22,872	8,792	1,845	10,637
Manhattan	7,077	3,508	1,011	4,519
Queens	32,047	9,353	3,587	12,940
Staten Island	7,621	2,346	495	2,841
Total	**80,572**	**29,615**	**7,470**	**37,085**

Appendix 7.1.2: Table 7.1-B - CY2022 Catch Basin Hooding

Wastewater Resource Recovery Facility (WRRF) Drainage Area	Quantity
26th Ward	174
Bowery Bay	622
Coney Island	79
Hunts Point	144
Jamaica	551
Newtown Creek	323
North River	40
Oakwood Beach	77
Owls Head	109
Port Richmond	270
Red Hook	48
Rockaway	17
Tallman Island	192
Wards Island	82
Total	**2,728**

Appendix 7.2: BWT

Appendix 7.2.1: Table 7.2-A - City-Wide Floatable Material Recovery 2004-2022 Table 7.2-A - City-Wide Floatable Material Recovery 2004-2022

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
No. Sites[1]																			
FCP[2] Permanent	21.00	21.00	22.00	21.00	21.00	24.00	23.00	23.00	23.00	23.00	23.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00
FCP Temporary[3]	2.00	2.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Other Sites	2.00	2.00	3.00	4.00	4.00	3.00	12.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	25.00	25.00	26.00	27.00	27.00	29.00	36.00	24.00	24.00	24.00	24.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00
Volume [cy][4]																			
FCP Permanent	1,460.00	1,047.50	1,614.50	2,131.30	1,881.75	1,368.75	1774.50	1,988.25	1,384.00	921.00	437.75	246.5	454.625	579.625	513.00	349.50	444.75	255.75	238.00
FCP Temporary	2.00	3.00	18.00	25.50	18.25	1.00	5.00	1.50	9.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Sites	32.00	80.25	70.50	151.50	136.50	207.50	523.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	**1,494.00**	**1,130.75**	**1,703.00**	**2,308.30**	**2,036.50**	**1,577.25**	**2,302.50**	**1,989.75**	**1,393.00**	**927.00**	**437.75**	**246.50**	**454.625**	**579.625**	**513.00**	**349.50**	**444.75**	**255.75**	**238.00**

[1] Maximum number of sites operating during calendar year period.

[2] Floatables Containment Program.

[3] "Temporary" status refers to sites which do not have a permanent floatables containment installation - Gowanus Canal.

[4] Total volume of floatables retrieved from sites during period.

Appendix 7.2.2: 7.2-B - City-Wide Floatable Material Recovery Per CSO Floatable Containment Sites, 2022

Month-Year	FRESH CREEK	BERGEN BASIN	THURSTON BASIN	FLUSHING BAY I	FLUSHING BAY II	FLUSHING CREEK I	FLUSHING CREEK II	BRONX RIVER	OPEN WATER BRONX RIVER	CRYDERS POINT	CLASON POINT	WESTCHESTER CREEK	HENDRIX CREEK	ENGLISH KILLS	OPEN WATER WHALE CREEK	OWLS HEAD	OPEN WATER EAST RIVER	OPEN WATER NEWTOWN CREEK	CONEY ISLAND	GOWANUS CANAL	MASPETH CREEK	BOWERY BAY	BUSHWICK INLET	EAST BRANCH	OPEN WATER SHELLBANK BASIN	OPEN WATER SHEEPSHEAD BAY	WALLABOUT 1	WALLABOUT 2	HUNTS POINT	20 To
Jan-22	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Feb-22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar-22	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apr-22	0	0	0	0	0	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
May-22	0	0	0	0	0	0	0	54	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Jun-22	0	0	0	0	0	0	0	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	51
Jul-22	0	0	0	0	0	0	0	24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Aug-22	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	10
Sep-22	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Oct-22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Nov-22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dec-22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**231**	**1**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	2

Appendix 7.2.3: Table 7.2-C - City-Wide Floatable Material Recovery While Navigating to Containment Sites, 2022

Table 7C-2. City-Wide Floatable Material Recovery Per CSO Floatable Containment Sites, 2022

Month-Year	FRESH CREEK	BERGEN BASIN	THURSTON BASIN	FLUSHING BAY I	FLUSHING BAY II	FLUSHING CREEK I	FLUSHING CREEK II	BRONX RIVER	CRYDERS LANE	HENDRIX CREEK	ENGLISH KILLS	CONEY ISLAND	GOWANUS CANAL
Jan-22	0	0	0	0	0	0	0	12	0	0	0	0	0
Feb-22	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar-22	0	0	0	0	0	0	0	14	0	0	0	0	0
Apr-22	0	0	0	0	0	0	0	48	0	0	0	0	0
May-22	0	0	0	0	0	0	0	54	0	0	0	0	0
Jun-22	0	0	0	0	0	0	0	51	0	0	0	0	0
Jul-22	0	0	0	0	0	0	0	24	0	0	0	0	0
Aug-22	0	0	0	0	0	0	0	10	0	0	0	0	0
Sep-22	0	0	0	0	0	0	0	18	0	0	0	0	0
Oct-22	0	0	0	0	0	0	0	0	0	0	0	0	0
Nov-22	0	0	0	0	0	0	0	0	0	0	0	0	0
Dec-22	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**231**	**0**	**0**	**0**	**0**	**0**

Month-Year	MASPETH CREEK	BOWERY BAY	BUSHWICK INLET	EAST BRANCH	HUNTS POINT		OWLS HEAD	WALLABOUT I	WALLABOUT II	WESTCHESTER CREEK	CLASON POINT	OUTSIDE CONTAINMENT (1)	2022 Total
Jan-22	0	0	0	0	0		0	0	0	0	0	0	12
Feb-22	0	0	0	0	0		0	0	0	0	0	0	0
Mar-22	0	0	0	0	0		0	0	0	0	0	0	14
Apr-22	0	0	0	0	0		0	0	0	0	0	0	48
May-22	0	0	0	0	0		0	0	0	0	0	3	57
Jun-22	0	0	0	0	0		0	0	0	0	0	0.5	51.5
Jul-22	0	0	0	0	0		0	0	0	0	0	1	25
Aug-22	0	0	0	0	0		0	0	0	0	0	0.5	10.5
Sep-22	0	0	0	0	0		0	0	0	0	0	1	19
Oct-22	0	0	0	0	0		0	0	0	0	0	1	1
Nov-22	0	0	0	0	0		0	0	0	0	0	0	0
Dec-22	0	0	0	0	0		0	0	0	0	0	0	0
2022 Total	0	0	0	0	0	0	0	0	0	0	0	7	238

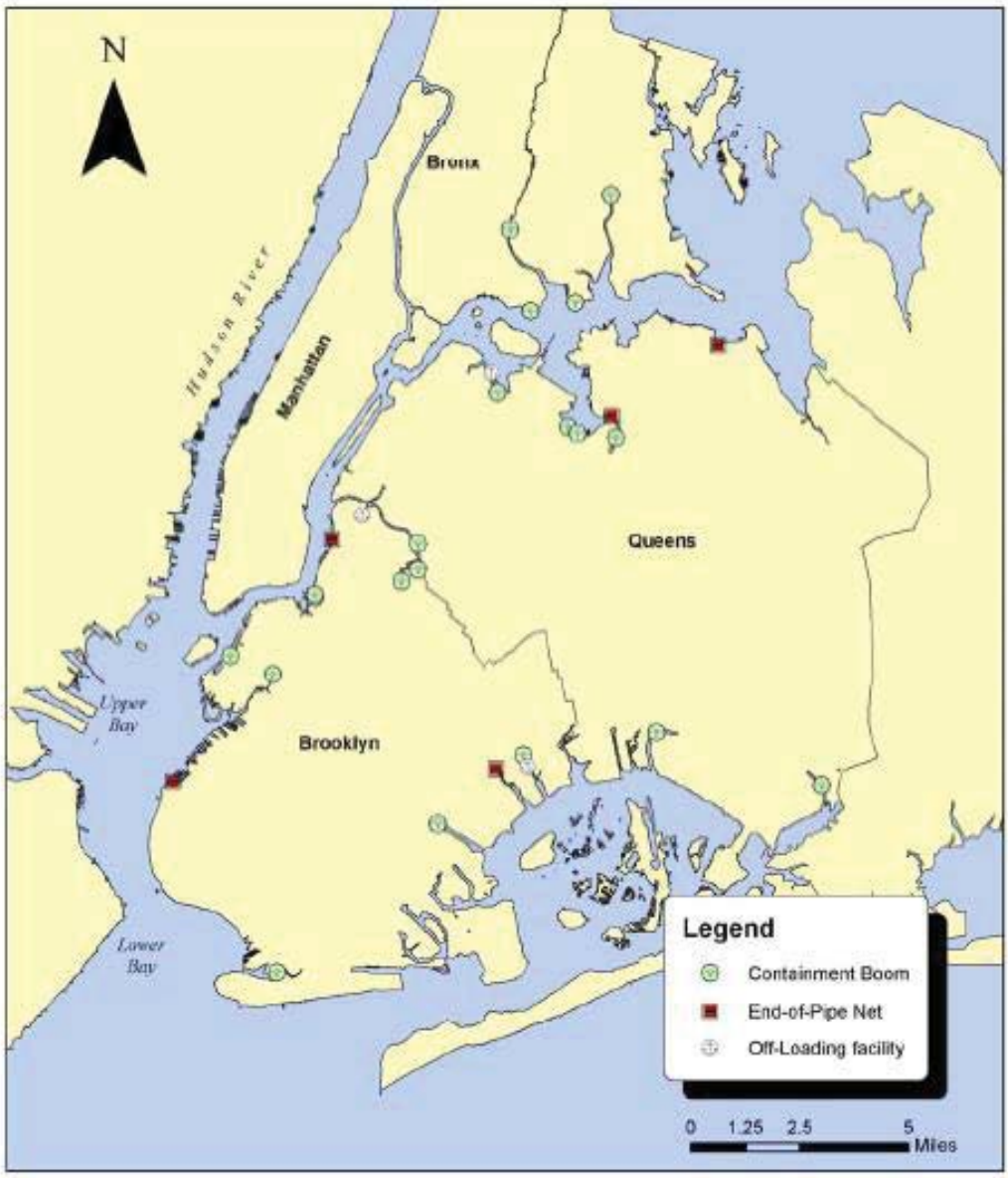
Appendix 7.2.4: Table 7.2-D - NYCDEP CSO Floatables Removal Program via Skimmer Vessels Collection Summary

Table 7D-2. NYCDEP CSO FLOATABLES REMOVAL PROGRAM VIA SKIMMER VESSELS COLLECTION SUMMARY (CUBIC YARDS)

MONTH	ZONE I	ZONE II/III	ZONE IV	TOTAL
January	0	0	12	12
February	0	0	0	0
March	0	0	14	14
April	0	0	48	48
May	0	3	54	57
June	0.5	0	51	51.5
July	0	0	25	25
August	0.5	0	10	10.5
September	0	0	19	19
October	0	1	0	1
November	0	0	0	0
December	0	0	0	0
2022 TOTAL YTD	1	4	233	238

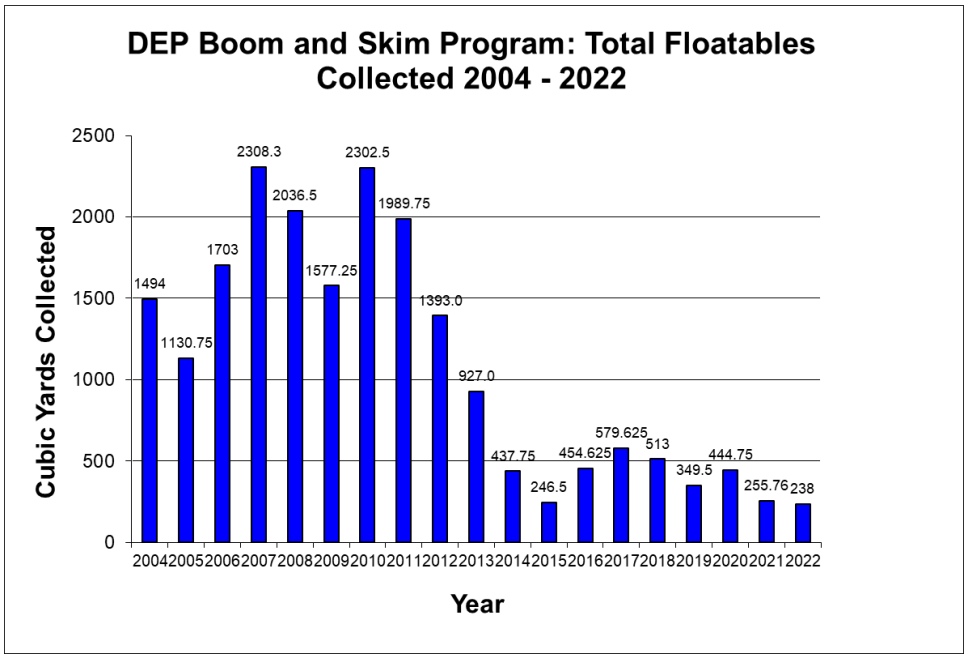
ZONE I	ZONE II/III	ZONE IV
	CONEY ISLAND	BOWERY BAY
FRESH CREEK	OWLS HEAD	FLUSHING BAY I
HENDRIX CREEK	GOWANUS CANAL	FLUSHING BAY II
BERGEN BASIN	WALLABOUT I	FLUSHING CREEK I
THURSTON BASIN	WALLABOUT II	FLUSHING CREEK II
GRAVESEND BAY	BUSHWICK INLET	WESTCHESTER CREEK
SHEEPSHEAD BAY	UPPER NY BAY	CLASON POINT
JAMAICA BAY	MASPETH CREEK	BRONX RIVER
Shellbank Basin	EAST BRANCH	HUNTS POINT
	ENGLISH KILLS	CRYDERS LANE
	WHALE CREEK	EAST RIVER
	NEWTOWN CREEK	BOWERY BAY
		BRONX RIVER

Appendix 7.2.5: Figure 7.2-E - Floatables Booming, Netting, and Offloading Sites

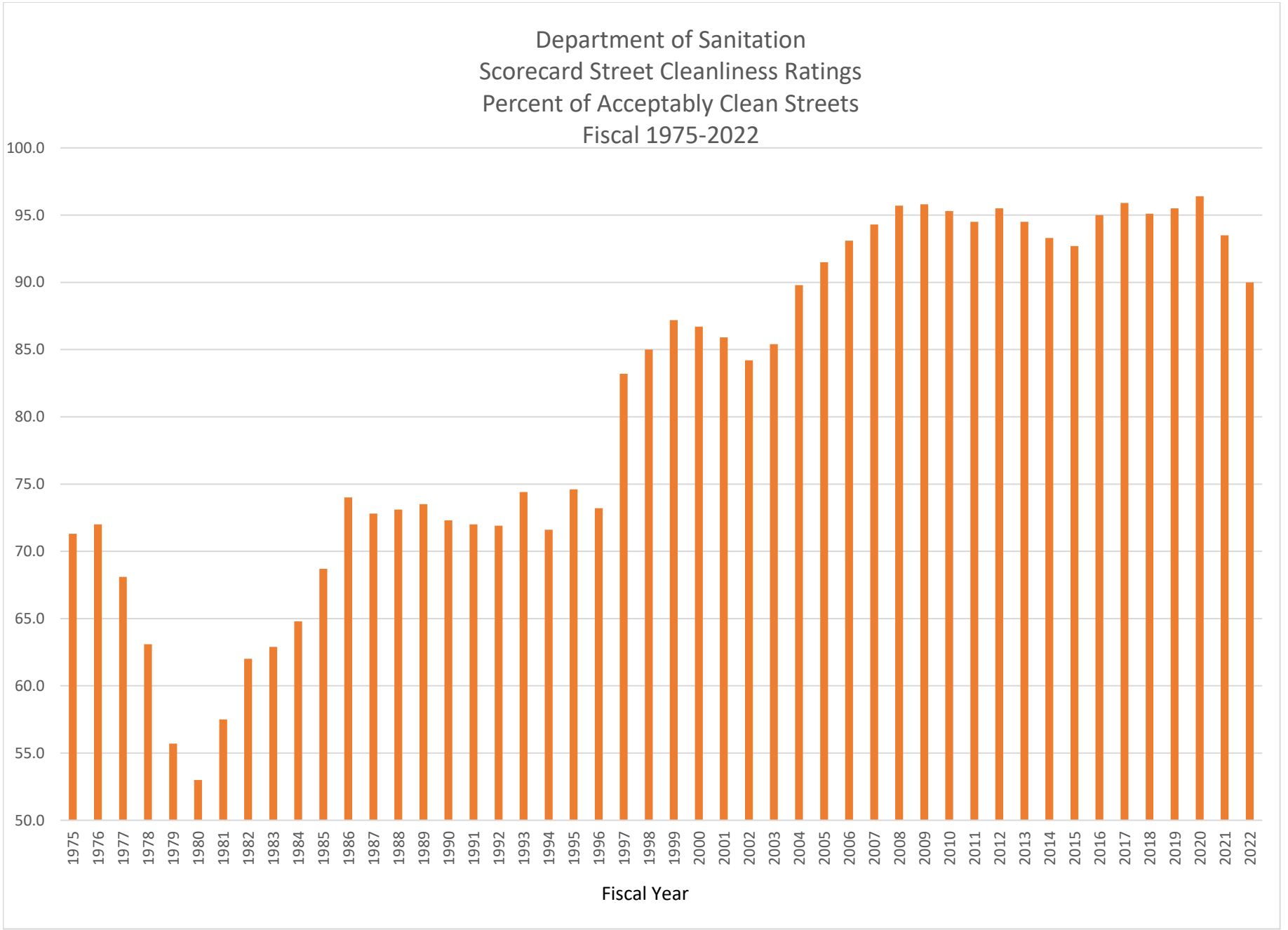


1200 MacArthur Boulevard Mahwah, New Jersey 07430 (201) 529-5151 F-(201) 529-5728	Figure 7-2 Floatables Booming, Netting and Offloading Sites Annual Report on Best Management Practices for CSO's	DEP

Appendix 7.2.6: Figure 7.2-F - City-Wide Floatables Material Recovery 2004-2022



Appendix 7.2.7: Figure 7.2-G - NYC DSNY Scorecard Fiscal 1975 - 2022



Appendix 8: NO APPENDICES FOR BMP NO. 8

Appendix 9: NO APPENDICES FOR BMP NO. 9

Appendix 10: NO APPENDICES FOR BMP NO. 10

Appendix 11: NO APPENDICES FOR BMP NO. 11

Appendix 12: SITE CONNECTION PROPOSAL FORM

NYC Environmental Protection

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER & SEWER OPERATIONS
SITE CONNECTION PROPOSAL/HOUSE CONNECTION PROPOSAL FORM
Project ID:

PE/RA Seal

○ HCP ○ SCP ☐ Self-Certified ☐ Previously Certified (Unexpired) *Cannot be checked for Self-Certified Proposals*
Digital Signature:

A. PROJECT DATA:

Borough of: ☐ DEC Permit ☐ BEPA Permit ☐ DOB #:
Block: ☐☐☐☐☐ Tentative Lot ☐ Lot :
Project Address: Zoning: Map No:

PE/RA/Applicant Information:

Applicant Name: Company Name:
Applicant Address: Zip: Phone:
Applicant Email: Applicant's NY State License #:

Owner Information:

Owner Name: Owner Email:
Owner Address: Zip: Phone:

B. PROJECT USE:

Development: ☐ 1-3 Family ☐ Multi-Unit ☐ Other: No. Buildings: Dwelling Units:

Ownership: ○ Fee Simple ○ Other:

C. CONNECTIONS REQUESTED:

	Sanitary	Storm	Combined	Retention
No. Requested:				
Size:				
Material(s):				
Total Q (cfs):				

Note: The property owner is responsible for plugging all inactive pre-existing sewer connections

D. CONNECTION INFO: Discharge to Water Body ☐

1. Connection to existing: ☐ Spur ☐ Riser ☐ Curb Connection
2. ☐ Proposed New Riser
3. ☐ Fold Spur in
4. ☐ Drill in
5. ☐ Manhole Connection: ☐ Existing ☐ Proposed
6. ☐ Reuse Connection: ☐ Existing ☐ Plugged

E. GREEN INFRASTRUCTURE INFORMATION: *This section is subject to change by the reviewer depending on site conditions.*

Site Storm Release Rate to Sewer (cfs): Max Storm Release Rate to Sewer (cfs):

Structure:	Technology	Type	Weighted Trib. C	V Req. (cf)	V Prov. (cf)	Contr. Area (sf)	GI Footprint (sf)	RR to Sewer (cfs)
Primary:								
Secondary:								
Other:								
Other:								

Roof Slope (%): Soil Infiltration Rate (in/hr):

F. PRIVATE SEWER/DRAIN AND FORCE MAIN DATA (if applicable):

P.D. Plan Number: Approval Date: Expiration Date:
Date of Construction Permit Issuance: Date Sewer was Accepted by DEP:
Private Drain Owner: Private Drain Location:
Force Main Proposed: ☐ Location of Sewer Conn. to Force Main:

G. SUPPORT DOCUMENTS: *Applicant must complete ALL items as it relates to certification and submitted with the application as pdfs.*

* 1. Attachment 'F' - attached with connection and site information		■ Attached	
* 2. Site Plan - attached with hydraulic calculations		■ Attached	
* 3. Survey - attached with watercourse note		■ Attached	
* 4. Tentative Tax Lot Form (R.P. 602)		○ Attached	○ Not Applicable
* 5. Industrial Waste Approval	○ Pending	○ Attached	○ Not Applicable
* 6. Boring Log		○ Attached	○ Not Applicable
** 7. Owner's Association or Deed Restriction		○ Attached	○ Not Applicable
8. Other (Specify):		☐ Attached	
9. Other (Specify):		☐ Attached	

Notes:
* Requires PE/RA/LS Stamp and Signature
** Must Be Notarized

Consolidated Site/House Connection Application Form

H. SEWER INFORMATION: *This section to be completed by PE/RA for Self-Certified Applications OR DEP Staff for standard applications.*

Total Site Area (sq ft): Application Fee Amount:

1. There ◯ IS ◯ IS NOT a sanitary sewer fronting the property available for connections. Size: ◯ Public ◯ Private
2. There ◯ IS ◯ IS NOT a storm sewer fronting the property available for connections. Size: ◯ Public ◯ Private
3. There ◯ IS ◯ IS NOT a combined sewer fronting the property available for connections. Size: ◯ Public ◯ Private
4. Distance from the property line to nearest allowable sewer or drain: If Connecting to Sewer Not Fronting Property:

	Distance:	Location:
a) Sanitary		
b) Storm		
c) Combined		

5. Sanitary Discharge Tributary to: Owner Location

Pumping Station: ☐ ◯ Public ◯ Private

I. CERTIFICATION, RESTRICTIONS, SPECIAL CONDITIONS (FOR DEP USE ONLY):

Conditions:

Notes:

B W S O
S T A M P S

THE FOLLOWING SECTION IS TO BE COMPLETED FOR SELF-CERTIFIED APPLICATIONS ONLY

STATEMENTS AND SIGNATURES

Complete the appropriate sections and sign below. All professionals must affix their seal.

APPLICANT

IDENTIFICATION OF RESPONSIBILITIES

I hereby state that the above information is correct and complete to the best of my knowledge and is in compliance with all applicable Administrative Code Provisions and all Department Rules, Regulations, and Directives, except where noted. Falsification of any statement is a misdemeanor under section 26-124 of the Administrative Code and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for consideration. Violation is punishable by imprisonment or fine, or both.

Name of Applicant

Signature Date

PE/RA Seal

OWNER

I hereby state that I have authorized the applicant to perform the work specified herein, and agree to indemnify and save harmless to the fullest extent permitted by law, the City of New York, the New York City Water Board, and the New York Municipal Water Finance Authority (hereinafter collectively called "the City") and their, respective officers, representatives, agencies, contractors, servants and employees from and against any and all claims, suits, actions, proceedings, and losses ("claims and losses") that may arise from the construction, maintenance, operation, or use of any connection to the City Sewer System that I or my contractor connect to the City Sewer System from the subject site.

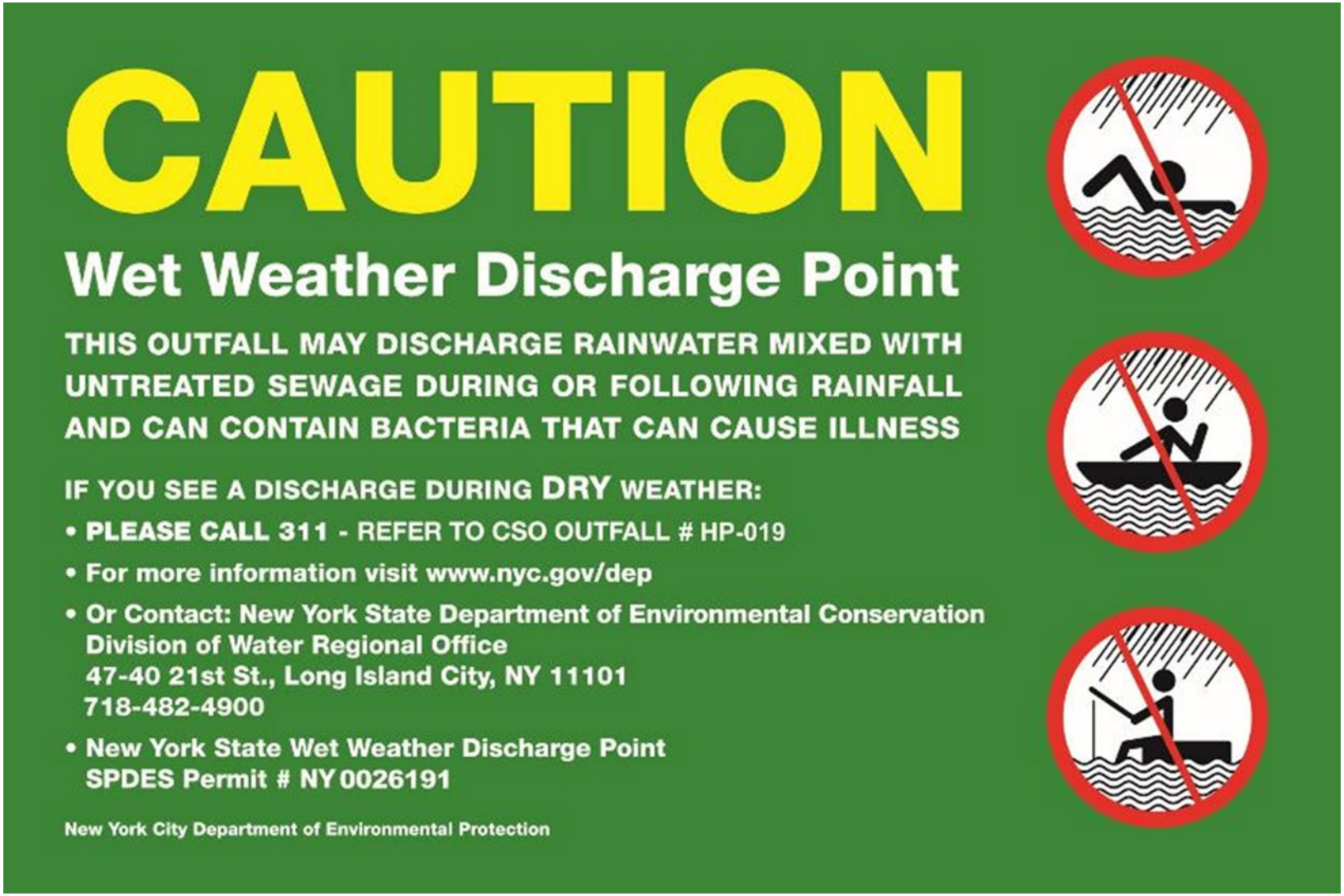
Name of Owner

Signature Date

Appendix 13:

- Appendix 13.1: CSO Sign Sample
- Appendix 13.2: Table: List of installed CSO Signs
- Appendix 13.3: New York City 2022 Beach Surveillance and Monitoring Program

Appendix 13.1: CSO SIGN SAMPLE



Appendix 13.2: TABLE: LIST OF INSTALLED CSO SIGNS

No	OUTFALLID	OUTFALL LOCATION	CONTRIBUTORS	STATUS/COMMENTS
1	**WI - 001**	**Wards Island W.P.C.P. Outfall**		Installed
2	WIM-002	EAST RIVER & E. 73rd STREET	REG #1	Installed
3	WIM-003	EAST RIVER & E. 74th STREET	REG #2A, 2B	Installed
4	WIM-004	EAST RIVER & E. 75th STREET	REG #3	Installed
5	WIM-005	EAST RIVER & E. 76th STREET	REG #4	Installed
6	WIM-006	EAST RIVER & E. 77th STREET	REG #5	Installed
7	WIM-007	EAST RIVER & E. 78th STREET	REG #6	Installed
8	WIM-008	EAST RIVER & E. 79th STREET	REG #7	Installed
9	WIM-009	EAST RIVER & E. 83rd STREET	REG #8	Installed
10	WIM-010	EAST RIVER & E. 84th STREET	REG #9	Installed
11	WIM-011	EAST RIVER & E. 86th STREET	REG #10	Installed
12	WIM-012	EAST RIVER & E. 89th STREET	REG #11	Installed
13	WIM-013	EAST RIVER & E. 90th STREET	REG #12	Installed
14	WIM-014	EAST RIVER & E. 91st STREET	REG #13	Installed
15	WIM-015	EAST RIVER & E. 92nd STREET	REG #14	Installed
16	WIM-016	EAST RIVER & E. 95th STREET	REG #15	Installed
17	WIM-017	EAST RIVER & E. 96th STREET	REG #16	Installed
18	WIM-018	EAST RIVER & E. 100th STREET	REG #17	Installed
19	WIM-019	EAST RIVER & E. 101st STREET	REG #18	Installed
20	WIM-020	EAST RIVER & E. 103rd STREET	REG #20	Installed
21	WIM-021	EAST RIVER & E. 104th STREET	REG #21	Installed
22	WIM-022	EAST RIVER & E. 105th STREET	REG #22	Installed
23	WIM-023	EAST RIVER & E. 106th STREET	REG #23	Installed
24	WIM-024	EAST RIVER & E. 110th STREET	REG #24	Installed
25	WIM-025	EAST RIVER & E. 114th STREET	REG #25	Installed
26	WIM-026	EAST RIVER & E. 115th STREET	REG #26	Installed
27	WIM-027	EAST RIVER & E. 116th STREET	REG #27	Installed

28	WIM-030	EAST RIVER & E. 119th STREET	REG #30	Installed
29	WIM-031	EAST RIVER & E. 120th STREET	REG #31	Installed
30	WIM-032	EAST RIVER & E. 121st STREET	REG #32	Installed
31	WIM-033	EAST RIVER & E. 122nd STREET	REG #33	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
32	WIM-034	EAST RIVER & E. 124th STREET	REG #34	Installed
33	WIM-035	EAST RIVER & E. 125th STREET	REG #35	Installed
34	WIM-036	HARLEM RIVER & E. 129th STREET	REG #36	Installed
35	WIM-037	HARLEM RIVER & E. 130th STREET	REG #37	Installed
36	WIM-038	HARLEM RIVER & E. 135th STREET	REG #38	Installed
37	WIM-039	HARLEM RIVER & W. 140th STREET	REG #39	Installed
38	WIM-040	HARLEM RIVER & W. 141st STREET	REG #40	Installed
39	WIM-041	HARLEM RIVER & W. 142nd STREET	REG #41	Installed
40	WIM-042	HARLEM RIVER & W. 143rd STREET	REG #42	Installed
41	WIM-043	EAST RIVER & E. 102nd STREET	REG #19	Installed
42	WIM-044	HARLEM RIVER & W. 145th STREET	REG #44	Installed
43	WIM-045	HARLEM RIVER & W. 149th STREET	REG #45	Installed
44	WIM-046	HARLEM RIVER & W. 151st STREET	REG #46	Installed
45	WIM-047	HARLEM RIVER & W. 154th STREET	REG #47	Installed
46	WIM-048	HARLEM RIVER & W. 155th STREET	REG #48	Installed
47	WIM-050	HARLEM RIVER & W. 156th STREET	REG #50	Installed
48	WIM-051	HARLEM RIVER & W. 167th STREET	REG #51	Installed
49	WIM-052	HARLEM RIVER & W. 176th STREET	REG #52	Installed
50	WIB-053	HUDSON RIVER & W. 256th STREET	REG #R-3	Installed
51	WIB-054	HUDSON RIVER & W. 248th STREET	REG #R-2	Installed
52	WIB-055	HUDSON RIVER & W. 236th STREET	REG #R-1	Installed
53	WIB-056	HARLEM RIVER & W. 192nd STREET	REG #67	Installed
54	WIB-057	HARLEM RIVER & LANDING ROAD	REG #66	Installed
55	WIB-058	HARLEM RIVER & W. 178th STREET	REG #65	Installed
56	WIB-059	HARLEM RIVER & W. 176th STREET	REG #64	Installed

57	WIB-060	HARLEM RIVER & UNDER HIGH BRIDGE	REG #62	Installed
58	WIB-061	HARLEM RIVER & W. 167th STREET	REG #61	Installed
59	WIB-062	HARLEM RIVER & JEROME AVENUE	REG #60, 60A	Installed
60	WIB-063	HARLEM RIVER & S/O MCCOMBS DAM BRIDGE	REG #72	Installed
61	WIB-064	HARLEM RIVER & E. 149th STREET	REG #59	Installed
62	WIB-065	HARLEM RIVER & PARK AVENUE	REG #57	Installed
63	WIB-066	HARLEM RIVER & THIRD AVENUE BRIDGE	REG #56	Installed
64	WIB-067	HARLEM RIVER & LINCOLN AVENUE	REG #55	Installed
65	WIB-068	BRONX KILL & BROOK AVENUE	REG #53, 54	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
66	WIB-069	BRONX KILL & CYPRESS AVENUE	REG #71	Installed
67	WIB-070	EAST RIVER & E. 134th STREET	REG #70	Installed
68	WIB-071	EAST RIVER & E. 138th STREET	REG #69	Installed
69	WIB-072	EAST RIVER & E. 149th STREET	REG #68	Installed
70	WIB-073	BRONX KILL & SAINT ANN'S AVENUE	REG #73	Installed
71	WIB-075	HARLEM RIVER & E. 138th STREET	REG #58	Installed
72	WIB-076	HARLEM RIVER & BRADLEY TERRACE	REG #MH-1	Installed
73	WIB-077	HARLEM RIVER & TEUNISSEN PLACE	REG #MH-2	Installed
74	WIB-078	HARLEM RIVER & W. BROADWAY BRIDGE	REG #MH-3	Installed
75	WIB-079	HUDSON RIVER & W. 261st STREET (MT. ST. VINCENT)	REG #R-4	Installed
76	**NR - 001**	**North River W.P.C.P. Outfall**		Installed
77	NR-002	HUDSON RIVER & W. 152nd STREET	REG #N-20,21,21A,21B	Installed
78	NR-003	HUDSON RIVER & W. 158th STREET	REG #N-19	Installed
79	NR-004	HUDSON RIVER & W. 171st STREET	REG #N-18	Installed
80	NR-005	HUDSON RIVER & W. 190th STREET	REG #N-17	Installed
81	NR-006	HUDSON RIVER & DYCKMAN STREET	REG #N-16	Installed
82	NR-007	HARLEM RIVER & W. 218th STREET	REG #N-15	Installed
83	NR-008	HARLEM RIVER & W. 216th STREET	REG #N-14	Installed
84	NR-009	HARLEM RIVER & W. 215th STREET	REG #N-13	Installed
85	NR-010	HARLEM RIVER & W. 211th STREET	REG #N-10, N-11, N-12	Installed

86	NR-011	HARLEM RIVER & W. 209th STREET	REG #N-9	Installed
87	NR-012	HARLEM RIVER & W. 207th STREET	REG #N-7	Installed
88	NR-013	HARLEM RIVER & W. 206th STREET	REG #N-6	Installed
89	NR-014	HARLEM RIVER & W. 205th STREET	REG #N-5	Installed
90	NR-016	HARLEM RIVER & W. 203rd STREET	REG #N-4	Installed
91	NR-017	HARLEM RIVER & W. 201st STREET	REG #N-3	Installed
92	NR-018	HARLEM RIVER & HIGHBRIDGE PARK	REG #N-1	Installed
93	NR-019	HUDSON RIVER & BANK STREET	REG #N-56	Installed
94	NR-020	HUDSON RIVER & JANE STREET	REG #N-55	Installed
95	NR-021	HUDSON RIVER & GANSEVOORT STREET	REG #N-54	Installed
96	NR-022	HUDSON RIVER & S/O W. 17th STREET	REG #N-51	Installed
97	NR-023	HUDSON RIVER & W. 18th STREET	REG #N-50	Installed
98	NR-024	HUDSON RIVER & W. 21st STREET	REG #N-48, N-49	Installed
99	NR-025	HUDSON RIVER & W. 24th STREET	REG #N-47	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
100	NR-026	HUDSON RIVER & W. 26th STREET	REG #N-46	Installed
101	NR-027	HUDSON RIVER & W. 30th STREET	REG #N-45	Installed
102	*NR-028*	*HUDSON RIVER & W. 36th STREET*	*REG #N-43*	*WAIVER*
103	NR-029	HUDSON RIVER & W. 40th STREET	REG #N-42	Installed
104	NR-030	HUDSON RIVER & W. 43rd STREET	REG #N-39, N-40	Installed
105	NR-031	HUDSON RIVER & W. 44th STREET	REG #N-38	Installed
106	NR-032	HUDSON RIVER & W. 46th STREET	REG #N-36, N-37	Installed
107	NR-033	HUDSON RIVER & W. 48th STREET	REG #N-33, N-34	Installed
108	NR-034	HUDSON RIVER & W. 50th STREET	REG #N-32	Installed
109	NR-035	HUDSON RIVER & W. 56th STREET	REG #N-31	Installed
110	NR-036	HUDSON RIVER & W. 59th STREET	REG #N-30	Installed
111	NR-037	HUDSON RIVER & W. 72nd STREET	REG #N-29	Installed
112	NR-038	HUDSON RIVER & W. 80th STREET	REG #N-28	Installed
113	NR-039	HUDSON RIVER & W. 91st STREET	REG #N-27	Installed
114	NR-040	HUDSON RIVER & W. 96th STREET	REG #N-26, N-26A	Installed

115	NR-041	HUDSON RIVER & W. 108th STREET	REG #N-25	Installed
116	NR-042	HUDSON RIVER & W. 115th STREET	REG #N-24	Installed
117	NR-043	HUDSON RIVER & SAINT CLAIR PL	REG #N-23	Installed
118	NR-044	HUDSON RIVER & W. 138th STREET	REG #N-22	Installed
119	NR-045	HARLEM RIVER & ACADEMY STREET	REG #N-2	Installed
120	NR-046	HUDSON RIVER & W. 66th STREET	REG #N-29A	Installed
121	NR-047	HUDSON RIVER & W. 47th STREET	REG #N-35	Installed
122	NR-048	HUDSON RIVER & W. 42nd STREET	REG #N-40, N-41	Installed
123	NR-049	HUDSON RIVER & W. 14th STREET	REG #N-52	Installed
124	NR-050	HUDSON RIVER & BLOOMFIELD STREET	REG #N-53	Installed
125	NR-051	HUDSON RIVER & W. 49th STREET	N/A	Installed
126	NR-052	HUDSON RIVER & W. 34th STREET	REG #N-44	Installed
127	NR-055	HARLEM RIVER & W. 207th STREET	REG #N-7, N-8	Installed
128	NR-056	HUDSON RIVER & W. 142nd STREET	REG #N-22A	Installed
129	**HP - 001**	**Hunt's Point W.P.C.P. Outfall**		Installed
130	HP-002	EAST RIVER & TIFFANY STREET	REG #9, 9A	Installed
131	HP-003	EAST RIVER & FARRAGUT STREET	REG #10	Installed
132	HP-004	BRONX RIVER & WEST FARM ROAD	CSO-28, 28A	Installed
133	HP-005	HUTCHINSON RIVER & HOLLERS AVENUE PS	HOLLERS AVENUE P.S.	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
134	HP-006	HUTCHINSON RIVER & BARTOW AVENUE	CO-OP CITY SO PS, ELY AVE PS	Installed
135	HP-007	BRONX RIVER & E. 177th STREET	CSO-27, 27A	Installed
136	HP-008	BRONX RIVER & LAFAYETTE AVENUE	CSO-26	Installed
137	HP-009	BRONX RIVER & METCALF AVENUE	REG #13	Installed
138	HP-010	BRONX RIVER & LACOMBE AVENUE	CSO-25	Installed
139	HP-011	EAST RIVER & WHITE PLAINS ROAD	REG #5, 6, 7	Installed
140	HP-012	WESTCHESTER CREEK & LAFAYETTE AVENUE	CSO-23A	Installed
141	HP-013	PUGSLEY'S CREEK & NEWMAN AVENUE	CSO-24	Installed
142	HP-014	WESTCHESTER CREEK & EAST TREMONT AVENUE	CSO-29, 29A	Installed
143	HP-015	WESTCHESTER CREEK & LATTING STREET	CSO-22	Installed

144	HP-016	WESTCHESTER CREEK & BRUCKNER EXPWY	REG #4	Installed
145	HP-017	EAST RIVER & EMERSON AVENUE	REG #11	Installed
146	HP-018	EAST RIVER & ROBINSON AVENUE	REG #12	Installed
147	HP-019	EAST RIVER & CALHOUN AVENUE	REG #3	Installed
148	HP-020	EAST RIVER & THROGS NECK BLVD	REG #2A	Installed
149	HP-021	EAST RIVER & PENNYFIELD AVENUE	REG #2	Installed
150	HP-022	EASTCHESTER BAY & E 177th STREET	REG #1	Installed
151	HP-023	HUTCHINSON RIVER & CONNER STREET	REG #15, CONNOR ST.PS	Installed
152	HP-024	HUTCHINSON RIVER & E 233rd STREET	REG #15A	Installed
153	HP-025	EAST RIVER & TRUXTON STREET	REG #8	Installed
154	HP-026	WEIR CREEK & ELLESWORTH AVENUE	REG #14	Installed
155	HP-028	EASTCHESTER BAY & OUTLOOK AVENUE	CSO-20	Installed
156	HP-029	EASTCHESTER BAY & WATT AVENUE	CSO-21	Installed
157	HP-031	HUTCHINSON RIVER & BELLAMY LOOP	CSO-32, CO-OP CITY N. P.S.	Installed
158	HP-032	EAST RIVER & RIKERS ISLAND NORTH	RIKER'S ISLAND N. P.S.	Installed
159	HP-033	WESTCHESTER CREEK & S/O BRUCKNER BLVD, E/O ZEREGA AVE	CSO-23	Installed
160	HP-034	WESTCHESTER CREEK & NEWBOLD AVENUE (CITY ISLAND)	COMMERCE AVENUE P.S.	Installed
161	HP-036	LONG ISLAND SOUND & SCHOFIELD STREET	CITY ISLAND P.S.	Installed
162	*HP-037*	*SHORE ROAD LAGOON & ORCHARD BEACH*	*ORCHARD BEACH P.S.*	*WAIVER*
163	HP-039	EAST RIVER & N/O HUNTS POINT AVE	HUNT'S PONT MARKET P.S.	Installed
164	**NC - 001**	**Newtown Creek W.P.C.P. Outfall**		Installed
165	NCB-002	WHALE CREEK & WWTP OVERFLOW	WWTP OVERFLOW	Installed
166	NCB-003	EAST RIVER & GREENPOINT AVENUE	REG #B-11	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
167	NCB-004	EAST RIVER & QUAY STREET	REG #B-10	Installed
168	NCM-005	EAST RIVER & E. 63rd STREET	REG #M-51	Installed
169	NCB-006	EAST RIVER & N. 12th STREET	REG #B-9	Installed
170	NCB-007	EAST RIVER & N. 5th STREET	REG #B-8	Installed
171	NCB-008	EAST RIVER & METROPOLITAN AVENUE	REG #B-7	Installed
172	NCB-010	EAST RIVER & GRAND STREET	REG #B-6A	Installed

173	NCM-011	EAST RIVER & E. 48th STREET	REG #M-47A	Installed
174	NCB-012	EAST RIVER & S. 5th STREET	REG #B-6	Installed
175	NCB-013	WALLABOUT CHANNEL & DIVISION AVENUE	REG #B-5	Installed
176	NCB-014	WALLABOUT CHANNEL & KENT AVENUE	REG #B-3, B-4	Installed
177	NCB-015	ENGLISH KILLS & JOHNSON AVENUE	REG #B-1	Installed
178	*NCM-016*	*EAST RIVER & E. 46th STREET*	*REG #M-46*	*WAIVER*
179	NCM-017	EAST RIVER & E. 42nd STREET	REG #M-45A	Installed
180	NCM-018	EAST RIVER & E. 41st STREET	REG #M-45	Installed
181	NCB-019	NEWTOWN CREEK & METROPOLITAN AVENUE	REG #B-2	Installed
182	NCM-020	EAST RIVER & E. HOUSTON STREET	REG #M-31	Installed
183	NCB-021	NEWTOWN CREEK & MCGUINNESS BOULEVARD	CSO next to B-17	Installed
184	NCB-022	NEWTOWN CREEK & MCGUINNESS BOULEVARD	REG #B-17	Installed
185	NCB-023	NEWTOWN CREEK & FRANKLIN STREET	REG #B-16	Installed
186	NCB-024	EAST RIVER & DUPONT STREET	REG #B-15	Installed
187	NCB-025	EAST RIVER & FREEMAN STREET	REG #B-14	Installed
188	NCB-026	EAST RIVER & GREEN STREET	REG #B-13	Installed
189	NCB-027	EAST RIVER & HURON STREET	REG #B-12	Installed
190	NCM-028	EAST RIVER & DELANCEY STREET	REG #M-28	Installed
191	NCQ-029	NEWTOWN CREEK & 43rd STREET	REG #Q-2	Installed
192	NCM-030	EAST RIVER & E. 71st STREET	REG #M-51C	Installed
193	NCM-031	EAST RIVER & E. 70th STREET	REG #M-51A, M-15B	Installed
194	NCM-032	EAST RIVER & E. 61st STREET	REG #M-50	Installed
195	NCM-033	EAST RIVER & E. 57th STREET	REG #M-49	Installed
196	NCM-034	EAST RIVER & E. 54th STREET	REG #M-48	Installed
197	NCM-035	EAST RIVER & E. 53rd STREET	REG #M-48A	Installed
198	NCM-036	EAST RIVER & E. 49th STREET	REG #M-47	Installed
199	NCM-037	EAST RIVER & E. 41st STREET	REG #M-44	Installed
200	NCM-038	EAST RIVER & E. 38th STREET	REG #M-43B	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
201	NCM-039	EAST RIVER & E. 37th STREET	REG #M-43A	Installed

202	NCM-040	EAST RIVER & E. 36th STREET	REG #M-43	Installed
203	NCM-041	EAST RIVER & E. 33rd STREET	REG #M-42	Installed
204	NCM-042	EAST RIVER & BROOME STREET	REG #M-27	Installed
205	NCM-043	EAST RIVER & E. 30th STREET	REG #M-41	Installed
206	*NCM-044*	*EAST RIVER & E. 29th STREET*	*REG #M-41A*	*WAIVER*
207	*NCM-045*	*EAST RIVER & E. 26th STREET*	*REG #M-40*	*WAIVER*
208	NCM-046	EAST RIVER & E. 24th STREET	REG #M-39, M-39A	Installed
209	NCM-047	EAST RIVER & E. 23rd STREET	REG #M-38B	Installed
210	NCM-048	EAST RIVER & E. 21st STREET	REG #M-38	Installed
211	NCM-049	EAST RIVER & E. 18th STREET	REG #M-37	Installed
212	NCM-051	EAST RIVER & OLD SLIP	REG #M-12	Installed
213	NCM-052	EAST RIVER & E. 14th STREET	REG #M-36	Installed
214	NCM-053	EAST RIVER & E. 11th STREET	REG #M-35	Installed
215	NCM-054	EAST RIVER & E. 8th STREET	REG #M-34	Installed
216	NCM-055	NEWTOWN CREEK & E. 6th STREET	REG #M-33	Installed
217	NCM-056	EAST RIVER & E. 3rd STREET	REG #M-32	Installed
218	NCM-057	EAST RIVER & STANTON STREET	REG #M-30	Installed
219	NCM-058	EAST RIVER & RIVINGTON STREET	REG #M-29	Installed
220	NCM-059	EAST RIVER & S/O GRAND STREET	REG #M-26	Installed
221	NCM-060	EAST RIVER & S/O CORLEARS HOOK PARK	REG #M-25	Installed
222	NCM-061	EAST RIVER & JACKSON STREET	REG #M-23	Installed
223	NCM-062	EAST RIVER & GOUVERNEUR SLIP E.	REG #M-22	Installed
224	NCM-063	EAST RIVER & JEFFERSON STREET	REG #M-21	Installed
225	NCM-064	EAST RIVER & MARKET SLIP	REG #M-20	Installed
226	NCM-065	EAST RIVER & S/O CATHERINE STREET	REG #M-18	Installed
227	NCM-066	EAST RIVER & ROBERT WAGNER SR. PLACE	REG #M-17	Installed
228	NCM-067	EAST RIVER & MAIDEN LANE	REG #M-13	Installed
229	NCM-068	EAST RIVER & COENTIES SLIP	REG #M-11	Installed
230	NCM-069	EAST RIVER & BROAD STREET	REG #M-10	Installed
231	*NCM-070*	*HUDSON RIVER & BATTERY PLACE*	*REG #M-9*	*WAIVER*

232	*NCM-071*	*HUDSON RIVER & RECTOR STREET*	*REG #M-6, M-7*	*WAIVER*
233	*NCM-072*	*HUDSON RIVER & VESEY STREET*	*REG #M-5*	*WAIVER*
234	*NCM-073*	*HUDSON RIVER & DUANE STREET*	*REG #M-4*	*WAIVER*
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
235	NCM-074	HUDSON RIVER & VESTRY STREET	REG #M-3	Installed
236	NCM-075	HUDSON RIVER & WATTS STREET	REG #M-2	Installed
237	NCM-076	HUDSON RIVER & CLARKSON STREET	REG #M-1	Installed
238	NCQ-077	MASPETH CREEK & 49th STREET	REG #Q-1	Installed
239	NCM-078	EAST RIVER & N/O DOVER STREET	REG #M-16	Installed
240	NCM-080	HUDSON RIVER & N/O VANDAM STREET	REG #TG-2	Installed
241	NCM-081	HUDSON RIVER & N/O CHARLES STREET	REG #TG-1	Installed
242	NCB-082	EAST RIVER & S. 8th STREET	REG #B-5A	Installed
243	NCB-083	NEWTOWN CREEK & METROPOLITAN/SCOTT AVENUE	N/A	Installed
244	NCM-087	EAST RIVER & E 22nd STREET	REG #M-38A	Installed
245	**RH - 001**	**Red Hook W.P.C.P. Outfall**		Installed
246	RH-002	EAST RIVER & HUDSON AVENUE	REG #R-21A	Installed
247	RH-003	EAST RIVER & HUDSON AVENUE	REG #R-21	Installed
248	RH-005	EAST RIVER & GOLD STREET	REG #R-20A	Installed
249	RH-006	EAST RIVER & PEARL STREET	REG #R-19A	Installed
250	RH-007	EAST RIVER & ADAMS STREET	REG #R-19	Installed
251	RH-008	EAST RIVER & WASHINGTON STREET	REG #R-18A	Installed
252	RH-009	EAST RIVER & MAIN STREET	REG #R-18	Installed
253	RH-010	EAST RIVER & ORANGE STREET	REG #R-16	Installed
254	RH-011	EAST RIVER & MONTAGUE STREET	REG #R-15	Installed
255	RH-012	EAST RIVER & CADMAN PLAZA	REG #R-17	Installed
256	RH-013	EAST RIVER & JORALEMON STREET	REG #R-14	Installed
257	RH-014	EAST RIVER & ATLANTIC AVENUE	REG #R-13	Installed
258	RH-016	EAST RIVER & AMITY STREET	REG #R-12	Installed
259	RH-018	EAST RIVER & KANE STREET	REG #R-11	Installed
260	RH-019	BUTTERMILK CHANNEL & HAMILTON AVENUE	REG #R-9	Installed

261	RH-020	BUTTERMILK CHANNEL & DEGRAW STREET	REG #R-10	Installed
262	RH-021	BUTTERMILK CHANNEL & SACKETT STREET	REG #R-9A	Installed
263	RH-022	ATLANTIC BASIN & BOWNE STREET	REG #R-8	Installed
264	RH-023	ATLANTIC BASIN & COMMERCE STREET	REG #R-7	Installed
265	RH-024	ATLANTIC BASIN & VERONA STREET	REG #R-6	Installed
266	RH-025	ATLANTIC BASIN & PIONEER STREET	REG #R-5	Installed
267	RH-028	BUTTERMILK CHANNEL & WOLCOTT STREET	REG #R-2	Installed
268	RH-029	UPPER NEW YORK BAY & VAN BRUNT STREET	REG #R-1, VAN BLANT ST. PS	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
269	RH-030	GOWANUS CANAL & HICKS STREET	CSO-2	Installed
270	RH-031	GOWANUS CANAL & CREAMER STREET	BOND-LORRAINE SWR RELIEF	Installed
271	RH-033	GOWANUS CANAL & DOUGLASS STREET (E)	REG #R-25	Installed
272	RH-034	HEAD OF GOWANUS CANAL	GOWANUS PS	Installed
273	RH-035	GOWANUS CANAL & BOND STREET	CSO-3, BOND-LORR SWR REL.	Installed
274	RH-036	GOWANUS CANAL & PRESIDENT STREET	REG #R-22	Installed
275	RH-037	GOWANUS CANAL & SACKETT STREET	REG #R-23	Installed
276	RH-038	GOWANUS CANAL & DEGRAW STREET	REG #R-24	Installed
277	RH-040	EAST RIVER & NAVY YARD	REG #R-26	Installed
278	**TI - 001**	**Tallman Island W.P.C.P. Outfall**		Installed
279	TI-003	POWELL'S COVE & N/O 7th AVENUE	REG #10A, 10B	Installed
280	TI-004	EAST RIVER & 151st STREET	REG #11	Installed
281	TI-005	EAST RIVER & 154th STREET	REG #12	Installed
282	TI-006	LITTLE NECK BAY & 24th AVENUE	24 AVENUE P.S.	Installed
283	TI-007	ALLEY CREEK & NORTHERN BLVD	OLD DOUG P.S.	Installed
284	TI-008	ALLEY CREEK & 46th AVENUE	REG #46, 47, 48, 49	Installed
285	*TI-009*	*LITTLE NECK BASIN & DOUG. BAY P.S.*	*DOUG BAY P.S.*	*WAIVER*
286	TI-010	FLUSHING RIVER & ROOSEVELT AVENUE	REG #30, 31, 40, 44	Installed
287	TI-011	FLUSHING BAY & 32nd AVENUE	REG #9, 51, 52, 53, 54	Installed
288	TI-012	FLUSHING BAY & 29th AVENUE	122ND STREET P.S.	Installed
289	TI-014	FLUSHING BAY & 23rd AVENUE	REG #7	Installed

290	TI-015	FLUSHING BAY & 22nd AVENUE	REG #6	Installed
291	TI-016	FLUSHING BAY & 20th AVENUE	REG #5	Installed
292	TI-017	FLUSHING BAY & 15th AVENUE	REG #4	Installed
293	TI-018	FLUSHING BAY & 14th AVENUE	REG #3	Installed
294	TI-019	EAST RIVER & 9th AVENUE	REG #2	Installed
295	TI-020	EAST RIVER & COLLEGE PLACE	REG #1	Installed
296	TI-022	FLUSHING RIVER & 40th ROAD	REG #55, 56, 57, 58	Installed
297	TI-023	LITTLE BAY & CRYDERS LANE	REG #13, CLEARVIEW P.S.	Installed
298	TI-024	ALLEY POND & 61st AVENUE	NEW DOUG P.S.	Installed
299	TI-025	ALLEY CREEK (W) & 400' SOUTH OF LIRR BRIDGE	Alley Creek CSO Storage Facility	Installed
300	**BB - 001**	**Bowery Bay W.P.C.P. Outfall**		Installed
301	BB-002	RIKER'S ISLAND CHANNEL & 45th STREET	REG #2	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
302	BB-003	BOWERY BAY & HAZEN STREET	REG #3	Installed
303	BB-004	DUTCH KILLS & BORDEN AVENUE	REG #L-3, L-41	Installed
304	BB-005	BOWERY BAY & E/O 81st STREET	REG #4	Installed
305	BB-006	FLUSHING BAY & W/O MARINA (114th STREET)	REG #10, 12, 13	Installed
306	BB-007	FLUSHING BAY & 27th AVENUE	REG #5	Installed
307	BB-008	FLUSHING BAY & 31st DR (108th STREET)	REG #6, 7, 8, 9	Installed
308	BB-009	DUTCH KILLS & HUNTERS POINT AVE.	REG #L-3B, L-37,L-38,L-41,L-3A	Installed
309	BB-010	DUTCH KILLS & QUEENS-MIDTOWN EXPWY	REG #L-3C	Installed
310	BB-011	NEWTOWN CREEK & GREENPOINT AVENUE	REG #L-1	Installed
311	BB-012	NEWTOWN CREEK & 35th STREET	REG #L-2	Installed
312	BB-013	NEWTOWN CREEK & 11th STREET	REG #L-8	Installed
313	BB-014	NEWTOWN CREEK & VERNON BLVD	REG #L-9	Installed
314	BB-015	NEWTOWN CREEK & 5th STREET	REG #L-10	Installed
315	BB-016	EAST RIVER & 51st AVENUE	REG #L-11	Installed
316	BB-017	EAST RIVER & 50th AVENUE	REG #L-12	Installed
317	BB-018	EAST RIVER & 49th AVENUE	REG #L-12A	Installed
318	BB-021	EAST RIVER & 47th AVENUE	REG #L-15	Installed

319	BB-022	EAST RIVER & 5th STREET	REG #L-16	Installed
320	BB-023	EAST RIVER & 44th DRIVE	REG #L-17	Installed
321	BB-024	EAST RIVER & 43rd AVENUE	REG #L-18	Installed
322	BB-025	EAST RIVER & 41st AVENUE	REG #L-19	Installed
323	BB-026	DUTCH KILLS & BETW. 28th & 29th STREET	REG #L-4, L-39, L-40, L-42	Installed
324	BB-027	EAST RIVER & 38th AVENUE	REG #L-20	Installed
325	BB-028	EAST RIVER & 37th AVENUE	REG #L-21	Installed
326	BB-029	EAST RIVER & BROADWAY	REG #L-22	Installed
327	BB-030	EAST RIVER & 30th ROAD	REG #L-23	Installed
328	BB-032	EAST RIVER & MAIN AVENUE	REG #L-29, L-29A, MH-15	Installed
329	BB-033	EAST RIVER & 27th AVENUE	REG #L-27	Installed
330	BB-034	EAST RIVER & HOYT AVENUE	REG #L-30	Installed
331	BB-035	EAST RIVER & DITMARS BLVD	REG #L-31	Installed
332	BB-036	EAST RIVER & 21st AVENUE	REG #L-32	Installed
333	BB-037	EAST RIVER & 20th AVENUE	REG #L-33	Installed
334	BB-040	DUTCH KILLS & 49th AVENUE	REG #L-5	Installed
335	BB-041	LUYSTER CREEK & 19th AVENUE	REG #1	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
336	BB-042	DUTCH KILLS & W/O 27th STREET	REG #L-6	Installed
337	BB-043	NEWTOWN CREEK & 11th STREET	REG #L-7	Installed
338	BB-045	EAST RIVER & 9th STREET	REG #L-25	Installed
339	BB-046	EAST RIVER & 3rd STREET	REG #L-26	Installed
340	BB-047	EAST RIVER & ASTORIA BLVD	REG #L-28	Installed
341	BB-049	NEWTOWN CREEK & 21st STREET	N/A	Installed
342	BB-053	HELL GATE & 20th AVENUE	N/A	Installed
343	**26W - 001**	**26th Ward W.P.C.P. Outfall**		Installed
344	26W-002	HENDRIX CREEK & PLANT BYPASS	PLANT BYPASS	Installed
345	26W-003	FRESH CREEK BASIN & WILLIAMS AVENUE	REG #2	Installed
346	26W-004	HENDRIX CREEK & HENDRIX STREET	REG #1	Installed
347	26W-005	SPRING CREEK & SPRING CREEK AUXILIARY WWTP	REG #3, JAM REG #2	Installed

348	**CI - 001**	**Coney Island W.P.C.P. Outfall**		Installed
349	**CI - 002**	**Coney Island W.P.C.P. Outfall**		Installed
350	CI-004	PAERDEGAT BASIN & FLATLANDS AVENUE	TG #5	Installed
351	CI-005	PAERDEGAT BASIN & FLATLANDS AVENUE	REG #1, 2, 3, 4	Installed
352	CI-006	PAERDEGAT BASIN & RALPH AVENUE	REG #6	Installed
353	**OH - 001**	**Owls Head W.P.C.P. Outfall**		Installed
354	OH-002	UPPER NEW YORK BAY & 64th STREET	REG #6A, 6B, 6C	Installed
355	OH-003	UPPER NEW YORK BAY & 49th STREET	REG #7A, 7B, 7C	Installed
356	*OH-004*	*UPPER NEW YORK BAY & 43rd STREET*	*REG #7D, 19th ST. PS*	*WAIVER*
357	OH-005	GOWANUS CANAL & CARROLL STREET	3rd AVE SEWER RELIEF	Installed
358	OH-006	GOWANUS CANAL & 19th STREET (N0RTH SIDE)	3rd AVE SEWER RELIEF	Installed
359	OH-007	GOWANUS CANAL & 2nd AVENUE	2nd AVENUE P.S.	Installed
360	OH-015	GRAVESEND BAY & 17th AVENUE	REG #9A, 9B, 9C	Installed
361	OH-017	UPPER NEW YORK BAY & 92nd STREET	REG #1	Installed
362	OH-018	UPPER NEW YORK BAY & 79th STREET	REG #2, 3	Installed
363	OH-019	UPPER NEW YORK BAY & 71st STREET	REG #4	Installed
364	OH-020	UPPER NEW YORK BAY & BAY RIDGE AVENUE	REG #5	Installed
365	OH-021	CONEY ISLAND CREEK & W 15th STREET	REG #10, 11, AVE.V P.S.	Installed
366	OH-022	GOWANUS BAY & 32nd STREET (Bush Terminal Complex)	2nd AVE SEWER RELIEF	Installed
367	OH-024	GOWANUS CANAL & 23rd STREET	3rd AVE SEWER RELIEF	Installed
368	***Jam - 001***	***Jamaica W.P.C.P. Outfall***		***WAIVER***
369	JAM-003	BERGEN BASIN & 123rd STREET	REG #3	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
370	JAM-003A	BERGEN BASIN & 123rd STREET	REG #14	Installed
371	JAM-005	HEAD OF THURSTON BASIN & JFK AIRPORT	REG #6, 7, 8, 9	Installed
372	JAM-006	HEAD OF BERGEN BASIN & JFK AIRPORT	REG #1, 4, 10, SECONDARY PLANT EFFLUENT	Installed
373	JAM-007	HEAD OF THURSTON BASIN & JFK AIRPORT (NEXT TO JA-005)	REG #6, 7, 8, 9	Installed
374	**Roc - 001**	**Rockaway W.P.C.P. Outfall**		Installed
375	ROC-003	JAMAICA BAY & PLANT BYPASS	PLANT BYPASS	Installed
376	ROC-009	JAMAICA BAY & BEACH 98th STREET	REG #D-6	Installed

377	ROC-014	JAMAICA BAY & BEACH 91st STREET	REG #D-2	Installed
378	ROC-016	NORTON BASIN & BAYSWATER AVENUE	BAYSWATER P.S.	Installed
379	ROC-017	BANNISTER CREEK & BEACH 3rd STREET	SEAGIRT AVE. P.S.	Installed
380	ROC-029	JAMAICA BAY & BEACH 106 STREET	REG #1, 2	Installed
381	ROC-031	MOTT BASIN & REDFERN AVENUE	NAMEOKE P.S.	Installed
382	ROC-032	JAMAICA BAY & BEACH 98th STREET	REG #D-7,D-8,D-9,D-10,D-11	Installed
383	ROC-033	JAMAICA BAY & BEACH 106th STREET	REG #D-12	Installed
384	**OB - 001**	**Oakwood Beach W.P.C.P. Outfall**		Installed
385	OB-001A	LOWER NEW YORK BAY & PLANT BYPASS	PLANT BYPASS	Installed
386	**PR - 001**	**Port Richmond W.P.C.P. Outfall**		Installed
387	PR-002	KILL VAN KULL & E/O TAYLOR STREET	REG #R-34	Installed
388	PR-003	KILL VAN KULL & BROADWAY	REG #R-33	Installed
389	PR-004	KILL VAN KULL & BARD AVENUE	REG #R-29	Installed
390	PR-005	KILL VAN KULL & W/O KISSEL AVENUE	REG #R-28	Installed
391	PR-006	KILL VAN KULL & CLINTON AVENUE	REG #R-23	Installed
392	PR-007	KILL VAN KULL & SAILOR SNUG HARBOR	REG #R-27	Installed
393	PR-008	KILL VAN KULL & FRANKLIN AVENUE	REG #R-21	Installed
394	PR-009	KILL VAN KULL & JERSEY STREET	REG #R-20	Installed
395	PR-010	UPPER NEW YORK BAY & ST. PETERS PLACE	REG #R-19	Installed
396	PR-011	UPPER NEW YORK BAY & HAMILTON AVENUE	REG #R-18	Installed
397	PR-013	UPPER NEW YORK BAY & VICTORY BLVD.	REG #R-17	Installed
398	PR-014	UPPER NEW YORK BAY & BALTIC STREET	REG #R-15	Installed
399	PR-015	UPPER NEW YORK BAY & S/O DOCK STREET	REG #R-11	Installed
400	PR-016	UPPER NEW YORK BAY & MARINE HOSPITAL	REG #R-10	Installed
401	PR-017	UPPER NEW YORK BAY & NORWOOD AVENUE	REG #R-9	Installed
402	PR-018	UPPER NEW YORK BAY & N/O CAMDEN STREET	REG #R-8	Installed
No	**OUTFALLID**	**OUTFALL LOCATION**	**CONTRIBUTORS**	**STATUS/COMMENTS**
403	PR-019	UPPER NEW YORK BAY & S/O LYNHURST AVENUE	REG #R-7	Installed
404	PR-020	UPPER NEW YORK BAY & N/O SYLVA LANE	REG #R-5	Installed
405	PR-021	UPPER NEW YORK BAY & HYLAN BOULEVARD	REG #R-4	Installed

406	PR-023	UPPER NEW YORK BAY & NAUTILUS STREET	REG #R-3	Installed
407	PR-023A	UPPER NEW YORK BAY & NAUTILUS STREET	REG #R-2	Installed
408	PR-023B	UPPER NEW YORK BAY & NAUTILUS STREET	REG #R-1	Installed
409	PR-024	NEWARK BAY & W/O HOLLAND AVENUE	REG #R-1W	Installed
410	PR-025	NEWARK BAY & SOUTH AVENUE	REG #R-2W	Installed
411	PR-026	NEWARK BAY & HARBOR ROAD	REG #R-3W	Installed
412	PR-027	NEWARK BAY & UNION AVENUE	REG #R-4W	Installed
413	PR-028	NEWARK BAY & HOUSEMAN AVENUE	REG #R-5W	Installed
414	PR-029	NEWARK BAY & NICHOLAS STREET	REG #R-6W	Installed
415	PR-030	UPPER NEW YORK BAY & SYLVATON TER..	REG #R-6	Installed
416	PR-031	UPPER NEW YORK BAY & CANAL STREET	REG #13	Installed
417	PR-032	UPPER NEW YORK BAY & VICTORY BOULEVARD	REG #16	Installed
418	PR-033	KILL VAN KULL & ELIZABETH AVENUE	REG #R-31	Installed
419	PR-034	KILL VAN KULL & BEMENT AVENUE	REG #R-32	Installed
420	PR-035	KILL VAN KULL & BODINE STREET	REG #R-35	Installed
421	PR-036	BODINE CREEK & RECTOR STREET	REG #R-36	Installed
422	PR-037	KILL VAN KULL & RICHMOND AVENUE	REG #R-37	Installed

Appendix 13.3: New York City 2022 Beach Surveillance and Monitoring Program

New York City

2022

Beach Surveillance and Monitoring Program

NYC Health

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List of Tables & Figures

Section 1

Introduction

In accordance with the New York City Administrative Code §18-131(c)(4), this annual report summarizes the 2022 New York City Beach Surveillance and Monitoring Program for beaches permitted by the Department of Health and Mental Hygiene (DOHMH or the "Department"). This law requires that the Health Commissioner "forward a combined report of the dates and results of all inspections of all beaches and the dates and reasons for any warning advisory or closure, and such other information deemed appropriate by the Commissioner of Health and Mental Hygiene, for the Friday proceeding the last Monday of May until the Friday after the first Monday of September of each year, to the mayor, the public advocate and the speaker of the council."

With the principal goal of protecting ocean beachgoers from potential health and safety hazards, the Department closely monitors and conducts surveillance of permitted beaches in New York City. Under the regulatory directive and authority of both Article 167 of the New York City Health Code (Article 167) and Subpart 6-2 of the New York State Sanitary Code (Subpart 6-2), the Department administers the Beach Surveillance and Monitoring Program for all beaches operating within the city limits and with a permit issued by the Department. The Program responsibilities include: 1) beach monitoring and surveillance, 2) public notification and communication and 3) safety inspections.

The city's beaches function as an important recreational resource for city residents and neighboring communities. As shown in Figure 1 (page 2) and Table 1 (page 3), there are eight public beaches operated by the Department of Parks and Recreations (the Parks Department) and 17 privately operated beaches and 1 privately operated freshwater lake within New York City limits.

This year, despite the continuing impact of the COVID-19 pandemic, Parks Department beaches were open from May 28, 2022, Memorial Day weekend, through September 11, 2022.

FIGURE 1: NEW YORK CITY PERMITTED BEACHES

= Public Beach (NYC Dept. Parks and Recreation)

TABLE 1: New York City Permitted Beaches and Water Body Identification

Borough	Beaches	Water Body
Brooklyn	*Public:* Coney Island, Manhattan Beach *Private:* Sea Gate 42nd*, Sea Gate Beach Club*, Gerritsen/Kiddie Beach, Kingsborough Community College	Lower New York Harbor
Bronx	*Public:* Orchard Beach *Private:* American Turner, Danish American Beach Club, Manhem Club (The Strand), White Cross Fishing Club, Morris Yacht Club, Schuyler Hill Civic Association, Trinity Danish, Locust Point Yacht Club, West Fordham Street Association	Eastchester Bay, Western Long Island Sound
Queens	*Public:* Rockaway Beach *Private:* Breezy Point 291**, Breezy Point Reid**	Atlantic Ocean
	Private: Douglaston Manor, Whitestone Booster Civic Association	Western Long Island Sound
Staten Island	*Public:* South Beach, Midland Beach, Cedar Grove Beach, Wolfe's Pond Beach	Lower New York Bay
	Private: Staten Island YMCA	Private Freshwater Lake

*Sea Gate 42nd and Sea Gate Beach Club operate under one permit; DOHMH performs water quality sampling at both locations.
**Breezy Point 291 and Breezy Point Reid operate under one permit; DOHMH performs water quality sampling at both locations.

1.1 Public Risk Communication

The Department continued public notification and risk communication during the beach season, using easy-to-interpret signs shown in Figure 2 for beach closures and warnings in 2022.

FIGURE 2: BEACH WARNING AND CLOSED SIGNS

"Know Before You Go", a free texting service introduced in 2014, was continued for the 2022 beach season. The service enables subscribers to make informed decisions before they go to a public beach. Through this service, users can check whether the beach is open or closed or if there are any warnings due to wet weather conditions or water quality concerns. Subscribers

simply text "BEACH" to 877-877 to learn the status of any of the eight public beaches in New York City. This tool also can be used by the Department to deliver notifications of high priority water quality warnings or closures, as well as safety-related messages, such as warnings for high rip currents, closures for extreme weather, and whether beaches are open or closed during the season. For example, DOHMH issued the following notification to all enrolled users:

> NYC Beach: Beaches open for swimming May 28! For beach status, reply with a beach name or with "LOOK" to find a beach near you, or go to maps.nyc.gov/beach

In 2022 the Department did not conduct any paid campaign promotions for the "Know Before You Go" service. At the end of the 2021 season, the texting service had 15,016 English-language subscribers and 615 Spanish-language subscribers. By the close of the 2022 beach season, there were 14,240 English-language subscribers and 626 Spanish-language subscribers.

FIGURE 3: KNOW BEFORE YOU GO TEXTING PROGRAM

SECTION 2

BACKGROUND INFORMATION

2.1 Water Quality Criteria

Under the New York State Sanitary Code §6-2.15, Article §167.13 of the New York City Health Code and the Federal Beaches Environmental Assessment and Coastal Health Act of 2000 (BEACH), enterococci, bacteria that live in the intestinal tracks of warm-blooded animals, are the indicator organism mandated for evaluating the microbiological quality of marine (saline) recreational beach water.

Under the New York State Sanitary Code and the New York City Health Code, enterococci concentrations for a single sample of saline water may not exceed 104 enterococci per 100 milliliter (mL) (61 enterococci per 100 mL for freshwater), and the geometric mean of five or more samples during a 30-day period may not exceed 35 enterococci per 100 mL (33 enterococci per 100 mL for freshwater). The geometric mean and single sample maximum are determined by analyzing samples for the presence and quantification of enterococci using the IDEXX Enterolert test method, a New York State ELAP certified method, as described in Standard Methods for the Examination of Water and Wastewater SM-9230D-2013. Water quality is measured in most probable number per 100 mL of water (MPN/100mL), an estimate of the number of bacteria in a water sample.

In November 2012, the Environmental Protection Agency (EPA) released revised Recreational Water Quality Criteria (RWQC). The revised criteria use a geometric mean and a statistical threshold value to indicate whether waters designated for primary contact recreation use are protective of human health. The 2012 revised criteria for marine waters are a 30-day geometric mean of 35 enterococci per 100 mL and a statistical threshold value of 130 enterococci per 100 mL; the statistical threshold value is one where no more than 10% of samples within 30 days shall exceed the criteria. The EPA also introduced a Beach Action Value (BAV) of 70 enterococci per 100 mL to be used as a precautionary notification threshold for beach management, replacing earlier guidance that provided single sample maximum values. These water quality criteria have been adopted by the New York State Department of Environmental Conservation (DEC) and became effective November 1, 2019. The New York State Department of Health (NYSDOH), however, has not yet promulgated equivalent bathing beach water quality standards in the State Sanitary Code, which is required before local beach programs can implement them.

EPA also published criteria and methods in the revised 2012 RWQC to detect and quantify *Enterococcus* spp. rapidly with quantitative polymerase chain reaction (qPCR) (EPA Methods 1609 and 1611). These are optional methods of analysis which may be used by beach managers to potentially inform same-day decision making. In 2019, the Department initiated a pilot project to assess qPCR sampling and analysis implementation for New York City beach surveillance and monitoring. The pilot continued through 2022, and the Department collected additional, paired samples from a selection of beaches throughout the season. These additional samples were analyzed with qPCR method 1609 with use of Bio Rad's QX 200 system, for comparison with the currently utilized IDEXX Enterolert method. Analysis is ongoing and DOHMH intends to continue this project to advance sampling protocols and assess feasibility of implementation in future seasons.

2.2 Rainfall Events

Preemptive rainfall thresholds have been developed for New York City beaches through statistical modeling of historical precipitation and water quality data. These thresholds are used as a management tool to provide a quick and reliable indication of water quality conditions. Because the majority of the city has combined stormwater and sewer conveyance systems, high levels of precipitation, greater than the rainfall thresholds, cause an excess of stormwater, which combines with the wastewater in the sewage systems. This combination can bypass the treatment system and flow into local waterbodies. This process, known as Combined Sewer Overflow (CSO), poses a public health threat to nearby beaches. When preemptive rainfall thresholds are met, as defined in Table 2, a public notification or warning takes effect for the predetermined duration.

TABLE 2: New York City Preemptive Rainfall Thresholds

Beach (Borough)	Rainfall Threshold (within 24 hours)	Duration of Warning
South Beach, Midland Beach, Cedar Grove Beach (Staten Island) Manhattan Beach, Kingsborough Community College (Brooklyn)	1.5 – 2.5 inches	12 hours
	> 2.5 inches	24 hours
Orchard Beach (Brooklyn)	> 2.5 inches	24 hours
Coney Island (Brooklyn)	> 2.5 inches	12 hours
Gerritsen/Kiddie Beach (Brooklyn) Whitestone Booster Civic Association (Queens)	0.3 - 0.6 inches	18 hours
	> 0.6 inches	40 hours
American Turner, Danish American Beach Club, Manhem Club (The Strand), White Cross Fishing Club, Morris Yacht Club, Schuyler Hill Civic Association, Trinity Danish, Locust Point Yacht Club, West Fordham Street Association (Bronx)	0.6 – 2.5 inches	36 hours
	> 2.5 inches	48 hours
Douglaston Manor (Queens)	0.3 – 0.6 inches	30 hours
	> 0.6 – 2.5 inches	60 hours
	> 2.5 inches	72 hours

2.3 Beach Classifications

There are three swimming classifications for New York City beaches, which are determined by assessing water quality, rainfall and pollution events; onsite sanitary surveys; and/or historical information. Beaches, except those specifically restricted under Article §167.05, are classified as follows:

Class A: Open for Swimming and Wading. Beaches may be classified as open and approved for swimming and wading when *all* of the following conditions are met:

1. Beach water quality is in accordance with standards defined under Article §167.13.
2. Sanitary and safety surveys are satisfactory in accordance with Article §167.25.

3. The epidemiological history is satisfactory to the Department, i.e., no repeated complaints or reports of illness/injury received from the public or from owners/operators of city beaches.

Class B: Warning – Not Recommended for Swimming and Wading. Beaches may be classified as "Not Recommended for Swimming and Wading," resulting in notifications to the public that swimming should be avoided to prevent contracting a swimming-related illness, when *one or more* of the following conditions exists:

1. Rainfall events exceed the preemptive rainfall thresholds.
2. A water quality sample exceeds the water quality standard or a beach notification threshold. The notification should remain in effect until resampling indicates that the beach water quality standard and/or notification thresholds are being met.
3. An onsite sanitary survey or investigation reveals the presence of floatable debris, medical/infectious waste, toxic contaminants, petroleum products, other contamination, or evidence of sewage and wastewater discharge.

Class C: Closed – Temporarily Restricted for Swimming and Wading: Beaches may be classified as "Temporarily Restricted for Swimming and Wading" when *one or more* of the following conditions exists:

1. Sampling by bacteriological testing that finds beach water quality exceeding the statutory water quality standard for marine water beaches.
2. Epidemiological data indicates a significant incidence of related illnesses or repeated complaints/reports of illness/injury received from beach patrons.
3. A sanitary and safety survey or an investigation reveals the presence of potentially hazardous amounts of floatable debris, medical/infectious waste, toxic contaminants, petroleum products or other contaminants on the beach, or there is evidence of sewage and wastewater discharges in sufficient quantities that will adversely affect the quality of the beach water.
4. Any other environmental factors determined to be a public health or safety hazard by the Department are present.

2.4 Beach Monitoring and Surveillance

Starting one month before the beach season, the Department monitors and samples each beach weekly, except for Rockaway and Breezy Point beaches, which are sampled biweekly. In addition to routine water quality monitoring, the Department monitors daily regional wet weather conditions and occasional wastewater treatment plant bypasses, operational upsets, and spills through interagency communication and cooperation. This information can be used to assess and make beach status determinations.

During a sample event, a routine onsite sanitary survey inspection is performed to identify any existing and/or potential sources of pollution that are likely to affect beach water quality. Water samples are collected at representative points on the beach by wading into the water to a point where water depth is three feet and submerging the bottle to 18 inches below the water surface. At larger beaches, such as Coney Island and Rockaway Beach, samples are taken at more

locations to ensure adequate representation and reliable results. Sea Gate and Breezy Point are permitted beaches where samples are taken at two separate locations for representative results. The collected samples are delivered to the Department's Public Health Laboratory for analysis. The analytical and processing turnaround time for enterococci using the current Enterolert methods is at least 24 hours.

The water quality of the samples analyzed is reviewed and assessed for conformance to applicable standards. If the regulatory limit for enterococci is exceeded or conditions exist that may pose a threat to the health and/or safety of the public, the Department either conducts immediate re-sampling, issues a warning and conducts re-sampling, or closes the beach and conducts re-sampling. The determining factors for additional sampling may include proximity to suspected pollution sources, the extent of pollution, beach use, historical water quality data, and other health risk factors.

2.5 Public Notification and Risk Communication

When beach status changes based upon evaluation and assessment of beach water quality as specified above, the Department notifies the public through on-site beach signage, website postings, 311 non-emergency government service hotline, Notify NYC, "Know Before You Go" texting service, and Department press releases when necessary. Beach operators are notified by phone, email and/or text as to the necessary onsite postings. The specific notification procedures and requirements are as follows:

Onsite Signage: When notified by the Department, the permittee is required to post or remove the warning or closure signs in designated areas visible to beach users, such as beach entrances, bulletin boards, comfort stations or the general vicinity of the common swimming areas.

"Know Before You Go" Texting Service: Subscribers text "BEACH" to 877-877 to learn the beach status for any of the eight public beaches in New York City.

Website Postings: The Department has developed an easily accessible website with up-to-date information for all permitted beaches: www.nyc.gov/health/beach. The website contains background information on the beach program, explains the causes and sources of surface water pollution, and summarizes the beach classification system, including the different types of warnings. In 2021, the Department updated the map of city beaches to improve information delivery and ease-of-use. The map visually indicates the respective status (Open, Closed, or Warning) for all beaches and provides the most recent sample results, along with all year-to-date samples results for that beach.

Notify NYC: When notified by the Department of status changes relating to public beaches, the Office of Emergency Management will share this information with members of the public who have signed up for Notify NYC status information via Twitter, RSS feed, e-mail and SMS.

311: The 311 telephone operators monitor the Department's website for updates on warning or closure information, as described above, and convey that information to 311 callers. The public can also report a swimming-related illness via 311.

NYC Press Release: Press releases are disseminated to various types of media (newspaper, radio, website, television), as well as elected officials.

2.6 Inspections

The Department conducts annual safety inspections and complaint inspections at bathing beaches to assure that (1) all staff, especially lifeguards and supervisors, have proper certificates and coverage, including CPR certification; (2) all required life-saving equipment is available, including rescue tubes, spine boards, first aid kits, and resuscitation equipment; and (3) there is proper signage posted on site. Direct observations of conditions are supplemented by interviews with lifeguards and other personnel. The inspections also evaluate beach facility cleanliness.

SECTION 3

FINDINGS

3.1 Water Quality and Illness Reporting

Routine water quality monitoring and sample collection was performed at 25 permitted beaches and one permitted freshwater lake. Between April and September 2022, the beach monitoring program has returned to its pre-COVID-19 sampling plan and collected over 1,300 samples. In 2022, the Department did not receive any specific beach water quality or illness complaints.

Water quality sample results, including 30-day geometric mean and daily averages and any associated criteria exceedances can be found in Appendix A (pages 12 to 17). Warnings and closures issued by the Department throughout the season are summarized in Appendix B (pages 18 to 21).

Among private beaches, Douglaston Manor had the highest single sample exceedance rate (46%), followed by White Cross Fishing (41%), while all other private beaches had an average exceedance rate of 14%. Among public beaches, Wolfe's Pond Beach had the highest single sample exceedance rate (28%), while all other public beaches had an average exceedance rate of 7%.

3.2 Public Notification for Warnings and Closures

Out of the eight public beaches, five were issued at least one swimming advisory warning notice during the 2022 bathing season due to a rainfall event or water quality exceedance. This resulted in a total of 76 warning days ranging in length from 1 to 35 days. There were a total of 8 closure days due to water quality exceedances or shark sightings. The length of each beach closure ranged from 1 to 4 days. Sharks were sighted at Rockaway Beach in mid-July, accounting for 2 of the 8 closure days.

Of the 17 private beaches in NYC, 16 were open in 2022. Twelve (12) were issued at least one swimming advisory warning notice during the bathing season. There was a total of 517 warning days with lengths ranging from 1 to 29 days. American Turner had the largest total number of warning days with a total of 63. Across all private beaches there were a total of 238 closure days due to water quality exceedances. Douglaston Manor had the largest number of closure days with a total of 49. The length of each beach closure ranged from 1 to 22 days. Public notification details can be found in Appendix B (pages 18 to 21).

3.3 Inspections

During the 2022 beach season, inspections of all open 24 public and private beaches were successfully conducted by the Department. Two beaches were cited for violations at the time of inspection as indicated in Appendix C. Disrepair of parts of the boardwalk was observed during the inspection of Coney Island Beach. Additionally, a current bathing beach permit was not provided at Gerritsen/Kiddie Beach, however Gerritsen/Kiddie representatives subsequently renewed the permit to resolve the issue.

Appendix A: 2022 Water Quality Results and Exceedance

Table A1-1: Brooklyn Beaches Water Quality Results

Enterococci 30 Day Geometric Mean/Daily Average (MPN/100mL)

Water Quality Standards: 30 day geomean limit: 35 MPN/100mL, Daily average limit: 104 MPN/100mL

Date of Week Ending	CONEY ISLAND BEACH (public)		MANHATTAN BEACH (public)		GERRITSEN/ KIDDIE BEACH (private)		KINGSBOROUGH COMMUNITY COLLEGE** (private)		SEA GATE 42ND (private)		SEA GATE BEACH CLUB (private)	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/7/2022	14	15	47	187	94	106	13	13	10	10	10	10
5/14/2022	20	35	78	146	30	10			19	38	16	27
5/21/2022	16	10	99	173	81	668			15	10	15	13
5/28/2022	15	15	87	83	48	10			14	10	13	10
6/4/2022	15	13	62	17	35	10			13	10	13	10
6/11/2022	16	37	45	10	22	10			14	17	14	17
6/18/2022	13	12	35	55	31	94			11	10	12	13
6/25/2022*	14	10	20	10	14	10			11	10	11	10
7/2/2022	14	13	19	49	14	13			11	13	11	10
7/9/2022	14	15	19	17	14	10			11	10	12	13
7/16/2022	13	12	21	20	14	10			11	13	11	13
7/23/2022	13	10	17	13	12	24			12	20	12	17
7/30/2022	12	15	20	28	12	10			12	10	14	24
8/6/2022	13	33	18	51	23	405			13	20	15	13
8/13/2022	13	13	19	20	23	10			17	34	21	79
8/20/2022	13	12	17	13	26	17			16	10	21	13
8/27/2022	14	17	20	31	35	103			21	70	24	34
9/3/2022	18	76	17	10	41	24			31	72	22	17
9/10/2022	19	48	24	145								

Table A1-2: Bronx Beaches Water Quality Results

Water Quality Standards: 30 day geomean limit: 35 MPN/100mL, Daily average limit: 104 MPN/100mL

Date of Week Ending	ORCHARD BEACH (public)		AMERICAN TURNER (private)		DANISH AMERICAN BEACH CLUB (private)		LOCUST POINT YACHT CLUB (private)		MANHEM CLUB (private)		MORRIS YACHT AND BEACH CLUB (private)		SCHUYLER HILL CIVIC ASSOC. (private)		TRINITY DANISH (private)		WEST FORDHAM STREET ASSOC. (private)		WHITE CROSS FISHING CLUB (private)	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/7/2022	19	28	13	13	10	10	16	17	10	10	16	21	10	10	20	24	10	10	13	13
5/14/2022	15	13	13	13	17	31	15	17	13	21	14	13	10	10	17	17	10	10	14	17
5/21/2022	15	17	12	10	19	28	15	17	14	17	28	171	12	17	18	20	22	108	13	13
5/28/2022	16	21	20	105	34	208	14	13	20	61	22	10	11	10	24	57	30	99	18	49
6/4/2022	20	49	44	1175	63	755	17	46	42	932	19	10	20	225	41	782	29	28	36	560
6/11/2022	19	17	76	445	69	17	16	10	49	24	17	10	20	10	50	57	31	17	66	323
6/18/2022	22	31	111	83	87	105	16	17	76	157	20	27	27	50	84	204	31	10	125	396
6/25/2022	36	267	322	2070	151	370	16	24	102	71	13	17	26	13	166	988	26	53	333	1741
7/2/2022	35	13	258	42	139	387	18	20	131	202	19	67	26	10	144	30	17	10	480	620
7/9/2022	25	10	118	27	58	10	14	10	53	10	25	73	14	10	73	17	15	13	251	27
7/16/2022	23	10	83	46	63	23	16	20	55	27	30	24	18	61	92	307	19	52	187	101
7/23/2022	21	17	80	68	60	90	16	24	48	102	72	2005	19	57	83	121	53	1818	124	62
7/30/2022	15	68	45	120	34	20	21	57	34	13	73	17	25	63	54	53	76	307	87	749
8/6/2022*	16	20	40	24	24	27	18	10	23	55	53	13	26	13	53	31	133	162	49	20
8/13/2022	20	45	43	34	24	10	22	27	26	17	51	42	38	103	53	20	157	50	58	87
8/20/2022	27	58	34	10	23	28	20	10	26	35	43	10	29	10	34	20	116	10	40	10
8/27/2022*	25	31	40	192	26	151	17	10	24	55	15	10	21	10	48	710	43	13	51	204
9/3/2022	24	28	24	10	24	13	13	13	23	10	17	43	15	10	35	10	28	42	26	10
9/10/2022	47	978			24	24							18	27			33	403		
9/17/2022													25	366						
9/24/2022													25	10						

* Mid-week sample result on 6/25/2022 at Coney Island Beach resulted in water quality concerns, see appendix B for description.
** Kingsborough Community College did not open for the 2022 season.
Values highlighted in red indicate exceedance of recreational water quality criteria.

* Due to administrative error for samples collected week ending 8/6/22, daily and 30 day calculations here are presented based on corrected data.
** Mid-week sample result on 8/27/22 at Orchard Beach resulted in a water quality exceedance, see appendix B for description.
Values highlighted in red indicate exceedance of recreational water quality criteria.

Table A1-3: Queens Beaches Water Quality Results

Enterococci 30 Day Geometric Mean/Daily Average (MPN/100mL)

Water Quality Standards: 30 day geomean limit: 35 MPN/100mL, Daily Average limit: 104 MPN/100mL

Date of Week Ending	ROCKAWAY BEACH (Public)		BREEZY POINT 219 (Private)		BREEZY POINT Reid Ave (Private)		WHITESTONE BOOSTER CIVIC ASSOCIATION (Private)		DOUGLASTON MANOR ASSOCIATION (Private)	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/7/2022							20	20	16	17
5/14/2022							52	357	13	10
5/21/2022	16	23	10	10	42	42	63	100	45	637
5/28/2022	13	10	10	10	20	10	46	20	67	571
6/4/2022							60	245	90	302
6/11/2022	12	10	10	10	16	10	52	10	82	10
6/18/2022							42	49	141	183
6/25/2022	10	10	10	10	10	10	50	271	76	34
7/2/2022							83	247	93	608
7/9/2022	10	10	10	10	10	10	48	10	74	93
7/16/2022							58	27	129	166
7/23/2022	10	10	10	10	10	10	73	408	217	2005
7/30/2022							72	215	297	133
8/6/2022*	10	10	17	52	10	10	56	93	203	104
8/13/2022							70	42	191	71
8/20/2022	10	10	17	10	10	10	86	89	147	50
8/27/2022							110	547	62	27
9/3/2022	10	11	17	10	17	10	63	13	47	35
9/10/2022									50	135

* Due to administrative error for Whitestone and Douglaston samples collected week ending 8/6/22, daily and 30 day calculations here are presented based on corrected data.
Values highlighted in red indicate exceedance of recreational water quality criteria.

Table A1-4: Staten Island Beaches and Lake Water Quality Results

Enterococci 30 Day Geometric Mean/Daily Average (MPN/100mL)

Water Quality Standards: 30 day Geomean limit: 35 MPN/100mL, Daily Average limit: 104 MPN/100mL
Freshwater Standards: 30 day Geomean limit: 33 MPN/100mL, Daily Average limit: 61 MPN/100mL

Date of Week Ending	SOUTH BEACH (Public)		MIDLAND BEACH (Public)		CEDAR GROVE BEACH (Public)		WOLFE'S POND BEACH (Public)		SI YMCA** (Private Freshwater Lake)	
	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily	30 Day	Daily
5/7/2022	20	24	13	13	10	10	15	17	24	28
5/14/2022	26	46	22	67	22	49	14	13	33	46
5/21/2022	22	21	17	10	17	10	15	24	34	38
5/28/2022	18	10	15	10	15	10	14	10	30	24
6/4/2022	17	13	15	17	14	10	13	10		
6/11/2022	15	13	14	10	14	13	13	13		
6/18/2022*	19	103	17	10	11	17	25	68		
6/25/2022	17	10	16	10	11	10	22	13		
7/2/2022	19	20	16	10	11	10	22	10		
7/9/2022	19	13	15	10	11	10	26	31		
7/16/2022	19	13	15	10	11	10	28	24		
7/23/2022*	12	10	10	13	10	13	37	49		
7/30/2022	13	17	11	13	11	13	38	17		
8/6/2022	14	31	11	10	15	53	47	38		
8/13/2022	14	10	12	20	15	10	40	10		
8/20/2022*	14	13	13	13	17	24	59	351		
8/27/2022	14	13	13	13	16	10	34	20		
9/3/2022	15	24	14	61	18	32	80	85		
9/10/2022*	17	67	20	57	34	45	144	419		

* Mid-week sample on result 6/18/22 at Midland and 6/18/22, 7/23/22, 8/20/22 and 9/10/22 at Wolfe's Pond, and 9/10/22 at Cedar Grove beaches resulted in a water quality exceedance, see appendix B for description.
** Staten Island YMCA did not open for the 2022 season.
Values highlighted in red indicate exceedance of recreational water quality criteria.

Table A2-1: 2022 Summary of Beach Samples and Single-Sample Exceedances

Beach	Sample Location	Total # of Samples	# of Sample Exceed 104	% of Sample Exceed 104
ALL Beaches TOTAL		**1358**	**216**	**15.91%**
Public Beaches TOTAL		**561**	**54**	**9.63%**
Private Beaches TOTAL		**797**	**162**	**20.33%**

Table A2-2: 2022 Public Beaches Samples and Single-Sample Exceedances

Beach	Sample Location		Total # of Samples	# of Sample Exceed 104	% of Sample Exceed 104 (Location)	% of Sample Exceed 104 (Beach)
CEDAR GROVE	CEDAR GROVE	Left	20	0	0.00%	1.67%
	CEDAR GROVE	Center	20	0	0.00%	
	CEDAR GROVE	Right	20	1	5.00%	
CONEY ISLAND	CONEY ISLAND BR. 15TH - 6TH	Center	20	0	0.00%	5.00%
	CONEY ISLAND BR. 6TH - OCEAN PKWY	Center	20	0	0.00%	
	CONEY ISLAND OCEAN PKWY - WEST 8TH	Center	20	0	0.00%	
	CONEY ISLAND WEST 8TH - PIER	Center	20	3	14.29%	
	CONEY ISLAND WEST 16TH - WEST 27TH	Center	20	3	15.00%	
	CONEY ISLAND WEST 28TH - WEST 37TH	Center	20	0	0.00%	
MANHATTAN BEACH	MANHATTAN BEACH	Left	20	3	15.00%	18.33%
	MANHATTAN BEACH	Center	20	5	25.00%	
	MANHATTAN BEACH	Right	20	3	15.00%	
MIDLAND BEACH	MIDLAND BEACH	Left	20	2	10.00%	6.67%
	MIDLAND BEACH	Center	20	1	5.00%	
	MIDLAND BEACH	Right	20	1	5.00%	
ORCHARD BEACH	ORCHARD BEACH	Left	20	2	10.00%	13.33%
	ORCHARD BEACH	Center	20	3	15.00%	
	ORCHARD BEACH	Right	20	3	15.00%	
ROCKAWAY BEACH	ROCKAWAY BEACH 9TH - 13TH	Center	9	0	0.00%	0.00%
	ROCKAWAY BEACH 15TH - 22TH	Center	9	0	0.00%	
	ROCKAWAY BEACH 23RD - 59TH	Center	9	0	0.00%	
	ROCKAWAY BEACH 59TH - 80TH	Center	9	0	0.00%	
	ROCKAWAY BEACH 80TH - 95TH	Center	9	0	0.00%	
	ROCKAWAY BEACH 95TH - 116TH	Center	6	0	0.00%	
	ROCKAWAY BEACH 116TH - 126TH	Center	9	0	0.00%	
	ROCKAWAY BEACH 126TH - 149TH	Center	9	0	0.00%	
SOUTH BEACH	SOUTH BEACH	Left	19	1	5.26%	5.26%
	SOUTH BEACH	Center	19	0	0.00%	
	SOUTH BEACH	Right	19	2	10.53%	
WOLFE'S POND BEACH	WOLFE'S POND BEACH	Left	25	7	28.00%	28.00%
	WOLFE'S POND BEACH	Center	25	6	24.00%	
	WOLFE'S POND BEACH	Right	25	8	32.00%	
Public Beaches (Locations) Total			**561**	**54**	**9.63%**	

Table A2-3: 2022 Private Beaches Samples and Single-Sample Exceedances

Beach	Sample Location		Total # of Samples	# of Sample Exceed 104	% of Sample Exceed 104 (Location)	% of Sample Exceed 104 (Beach)
AMERICAN TURNER	AMERICAN TURNER	Left	18	5	27.78%	*24.07%*
	AMERICAN TURNER	Center	18	4	22.22%	
	AMERICAN TURNER	Right	18	4	22.22%	
BREEZY POINT 219	BREEZY POINT 219	Center	9	0	0.00%	*0.00%*
BREEZY POINT Reid	BREEZY POINT Reid Ave	Center	9	0	0.00%	*0.00%*
DANISH AMERICAN BEACH CLUB	DANISH AMERICAN BEACH CLUB	Left	19	5	26.32%	*26.32%*
	DANISH AMERICAN BEACH CLUB	Center	19	4	21.05%	
	DANISH AMERICAN BEACH CLUB	Right	19	6	31.58%	
DOUGLASTON MANOR ASSOCIATION	DOUGLASTON MANOR ASSOCIATION	Left	19	8	42.11%	*45.61%*
	DOUGLASTON MANOR ASSOCIATION	Center	19	10	52.63%	
	DOUGLASTON MANOR ASSOCIATION	Right	19	8	42.11%	
GERRITSEN/KIDDIE BEACH	GERRITSEN/KIDDIE BEACH	Left	18	3	16.67%	*16.67%*
	GERRITSEN/KIDDIE BEACH	Center	18	3	16.67%	
	GERRITSEN/KIDDIE BEACH	Right	18	3	16.67%	
KINGSBOROUGH COMMUNITY COLLEGE	KINGSBOROUGH COMMUNITY COLLEGE	Left	1	0	0.00%	*0.00%*
	KINGSBOROUGH COMMUNITY COLLEGE	Center	1	0	0.00%	
	KINGSBOROUGH COMMUNITY COLLEGE	Right	1	0	0.00%	
LOCUST POINT YACHT CLUB	LOCUST POINT YACHT CLUB	Left	18	0	0.00%	*0.00%*
	LOCUST POINT YACHT CLUB	Center	18	0	0.00%	
	LOCUST POINT YACHT CLUB	Right	18	0	0.00%	
MANHEM CLUB (THE STRAND)	MANHEM CLUB (THE STRAND)	Left	18	4	22.22%	*18.52%*
	MANHEM CLUB (THE STRAND)	Center	18	3	16.67%	
	MANHEM CLUB (THE STRAND)	Right	18	3	16.67%	
MORRIS YACHT AND BEACH CLUB	MORRIS YACHT AND BEACH CLUB	Left	19	2	10.53%	*14.04%*
	MORRIS YACHT AND BEACH CLUB	Center	19	4	21.05%	
	MORRIS YACHT AND BEACH CLUB	Right	19	2	10.53%	
SCHUYLER HILL CIVIC ASSOCIATION	SCHUYLER HILL CIVIC ASSOCIATION	Left	21	3	13.64%	*14.29%*
	SCHUYLER HILL CIVIC ASSOCIATION	Center	21	3	13.64%	
	SCHUYLER HILL CIVIC ASSOCIATION	Right	21	3	13.64%	
SEA GATE 42ND	SEA GATE 42ND	Left	18	1	5.56%	*1.85%*
	SEA GATE 42ND	Center	18	0	0.00%	
	SEA GATE 42ND	Right	18	0	0.00%	
SEA GATE BEACH CLUB	SEA GATE BEACH CLUB	Left	18	0	0.00%	*0.00%*
	SEA GATE BEACH CLUB	Center	18	0	0.00%	
	SEA GATE BEACH CLUB	Right	18	0	0.00%	
TRINITY DANISH	TRINITY DANISH	Left	18	5	27.78%	*26.42%*
	TRINITY DANISH	Center	17	4	22.22%	
	TRINITY DANISH	Right	18	5	27.78%	
WEST FORDHAM STREET ASSOCIATION	WEST FORDHAM STREET ASSOCIATION	Left	19	5	26.32%	*28.07%*
	WEST FORDHAM STREET ASSOCIATION	Center	19	6	31.58%	
	WEST FORDHAM STREET ASSOCIATION	Right	19	5	26.32%	
WHITE CROSS FISHING CLUB	WHITE CROSS FISHING CLUB	Left	18	9	50.00%	*40.74%*
	WHITE CROSS FISHING CLUB	Center	18	5	27.78%	
	WHITE CROSS FISHING CLUB	Right	18	8	44.44%	
WHITESTONE BOOSTER CIVIC ASSOCIATION	WHITESTONE BOOSTER CIVIC ASSOCIATION	Left	18	7	38.89%	*35.19%*
	WHITESTONE BOOSTER CIVIC ASSOCIATION	Center	18	6	33.33%	
	WHITESTONE BOOSTER CIVIC ASSOCIATION	Right	18	6	33.33%	
Private Beaches (Locations) Total			**797**	**162**	**20.33%**	

Table A2-4: 2022 Private Freshwater Lake Samples and Single-Sample Exceedances

Beach	Sample Location		Total # of Samples	# of Sample Exceed 61	% of Sample Exceed 61 (Location)	% of Sample Exceed 61 (Lake)
Staten Island YMCA	Staten Island YMCA	Left	4	0	0.00%	0.00%
	Staten Island YMCA	Center	4	0	0.00%	
	Staten Island YMCA	Right	4	0	0.00%	
Private Freshwater Lake (Locations) Total			**12**	**0**	0.00%	

APPENDIX B: 2022 WARNINGS AND CLOSURES

Table B-1: Summary of Beach Warnings and Closure

Beach	Types	Reason	Start Date	End Date	Beach Open Days	# of Beach-Specific Days	Notification (Beach Specific Days)		
							Warning	Closure	Total
NYC ALL Beaches (N=25)	Warning or Closure	Enterococci Exceedance, Rainfall Event or Shark Sighting	5/28/2022	9/11/2022	**1,663**	**839**	**593**	**246**	**839**

*One private beach did not open for 2022 season.

Table B-2: Public Beaches Warnings and Closures

Beach	Types	Reason	Start Date	End Date	Beach Open Days	# of Beach-Specific Days	Notification (Beach Specific Days)		
							Warning	Closure	Total
CEDAR GROVE	Warning	Enterococci Exceedance	9/8/2022	9/9/2022	105	2	2	0	2
CONEY ISLAND					107	0	0	0	0
MANHATTAN BEACH	Warning	Enterococci Exceedance	5/28/2022	6/14/2022	87	18	20	0	20
	Warning	Enterococci Exceedance	9/8/2022	9/9/2022		2			
MIDLAND BEACH	Warning	Enterococci Exceedance	6/15/2022	6/16/2022	105	2	2	0	2
ROCKAWAY BEACH	Closure	Shark Sighting	7/19/2022	7/19/2022	105	1	0	2	2
	Closure	Shark Sighting	7/23/2022	7/23/2022		1			
ORCHARD BEACH*	Warning	Enterococci Exceedance	6/24/2022	6/29/2022	98	6	9	0	9
	Warning	Enterococci Exceedance	9/9/2022	9/11/2022		3			
SOUTH BEACH					107	0	0	0	0
WOLFE'S POND PARK	Warning	Enterococci Exceedance	6/15/2022	6/16/2022	58	2	43	6	49
	Warning	Enterococci Exceedance	7/20/2022	8/23/2022		35			
	Warning	Enterococci Exceedance	8/31/2022	9/1/2022		2			
	Closure	Enterococci Exceedance	9/2/2022	9/3/2022		2			
	Warning	Enterococci Exceedance	9/4/2022	9/7/2022		4			
	Closure	Enterococci Exceedance	9/8/2022	9/11/2022		4			
Public Beaches TOTAL					**772**	**84**	**76**	**8**	**84**

* Due to administrative error, an erroneous advisory was issued to Orchard beach (8/18/22-8/26/22) but has been removed from the corrected table presented here.

Table B-3: Private Beaches Warnings and Closures

Beach	Types	Reason	Start Date	End Date	Beach Open Days	# of Beach-Specific Days	Notification (Beach Specific Days)		
							Warning	Closure	Total
AMERICAN TURNER	Warning	Enterococci Exceedance	5/28/2022	6/2/2022	12	6	63	26	89
	Closure	Enterococci Exceedance	6/3/2022	6/15/2022		13			
	Warning	Enterococci Exceedance	6/16/2022	6/23/2022		8			
	Closure	Enterococci Exceedance	6/24/2022	6/29/2022		6			
	Warning	Enterococci Exceedance	6/30/2022	7/27/2022		28			
	Closure	Enterococci Exceedance	7/28/2022	8/3/2022		7			
	Warning	Enterococci Exceedance	8/4/2022	8/17/2022		14			
	Warning	Enterococci Exceedance	8/25/2022	8/31/2022		7			
BREEZY POINT 219					101	0	0	0	0
BREEZY POINT REID					101	0	0	0	0
DANISH AMERICAN BEACH CLUB	Warning	Enterococci Exceedance	5/28/2022	6/2/2022	36	6	43	28	71
	Closure	Enterococci Exceedance	6/3/2022	6/8/2022		6			
	Warning	Enterococci Exceedance	6/9/2022	6/15/2022		7			
	Closure	Enterococci Exceedance	6/16/2022	7/7/2022		22			
	Warning	Enterococci Exceedance	7/8/2022	7/27/2022		20			
	Warning	Rainfall Event	8/8/2022	8/8/2022		1			
	Warning	Enterococci Exceedance	8/25/2022	8/31/2022		7			
	Warning	Rainfall Event	9/6/2022	9/7/2022		2			
DOUGLASTON MANOR ASSOCIATION*	Closure	Enterococci Exceedance	5/28/2022	6/8/2022	0	12	58	49	107
	Warning	Enterococci Exceedance	6/9/2022	6/15/2022		7			
	Closure	Enterococci Exceedance	6/16/2022	6/23/2022		8			
	Warning	Enterococci Exceedance	6/24/2022	6/29/2022		6			
	Closure	Enterococci Exceedance	6/30/2022	7/7/2022		8			
	Warning	Enterococci Exceedance	7/8/2022	7/13/2022		6			
	Closure	Enterococci Exceedance	7/14/2022	8/3/2022		21			
	Warning	Enterococci Exceedance	8/4/2022	8/31/2022		28			
	Warning	Enterococci Exceedance	9/1/2022	9/5/2022		5			
	Warning	Rainfall Event	9/6/2022	9/8/2022		3			
	Warning	Enterococci Exceedance	9/9/2022	9/11/2022		3			
GERRITSEN/KIDDIE BEACH	Warning	Enterococci Exceedance	5/28/2022	6/7/2022	67	11	34	0	34
	Warning	Rainfall Event	6/9/2022	6/10/2022		2			
	Warning	Enterococci Exceedance	8/3/2022	8/9/2022		7			
	Warning	Rainfall Event	8/11/2022	8/11/2022		1			
	Warning	Enterococci Exceedance	8/24/2022	9/5/2022		13			
KINGSBOROUGH COMMUNITY COLLEGE	*Did not open for 2022 Season*				0	0	0	0	0

* Due to administrative error, an advisory was missed from Douglaston Manor (9/1/22-9/5/22) but has been inserted into the corrected table presented here.

Beach	Types	Reason	Start Date	End Date	Beach Open Days	# of Beach-Specific Days	Notification (Beach Specific Days)		
							Warning	Closure	Total
LOCUST POINT YACHT CLUB	Warning	Rainfall Event	6/2/2022	6/3/2022	95	2	6	0	6
	Warning	Rainfall Event	6/9/2022	6/10/2022		2			
	Warning	Rainfall Event	7/26/2022	7/26/2022		1			
	Warning	Rainfall Event	8/8/2022	8/8/2022		1			
MANHEM BEACH CLUB	Warning	Rainfall Event	6/2/2022	6/2/2022	44	1	41	16	57
	Warning	Enterococci Exceedance	6/3/2022	6/15/2022		13			
	Closure	Enterococci Exceedance	6/16/2022	6/23/2022		8			
	Warning	Enterococci Exceedance	6/24/2022	6/29/2022		6			
	Closure	Enterococci Exceedance	6/30/2022	7/7/2022		8			
	Warning	Enterococci Exceedance	7/8/2022	7/27/2022		20			
	Warning	Rainfall Event	8/8/2022	8/8/2022		1			
MORRIS YACHT AND BEACH CLUB	Warning	Rainfall Event	6/2/2022	6/3/2022	63	2	44	0	44
	Warning	Rainfall Event	6/9/2022	6/10/2022		2			
	Warning	Enterococci Exceedance	7/21/2022	8/3/2022		14			
	Warning	Enterococci Exceedance	8/4/2022	8/10/2022		7			
	Warning	Enterococci Exceedance	8/11/2022	8/24/2022		14			
	Warning	Rainfall Event	9/6/2022	9/7/2022		2			
	Warning	Enterococci Exceedance	9/9/2022	9/11/2022		3			
SCHUYLER HILL CIVIC ASSOCIATION	Warning	Rainfall Event	6/2/2022	6/2/2022	87	1	20	0	20
	Warning	Enterococci Exceedance	6/3/2022	6/8/2022		6			
	Warning	Rainfall Event	6/9/2022	6/10/2022		2			
	Warning	Rainfall Event	7/26/2022	7/26/2022		1			
	Warning	Rainfall Event	8/8/2022	8/8/2022		1			
	Warning	Enterococci Exceedance	8/11/2022	8/17/2022		7			
	Warning	Rainfall Event	9/6/2022	9/7/2022		2			
SEAGATE 42nd					101	0	0	0	0
SEAGATE BEACH CLUB					101	0	0	0	0
TRINITY DANISH YOUNG PEOPLE'S SOCIETY	Warning	Rainfall Event	6/2/2022	6/2/2022	17	1	56	28	84
	Warning	Enterococci Exceedance	6/3/2022	6/15/2022		13			
	Closure	Enterococci Exceedance	6/16/2022	6/29/2022		14			
	Warning	Enterococci Exceedance	6/30/2022	7/13/2022		14			
	Closure	Enterococci Exceedance	7/14/2022	7/27/2022		14			
	Warning	Enterococci Exceedance	7/28/2022	8/17/2022		21			
	Warning	Enterococci Exceedance	8/25/2022	8/31/2022		7			

* Due to administrative error, a closure was issued instead of an advisory at Morris Yacht Club (8/4/22-8/10/22) but has been corrected above.

Beach	Types	Reason	Start Date	End Dute	Beach Open Days	# of Beach-Specific Days	Notification (Beach Specific Days)		
							Warning	Closure	Total
WEST FORDHAM STREET ASSOCIATION	Warning	Rainfall Event	6/2/2022	6/3/2022	56	2	44	7	51
	Warning	Rainfall Event	6/9/2022	6/10/2022		2			
	Warning	Enterococci Exceedance	7/21/2022	7/27/2022		7			
	Closure	Enterococci Exceedance	7/28/2022	8/3/2022		7			
	Warning	Enterococci Exceedance	8/04/2022	8/24/2022		21			
	Warning	Enterococci Exceedance	8/25/2022	8/31/2022		7			
	Warning	Rainfall Event	9/6/2022	9/7/2022		2			
	Warning	Enterococci Exceedance	9/9/2022	9/11/2022		3			
WHITE CROSS FISHING CLUB	Warning	Rainfall Event	6/2/2022	6/2/2022	10	1	48	43	91
	Warning	Enterococci Exceedance	6/3/2022	6/8/2022		6			
	Closure	Enterococci Exceedance	6/9/2022	7/7/2022		29			
	Warning	Enterococci Exceedance	7/8/2022	7/27/2022		20			
	Closure	Enterococci Exceedance	7/28/2022	8/3/2022		7			
	Warning	Enterococci Exceedance	8/4/2022	8/24/2022		21			
	Closure	Enterococci Exceedance	8/25/2022	8/31/2022		7			
WHITESTONE BOOSTER CIVIC ASSOCIATION	Warning	Enterococci Exceedance	5/28/2022	6/2/2022	0	6	60	41	101
	Closure	Enterococci Exceedance	6/3/2022	6/8/2022		6			
	Warning	Enterococci Exceedance	6/9/2022	6/23/2022		15			
	Closure	Enterococci Exceedance	6/24/2022	7/7/2022		14			
	Warning	Enterococci Exceedance	7/8/2022	7/20/2022		13			
	Closure	Enterococci Exceedance	7/21/2022	8/3/2022		14			
	Warning	Enterococci Exceedance	8/4/2022	8/24/2022		21			
	Closure	Enterococci Exceedance	8/25/2022	8/31/2022		7			
	Warning	Enterococci Exceedance	9/1/2022	9/5/2022		5			
Private Beaches TOTAL					**891**	**755**	**517**	**238**	**755**

APPENDIX C: 2022 INSPECTION SUMMARY

Table C-1: Inspection Non-Compliance Summary*

Beach Name	Public Health Hazard Violations**	General Violations***
	167.05(c)	167.09(a)(13)
CONEY ISLAND BEACH		√
GERRITSEN/KIDDIE BEACH	√	

*All other beaches were in full compliance of the regulations at the time of inspection.

**** Public Health Hazard Violations:**
§167.05(c) Operating a bathing beach with an expired permit.
***** General Violations:**
§167.09(a)(13) Numerous areas of boardwalk in disrepair (broken planks/nails).

Appendix 14:

- Appendix 14.1: CSO Discharge Summary for CY2022 Check list

Appendix 14.1: TABLE – CSO DISCHARGE SUMMARY FOR CY 2022

Modeled Annual CSO Discharges for CY2021 & CY2022

			Pre-WWFP			CY2021 - QPE			CY2022 - QPE		
WWTPs	**Waterbody**	**CSO Outfalls**	**CSO Events (Count)**	**Annual CSO Volume (MGY)**	**Total Annual Flow Treated at WWTP (MGY)**	**CSO Events (Count)**	**Annual CSO Volume (MGY)**	**Total Annual Flow Treated at WWTP (MGY)**	**CSO Events (Count)**	**Annual CSO Volume (MGY)**	**Total Annual Flow Treated at WWTP (MGY)**
26th Ward		**ALL**	**23**	**628**			**798**	**21,066**		**173**	**21,287**
26th Ward	HC	26-003	47	494		14	326		15	97	
26th Ward	HC	26-004	16	36		26	104	21,066	24	45	21,287
26th Ward	HC	26-005	5	98		5	368		2	30	
Bowery Bay		**ALL**	**33**	**6,083**			**3,625**	**37,103**		**2,681**	**37,030**
Bowery Bay	OW	BB-002	NA	988		68	145		74	145	
Bowery Bay	OW	BB-003	NA	54		42	41		47	23	
Bowery Bay	OW	BB-005	NA	1,520		69	416		54	257	
Bowery Bay	FB	BB-006L	NA	1,434		23	274		27	134	
Bowery Bay	FB	BB-006U	NA			60	694		60	542	
Bowery Bay	FB	BB-007	NA	3		63	136		65	131	
Bowery Bay	FB	BB-008	NA	534		60	978		62	854	
Bowery Bay	NC	BB-004	NA	0		1	1		1	0	
Bowery Bay	NC	BB-041	NA	126		68	83		83	63	
Bowery Bay	NC	BB-009	35	35		37	58		38	28	
Bowery Bay	NC	BB-010	16	2		6	1		6	0	
Bowery Bay	NC	BB-011	24	3		20	2		18	1	
Bowery Bay	NC	BB-012	NA	0		1	0		3	0	
Bowery Bay	NC	BB-013	44	39		45	16		41	12	
Bowery Bay	NC	BB-014	35	3		36	3		26	1	
Bowery Bay	NC	BB-015	39	3		38	1		35	1	
Bowery Bay	OW	BB-016	NA	2		33	2		30	1	
Bowery Bay	OW	BB-017	NA	2		28	2		25	1	
Bowery Bay	OW	BB-018	NA	2		23	1		19	0	
Bowery Bay	OW	BB-021	NA	31		39	21		38	13	
Bowery Bay	OW	BB-022	NA	2		32	2		28	0	
Bowery Bay	OW	BB-023	NA	27		40	18		32	10	
Bowery Bay	OW	BB-024	NA	97		39	36	37,103	34	19	37,030
Bowery Bay	OW	BB-025	NA	18		37	10		34	5	
Bowery Bay	NC	BB-026	47	187		41	116		42	84	
Bowery Bay	OW	BB-027	NA	8		34	6		32	3	
Bowery Bay	OW	BB-028	NA	456		40	178		46	107	
Bowery Bay	OW	BB-029	NA	180		36	96		35	47	
Bowery Bay	OW	BB-030	NA	19		63	26		68	18	
Bowery Bay	OW	BB-031	NA	22		43	4		40	2	
Bowery Bay	OW	BB-032	NA	3		18	2		16	1	
Bowery Bay	OW	BB-033	NA	9		35	6		30	3	
Bowery Bay	OW	BB-034	NA	223		71	211		94	153	
Bowery Bay	OW	BB-035	NA	4		40	4		39	2	
Bowery Bay	OW	BB-036	NA	10		39	9		36	5	
Bowery Bay	OW	BB-037	NA	1		5	1		6	0	
Bowery Bay	OW	BB-038	NA	10							
Bowery Bay	NC	BB-040	21	1		28	2		21	1	
Bowery Bay	NC	BB-042	29	2		36	3		29	1	
Bowery Bay	OW	BB-043	40	14		40	10		40	6	
Bowery Bay	OW	BB-045	NA	0		1	0		0	0	
Bowery Bay	OW	BB-046	NA	8		36	7		41	4	
Bowery Bay	OW	BB-047	NA	2		24	2		21	1	

Bowery Bay	NC	BB-049	NA									
Bowery Bay	NC	BB-053	NA									
Coney Island		**ALL**	**61**	**2,749**			**2,074**	**32,261**		**515**	**32,088**	
Coney Island	PB	CI-004	61	1,210								
Coney Island	PB	CI-005	61	973								
Coney Island	PB	CI-006	NA	566								
Coney Island	PB	Tank	NA			11	893		8	248		
Coney Island	PB	Tank Bypass	NA			7	289	32,261	3	19	32,088	
Coney Island	PB	Tank Overflow	NA			11	893		8	248		
Hunts Point		**ALL**	**29**	**4,199**			**3,342**	**38,410**		**2,290**	**37,231**	
Hunts Point	OW	HP-002	NA	119		39	88		46	47		
Hunts Point	OW	HP-003	NA	359		31	198		39	138		
Hunts Point	BR	HP-004	56	100		18	62		21	28		
Hunts Point	HR	HP-005	NA	0		3	0		2	0		
Hunts Point	NR	HP-006	NA	0		1	0		0	0		
Hunts Point	BR	HP-007	21	88		9	111		13	46		
Hunts Point	BR	HP-008	17	4		4	11		4	4		
Hunts Point	BR	HP-009	51	814		36	367		44	298		
Hunts Point	BR	HP-010	1	1		2	9		2	1		
Hunts Point	OW	HP-011	NA	828		52	305		56	252		
Hunts Point	WC	HP-012	NA	27		7	80		10	30		
Hunts Point	WC	HP-013	54	144		21	232		23	146		
Hunts Point	WC	HP-014	NA	516		40	573		43	389		
Hunts Point	WC	HP-015	NA	0		3	10		4	3		
Hunts Point	WC	HP-016	24	72		32	90		33	58		
Hunts Point	OW	HP-017	NA	35		35	61		42	43		
Hunts Point	OW	HP-018	NA	2		28	6		29	3		
Hunts Point	OW	HP-019	NA	18		36	22		41	13		
Hunts Point	OW	HP-020	NA	0		14	2	38,410	12	1	37,231	
Hunts Point	OW	HP-021	NA	298		47	268		52	237		
Hunts Point	OW	HP-022	NA	31		33	43		33	28		
Hunts Point	HR	HP-023	NA	115		43	179		48	137		
Hunts Point	HR	HP-024	NA	254		36	273		44	172		
Hunts Point	OW	HP-025	NA	130		66	143		67	103		
Hunts Point	OW	HP-026	NA	79		24	116		24	64		
Hunts Point	OW	HP-027	NA	0								
Hunts Point	OW	HP-028	NA	0								
Hunts Point	OW	HP-029	NA	4		24	14		27	9		
Hunts Point	OW	HP-030	NA	0								
Hunts Point	HR	HP-031	NA	83		33	27		39	17		
Hunts Point	OW	HP-032	NA	0								
Hunts Point	WC	HP-033	5	78		6	52		5	21		
Hunts Point	WC	HP-034	NA	0								
Hunts Point	OW	HP-036	NA	0								
Hunts Point	OW	HP-037	NA	0								
Hunts Point	OW	HP-038	NA	0								
Hunts Point	OW	HP-039	NA									
Jamaica		**ALL**	**55**	**1,557**			**1,089**	**29,134**		**679**	**21,287**	
Jamaica	BB	JA-003	47	319		49	524		59	390		
Jamaica	BB	JA-003A	57	300		28	159		27	81		
Jamaica	TB	JA-005	55	908		37	270	29,134	30	110	21,287	
Jamaica	TB	JA-007				64	133		71	98		
Jamaica	TB	JA-006	61	30		32	3		17	0.5		
Newtown Creek		**ALL**	**49**	**2,974**			**3,765**	**85,240**		**1,911**	**80,329**	
Newtown Creek	NC	NC-002	NA									

Newtown Creek	OW	NC-003	NA	1	6	1		5	0	
Newtown Creek	OW	NC-004	NA	18	32	22		35	11	
Newtown Creek	OW	NC-005	NA	79	31	47		35	25	
Newtown Creek	OW	NC-006	NA	104	10	135		15	49	
Newtown Creek	OW	NC-007	NA	9	24	11		27	5	
Newtown Creek	OW	NC-008	NA	27	26	31		29	13	
Newtown Creek	OW	NC-009	NA	0						
Newtown Creek	OW	NC-010	NA	0	2	0		0	0	
Newtown Creek	OW	NC-011	NA	0	1	0		0	0	
Newtown Creek	OW	NC-012	NA	27	16	61		21	20	
Newtown Creek	OW	NC-013	NA	42	24	111		28	38	
Newtown Creek	OW	NC-014	NA	337	28	850		34	472	
Newtown Creek	NC	NC-015	33	308	26	340		29	159	
Newtown Creek	OW	NC-016	NA	4	6	5		5	1	
Newtown Creek	OW	NC-017	NA	0	4	3		3	0	
Newtown Creek	OW	NC-018	NA	14	29	11		36	7	
Newtown Creek	NC	NC-019	NA	0	13	5		15	2	
Newtown Creek	OW	NC-020	NA	4	13	10		11	3	
Newtown Creek	NC	NC-021	NA	0	1	0		1	0	
Newtown Creek	NC	NC-022	42	8	22	10		25	5	
Newtown Creek	NC	NC-023	NA	0	4	1		3	0	
Newtown Creek	OW	NC-024	NA	0	2	0		0	0	
Newtown Creek	OW	NC-025	NA	1	6	1		5	0	
Newtown Creek	OW	NC-026	NA	0	4	1		4	0	
Newtown Creek	OW	NC-027	NA	24	28	28		27	7	
Newtown Creek	OW	NC-028	NA	0	0	0		0	0	
Newtown Creek	NC	NC-029	48	18	40	25		47	15	
Newtown Creek	OW	NC-030	NA	0	5	0		2	0	
Newtown Creek	OW	NC-031	NA	1	13	4		15	1	
Newtown Creek	OW	NC-032	NA	6	5	12		2	1	
Newtown Creek	OW	NC-033	NA	1	4	1		3	0	
Newtown Creek	OW	NC-034	NA	0	3	3		4	0	
Newtown Creek	OW	NC-035	NA	5	9	4		9	1	
Newtown Creek	OW	NC-036	NA	81	10	112		10	28	
Newtown Creek	OW	NC-037	NA	0	2	9		1	0	
Newtown Creek	OW	NC-038	NA	9	9	13		11	3	
Newtown Creek	OW	NC-039	NA	5	3	2		2	1	
Newtown Creek	OW	NC-040	NA	1	2	0		1	0	
Newtown Creek	OW	NC-041	NA	45	9	36		12	10	
Newtown Creek	OW	NC-042	NA	0	4	2		4	0	
Newtown Creek	OW	NC-043	NA	4	9	6	85,240	8	1	80,329
Newtown Creek	OW	NC-044	NA	1	3	0		2	0	
Newtown Creek	OW	NC-045	NA	34	9	31		12	8	
Newtown Creek	OW	NC-046	NA	13	15	16		18	7	
Newtown Creek	OW	NC-047	NA	1	1	1		1	0	
Newtown Creek	OW	NC-048	NA	24	9	9		10	3	
Newtown Creek	OW	NC-049	NA	26	10	29		7	8	
Newtown Creek	OW	NC-050	NA	53	10	41		16	14	
Newtown Creek	OW	NC-051	NA	0	2	2		6	1	
Newtown Creek	OW	NC-052	NA	41	12	34		17	16	
Newtown Creek	OW	NC-053	NA	3	7	17		4	3	
Newtown Creek	OW	NC-054	NA	3	3	8		5	1	
Newtown Creek	OW	NC-055	NA	2	6	2		10	1	
Newtown Creek	OW	NC-056	NA	72	18	28		25	15	
Newtown Creek	OW	NC-057	NA	11	8	9		6	2	

Newtown Creek	OW	NC-058	NA	37		12	22		19	8		
Newtown Creek	OW	NC-059	NA	44		12	12		17	5		
Newtown Creek	OW	NC-060	NA	4		3	1		3	0		
Newtown Creek	OW	NC-061	NA	2		11	4		10	1		
Newtown Creek	OW	NC-062	NA	17		29	13		35	8		
Newtown Creek	OW	NC-063	NA	45		8	24		7	5		
Newtown Creek	OW	NC-064	NA	9		9	12		11	3		
Newtown Creek	OW	NC-065	NA	0		3	1		1	0		
Newtown Creek	OW	NC-066	NA	38		6	9		5	2		
Newtown Creek	OW	NC-067	NA	6		5	10		5	2		
Newtown Creek	OW	NC-068	NA	0		2	1		1	0		
Newtown Creek	OW	NC-069	NA	8		5	15		5	3		
Newtown Creek	OW	NC-070	NA	1		10	6		13	2		
Newtown Creek	OW	NC-071	NA	10		11	10		12	3		
Newtown Creek	OW	NC-072	NA	9		9	12		8	4		
Newtown Creek	OW	NC-073	NA	29		11	34		16	12		
Newtown Creek	OW	NC-074	NA	13		9	14		9	5		
Newtown Creek	OW	NC-075	NA	81		12	89		18	35		
Newtown Creek	OW	NC-076	NA	292		34	217		40	124		
Newtown Creek	NC	NC-077	49	262		50	558		63	424		
Newtown Creek	OW	NC-078	NA	11		2	5		2	0		
Newtown Creek	OW	NC-079	NA	1		11	2		12	1		
Newtown Creek	OW	NC-080	NA	2		9	1		10	0		
Newtown Creek	OW	NC-081	NA	2		12	1		11	0		
Newtown Creek	OW	NC-082	NA	0		6	2		5	0		
Newtown Creek	NC	NC-083	71	586		46	540		52	309		
Newtown Creek	OW	NC-087	NA	1		6	7		3	1		
North River		**ALL**		**806**			**868**	**38,363**		**170**	**37,938**	
North River	OW	NR-002	NA	54		37	37		38	17		
North River	OW	NR-003	NA	9		9	13		4	1		
North River	OW	NR-004	NA	7		7	15		3	1		
North River	OW	NR-005	NA	0		1	0		0	0		
North River	OW	NR-006	NA	76		14	64		16	15		
North River	OW	NR-007	NA	2		6	2		3	0		
North River	OW	NR-008	NA	27		28	23		34	12		
North River	OW	NR-009	NA	3		15	2		16	1		
North River	OW	NR-010	NA	14		11	15		12	3		
North River	OW	NR-011	NA	3		6	4		6	0		
North River	OW	NR-012	NA	2		6	2		4	0		
North River	OW	NR-013	NA	1		6	1		4	0		
North River	OW	NR-014	NA	3		6	3		5	0		
North River	OW	NR-016	NA	3		6	2		5	0		
North River	OW	NR-017	NA	67		13	37		17	13		
North River	OW	NR-018	NA	0		2	0		0	0		
North River	OW	NR-019	NA	5		12	5		13	1		
North River	OW	NR-020	NA	18		16	17		16	5		
North River	OW	NR-021	NA	6		11	6		9	1		
North River	OW	NR-022	NA	16		8	13		10	2		
North River	OW	NR-023	NA	41		8	45		6	5		
North River	OW	NR-024	NA	18		11	17		9	3		
North River	OW	NR-025	NA	19		8	17		9	3		
North River	OW	NR-026	NA	26		16	24		19	6		
North River	OW	NR-027	NA	72		10	121		9	29		
North River	OW	NR-028	NA	13		7	7	38,363	5	1	37,938	
North River	OW	NR-029	NA	7		7	8		5	1		

North River	OW	NR-030	NA	3		7	3		5	0		
North River	OW	NR-031	NA	4		8	5		5	1		
North River	OW	NR-032	NA	2		6	3		4	0		
North River	OW	NR-033	NA	24		10	62		5	5		
North River	OW	NR-034	NA	8		12	9		13	2		
North River	OW	NR-035	NA	10		13	11		14	2		
North River	OW	NR-036	NA	20		10	19		12	3		
North River	OW	NR-037	NA	1		3	9		1	0		
North River	OW	NR-038	NA	6		6	20		3	1		
North River	OW	NR-039	NA	0		1	0		0	0		
North River	OW	NR-040	NA	33		10	45		5	4		
North River	OW	NR-041	NA	3		6	4		3	0		
North River	OW	NR-042	NA	4		7	5		6	1		
North River	OW	NR-043	NA	132		14	108		16	16		
North River	OW	NR-044	NA	2		7	2		4	0		
North River	OW	NR-045	NA	17		11	20		9	4		
North River	OW	NR-046	NA	8		9	17		6	2		
North River	OW	NR-047	NA	0		3	0		0	0		
North River	OW	NR-048	NA	4		10	6		11	1		
North River	OW	NR-049	NA	14		13	16		15	3		
North River	OW	NR-050	NA	0		4	0		0	0		
North River	OW	NR-051	NA	0								
North River	OW	NR-052	NA	2		4	2		2	0		
North River	OW	NR-055	NA	1		6	1		4	0		
North River	OW	NR-056	NA	0								
Owls Head		**ALL**	**30**	**2,791**			**3,506**	**34,055**		**2,592**	**36,320**	
Owls Head	OW	OH-002	NA	413		36	517		43	366		
Owls Head	OW	OH-003	NA	397		94	384		97	335		
Owls Head	OW	OH-004	NA	1		11	16		12	3		
Owls Head	GC	OH-005	5	1		3	7		1	1		
Owls Head	GC	OH-006	33	13		35	33		35	18		
Owls Head	GC	OH-007	47	69		50	104		58	61		
Owls Head	OW	OH-015	NA	1,140		70	1,492		80	1,190		
Owls Head	OW	OH-017	NA	235		37	579		44	418		
Owls Head	OW	OH-018	NA	163		37	162	34,590	42	92	36,320	
Owls Head	OW	OH-019	NA	42		36	36		38	27		
Owls Head	OW	OH-020	NA	1		28	3		25	1		
Owls Head	OW	OH-021	NA	292		17	127		22	50		
Owls Head	GC	OH-022	NA	0								
Owls Head	OW	OH-023	NA	1		11	3		12	2		
Owls Head	GC	OH-024	35	23		35	43		36	28		
Owls Head	GC	OH-025	NA									
Owls Head	GC	OH-026	NA									
Port Richmond		**ALL**		**550**			**1,164**	**11,120**		**540**	**10,638**	
Port Richmond	OW	PR-002	NA	0		1	0		0	0		
Port Richmond	OW	PR-003	NA	0		1	0		0	0		
Port Richmond	OW	PR-004	NA	0		1	1		0	0		
Port Richmond	OW	PR-005	NA	0		6	3		1	0		
Port Richmond	OW	PR-006	NA	6		22	17		23	4		
Port Richmond	OW	PR-007	NA	0		0	0		0	0		
Port Richmond	OW	PR-008	NA	0		0	0		0	0		
Port Richmond	OW	PR-009	NA	0		1	2		0	0		
Port Richmond	OW	PR-010	NA	0		13	5		5	0		
Port Richmond	OW	PR-011	NA	0		6	2		1	0		
Port Richmond	OW	PR-013	NA	28		38	96		42	35		

Port Richmond	OW	PR-014	NA	23			51	63			55	30		
Port Richmond	OW	PR-015	NA	1			21	6			15	1		
Port Richmond	OW	PR-016	NA	0			34	3			32	1		
Port Richmond	OW	PR-017	NA	12			48	24			54	11		
Port Richmond	OW	PR-018	NA	3			48	5			54	3		
Port Richmond	OW	PR-019	NA	26			51	106			56	61		
Port Richmond	OW	PR-020	NA	2			51	29			57	28		
Port Richmond	OW	PR-021	NA	0			42	9		11,120	53	8		10,638
Port Richmond	OW	PR-023	NA	0			36	86			41	34		
Port Richmond	OW	PR-023A	NA	76										
Port Richmond	OW	PR-023B	NA											
Port Richmond	OW	PR-024	NA	0			2	0			0	0		
Port Richmond	OW	PR-025	NA	0			0	0			0	0		
Port Richmond	OW	PR-026	NA	1			8	7			3	0		
Port Richmond	OW	PR-027	NA	1			11	5			5	0		
Port Richmond	OW	PR-028	NA	10			36	32			34	10		
Port Richmond	OW	PR-029	NA	217			47	314			55	141		
Port Richmond	OW	PR-030	NA	0			51	10			57	9		
Port Richmond	OW	PR-031	NA	139			52	327			56	160		
Port Richmond	OW	PR-032	NA	0			26	4			24	1		
Port Richmond	OW	PR-033	NA	0			1	0			0	0		
Port Richmond	OW	PR-034	NA	0			1	0			0	0		
Port Richmond	OW	PR-035	NA	0			0	0			0	0		
Port Richmond	OW	PR-036	NA	0			0	0			0	0		
Port Richmond	OW	PR-037	NA	4			20	10			16	1		
Red Hook		**ALL**		**670**				**909**		**10,957**		**537**		**16,573**
Red Hook	OW	RH-002	NA	0			0	0			0	0		
Red Hook	OW	RH-003	NA	0			10	2			9	1		
Red Hook	OW	RH-005	NA	153			22	256			46	113		
Red Hook	OW	RH-006	NA	8			25	14			27	6		
Red Hook	OW	RH-007	NA	1			12	2			22	1		
Red Hook	OW	RH-008	NA	2			14	6			26	2		
Red Hook	OW	RH-009	NA	2			16	5			26	2		
Red Hook	OW	RH-010	NA	0			3	1			3	0		
Red Hook	OW	RH-011	NA	3			14	9			22	3		
Red Hook	OW	RH-012	NA	8			14	22			22	7		
Red Hook	OW	RH-013	NA	0			7	1			3	0		
Red Hook	OW	RH-014	NA	20			47	44			52	31		
Red Hook	OW	RH-016	NA	18			20	58			42	37		
Red Hook	OW	RH-018	NA	4			16	16			32	11		
Red Hook	OW	RH-019	NA	13			20	19			46	18		
Red Hook	OW	RH-020	NA	0			10	2			19	1		
Red Hook	OW	RH-021	NA	0			20	11		10,957	44	16		16,573
Red Hook	OW	RH-022	NA	2			13	5			38	8		
Red Hook	OW	RH-023	NA	2			17	5			43	7		
Red Hook	OW	RH-024	NA	2			15	5			39	7		
Red Hook	OW	RH-025	NA	5			14	7			36	13		
Red Hook	OW	RH-028	NA	97			12	49			24	34		
Red Hook	OW	RH-029	NA	2			16	5			18	1		
Red Hook	GC	RH-030	NA	18			15	31			39	45		
Red Hook	GC	RH-030 A	NA											
Red Hook	GC	RH-031	NA	35			15	37			37	42		
Red Hook	GC	RH-033	NA	0			8	1			4	0		
Red Hook	GC	RH-034	NA	121			42	237			48	100		
Red Hook	GC	RH-035	NA	111			14	16			31	11		

Red Hook	GC	RH-036	NA	2		11	3		13	1		
Red Hook	GC	RH-037	NA	1		8	1		4	0		
Red Hook	GC	RH-038	NA	1		8	2		5	0		
Red Hook	OW	RH-040	NA	37		19	38		33	17		
Tallman Island		**ALL**	**45**	**2,375**			**1,974**	**23,400**		**1,527**	**25,506**	
Tallman Island	OW	TI-003	NA	127		70	113		84	121		
Tallman Island	OW	TI-004	NA	10		10	5		17	3		
Tallman Island	OW	TI-005	NA	0		1	0		1	0		
Tallman Island	AC	TI-006	NA	0		0	0		0	0		
Tallman Island	AC	TI-007	NA	0		1	1		2	0		
Tallman Island	AC	TI-008	38	59		0	0		0	0		
Tallman Island	AC	TI-009	NA	0								
Tallman Island	FB	TI-010	73	1,580		43	970		57	541		
Tallman Island	FC	TI-011	54	332		54	398		72	450		
Tallman Island	FC	TI-012	NA	0		0	0		0	0		
Tallman Island	FB	TI-013	NA	0		0	0		0	0		
Tallman Island	FB	TI-014	32	2		40	14	23,400	49	14	25,506	
Tallman Island	FB	TI-015	29	1		24	4		34	3		
Tallman Island	FB	TI-016	45	28		49	38		62	38		
Tallman Island	FB	TI-017	NA	0		20	4		32	3		
Tallman Island	FB	TI-018	34	2		35	6		46	6		
Tallman Island	OW	TI-019	NA	0		11	2		18	2		
Tallman Island	OW	TI-020	NA	6		33	8		45	7		
Tallman Island	FB	TI-022	55	30		66	95		85	91		
Tallman Island	OW	TI-023	NA	198		36	122		47	105		
Tallman Island	AC	TI-024	NA	0		0	0		0	0		
Tallman Island	AC	TI-025	NA	0		13	194		24	143		
Wards Island		**ALL**		**4,181**			**3,296**	**74,086**		**2,217**	**75,098**	
Wards Island	OW	WI-002	NA	11		47	6		52	6		
Wards Island	OW	WI-003	NA	115		53	115		55	75		
Wards Island	OW	WI-004	NA	12		46	6		49	5		
Wards Island	OW	WI-005	NA	10		39	5		41	4		
Wards Island	OW	WI-006	NA	12		37	5		46	5		
Wards Island	OW	WI-007	NA	11		39	5		41	4		
Wards Island	OW	WI-008	NA	224		57	170		55	126		
Wards Island	OW	WI-009	NA	0		2	0		1	0		
Wards Island	OW	WI-010	NA	0		2	0		0	0		
Wards Island	OW	WI-011	NA	3		13	7		19	2		
Wards Island	OW	WI-012	NA	41		18	16		26	13		
Wards Island	OW	WI-013	NA	1		12	0		22	0		
Wards Island	OW	WI-014	NA	1		10	0		20	0		
Wards Island	OW	WI-015	NA	14		11	6		20	4		
Wards Island	OW	WI-016	NA	30		32	18		35	14		
Wards Island	OW	WI-017	NA	17		11	6		20	5		
Wards Island	OW	WI-018	NA	1		6	0		22	0		
Wards Island	OW	WI-019	NA	1		7	0		20	0		
Wards Island	OW	WI-020	NA	0								
Wards Island	OW	WI-021	NA	1		7	1		17	0		
Wards Island	OW	WI-022	NA	1		9	1		18	0		
Wards Island	OW	WI-023	NA	79		24	49		45	35		
Wards Island	OW	WI-024	NA	100		10	57		21	36		
Wards Island	OW	WI-025	NA	35		47	30		54	23		
Wards Island	OW	WI-026	NA	1		5	1		17	0		
Wards Island	OW	WI-027	NA	1		6	0		15	0		
Wards Island	OW	WI-028	NA	1		11	1		20	0		

Wards Island	OW	WI-029	NA	3	12	2		21	1		
Wards Island	OW	WI-030	NA	2	8	1		20	0		
Wards Island	OW	WI-031	NA	5	9	4		20	2		
Wards Island	OW	WI-032	NA	0	4	0		18	0		
Wards Island	OW	WI-033	NA	4	11	3		22	2		
Wards Island	OW	WI-034	NA	1	8	1		20	1		
Wards Island	OW	WI-035	NA	8	10	7		23	4		
Wards Island	OW	WI-036	NA	3	45	2		43	1		
Wards Island	OW	WI-037	NA	9	11	7		20	4		
Wards Island	OW	WI-038	NA	39	17	23		23	15		
Wards Island	OW	WI-039	NA	3	17	3		24	2		
Wards Island	OW	WI-040	NA	3	16	2	74,086	27	1	75,098	
Wards Island	OW	WI-041	NA	13	26	7		30	5		
Wards Island	OW	WI-042	NA	3	19	1		21	1		
Wards Island	OW	WI-043	NA	7	11	2		20	2		

Appendix 15:

- Table 15-1: Key Regulators with Potential CSO Discharges outside the Period of a Critical Wet Weather Event, January through December 2022
- Appendix 15.1 CY2022 Key Regulators Monitoring Report Summary
- Appendix 15.2 CY2022 Non-Key Regulator Monitoring Reports
- Appendix 15.3 CY2022 Summary of the Status of All Telemetered Regulators.

TABLE 15.1 KEY REGULATORS WITH POTENTIAL CSO DISCHARGES OUTSIDE THE PERIOD OF A CRITICAL WET WEATHER EVENT, JANUARY THROUGH DECEMBER 2022

Table 15-1: Key Regulators with Potential CSO Discharges outside the Period of a Critical Wet Weather Event, January through December 2022

Key Regulator	2022 Number of Occurrences													Total Duration (hours)	Analysis Category
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	To Date		
26W-01	0	0	0	1	1	1	1	0	0	1	1	0	6	0.75	B
26W-02	0	1	*	*	*	*	*	*	*	*	*	*	1*	*	*
BBH-02	0	0	0	0	0	0	0	0	1	2	1	0	4	12.25	B
BBH-06	1	0	0	0	2	2	3	0	3	3	2	0	16	4.25	C
BBL-04	1	1	1	2	6	5	3	1	0	5	4	1	30	18.75	C
BBL-22	0	0	0	0	4	5	1	0	0	0	0	1	11	8.50	B
HP-05	3	2	2	3	0	3	3	0	3	1	1	2	23	43.00	A
HP-10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	B*
HP-13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	A
JA-03	*	*	*	*	*	*	*	*	*	*	*	*	*	*	B*
NCB-01	2	1	1	2	3	4	3	0	4	2	0	2	24	17.50	C
NCB-04	*	*	*	*	*	*	*	*	*	*	*	*	*	*	C*
NCM-47	1	1	0	1	0	0	1	0	2	0	3	2	11	6.25	B
NR-16	0	1	0	1	3	4	2	1	1	0	1	0	14	8.00	C
NR-23	0	0	0	0	1	1	3	0	1	0	1	1	8	7.00	B
NR-33	0	0	0	1	0	0	0	0	0	0	0	0	1	1.25	B
OH-01	*	*	*	*	*	*	*	*	*	*	*	*	*	*	B*
OH-06	*	*	*	*	*	*	*	*	*	*	*	*	*	*	B*
PR-06W	1	*	*	*	*	*	*	*	*	*	*	*	*	*	C*
PR-13E	*	*	*	*	*	*	*	*	*	*	*	*	*	*	C*
RH-02	0	0	0	0	0	0	0	0	0	0	0	1	1	0.00	B
RH-20	0	0	0	0	0	0	0	0	1	0	0	0	1	1.25	B
TI-09	1	0	0	0	0	2	3	1	3	4	4	4	22	46.00	C
TI-10A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	B
WIB-53	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	B
WIB-67	0	0	0	0	3	7	4	0	0	1	1	1	17	25.00	C
WIM-23	0	0	1	1	4	2	1	1	0	0	2	1	13	6.50	C
Count**	7	6	4	8	9	11	12	4	9	8	11	10	16		

**Count of regulators with at least one event

Analysis Categories

A. Key Regulators that may be influenced by planned capital improvements (Projects are currently in design or construction that may result in CSO reductions and additional wet weather capture);

B. Key Regulators averaging one or fewer potential discharge outside the period of a critical wet weather event per month

C. All other Key Regulators with an average of more than one potential discharge outside the period of a critical wet weather event per month

APPENDIX: 15.1 KEY REGULATOR MONITORING REPORT SUMMARY CY 2022

CY2022 Key Regulator Monitoring Report

Regulator 26W-01	Potential CSO Discharges Outside the						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Apr-22	1	4/1/22 12:45 AM	4/1/22 12:45 AM	0.00*	168	168	170	4/1/22 1:00 AM	4/1/22 2:15 AM	178	170
May-22	1	5/20/22 6:00 PM	5/20/22 6:00 PM	0.00*	105	105	170	5/20/22 6:15 PM	5/20/22 7:30 PM	178	174
Jun-22	1	6/1/22 9:00 PM	6/1/22 9:30 PM	0.50	148	179	127.5	6/1/22 9:15 PM	6/2/22 12:30 AM	185	178
Jul-22	1	7/25/22 4:45 PM	7/25/22 5:00 PM	0.25	140	141	170	7/25/22 5:15 PM	7/25/22 6:15 PM	178	176
Oct-22	1	10/13/22 6:45 PM	10/13/22 6:45 PM	0.00**	163	163	170	10/13/22 7:00 PM	10/13/22 7:45 PM	177	176
Nov-22	1	11/11/22 5:00 PM	11/11/22 5:00 PM	0.00*	150	150	170	11/11/22 5:15 PM	11/11/22 7:00 PM	175	170

CY2022 Key Regulator Monitoring Report

Regulator 26W-02	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Feb-22	1	2/25/22 7:00 AM	2/25/22 7:45 AM	0.75	91	96	170	2/25/22 9:30 AM	2/25/22 11:00 AM	173	172

26W-02 reported no data as of March 2022 due to sensor malfunctions.

CY2022 Key Regulator Monitoring Report

Regulator BBH-02	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Sep-22	1	9/30/22 3:30 AM	9/30/22 12:45 PM	9.25	72	93	300	N/A	N/A	N/A	N/A
Oct-22	1a	10/6/22 10:45 AM	10/6/22 11:45 AM	1.00	91	98	300	N/A	N/A	N/A	N/A
	1b	10/6/22 4:15 PM	10/6/22 5:00 PM	0.75	98	103	300	N/A	N/A	N/A	N/A
	2	10/13/22 7:45 PM	10/13/22 9:00 PM	1.25	300	303	300	10/13/22 9:15 PM	10/14/22 4:45 AM	177	176
Nov-22	1	11/11/22 7:15 PM	11/11/22 7:15 PM	0.00*	294	294	300	11/11/22 5:15 PM	11/11/22 7:00 PM	303	297***

CY2022 Key Regulator Monitoring Report

Regulator BBH-06	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Jan-22	1	1/17/22 12:00 AM	1/17/22 12:00 AM	0.00*	223	223	300	1/17/22 12:15 AM	1/17/22 8:00 AM	314	305
May-22	1	5/19/22 5:30 AM	5/19/22 5:30 AM	0.00*	230	230	300	5/19/22 5:45 AM	5/19/22 9:00 AM	322	310
	2	5/20/22 6:00 PM	5/20/22 6:15 PM	0.25	126	234	300	5/20/22 6:30 PM	5/20/22 8:30 PM	341	319
Jun-22	1	6/1/22 8:30 PM	6/1/22 9:00 PM	0.50	189	276	300	6/1/22 9:15 PM	6/2/22 2:00 AM	328	318
	2	6/27/22 3:30 PM	6/27/22 4:15 PM	0.75	195	286	300	N/A	N/A	N/A	N/A
Jul-22	1	7/16/22 3:30 PM	7/16/22 3:30 PM	0.00*	194	194	300	7/16/22 3:45 PM	7/16/22 6:45 PM	323	309
	2	7/21/22 2:15 PM	7/21/22 2:30 PM	0.25	155	290	300	7/21/22 2:45 PM	7/21/22 5:15 PM	363	321
	3	7/25/22 1:45 PM	7/25/22 1:45 PM	0.00	247	247	300	7/25/22 2:00 PM	7/25/22 5:00 PM	314	303
Sep-22	1	9/6/22 11:45 AM	9/6/22 11:45 AM	0.00*	286	286	300	N/A	N/A	N/A	N/A
	2	9/13/22 1:30 AM	9/13/22 1:30 AM	0.00*	293	293	300	N/A	N/A	N/A	N/A
	3	9/25/22 10:00 PM	9/25/22 10:15 PM	0.25	157	269	300	N/A	N/A	N/A	N/A
Oct-22	1	10/4/22 2:00 AM	10/4/22 2:45 AM	0.75	245	288	300	10/4/22 3:00 AM	10/4/22 11:00 AM	338	312
	2	10/5/22 5:45 AM	10/5/22 6:15 AM	0.50	82	212	300	10/5/22 6:30 AM	10/5/22 10:45 AM	317	306
	3	10/13/22 6:45 PM	10/13/22 7:30 PM	0.75	216	299	300	10/13/22 9:15 PM	10/14/22 4:45 AM	177	176
Nov-22	1	11/11/22 4:45 PM	11/11/22 5:00 PM	0.25	236	288	300	11/11/22 5:15 PM	11/11/22 7:00 PM	303	297***
	2	11/27/22 3:15 PM	11/27/22 3:15 PM	0.00*	228	228	300	11/27/22 3:30 PM	11/27/22 4:30 PM	308	304

CY2022 Key Regulator Monitoring Report

Regulator BBL-04	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Jan-22	1	1/16/22 11:45 PM	1/17/22 12:00 AM	0.25	182	223	300	1/17/22 12:15 AM	1/17/22 8:00 AM	314	305
Feb-22	1	2/17/22 11:15 PM	2/18/22 12:00 AM	0.75	155	283	300	2/18/22 12:15 AM	2/18/22 3:30 AM	314	305
Mar-22	1	3/12/22 9:00 AM	3/12/22 9:30 AM	0.50	79	215	300	3/12/22 9:45 AM	3/12/22 2:00 PM	232	310
Apr-22	1	4/1/22 3:15 AM	4/1/22 4:00 AM	0.75	195	262	300	N/A	N/A	N/A	N/A
	2	4/18/22 11:00 PM	4/18/22 11:30 PM	0.50	145	287	300	4/18/22 11:45 PM	4/19/22 7:30 AM	322	309
May-22	1	5/2/22 6:30 AM	5/2/22 7:00 AM	0.50	57	208	300	5/2/22 7:30 AM	5/2/22 9:00 AM	311	307
	2	5/14/22 11:45 PM	5/15/22 1:15 AM	1.50	111	214	300	N/A	N/A	N/A	N/A
	3	5/16/22 6:45 PM	5/16/22 7:00 PM	0.25	193	244	300	5/16/22 7:15 PM	5/16/22 9:45 PM	317	309
	4	5/19/22 5:00 AM	5/19/22 5:30 AM	0.50	147	230	300	5/19/22 5:45 AM	5/19/22 9:00 AM	322	310
	5	5/20/22 5:45 PM	5/20/22 6:15 PM	0.50	130	234	300	5/20/22 6:30 PM	5/20/22 8:30 PM	341	319
	6	5/27/22 5:45 PM	5/27/22 6:15 PM	0.50	115	120	300	N/A	N/A	N/A	N/A
Jun-22	1	6/1/22 8:30 PM	6/1/22 9:00 PM	0.50	189	276	300	6/1/22 9:15 PM	6/2/22 2:00 AM	328	318
	2	6/2/22 5:30 PM	6/2/22 5:45 PM	0.25	220	290	300	6/2/22 6:00 PM	6/2/22 7:45 PM	316	310
	3	6/9/22 4:00 AM	6/9/22 5:15 AM	1.25	130	290	300	6/9/22 5:30 AM	6/9/22 9:15 AM	319	312
	4	6/16/22 7:45 AM	6/16/22 8:30 AM	0.75	101	168	300	6/16/22 8:45 AM	6/16/22 9:45 AM	333	316
	5	6/27/22 3:15 PM	6/27/22 4:15 PM	1.00	191	286	300	N/A	N/A	N/A	N/A
Jul-22	1	7/16/22 3:15 PM	7/16/22 3:30 PM	0.25	147	194	300	7/16/22 3:45 PM	7/16/22 6:45 PM	323	309
	2	7/21/22 2:00 PM	7/21/22 2:30 PM	0.50	112	290	300	7/21/22 2:45 PM	7/21/22 5:15 PM	363	321
	3	7/25/22 1:45 PM	7/25/22 1:45 PM	0.00*	247	247	300	7/25/22 2:00 PM	7/25/22 5:00 PM	314	303
Aug-22	1	8/26/22 4:30 PM	8/26/22 5:15 PM	0.75	226	462	700	N/A	N/A	N/A	N/A
Oct-22	1a	10/1/22 6:30 AM	10/1/22 7:15 AM	0.75	129	292	300	10/1/22 7:30 AM	10/1/22 8:30 AM	334	308
	1b	10/1/22 11:15 AM	10/1/22 12:00 PM	0.75	250	270	300	10/1/22 12:15 PM	10/1/22 2:00 PM	316	311
	2a	10/3/22 6:45 PM	10/3/22 6:45 PM	0.00**	292	292	300	10/3/22 7:00 PM	10/3/22 9:30 PM	324	307
	2b	10/4/22 2:15 AM	10/4/22 2:45 AM	0.50	251	288	300	10/4/22 3:00 AM	10/4/22 11:30 AM	338	312
	3	10/5/22 5:30 AM	10/5/22 6:15 AM	0.75	109	212	300	10/5/22 6:30 AM	10/5/22 10:45 AM	317	306
	4	10/13/22 6:30 PM	10/13/22 7:30 PM	1.00	155	299	300	10/13/22 11:15 PM	10/14/22 4:45 AM	177	176
	5	10/24/22 11:15 PM	10/24/22 11:45 PM	0.50	319	319	300	10/24/22 11:00 PM	10/24/22 11:45 PM	328	312
Nov-22	1a	11/11/22 4:30 PM	11/11/22 5:00 PM	0.50	219	288	300	11/11/22 5:15 PM	11/11/22 7:00 PM	303	297***
	1b	11/11/22 7:15 PM	11/11/22 7:15 PM	0.00*	294	294					
	2	11/12/22 7:15 AM	11/12/22 7:45 AM	0.50	74	93	300	N/A	N/A	N/A	N/A
	3	11/15/22 9:45 PM	11/15/22 10:00 PM	0.25	295	295	300	11/15/22 10:15 PM	11/16/22 1:45 AM	318	309
	4	11/27/22 2:45 PM	11/27/22 3:15 PM	0.50	126	228	300	11/27/22 3:30 PM	11/27/22 4:30 PM	308	304
Dec-22	1a	12/23/22 4:15 AM	12/23/22 4:30 AM	0.25	219	245	300	12/23/22 4:45 AM	12/23/22 6:30 AM	318	306
	1b	12/23/22 6:45 AM	12/23/22 7:30 AM	0.75	298	299					

CY2022 Key Regulator Monitoring Report

Regulator BBL-22	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
May-22	1	5/2/22 6:00 AM	5/2/22 7:00 AM	1.00	49	208	300	5/2/22 7:30 AM	5/2/22 9:00 AM	311	307
	2	5/15/22 12:15 AM	5/15/22 12:45 AM	0.50	161	211	300	N/A	N/A	N/A	N/A
	3	5/19/22 5:15 AM	5/19/22 5:30 AM	0.25	163	230	300	5/19/22 5:45 AM	5/19/22 9:00 AM	322	310
	4	5/20/22 6:00 PM	5/20/22 6:15 PM	0.25	126	234	300	5/20/22 6:30 PM	5/20/22 8:30 PM	341	319
Jun-22	1	6/1/22 8:00 PM	6/1/22 9:00 PM	1.00	118	276	300	6/1/22 9:15 PM	6/2/22 2:00 AM	328	318
	2	6/2/22 5:15 PM	6/2/22 5:45 PM	0.50	146	290	300	6/2/22 6:00 PM	6/2/22 7:45 PM	316	310
	3	6/9/22 3:00 AM	6/9/22 5:15 AM	2.25	110	290	300	6/9/22 5:30 AM	6/9/22 9:15 AM	319	312
	4	6/16/22 7:00 AM	6/16/22 8:30 AM	1.50	90	168	300	6/16/22 8:45 AM	6/16/22 9:45 AM	333	316
	5	6/27/22 3:00 PM	6/27/22 4:00 PM	1.00	166	283	300	N/A	N/A	N/A	N/A
Jul-22	1	7/16/22 3:15 PM	7/16/22 3:30 PM	0.25	147	194	300	7/16/22 3:45 PM	7/16/22 6:45 PM	323	309
Dec-22	1	12/23/22 4:30 AM	12/23/22 4:30 AM	0.00*	245	245	300	12/23/22 4:45 AM	12/23/22 6:30 AM	318	306

CY2022 Key Regulator Monitoring Report

Regulator HP-05	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Jan-22	1	4/1/22 4:00 AM	4/1/22 6:15 AM	2.25	345	345	400	N/A	N/A	N/A	N/A
	2	4/7/22 8:30 PM	4/7/22 10:45 PM	2.25	379	393	400	4/7/22 11:00 PM	4/8/22 1:45 AM	424	411
	3	4/19/22 7:30 AM	4/19/22 9:15 AM	1.75	324	324	330	4/18/22 11:30 PM	4/19/22 7:15 AM	422	392
Feb-22	1	2/18/22 4:15 AM	2/18/22 4:45 AM	0.50	221	221	400	N/A	N/A	N/A	N/A
	2	2/25/22 12:30 PM	2/25/22 1:30 PM	1.00	313	313	400	2/25/22 10:00 AM	2/25/22 10:30 AM	423	415
Mar-22	1	3/12/22 12:45 PM	3/12/22 2:30 PM	1.75	330	330	400	N/A	N/A	N/A	N/A
	2a	3/24/22 11:45 PM	3/24/22 11:45 PM	0.00*	338	338	400	3/25/22 12:00 AM	3/25/22 12:15 AM	415	415
	2b	3/25/22 12:30 AM	3/25/22 1:15 AM	0.75	320	322					
Apr-22	1	4/1/22 4:00 AM	4/1/22 6:15 AM	2.25	345	345	400	N/A	N/A	N/A	N/A
	2	4/7/22 8:30 PM	4/7/22 10:45 PM	2.25	379	393	400	4/7/22 11:00 PM	4/8/22 1:45 AM	424	411
	3	4/19/22 7:30 AM	4/19/22 9:15 AM	1.75	324	324	330	4/18/22 11:30 PM	4/19/22 7:15 AM	422	392
Jun-22	1a	6/2/22 6:15 AM	6/2/22 7:00 AM	0.75	137	137	330	6/1/22 8:45 PM	6/2/22 3:30 AM	361	314***
	1b	6/2/22 5:00 PM	6/2/22 5:00 PM	0.00*	312	312		6/2/22 5:15 PM	6/2/22 8:30 PM	328**	321***
	2	6/9/22 3:00 AM	6/9/22 5:15 AM	2.25	132	260	330	6/9/22 5:30 AM	6/9/22 9:45 AM	335	320
	3	6/27/22 4:00 PM	6/27/22 5:45 PM	1.75	290	292	400	N/A	N/A	N/A	N/A
Jul-22	1a	7/18/22 8:15 AM	7/18/22 10:30 AM	2.25	357	364	400	7/18/22 3:30 PM	7/18/22 6:15 PM	423	404
	1b	7/18/22 6:30 PM	7/18/22 8:45 PM	2.25	385	398					
	2	7/21/22 2:00 PM	7/21/22 2:00 PM	0.00*	381	381	400	7/21/22 2:15 PM	7/21/22 3:15 PM	423	407
	3	7/25/22 2:15 PM	7/25/22 3:15 PM	1.00	393	393	400	7/25/22 1:45 PM	7/25/22 2:00 PM	429	424
Sep-22	1	9/13/22 3:00 AM	9/13/22 6:30 AM	3.50	382	390	400	N/A	N/A	N/A	N/A
	2	9/22/22 1:15 PM	9/22/22 2:15 PM	1.00	285	285	400	N/A	N/A	N/A	N/A
	3a	9/26/22 12:15 AM	9/26/22 2:15 AM	2.00	377	377	400	9/25/22 10:15 PM	9/26/22 12:00 AM	423	398***
	3b	9/26/22 3:15 AM	9/26/22 5:15 AM	2.00	145	145					
Oct-22	1	10/4/22 10:00 AM	10/4/22 11:00 AM	1.00	337	337	400	10/4/22 3:30 AM	10/4/22 9:45 AM	415	399
Nov-22	1	11/11/22 5:45 PM	11/11/22 8:45 PM	3.00	396	396	400	11/11/22 5:00 PM	11/11/22 5:30 PM	411	407
Dec-22	1	12/3/22 1:30 PM	12/3/22 2:30 PM	1.00	336	336	400	N/A	N/A	N/A	N/A
	2a	12/23/22 7:15 AM	12/23/22 8:30 AM	1.25	399	399	400	12/23/22 5:00 AM	12/23/22 7:00 AM	422	411
	2b	12/23/22 2:30 PM	12/23/22 3:00 PM	0.50	260	260					
	2c	12/23/22 4:30 PM	12/23/22 5:30 PM	1.00	234	234					

CY2022 Key Regulator Monitoring Report

Regulator HP-10	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
HP-10 reported no data all year due to sensor malfunction.											

CY2022 Key Regulator Monitoring Report

Regulator HP-13	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
HP-13 reported no data all year due to sensor malfunction.											

CY2022 Key Regulator Monitoring Report

Regulator JA-03	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
JA-03 reported no data all year due to sensor malfunction.											

CY2022 Key Regulator Monitoring Report

Regulator NCB-01	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Jan-22	1	1/1/22 10:30 PM	1/2/22 12:00 AM	1.50	665	765	620	1/1/22 10:30 PM	1/2/22 12:45 AM	765	716
	2	1/16/22 11:30 PM	1/16/22 11:45 PM	0.25	466	593	700	1/17/22 12:00 AM	1/17/22 7:00 AM	773	714
Feb-22	1	2/4/22 4:15 PM	2/4/22 4:45 PM	0.50	647	647	700	N/A	N/A	765	716
Mar-22	1	3/12/22 9:45 AM	3/12/22 9:45 AM	0.00	646	646	700	3/12/22 10:00 AM	3/12/22 11:30 AM	768	732
Apr-22	1	4/1/22 12:45 AM	4/1/22 1:30 AM	0.75	335	387	700	N/A	N/A	N/A	N/A
	2	4/7/22 11:15 PM	4/7/22 11:15 PM	0.00*	510	510	700	4/7/22 11:30 PM	4/8/22 1:15 AM	735	720
May-22	1	5/7/22 12:15 PM	5/7/22 12:15 PM	0.00*	684	684	700	5/7/22 12:30 PM	5/7/22 4:15 PM	818	782
	2	5/19/22 5:15 AM	5/19/22 5:15 AM	0.00*	673	673	700	5/19/22 5:30 AM	5/19/22 8:30 AM	804	720
	3	5/20/22 6:00 PM	5/20/22 6:45 PM	0.75	581	642	700	N/A	N/A	N/A	N/A
Jun-22	1	6/1/22 8:45 PM	6/1/22 8:45 PM	0.00*	371	371	700	6/1/22 9:00 PM	6/2/22 1:15 AM	778	687***
	2	6/9/22 5:45 AM	6/9/22 5:45 AM	0.00*	578	578	700	6/9/22 6:00 AM	6/9/22 7:15 AM	812	775
	3	6/16/22 8:15 AM	6/16/22 8:45 AM	0.50	654	676	700	N/A	N/A	N/A	N/A
	4	6/27/22 3:00 PM	6/27/22 5:00 PM	2.00	334	610	700	N/A	N/A	N/A	N/A
Jul-22	1a	7/16/22 10:00 AM	7/16/22 1:15 PM	3.25	167	506	700	N/A	N/A	N/A	N/A
	1b	7/16/22 4:00 PM	7/16/22 4:30 PM	0.50	318	543					
	2	7/25/22 4:15 PM	7/25/22 4:45 PM	0.50	301	558	700	N/A	N/A	N/A	N/A
	3	7/28/22 4:15 AM	7/28/22 4:45 AM	0.50	310	464	700	N/A	N/A	N/A	N/A
Sep-22	1	9/6/22 5:00 PM	9/6/22 5:30 PM	0.50	678	694	700	9/6/22 5:45 PM	9/6/22 6:15 PM	740	727
	2a	9/13/22 3:00 AM	9/13/22 3:30 AM	0.50	449	450	700	9/13/22 5:15 AM	9/13/22 6:00 AM	797	758
	2b	9/13/22 4:15 AM	9/13/22 5:00 AM	0.75	493	624					
	3	9/22/22 8:30 AM	9/22/22 9:15 AM	0.75	428	624	700	N/A	N/A	N/A	N/A
	4	9/25/22 9:45 PM	9/25/22 9:45 PM	0.00*	408	408	485	9/25/22 10:00 PM	9/26/22 2:15 AM	559	521
Oct-22	1	10/1/22 6:45 AM	10/1/22 8:00 AM	1.25	476	536	550	10/1/22 11:45 AM	10/1/22 4:00 PM	795	534
	2a	10/3/22 6:45 PM	10/3/22 8:15 PM	1.50	500	548	485	10/4/22 2:30 AM	10/4/22 1:00 PM	613	534
	2b	10/4/22 2:15 AM	10/4/22 2:15 AM	0.00**	589	589					
Dec-22	1	12/6/22 9:45 PM	12/6/22 10:30 PM	0.75	545	547	550	12/6/22 10:45 PM	12/7/22 3:30 AM	651	574
	2	12/15/22 10:45 PM	12/15/22 11:15 PM	0.50	536	545	550	N/A	N/A	N/A	N/A

CY2022 Key Regulator Monitoring Report

Regulator NCB-04	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Regulator NCB-04 reported no data all year due to sensor malfunction.											

CY2022 Key Regulator Monitoring Report

Regulator NCM-47	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Jan-22	1	1/1/22 11:00 PM	1/1/22 11:30 PM	0.50	710	723	620	1/1/22 10:30 PM	1/2/22 12:45 AM	765	716
Feb-22	1	2/4/22 4:15 PM	2/4/22 4:45 PM	0.50	647	647	700	N/A	N/A	765	716
Apr-22	1	4/19/22 5:30 AM	4/19/22 7:00 AM	1.50	553	670	700	4/18/22 11:15 PM	4/19/22 5:15 AM	725	715
Jul-22	1	7/25/22 1:15 PM	7/25/22 1:45 PM	0.50	247	292	700	N/A	N/A	N/A	N/A
Sep-22	1	9/6/22 11:15 AM	9/6/22 11:15 AM	0.00*	503	503	700	9/6/22 11:45 AM	9/6/22 1:00 PM	744	714
	2	9/13/22 12:30 AM	9/13/22 1:30 AM	1.00	382	514	700	9/13/22 5:15 AM	9/13/22 6:00 AM	797	758
Nov-22	1	11/20/22 4:15 AM	11/20/22 4:45 AM	0.50	163	164	550	N/A	N/A	N/A	N/A
	2	11/27/22 4:30 PM	11/27/22 5:00 PM	0.50	501	501	550	N/A	N/A	N/A	N/A
	3a	11/30/22 1:30 PM	11/30/22 2:00 PM	0.50	459	502	550	N/A	N/A	N/A	N/A
	3b	11/30/22 8:15 PM	11/30/22 8:45 PM	0.50	230	230					
Dec-22	1	12/7/22 3:45 AM	12/7/22 3:45 AM	0.00*	527	527	550	12/6/22 10:45 PM	12/7/22 3:30 AM	651	574
	2	12/23/22 4:00 AM	12/23/22 4:15 AM	0.25	344	389	550	12/23/22 4:30 AM	12/23/22 1:45 PM	618	481***

CY2022 Key Regulator Monitoring Report

Regulator NR-16	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Feb-22	1	2/18/22 6:45 AM	2/18/22 7:15 AM	0.50	103	117	340	N/A	N/A	N/A	N/A
Apr-22	1	4/1/22 3:15 AM	4/1/22 3:45 AM	0.50	152	196	340	N/A	N/A	N/A	N/A
May-22	1	5/6/22 10:00 PM	5/6/22 11:00 PM	1.00	269	269	340	N/A	N/A	N/A	N/A
	2	5/20/22 5:45 PM	5/20/22 6:15 PM	0.50	246	300	340	N/A	N/A	N/A	N/A
	3	5/28/22 1:00 PM	5/28/22 1:30 PM	0.50	215	277	340	N/A	N/A	N/A	N/A
Jun-22	1	6/1/22 8:00 PM	6/1/22 8:30 PM	0.50	211	268	340	6/1/22 8:45 PM	6/2/22 1:00 AM	449	426
	2	6/2/22 4:15 PM	6/2/22 4:30 PM	0.25	125	240	340	6/2/22 4:45 PM	6/2/22 6:45 PM	449	412
	3	6/9/22 5:15 AM	6/9/22 5:30 AM	0.25	233	302	340	6/9/22 5:45 AM	6/9/22 8:15 AM	439	412
	4	6/27/22 2:45 PM	6/27/22 3:15 PM	0.50	179	196	340	N/A	N/A	N/A	N/A
Jul-22	1	7/16/22 3:00 PM	7/16/22 3:30 PM	0.50	285	292	340	N/A	N/A	N/A	N/A
	2	7/18/22 3:00 PM	7/18/22 3:45 PM	0.75	278	337	340	7/18/22 4:00 PM	7/18/22 6:00 PM	357	350
Aug-22	1	8/22/22 12:30 PM	8/22/22 1:00 PM	0.50	174	227	340	N/A	N/A	N/A	N/A
Sep-22	1	9/13/22 1:30 AM	9/13/22 2:00 AM	0.50	316	334	340	9/13/22 2:30 AM	9/13/22 5:00 AM	342	327***
Nov-22	1	11/11/22 4:45 PM	11/11/22 6:00 PM	1.25	241	257	340	11/11/22 5:00 PM	11/12/22 6:00 AM	322**	181***

CY2022 Key Regulator Monitoring Report

Regulator NR-23	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
May-22	1	5/28/22 1:00 PM	5/28/22 1:45 PM	0.75	215	308	340	N/A	N/A	N/A	N/A
Jun-22	1	6/9/22 3:00 AM	6/9/22 5:30 AM	2.50	156	297	340	6/9/22 5:45 AM	6/9/22 8:15 AM	439	412
Jul-22	1	7/16/22 3:15 PM	7/16/22 4:00 PM	0.75	288	298	340	N/A	N/A	N/A	N/A
	2a	7/18/22 7:30 AM	7/18/22 7:45 AM	0.25	286	320	340	7/18/22 4:00 PM	7/18/22 6:00 PM	357	350
	2b	7/18/22 3:45 PM	7/18/22 3:45 PM	0.00*	337	337					
	3	7/25/22 1:15 PM	7/25/22 1:45 PM	0.50	253	311	340	7/25/22 2:00 PM	7/25/22 2:00 PM	340	340
Sep-22	1	9/25/22 9:45 PM	9/25/22 10:00 PM	0.25	287	337	340	9/25/22 10:15 PM	9/26/22 3:30 AM	374	307
Nov-22	1a	11/11/22 4:45 PM	11/11/22 5:45 PM	1.00	241	257	340	11/11/22 5:00 PM	11/12/22 6:00 AM	322**	181***
	1b	11/11/22 6:00 PM	11/11/22 6:45 PM	0.75	197	241					
Dec-22	1	12/23/22 4:15 AM	12/23/22 4:30 AM	0.25	290	304	340	12/23/22 4:45 AM	12/23/22 2:30 PM	358	271***

CY2022 Key Regulator Monitoring Report

Regulator NR-33	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Apr-22	1	4/15/22 9:45 PM	4/15/22 11:00 PM	1.25	110	110	340	N/A	N/A	N/A	N/A

CY2022 Key Regulator Monitoring Report

Regulator OH-01	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
OH-01 reported no data all year due to sensor malfunction.											

CY2022 Key Regulator Monitoring Report

Regulator OH-06	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
OH-06 reported no data all year due to sensor malfunction.											

CY2022 Key Regulator Monitoring Report

Regulator PR-06W	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Jan-22	1	1/17/22 2:30 AM	1/17/22 3:00 AM	0.50	119	119	120	1/17/22 3:15 AM	1/17/22 6:00 AM	5/12/00 12:00 AM	5/7/00 12:00 AM

PR-06W reported no data as of February 2022 due to sensor malfunctions.

CY2022 Key Regulator Monitoring Report

Regulator PR-13E	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
PR-13E reported no data all year due to sensor malfunction.											

CY2022 Key Regulator Monitoring Report

Regulator RH-02	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Dec-22	1	12/23/22 4:00 AM	12/23/22 4:00 AM	0.00*	58	58	120	12/23/22 4:15 AM	12/23/22 8:30 AM	130	125

CY2022 Key Regulator Monitoring Report

Regulator RH-20	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Sep-22	1	9/25/22 10:15 PM	9/25/22 11:30 PM	1.25	70	104	120	N/A	N/A	N/A	N/A

CY2022 Key Regulator Monitoring Report

Regulator TI-09	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Jan-22	1	1/2/22 12:45 AM	1/2/22 1:15 AM	0.50	120	120	160	1/1/22 9:45 PM	1/2/22 12:30 AM	166	157
Jun-22	1a	6/9/22 6:00 AM	6/9/22 6:15 AM	0.25	140	148	160	6/9/22 6:30 AM	6/9/22 7:15 AM	163	162
	1b	6/9/22 7:30 AM	6/9/22 8:00 AM	0.50	156	156					
	2	6/27/22 3:30 PM	6/27/22 4:45 PM	1.25	95	151	160	N/A	N/A	N/A	N/A
Jul-22	1	7/16/22 3:45 PM	7/16/22 6:00 PM	2.25	88	145	160	N/A	N/A	N/A	N/A
	2a	7/21/22 2:30 PM	7/21/22 2:45 PM	0.25	90	151	160	7/21/22 3:00 PM	7/21/22 4:45 PM	172	167
	2b	7/21/22 5:00 PM	7/21/22 5:00 PM	0.00*	147	147					
	3a	7/25/22 1:45 PM	7/25/22 3:15 PM	1.50	92	157	160	N/A	N/A	N/A	N/A
	3b	7/25/22 4:15 PM	7/25/22 5:45 PM	1.50	130	142	160				
Aug-22	1	8/7/22 3:30 PM	8/7/22 4:30 PM	1.00	77	153	160	N/A	N/A	N/A	N/A
Sep-22	1a	9/6/22 9:15 AM	9/6/22 11:00 AM	1.75	103	158	160	N/A	N/A	N/A	N/A
	1b	9/6/22 11:45 AM	9/6/22 2:30 PM	2.75	129	158					
	1c	9/6/22 3:15 PM	9/6/22 3:45 PM	0.50	126	132					
	1d	9/6/22 5:15 PM	9/6/22 7:00 PM	1.75	130	145					
	2a	9/12/22 2:15 AM	9/12/22 2:15 AM	0.00*	153	153	160	9/12/22 2:30 AM	9/12/22 2:45 AM	169	167
	2b	9/12/22 3:00 AM	9/12/22 3:30 AM	0.50	159	159					
	3a	9/25/22 10:00 PM	9/25/22 10:15 PM	0.25	71	105	160	9/25/22 10:30 PM	9/26/22 12:00 AM	170	166
	3b	9/26/22 12:15 AM	9/26/22 1:00 AM	0.75	158	158					
Oct-22	1	10/1/22 7:15 AM	10/1/22 9:00 AM	1.75	125	159	160	N/A	N/A	N/A	N/A
	2a	10/3/22 6:45 PM	10/3/22 9:15 PM	2.50	135	148	160	10/4/22 3:00 AM	10/4/22 8:15 AM	172	168
	2b	10/4/22 2:00 AM	10/4/22 2:45 AM	0.75	128	156					
	2c	10/4/22 8:30 AM	10/4/22 10:45 AM	2.25	153	156					
	3a	10/5/22 1:00 AM	10/5/22 1:30 AM	0.50	117	146	160	N/A	N/A	N/A	N/A
	3b	10/5/22 6:00 AM	10/5/22 6:45 AM	0.75	90	151	160	N/A	N/A	N/A	N/A
	4	10/13/22 7:00 PM	10/13/22 8:30 PM	1.50	118	159	160	N/A	N/A	N/A	N/A
Nov-22	1	11/11/22 7:30 PM	11/11/22 9:30 PM	2.00	137	142	160	11/11/22 4:30 PM	11/11/22 7:15 PM	167	162
	2	11/15/22 9:30 PM	11/16/22 2:15 AM	4.75	147	147	160	N/A	N/A	N/A	N/A
	3	11/27/22 3:30 PM	11/27/22 5:15 PM	1.75	155	155	160	N/A	N/A	N/A	N/A
	4	11/30/22 5:15 PM	11/30/22 7:00 PM	1.75	135	135	160	N/A	N/A	N/A	N/A
Dec-22	1	12/3/22 1:30 PM	12/3/22 2:30 PM	1.00	134	147	160	N/A	N/A	N/A	N/A
	2a	12/6/22 10:00 PM	12/6/22 10:30 PM	0.50	145	155	160	12/6/22 10:45 PM	12/7/22 2:30 AM	165	164
	2b	12/7/22 2:45 AM	12/7/22 3:30 AM	0.75	159	159					
	3a	12/15/22 9:30 PM	12/16/22 12:15 AM	2.75	138	150	160	N/A	N/A	N/A	N/A
	3b	12/16/22 7:45 AM	12/16/22 10:00 AM	2.25	139	145					
	4	12/23/22 5:30 AM	12/23/22 6:45 AM	1.25	120	150	160	N/A	N/A	N/A	N/A

CY2022 Key Regulator Monitoring Report

Regulator TI-10A	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Regulator TI-10A has had no potential discharges outside the period of a critical wet weather event.											

CY2022 Key Regulator Monitoring Report

Regulator WIB-53	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Regulator WIB-53 has had no potential discharges outside the period of a critical wet weather event.											

CY2022 Key Regulator Monitoring Report

Regulator WIB-67	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
May-22	1a	5/7/22 12:00 PM	5/7/22 12:00 PM	0.00*	336	336	440	5/7/22 12:15 PM	5/7/22 5:30 PM	555	510
	1b	5/7/22 5:45 PM	5/7/22 8:00 PM	2.25	393	393					
	2a	5/20/22 5:00 PM	5/28/22 5:45 PM	0.75	199	252	330	5/20/22 6:00 PM	5/20/22 8:45 PM	528	467
	2b	5/20/22 9:00 PM	5/20/22 9:00 PM	0.00*	319	319					
	3	5/28/22 1:15 PM	5/28/22 1:15 PM	0.00*	241	241	440	5/28/22 1:30 PM	5/28/22 2:30 PM	518	472
Jun-22	1a	6/1/22 8:00 PM	6/1/22 8:30 PM	0.50	207	310	420	6/1/22 8:45 PM	6/2/22 12:30 AM	473	501
	1b	6/2/22 12:45 AM	6/2/22 3:00 AM	2.25	409	409					
	2	6/2/22 4:30 PM	6/2/22 4:30 PM	0.00*	198	198	420	6/2/22 4:45 PM	6/2/22 7:00 PM	570	502
	3	6/8/22 3:00 AM	6/8/22 4:00 AM	1.00	154	154	420	N/A	N/A	N/A	N/A
	4a	6/9/22 5:00 AM	6/9/22 5:15 AM	0.25	305	327	420	6/9/22 5:30 AM	6/9/22 8:15 AM	549	491
	4b	6/9/22 8:30 AM	6/9/22 10:00 AM	1.50	256	321					
	5	6/13/22 2:00 AM	6/13/22 4:00 AM	2.00	141	191	420	N/A	N/A	N/A	N/A
	6a	6/16/22 8:00 AM	6/16/22 8:15 AM	0.25	258	314	420	6/16/22 8:30 AM	6/16/22 9:15 AM	516	462
	6b	6/16/22 9:30 AM	6/16/22 10:00 AM	0.50	411	411					
	7a	6/27/22 2:00 PM	6/27/22 3:15 PM	1.25	254	254	420	6/27/22 3:30 PM	6/27/22 4:30 PM	540	493
	7b	6/27/22 4:45 PM	6/27/22 6:00 PM	1.25	391	391					
Jul-22	1	7/19/22 3:45 AM	7/19/22 6:15 AM	2.50	259	261	420	7/18/22 7:30 AM	7/18/22 8:30 PM	548	442
	2	7/20/22 6:45 PM	7/20/22 7:15 PM	0.50	399	399	420	N/A	N/A	N/A	N/A
	3	7/21/22 4:30 PM	7/21/22 7:15 PM	2.75	376	381	420	7/21/22 1:30 PM	7/21/22 4:00 PM	525	470
	4	7/24/22 9:00 PM	7/24/22 10:45 PM	1.75	493	493	420	7/25/22 1:30 PM	7/25/22 3:15 PM	560	488
Oct-22	1	10/14/22 3:00 AM	10/14/22 4:00 AM	1.00	472	472	500	N/A	N/A	N/A	N/A
Nov-22	1	11/30/22 4:30 PM	11/30/22 6:45 PM	2.25	411	411	500	N/A	N/A	N/A	N/A
Dec-22	1	12/23/22 1:45 PM	12/23/22 2:15 PM	0.50	395	395	500	12/23/22 4:30 AM	12/23/22 8:30 AM	622	503

CY2022 Key Regulator Monitoring Report

Regulator WIM-23	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Mar-22	1	3/24/22 10:45 PM	3/24/22 11:00 PM	0.25	286	317	440	3/24/22 11:15 PM	3/25/22 2:15 AM	535	494
Apr-22	1	4/19/22 7:00 AM	4/19/22 7:15 AM	0.25	427	427	440	4/18/22 11:30 PM	4/19/22 6:45 AM	564	499
May-22	1	5/2/22 6:30 AM	5/2/22 7:00 AM	0.50	87	255	440	N/A	N/A	N/A	N/A
	2a	5/7/22 12:00 PM	5/7/22 12:00 PM	0.00*	336	336	440	5/7/22 12:15 PM	5/7/22 5:30 PM	555	510
	2b	5/7/22 5:45 PM	5/7/22 7:00 PM	1.25	393	393					
	3	5/27/22 6:00 PM	5/27/22 7:00 PM	1.00	265	418	440	N/A	N/A	N/A	N/A
	4	5/28/22 1:15 PM	5/28/22 1:15 PM	0.00*	241	241	440	5/28/22 1:30 PM	5/28/22 2:30 PM	518	472
Jun-22	1	6/1/22 8:30 PM	6/1/22 8:30 PM	0.00*	310	310	420	6/1/22 8:45 PM	6/1/22 12:30 PM	573	501
	2a	6/9/22 5:00 AM	6/9/22 5:15 AM	0.25	305	327	420	6/9/22 5:30 AM	6/9/22 8:15 AM	549	491
	2b	6/9/22 8:30 AM	6/9/22 9:00 AM	0.50	256	321					
Jul-22	1	7/16/22 5:45 PM	7/16/22 6:00 PM	0.25	418	418	420	7/16/22 3:30 PM	7/16/22 5:30 PM	573	481
Aug-22	1	8/26/22 2:30 PM	8/26/22 3:15 PM	0.75	355	375	420	N/A	N/A	N/A	N/A
Nov-22	1	11/11/22 6:30 PM	11/11/22 7:15 PM	0.75	445	445	500	11/11/22 4:00 PM	11/11/22 5:00 PM	532	519
	2	11/27/22 8:15 PM	11/27/22 9:00 PM	0.75	354	354	500	11/27/22 2:00 PM	11/27/22 3:15 PM	572	551
Dec-22	1	12/23/22 4:15 AM	12/23/22 4:15 AM	0.00*	366	366	500	12/23/22 4:30 AM	12/23/22 8:30 AM	622	503

APPENDIX: 15.2 NON-KEY REGULATOR MONITORING REPORT SUMMARY CY 2022

CY2022 Non-Key Regulator Monitoring Report

Regulator WIM-02B	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Regulator WIM-02B had a sensor malfunction resulting in no reportable data available to be assessed during the CY20221 monitoring period. Regulator WIM-02B was further evaluated as part of the Citywide/Open Waters LTCP.											

NOTES:

*	Potential CSO Discharge Duration was less than the 15-minute reportable interval.
**	"WWTP Event Maximum Flow" values reported with two asterisks (**) had a maximum flow during the critical wet weather event that was less than the wet weather flow requirement ("WWTP Event Capacity"), see below:
***	"WWTP Event Average Flow" values reported with three asterisks (***) had an average flow during the critical wet weather event that was less than the wet weather flow requirement ("WWTP Event Capacity"). These events were reported in the Wet Weather Quarterly Report submittal.
****	Sensor malfunction caused no reading or a reading equal to the regulator setpoint for the entire year.

CY2022 Non-Key Regulator Monitoring Report

Regulator WIM-07	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Regulator WIM-07 had a sensor malfunction resulting in no reportable data available to be assessed during the CY2022 monitoring period. Regulator WIM-07 was further evaluated as part of the Citywide/Open Waters LTCP.											

NOTES:

*	Potential CSO Discharge Duration was less than the 15-minute reportable interval.
**	"WWTP Event Maximum Flow" values reported with two asterisks (**) had a maximum flow during the critical wet weather event that was less than the wet weather flow requirement ("WWTP Event Capacity"), see below:
***	"WWTP Event Average Flow" values reported with three asterisks (***) had an average flow during the critical wet weather event that was less than the wet weather flow requirement ("WWTP Event Capacity"). These events were reported in the Wet Weather Quarterly Report submittal.
****	Sensor malfunction caused no reading for the entire year.

CY202 Non-Key Regulator Monitoring Report

Regulator WIM-45	Potential CSO Discharges Outside the Period of a Critical Wet Weather Event						WWTP Event Capacity (MGD)	Critical Wet Weather Event			
	Event #	Start Time	End Time	Duration (hrs)	WWTP Flow at Start (MGD)	WWTP Max Flow (MGD)		Start Time	End Time	WWTP Event Max Flow (MGD)	WWTP Event Avg Flow (MGD)
Regulator WIM-45 had no potential discharges outside the period of a critical wet weather event from January through October 2022. Regulator WIM-45 had a sensor malfunction resulting in no reportable data available to be assessed during the CY2021 November to December 2022 monitoring period. Regulator WIM-45 was further evaluated as part of the Citywide/Open Waters LTCP.											

NOTES:

*	Potential CSO Discharge Duration was less than the 15-minute reportable interval.
**	"WWTP Event Maximum Flow" values reported with two asterisks (**) had a maximum flow during the critical wet weather event that was less than the wet weather flow requirement ("WWTP Event Capacity"), see below:
***	"WWTP Event Average Flow" values reported with three asterisks (***) had an average flow during the critical wet weather event that was less than the wet weather flow requirement ("WWTP Event Capacity"). These events were reported in the Wet Weather Quarterly Report submittal.
****	Sensor malfunction caused stagnant regulator chamber liquid levels for the entire year.

APPENDIX: 15.3 ALL REGULATOR STATUS CY 2022

Status of All Telemetered Regulators with Potential CSO Discharges Outside of a Critical Wet Weather Event

No.	WWTP	Reg No.	Outfall SPDES No.	Key Regulator	2015 BMP Report Original Category	2016 BMP Report Updated Category	2017 BMP Report Updated Category	2018 BMP Report Updated Category	2019 BMP Report Updated Category	2020 BMP Report Updated Category	2021 BMP Report Updated Category	2022 BMP Report Updated Category (Current)	Monitoring Status in 2021 BMP Report	Additional Notes
1	26W	01	004	Key	A	A	A	A	A	A	A	B	monthly monitoring (key)	Capital Improvements: 5th PST construction at 26W - Oct 2021 (COMPLETE)
2	26W	02	003	Key	A	A	A	A	A	A	A	*	monthly monitoring (key) (*sensor malfunction)	Capital Improvements: Phase 2 HLSS in Fresh Creek - Sept 2021 (COMPLETE) & 5th PST construction at 26W - Oct 2021 (COMPLETE)
3	26W	03	005		E	E	E	E	E	E	E	E	no further monitoring	Does not directly discharge to a waterbody
1	BBL	L-04	026	Key	A	A	A	A	C	C	C	C	monthly monitoring (key) LTCP consideration	NC LTCP recommends diverting this flow to an expanded Borden Ave Pump Station
2	BBL	L-21	028		A	A	A	A	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
3	BBL	L-22	029	Key	A	A	A	A	C	B	B	B	monthly monitoring (key) LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
4	BBL	L-23	030		A	A	A	A	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
5	BBL	L-30	034		A	A	A	A	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
6	BBH	02	002	Key	A	A	A	A	B	B	B	B	monthly monitoring (key)	Key regulator that averaged one or fewer events per month
7	BBH	03	003		A	A	A	A	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
8	BBH	06	008	Key	A	A	A	A	C	C	C	C	monthly monitoring (key) LTCP consideration	FB LTCP recommends a CSO Storage Tunnel for outfalls BB-006 & BB-008
9	BBH	09	008		A	A	A	A	C	C	C	C	LTCP consideration	FB LTCP recommends a CSO Storage Tunnel for outfalls BB-006 & BB-008
1	HP	01	022		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
2	HP	02	023		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
3	HP	03	019		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
4	HP	04	016		C	C	A	A	A	A	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
5	HP	05	011	Key	A	A	A	A	A	A	A	A	monthly monitoring (key) LTCP consideration	Bronx River LTCP recommended modifications to this regulator to mitigate floatables
6	HP	06	011		E	E	E	E	E	E	E	E	no further monitoring	Does not directly discharge to a waterbody
7	HP	08	025		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
8	HP	09	002		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
9	HP	10	003	Key	C	C	C	C	C	B	B	B*	monthly monitoring (key) LTCP consideration (*sensor malfunction)	Was evaluated under the Citywide / Open Waters LTCP
10	HP	11	017		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
11	HP	12	018		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
12	HP	13	009	Key	B	C	C	C	C	C	A	A	monthly monitoring (key) LTCP consideration	Bronx River LTCP recommended weir modification and parallel sewer at this regulator
13	HP	14	026		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
1	JA	01	006		D	D	D	D	D	D	D	D	12-month analysis once equipment available	Absence of power to operate telemetry
2	JA	02	26W-005		E	E	E	E	E	E	E	E	no further monitoring	Does not directly discharge to a waterbody
3	JA	03	003	Key	A	A	A	A	A	A	B	B*	monthly monitoring (key) (*sensor malfunction)	Capital Improvements: installation of bending weirs, parallel interceptor, & new lateral sanitary sewer - (June 2020)
4	JA	09	005		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
5	JA	14	003a		A	A	A	A	A	A	B	B	no further monitoring	Capital Improvements: installation of bending weirs, parallel interceptor, & new lateral sanitary sewer - (June 2020)

Status of All Telemetered Regulators with Potential CSO Discharges Outside of a Critical Wet Weather Event

No.	WWTP	Reg No.	Outfall SPDES No.	Key Regulator	2015 BMP Report Original Category	2016 BMP Report Updated Category	2017 BMP Report Updated Category	2018 BMP Report Updated Category	2019 BMP Report Updated Category	2020 BMP Report Updated Category	2021 BMP Report Updated Category	2022 BMP Report Updated Category (Current)	Monitoring Status in 2021 BMP Report	Additional Notes
1	NC(Q)	Q-01	077		A	A	A	C	C	C	C	C	LTCP consideration	Newtown Creek LTCP recommends storage tunnel for outfalls NC-077,NC-015, & NC-083
2	NC(B)	B-01	015	Key	A	A	A	C	C	C	C	C	monthly monitoring (key) LTCP consideration	Newtown Creek LTCP recommends storage tunnel for outfalls NC-077,NC-015, & NC-083
3	NC(B)	B-04	014	Key	B	C	C	C	C	C	C	C*	monthly monitoring (key) LTCP consideration (*sensor malfunction)	Was evaluated under the Citywide / Open Water LTCP
4	NC(B)	B-05	013		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Water LTCP
5	NC(B)	B-06	012		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
6	NC(B)	B-09	006		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
7	NC(M)	M-01	076		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
8	NC(M)	M-02	075		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
9	NC(M)	M-10	069		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
10	NC(M)	M-16	078		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
11	NC(M)	M-17	066		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
12	NC(M)	M-19	050		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
13	NC(M)	M-21	063		D	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
14	NC(M)	M-36	052		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
15	NC(M)	M-37	049		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
16	NC(M)	M-40	045		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
17	NC(M)	M-42	041		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
18	NC(M)	M-44	037		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
19	NC(M)	M-47	036	Key	B	B	B	C	B	C	C	B	monthly monitoring (key)	Was evaluated under the Citywide / Open Waters LTCP
20	NC(M)	M-50	032		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
1	NR	N-03	017		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
2	NR	N-16	006	Key	B	C	B / C	C	C	C	B	C	monthly monitoring (key) LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
3	NR	N-18	004		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
4	NR	N-23	043	Key	B	B	B	C	C	B	B	B	monthly monitoring (key) LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
5	NR	N-26	040		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
6	NR	N-28	038		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
7	NR	N-29A	046		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP. LTCP recommended modifications to this regulator structure.
8	NR	N-33	033	Key	B	B	B	B	B	B	B	B	monthly monitoring (key)	Key regulator that averaged one or fewer events per month
9	NR	N-45	027		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
10	NR	N-50	023		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
1	OH	01	017	Key	C	B / C	B / C	B	C	B	B	B*	monthly monitoring (key) LTCP consideration (*sensor malfunction)	Was evaluated under the Citywide / Open Waters LTCP
2	OH	03	018		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
3	OH	04	019		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
4	OH	06	002	Key	C	C	B / C	B	B	B	B	B*	monthly monitoring (key) LTCP consideration (*sensor malfunction)	Was evaluated under the Citywide / Open Water LTCP
5	OH	07	003		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Water LTCP
6	OH	10			A	C	C	C	C	C	C	C	LTCP consideration	
7	OH	11			A	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
8	OH	7D	004		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
9	OH	9A	015		A	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
10	OH	9B	015		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month

Status of All Telemetered Regulators with Potential CSO Discharges Outside of a Critical Wet Weather Event

No.	WWTP	Reg No.	Outfall SPDES No.	Key Regulator	2015 BMP Report Original Category	2016 BMP Report Updated Category	2017 BMP Report Updated Category	2018 BMP Report Updated Category	2019 BMP Report Updated Category	2020 BMP Report Updated Category	2021 BMP Report Updated Category	2022 BMP Report Updated Category (Current)	Monitoring Status in 2021 BMP Report	Additional Notes
1	PR	R-13E	031	Key	C	C	C	C	C	C	C	C*	monthly monitoring (key) LTCP consideration (*sensor malfunction)	Was evaluated under the Citywide / Open Water LTCP
2	PR	R-35W	035		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
3	PR	R-06W	029	Key	C	C	C	C	C	C	C	C*	monthly monitoring (key) LTCP consideration (*sensor malfunction)	Was evaluated under the Citywide / Open Water LTCP
1	RH	R-02	018	Key	B	B	B	B	B	B	B	B	monthly monitoring (key)	Key regulator that averaged one or fewer events per month
2	RH	R-20	004	Key	B	B	B	B	B	B	B	B	monthly monitoring (key)	Key regulator that averaged one or fewer events per month
3	RH	R-21	003		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
1	RK	01	029		B	B	B	B	B	B	B	B	no further monitoring	Non-key regulator that averaged one or fewer events per month
1	TI	09	011	Key	A	C	B / C	C	C	C	C	C	monthly monitoring (key) LTCP consideration	Flushing Creek LTCP recommends floatables control and disinfection of outfalls TI-010 & TI-011
2	TI	10A	003	Key	B	B	B	B	B	B	B	B	monthly monitoring (key)	Key regulator that averaged one or fewer events per month
3	TI	13	023		C	C	C	C	C	C	C	C	LTCP consideration	Was evaluated under the Citywide / Open Water LTCP. LTCP recommnded project was to install bending weir at this regulator.
4	TI	30	010		E	E	E	E	E	E	E	E	no further monitoring	Does not directly discharge to a waterbody
5	TI	40	010		E	E	E	E	E	E	E	E	no further monitoring	Does not directly discharge to a waterbody
6	TI	46	008		E	E	E	E	E	E	E	E	no further monitoring	Does not directly discharge to a waterbody
7	TI	47	008		E	E	E	E	E	E	E	E	no further monitoring	Does not directly discharge to a waterbody
8	TI	49	008		E	E	E	E	E	E	E	E	no further monitoring	Does not directly discharge to a waterbody
1	WI(M)	02B	003		A	A	A	A	A	A	*	*	LTCP consideration (*sensor malfunction)	Was evaluated under the Citywide / Open Waters LTCP
2	WI(M)	07	008		A	A	A	A	A	A	*	*	LTCP consideration (*sensor malfunction)	Was evaluated under the Citywide / Open Waters LTCP
3	WI(M)	23	023	Key	A	A	A	A	A	B	B	C	monthly monitoring (key)	Was evaluated under the Citywide / Open Waters LTCP
4	WI(M)	24	024		A	A	A	A	A	A	B	B	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
5	WI(M)	38	038		A	A	A	A	A	A	B	B	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
6	WI(M)	45	045		A	A	A	A	A	A	*	*	LTCP consideration (*sensor malfunction)	Was evaluated under the Citywide / Open Waters LTCP
7	WI(M)	46	046		A	A	A	A	A	A	B	B	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
8	WI(M)	51	051		A	A	A	A	A	A	B	B	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
9	WI(M)	52	052		A	A	A	A	A	A	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
10	WI(B)	53	068	Key	A	A	A	A	A	B	B	B	monthly monitoring (key)	Was evaluated under the Citywide / Open Waters LTCP
11	WI(B)	58	075		A	A	A	A	A	A	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
12	WI(B)	60	062		A	A	A	A	A	A	B	B	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
13	WI(B)	62	060		A	A	A	A	A	A	C	C	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP
14	WI(B)	66	057		E	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	removed from list of telemetered regulators
15	WI(B)	67	056	Key	A	A	A	A	A	B	B	C	monthly monitoring (key)	Was evaluated under the Citywide / Open Waters LTCP. LTCP recommended daylighting of flow from Tibbetts Brook that will reduce CSO discharges from this regulator.
16	WI(B)	68	072		A	A	A	A	A	A	B	B	LTCP consideration	Was evaluated under the Citywide / Open Waters LTCP

Category	Definition
A	Current or future capital improvements potentially render collected data unrepresentative of future conditions
B	Averaged one or fewer potential discharges outside the period of a critical wet weather event per month
C	Averaged two or more potential discharges outside the period of a critical wet weather event per month
D	Data collection issue / data not reported
E	Telemetered regulator that does not directly discharge to a waterbody

ENVIRONMENTAL PROTECTION

14 WASTEWATER RESOURCE RECOVERY FACILITIES' SPDES PERMITS
COMBINED SEWER OVERFLOWS
BEST MANAGEMENT PRACTICES
ANNUAL REPORT

FOR THE PERIOD
JANUARY 1, 2022 - DECEMBER 31, 2022

CITY OF NEW YORK

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF WASTEWATER TREATMENT

MAY 2023

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EXECUTIVE SUMMARY

The waters surrounding New York City are cleaner and healthier than they have been in more than a century. Over the past decade, the New York City Department of Environmental Protection (DEP) has invested approximately $10 billion in projects such as sewer system and Wastewater Resource Recovery Facility (WRRF) upgrades to improve the health of these critical ecosystems. This investment has produced many ecological successes, ushering in the return of a variety of plant and animal species to our waters. It has also supported the redevelopment of vast swaths of our waterfront and numerous recreational opportunities for residents and visitors alike.

Although we continue to make great strides in improving the health of our waterbodies, we still face challenges. New York City, along with hundreds of other American communities, is largely served by a combined sewer system (CSS) where stormwater that falls on roofs, streets, and sidewalks, and wastewater from homes and businesses are carried together through a single sewer pipe to WRRFs. The City's 14 WRRFs can manage and treat to federal Clean Water Act standards all the wastewater created in New York City on a dry weather day, or about 1.3 billion gallons on average. On a rainy day, they have the capacity to partially treat and fully disinfect up to nearly 3 times that amount. However, during intense precipitation events, the stormwater that enters the system can exceed that capacity and can cause combined sewer overflows (CSOs), or the discharge of that untreated stormwater and wastewater mix into local waterways.

DEP implements three distinct strategies aimed at creating additional capacity in our wastewater system to reduce the number of CSOs during wet weather: grey infrastructure, green infrastructure and CSO Best Management Practices (BMPs).

GREY INFRASTRUCTURE

DEP has spent approximately $2.7 billion on baseline grey infrastructure projects to date and has forecasted costs of about $6.2 billion for CSO Long Term Control Plan (LTCP) recommended projects and for construction of 2 CSO retention tanks in the Gowanus Canal, as required by the Superfund Record of Decision. To reduce CSOs, DEP has utilized a variety of grey infrastructure controls such as improvements to the headworks of WRRFs, expansion of the storm sewer system, separation of storm sewers, sewer system and regulator optimization, and construction of large CSO retention tanks. All baseline grey CSO projects have been completed. The CSO LTCPs expand upon past successes and have proposed additional CSO controls and

ecological improvement projects. To learn more about the CSO Program visit nyc.gov/dep/ltcp.

GREEN INFRASTRUCTURE

DEP has constructed thousands of green infrastructure assets, such as rain gardens, green roofs and porous surfaces to absorb stormwater runoff where it lands, thereby reducing or, in some cases, slowing the amount of stormwater entering the sewer system. To achieve this reduction, the Green Infrastructure Program has maintained critical partnerships with the Departments of Transportation (DOT), Parks and Recreation (DPR or Parks) and Education (DOE), the New York City Housing Authority (NYCHA), and other city agencies to implement green infrastructure on city-owned property. We are also continuing to develop private incentives to encourage New Yorkers to join us in managing stormwater and improving water quality.

In 2022, DEP promulgated the Unified Stormwater Rule that provides for more onsite retention and requires much lower rates for stormwater release into the collection system. To date, nearly 13,000 green infrastructure assets have been constructed within the combined sewer area. See additional information in section 16.5.

CSO BEST MANAGEMENT PRACTICES

DEP has also continued implementing CSO BMPs to optimize existing facilities to capture and convey more wet-weather flow to the City's WRRFs. The State Pollutant Discharge Elimination System (SPDES) permits for the City's WRRFs list fifteen different CSO BMPs, which amplify EPA's national CSO Control Policy. This 20th Annual Report describes DEP's ongoing program to advance those BMPs and provides statistics for calendar year 2022. The report is divided into seventeen sections covering each of the BMPs and the additional Special Conditions listed in the SPDES permits.

Notable CSO BMP achievements during 2022 include:

- DEP inspected 34,891.6 feet of intercepting sewers citywide and removed 66.51 Tons of sediment. An additional 632.42 tons of sediment were removed from non-interceptor assets such as treatment plants, pumping stations, regulators, and other sewer appurtenances.
- DEP's in-house forces cleaned 196.74 miles of sewer in response to 11,262 customer service requests, and 323.83 miles of sewer as a proactive measure.

MORE INFORMATION ABOUT WATER QUALITY

Beaches (see also Section 1.1): During the summer months, DEP works closely with the NYC Department of Health and Mental Hygiene (DOHMH), which oversees bathing water quality at City beaches. DOHMH has an extensive beach monitoring program and posts wet-weather advisories if local waterways are affected by CSOs or faulty septic systems. DOHMH's 2022 Beach Surveillance and Monitoring report can be found online at: beach-report-2021.pdf (nyc.gov) beach-report-2022 (nyc.gov) For information on beaches, visit the NYC Beach Water Quality website at https://maps.nyc.gov/beach/

Other Waterbodies: DEP regularly posts additional monitoring data on our website, including non-beach waterbody advisories. In 2021, DEP launched an updated Waterbody Advisory System that the public can use when planning recreational activities in locations other than beaches; the advisories are based on water quality models and real-time rainfall data.

The Waterbody Advisory System also:

- Expands from 28 to 45 the number of waterbodies that could receive an advisory
- Utilizes and displays rainfall data from rain gauges at all 14 WRRFs
- Provides more detailed advisory durations based on measured rainfall
- Uses primary contact recreation standards

New Yorkers can visit DEP's website for up-to-date information or register for daily alerts

at NotifyNYC.

http://www.nyc.gov/html/dep/html/stormwater/combined_sewer_overflow.shtml

1 CSO MAINTENANCE AND INSPECTION PROGRAM (OMIP)

CSO Maintenance/Inspection Program (OMIP)

a. *"The permittee shall continue to implement a written maintenance and inspection program for all CSOs listed, beginning on page 3 of this permit. This program shall include all regulators tributary to these CSOs and shall be conducted during periods of both dry and wet weather. This is to ensure that no discharge or leakage occurs during dry weather and that the maximum amount of wet weather flow is conveyed to the WRRF for treatment. This program shall consist of inspections with required repair, cleaning and maintenance performed as needed to prevent dry weather overflow and leakage and ensure maximum wet weather flow is conveyed in accordance with CSO BMP #3. Inspection reports shall be completed indicating visual inspection, any observed flow, incidence of rain or snowmelt, condition of equipment and work required. OMIP inspection reports shall be available for NYSDEC review no later than 9am on the day following the inspection and shall be available for NYSDEC review at the associated WRRF no later than 30 days following the inspection."*

b. *The permittee shall also include in the OMIP:*

   i. *"A plan to maintain CSO tidegates to prevent infiltration of seawater into the collection system such that the WRRF influent concentration of chlorides does not exceed a twelve-month rolling average of 400 mg/L. The OMIP shall specify corrective actions to be taken within twelve months of an influent chloride exceedance of 400 mg/L."*

   ii. *A plan and schedule for:*

      1. *"Physical Condition Assessments of interceptor sewers every five years, with a minimum of twenty percent of the interceptor sewers assessed in each year of the five-year period. The assessment of the interceptors shall include an objective ranking and numerical scoring of physical assets. For interceptor sewers determined by permittee to be in need of repair or upgrade, a schedule for such projects shall be provided in each CSO BMP Annual Report. The current five-year assessment, repair and upgrade cycle commenced on January 1, 2018 and shall be completed by December 31, 2022. The next five-year assessment, repair and upgrade cycle shall commence on January 1, 2023, and be completed by December 31, 2028."*
      2. *"A regular program of re-inspection and cleaning of the interceptors based on the inspections and the need to maximize storage capacity of the interceptors in accordance with BMP #2."*

1.1 REGULATORS

DEP submitted the CSO Maintenance and Inspection Program to DEC on August 14, 2003, and an addendum to that Program in February 2023. See Appendix 1.1, Exhibit 1.

A summary of preventive and corrective maintenance performed during 2022 on all regulators tributary to each treatment plant is attached as Attachment A (also submitted under separate cover). The table shows the regulator number, the date when preventive maintenance (PM) was performed at each site and whether any corrective actions were completed (designated on the table by an 'x').

PM of a regulator consists of a physical inspection of the regulator and diversion chambers as well as of the branch interceptors or drop pipes. PM also includes exercising or lubrication of sluice gates and any other maintenance not considered corrective.

Corrective Maintenance (CM) of a regulator includes the clearing or cleaning of all blockages within the diversion chamber, regulator, branch interceptor or drop pipe. CM also consists of any replacement of manhole rungs and the cleaning of all sensors within the chambers.

All inspections performed in 2022 are listed in Attachment A.

1.1.1 Beach-Sensitive Regulators

During the Enhanced Beach Protection period from May 15 through September 30, DEP performed inspections of beach-sensitive regulators through telemetry twice per day. Shift engineers from the Bureau of Wastewater Treatment (BWT) Collection Facilities Operations (CFO) monitor these locations at the beginnings of their shifts and at the ends of their shifts. If telemetry is inoperable, field crews perform site inspections until the telemetry is corrected. See Attachment A for locations DEP inspected when the telemetry was inoperable (designated by an 'x' in the column EBPP).

1.2 TIDEGATES

(b) A plan to maintain CSO tidegates to prevent infiltration of seawater into the collection system such that the WRRF influent concentration of chlorides does not exceed a twelve-month rolling average of 400 mg/L. The OMIP shall specify corrective actions to be taken within twelve months of an influent chloride exceedance of 400 mg/L

WRRF and process personnel notify CFO if they measure elevated chloride levels and flow at their respective WRRFs. CFO personnel initiate a "chloride run" in response to the elevated chloride levels and extra flow. A "chloride run" is a visual inspection of the tide gates within the drainage area experiencing the high chlorides, followed by removal of debris, as needed, and closing of any gates found to be open. DEP performs chloride

inspections in addition to the standard regulator maintenance and inspection of regulators. Please refer to Attachment A for the results of those inspections (table column designated CI).

Attachment A contains a summary of PM and CM performed during 2022 on all tidegates tributary to each WRRF. The table sets forth the Regulator Numbers, the dates when the corresponding facility performed PM (designated by an 'x' in the column TG PM) and whether any corrective actions were completed (designated on the table by an 'x' in the column TG CM).

PM of a tide gate consists of the physical inspection and exercising of the tide gate as well as any other maintenance not considered corrective.

CM of a tide gate includes removal of debris from the gate, cleaning of the rubber seals and rebuilding and refurbishing of all hardware as well as of the flap itself (which includes stop planking, gate removal, hardware cleaning, tap and chase adjusting bolts and new seals if required).

Chloride levels decreased at the following facilities:

- Hunt's Point, 26th Ward, Coney Island, Owl's Head, Newtown Creek, Red Hook, Rockaway and Oakwood Beach.

Chloride levels increased at the following facilities:

- Ward's Island, North River and Tallman's Island.

Analysis for calendar year 2022 shows that the following WRRFs exceeded the twelve-month rolling average of influent chlorides concentrations of 400 mg/l:

- Wards Island, Hunt's Point, Coney Island, Newtown Creek, Red Hook, Bowery Bay, and Port Richmond.

For more information regarding chloride levels at all 14 WRRFs see Appendix 1, Table 1.

Comparative yearly analysis of CY 2021 and CY 2022 average tidal inflow (Appendix 1, Table 2) indicates:

A decrease in estimated tidal inflow occurred at the following WRRFs:

- Hunt's Point, 26th Ward, Coney Island, Owl's Head, Red Hook, Rockaway and Oakwood Beach.

An increase in estimated tidal inflow occurred at the following WRRFs:

- Wards Island, North River, Newtown Creek, Jamaica, Bowery Bay and Port Richmond.

A program is in place to repair defective tide gates in order to prevent tidal waters from entering the system. Below is an update of tide gate locations under reconstruction:

Regulator/Tide Gate Report Status

Reg. #	Status	Scope	Comments
26W-02	In Construction	16 New Gates	JOC Contract
PR -4E, 8E, 17E, 29E, 31E, 34E, 37E, 6W	In Construction	12 New Gates	JOC Contract
NCM-1	In Design	1	JOC Contract

1.3 INTERCEPTOR IMPROVEMENT PROGRAM

In 2022, BWT continued with its intercepting sewer inspection, cleaning, and rehabilitation program.

1.3.1 Scope of Work Completed in 2022

During 2022, DEP's Interceptor Improvement Program proceeded with inspections, cleaning, and rehabilitation of large intercepting sewers. 34891.6 feet of intercepting sewers were inspected citywide and 66.51 tons of sediment were removed from interceptors. An additional 632.42 tons of sediment were removed from non-interceptor assets such as treatment plants, pumping stations, regulators, and other sewer appurtenances, for a total of 698.93 tons.

Table 1: Interceptor Inspected Pipe Summary and Sediments Removed by Drainage Area (2022)

Drainage Area	Inspected length (ft)	Sediment removed (cubic yards)
26th Ward	1524.5	26.98
Bowery Bay	2800.27	0
Coney Island	614.5	21.26
Hunts Point	0	0
Jamaica	739	0
Newtown Creek	5767	2.71
North River	3148.8	0
Oakwood Beach	6466.4	0

Owls Head	0	0
Port Richmond	3124.2	0
Red Hook	0	0
Rockaway	735.2	0
Tallman Island	2099.2	15.56
Wards Island	7872.5	0
Total	**34891.6**	**66.51**

Using the Pipeline Assessment Certification Program (PACP) defect coding and condition scoring rating system developed by National Association of Sewer Service Companies (NASSCO) along with sound engineering judgment, DEP prioritized work such as repairs and cleaning of intercepting sewers. As a screening tool, the PACP system allows for quantitative identification of differences in pipe condition between one CCTV/sonar (inspection) and subsequent inspections, and prioritization based on significance of the defects in the different pipe segments.

The PACP grades two categories of defects: 1) structural and 2) operation and maintenance (O&M). Each condition defect code is assigned a grade from 1 to 5 (with 5 being the worst condition), based on significance of the defect. For each category an overall pipe index/rating is calculated from a summation of all of the defects and the total number of defects. A rank from 1 to 5 (with a 1 being the highest priority) is then assigned to the pipe, depending on the severity of the defects over the entire pipe (manhole to manhole).

Pipes with priority ranking of 1 in the O&M category will be cleaned. Pipes with priority ranking of 1 in the structural category (those with the highest PACP grades) will be subject to a detailed engineering investigation to determine whether their rehabilitation and inclusion in the capital program are necessary. DEP will track the condition of pipes with lower ranks (and lower priority) over time to follow their structural degradation and impact on flow and storage capacity; closer attention will be given to those with a priority ranking of 2.

Other important information to note: Appendix 2.2.3 contains Table 3 – Intercepting Sewer Inspections 2022 – Pipe Rating Index and Ranking. Additionally, the 2022 Map of Intercepting Sewers inspected (CCTV/Sonar) and the locations cleaned are shown in Appendix 2.2.5

2 MAXIMUM USE OF COLLECTION SYSTEM FOR STORAGE

Maximum Use of Collection System for Storage – "The permittee shall optimize the collection system by operating and maintaining it to minimize the discharge of pollutants from CSOs. The sewage collection system, regulating devices and head works upstream of the throttling gates shall be capable of delivering, and must be designed and operated to deliver, at a minimum, the wet weather flow identified in CSO BMP #3. It is intended that the maximum amount of in-system storage capacity be used (without causing service backups) to minimize CSOs and convey the maximum amount of combined sewage to the treatment plant. The permittee shall utilize the InfoWorks model and hydraulic capacity of the system to evaluate potential improvements to convey the maximum amount of combined sewage to the treatment plant. The permittee should also implement a continuous program of flushing or cleaning to prevent deposition of solids and the adjustment of regulators and weirs to maximize storage."

a. *"No Combined Sewer Overflow (CSO) discharges shall occur from any approved key regulator[1] outside the period of a critical wet weather event[2] as a result of either: (1) inadequate or improper operation or maintenance of the WRRF, (2) inadequate or improper maintenance of the sewage collection system and regulators, (3) improper throttling/un-throttling of flow to the WRRF, (4) critical WRRF equipment out of service for prolonged periods, (5) negligence, (6) the system not being operated as designed, (7) or any combination thereof."*

[1] The current list of key regulators shall be provided annually to NYSDEC in the CSO BMP Annual Report
[2] A "wet weather event" is any precipitation, snow melt, runoff or storm surge event which causes the influent flow at the WRRF to exceed normal dry weather flows. A "critical wet weather event" is a wet weather event which causes the influent flow at the WRRF to exceed the wet weather flow identified in the associated SPDES permit. The period of a critical wet weather event shall be defined, for these purposes, to begin when an instantaneous influent flow rate equivalent to the SPDES wet weather flow occurs at the WRRF and end when the instantaneous influent flow rate drops below the SPDES wet weather flow limit.

Interceptors that deliver wet weather flow to the WRRFs can provide in-line storage during wet weather. The following conditions induce this storage: when (a) the influent wet weather flow exceeds the WRRF capacity and the facility must throttle, (b) the WRRF wet well operates above the invert of the influent sewers, or (c) other site-specific circumstances occur. Generally, in these cases, in-line storage of a few hundred thousand to a few million gallons (MG) will be induced in the system.

DEP implements management practices for maximizing use of the collection system to reduce CSOs. The Stationary Electric Engineer (SEE) at the BWT Communication Center monitors approaching storms and notifies the plant Operations SEEs to begin reducing their wet-well elevations immediately, prior to the onset of rain. This action helps increase available capacity in the interceptor, which can reduce CSO volumes. Each plant has

established low-well elevation set points for impending rain events and has documented them in its Wet Weather Operating Plan (WWOP).

In-line storage upstream of CSO Control Facilities induces storage within the barrels upstream from the CSO facilities when operated in accordance with their WWOPs, as further described below.

2.1 KEY REGULATOR MONITORING

The current list of key regulators is in Appendix 2, Table 1.

DEP submits to DEC an annual report (Key Regulator(s) Monitoring Report) of all known or suspected CSO discharges from key regulators outside the period of critical wet weather events, using the data from the telemetry system at the key regulators. The report provides the list of such CSO discharges, the approximate start time and end time for each discharge, the corresponding WRRF flow rate, and the start time and end time of the critical wet weather event.

See Chapter 15 for the full list of the CSO discharges, including an engineering analysis of the cause(s) for each discharge and an analysis of options to reduce or eliminate similar future events.

2.2 SEWER CLEANING AND INSPECTION

2.2.1 Introduction

DEP maintains its sewers through a program of inspections and cleaning performed by DEP personnel and various contractors. DEP does inspections either in person or via camera (CCTV, zoom camera, or push cams). Sewer cleaning methods include hydraulic (flushing), mechanical (e.g., dragging, rodding, vactoring) and chemical (degreasing) procedures. Table 2-1 summarizes cleaning activities performed in calendar year (CY) 2022. Maps of the cleaning activities, by Community Board, for the NYC Department of Design and Construction (DDC) are in Appendix 2.

2.2.2 Sewer Maintenance – Complaint-based Inspection and Response

The Bureau of Water & Sewer Operations (BWSO), Division of Field Operations, has personnel including construction laborers, supervisors, and technical staff whose primary functions are operation, maintenance, and repair of the sewer collection and water distribution systems. For the sewer collection system, this Division performs investigations and responds to all sewer complaints received by the City's 311 call center, including sewer back-ups (SBUs), catch basin flooding, and street flooding. The Division also performs programmatic work involving sewer cleaning and catch basin survey

inspections and cleaning. The group works in conjunction with the BWT Industrial Waste section to investigate grease conditions, to perform programmatic degreasing to ensure proper operation, and to perform routine inspections with the engineering-based Collection Systems Investigation (CSI) section. Maintenance and repair yard facilities are located throughout the five boroughs of NYC; they are equipped with heavy duty and light duty construction vehicles, including truck-mounted crane vehicles (catch basin cleaning trucks), power jet flushing vehicles, power rodding auger trucks, and combined flusher/vacuum trucks.

During CY 2022, there were 11,262 customer service requests that resulted in sewer inspections. Of those requests, DEP determined that 9,273 were unrelated to the DEP infrastructure. In response to each request, the sewer maintenance division performs an initial inspection. This initial inspection includes inspecting the downstream and upstream manholes nearest the complaint location and collecting all data relevant to the incident. If the manhole inspection determines that the complaint was unconfirmed, i.e., that the sewer was functioning as designed, crews are directed to perform hydraulic cleaning for at least two sections of sewer. If the sewer complaint is confirmed, i.e., there was evidence that the sewer was overtaxed, the crews are directed to initially perform hydraulic cleaning; if hydraulic cleaning does not alleviate the condition, crews perform mechanical cleaning to remove material obstructing flow in the sewer to resolve the condition.

In response to these complaints, DEP's in-house forces cleaned over 196.74 miles of sewer. This number either represents actual footage, or, when there was no report of actual footage, represents an estimate of 150 linear feet between two manholes. As indicated, DEP performed the inspections and cleaning in response to service requests, and some of the footage may overlap with requests made at different times.

2.2.3 Sewer Maintenance – Proactive Inspection and Response

BWSO performs proactive sewer inspections and response through a program called the Sewer Operations and Analysis Program (SOAP), initiated by DEP in 2011. Quarterly, areas of the city associated with recurring, confirmed SBU complaints are assigned to each of the sewer yards for inspection.

Using its Geospatial Information System (GIS), DEP has divided the city into more than 157,700 sewer segments. A sewer segment is defined as a city block, street center line to street center line. Analysis has shown that approximately 0.72% of the overall sewer segments experienced a confirmed SBU, while only 0.20% of the overall sewer segments experienced more than 1 SBU event. Locations with recurring service issues are the focal point of the SOAP program. Under the SOAP program, in-house staff inspects and investigates each street segment. The inspections may lead to cleaning, as warranted, spot repair, if necessary, or referral for capital replacement, as appropriate.

DEP manages FOG issues of varying severity to ensure effective resolution and future maintenance. DEP's Programmatic Degreasing List addresses recurring FOG conditions. DEP tracks and visits the locations on the List, and cleans them mechanically, hydraulically, or chemically according to an established programmatic schedule. During CY 2022, under the Liquid Degreaser (LDG) Program, DEP proactively cleaned 141.98 miles of sewer. Some of these lengths may overlap depending on the frequency warranted by the FOG condition.

During CY 2022, under the programs for SOAP, LDG, and Field Operations' regular sewer maintenance, 323.83 total miles of sewer were proactively inspected and cleaned with in-house resources.

2.2.4 CSI Sewer Inspections

At times, field crews identify sewer conditions that require cleaning beyond the crews' capabilities. For example, the size and condition of the sewer or a record of recent, repeated cleanings may limit a crew's ability to take effective action. In these instances, DEP transfers the work to its CSI Section. The CSI staff then delineates the specific needs and boundaries of the work via more robust field inspection. Once staff defines the scope, DEP can assign the work to DEP's citywide contractors for cleaning and debris removal.

DEP's CSI Section is also responsible for performing internal, visual inspections of sewers. Field crew initial responders identify most areas that require inspection. Other agencies, such as the New York City DOT and DDC, identify the balance of the inspection work when it is required to support their capital planning work. DEP's CSI Section, through in-house personnel and citywide contracting, inspected 1,089,825 linear feet (or 206.41 miles) of sewers at 551 locations throughout the city during CY 2022. Some of this footage overlaps with areas addressed by field crews. As explained above and further below, this overlap occurs because the visual inspection is done prior to cleaning activities, as it is necessary to determine the extent of cleaning needed. DEP also conducts post-cleaning inspections to verify that the contractor has completed the work in an acceptable manner.

2.2.5 Citywide Sewer Cleaning Contracts

As discussed above, after DEP inspects the sewers to determine the scope of cleaning required, it assigns the work to a contractor who performs the work for DEP at various locations citywide. The contractor has equipment capable of cleaning sewers with diameters up to and including 204". Using the citywide sewer cleaning contractor resources, DEP cleaned 528,206 linear feet or approximately 100.04 miles of sewers in CY 2022. The cost of this work was $11,001,353.85.

2.2.6 Sewer Cleaning for Lining and Guniting Activities

DEP also rehabilitates sewers with the use of lining and guniting methods. For both lining and guniting, the first step is to remove all debris, grease, and silt from within the sewer. Upon completion of the rehabilitation, the sewers are either TV-inspected or visually inspected. In CY 2022, DEP lined 38,181 linear feet (or 7.23 miles) of sewer at a cost of $6,121,624.33. In CY 2022, DEP gunited 10,057 linear feet (or 1.90 miles) of sewers at a cost of $9,971,000.00.

2.2.7 Sewer Cleaning and Inspection: Capital Project Design

When DEP plans capital work for a specific location, DDC may perform sewer maintenance work associated with its capital project design program, i.e., it may inspect the sewer infrastructure in the street via TV camera and then clean as necessary. In CY 2022, DDC inspected and cleaned 53,569 linear feet or 10.15 miles. (See Table 2-1 and Appendix 2)

Table 2-1: Summary of Sewers Inspected & Cleaned by DEP BWSO & DDC in CY 2022

METHOD	**INSPECTED & CLEANED (miles)**
In-House (Reactive)	196.74
In-House (Proactive)	323.83
CSI Unit	206.41
Lining	7.23
Guniting	1.90
DDC Inspections & Cleaning	10.15
TOTALS:	**746.26**

3 MAXIMIZE FLOW TO WRRF

Maximize Flow to WRRF – "Factors cited in BMP #2 above shall also be considered in maximizing flow to the WRRF. Maximum delivery to the WRRF is particularly critical in treatment of "first-flush" flows. For the entire duration of each wet weather event, the treatment plant shall be physically capable of receiving and treating: a minimum of the plant-specific wet weather capacity through the plant headworks; a minimum of the plant-specific wet weather capacity through the primary treatment works and disinfection works; and a minimum of the plant-specific secondary system wet weather capacity through the secondary treatment works during wet weather. The actual process control set points may be established by the WWOP required in BMP #4. The collection system and associated regulating devices shall be optimized to the extent practicable to minimize the release of combined sewer overflows."

a. "All critical equipment out-of-service for necessary repair or maintenance must be returned to service as quickly as reasonably possible. If critical equipment is anticipated to be or is out-of- service for necessary repair or maintenance for more than 48 hours or under a NYSDEC approved schedule, NYCDEP must notify NYSDEC Region 2 verbally and in writing of such event and the anticipated time such equipment will be returned to service. NYCDEP must also notify NYSDEC Region 2 both verbally and in writing if during such an outage NYCDEP will be unable to temporarily and safely return the equipment to normal service without the potential for reasonable damage to the equipment. Upon receipt of such notice, and on a case-by-case basis, NYSDEC may adjust the flow required to be passed through the WRRF in consideration of the recommendations contained within an approved Wet Weather Operating Plan ("WWOP") as set forth in Subparagraph 4(b) below. NYSDEC will not unreasonably refuse to adjust the flow requirement. If NYSDEC adjusts the flow, the adjustment shall be deemed retroactive to the start date and time of the event."

b. "NYCDEP shall report all temporary throttling events, prior to achieving the minimum WRRF flows, even if they are the result of routine equipment outages for less than 48 hours. NYCDEP shall also report, as a reportable bypass, such events if they occur because screening equipment becomes "blinded" or equipment is removed from service during a wet weather event. NYSDEC will accept a revised bypass report, in the event that NYCDEP subsequently reports that all impacted equipment has been returned to service within 48 hours of the initial report."

DEP's WRRFs and associated interceptor sewers have been designed and constructed to deliver and treat approximately two times dry weather flow during wet weather. In order to protect the WRRFs' biological process to ensure effective treatment, as well as to guard against homes being flooded during wet weather events, conveyance structures called "regulators" were incorporated into the City's combined sewer system to regulate the flows that reach the interceptors and the WRRFs. Since the City's sewer system was constructed in the early 1900s, almost five hundred regulators have been installed to

regulate the flow to 135 miles of interceptors and 14 WRRFs. Regulators allow all dry-weather sewage and some stormwater runoff to enter the interceptor. During times when the amount of flow due to wet weather exceeds the design capacity of the sewer system, combined sewage spills over a fixed weir inside the regulator, and into a local water body. These discharges, subject to certain conditions, are permitted under DEP's SPDES permits.

Most of the regulators are located along waterways. The outfall pipe from the regulator is only a short distance from the waterbody, while the tributary WRRF may be miles away. Consequently, depending on the length and/or intensity of the wet weather event, and consistent with the design of the collection system, overflow from a regulator during a storm can occur at an outfall pipe some distance from the WRRF and long before the wastewater in a regulator's catchment area reaches the WRRF.

DEP has completed a number of CSO projects that convey additional flow to the WRRFs and, under the approved CSO LTCPs, will construct additional CSO controls in the future.

3.1 Critical Equipment Notifications

In accordance with the 2022 SPDES permits, DEP continued notifying DEC whenever critical equipment was anticipated to be, or was, out of service for necessary repair or maintenance for more than 48 hours or under a DEC-approved schedule. Upon receipt of such notice, and on a case-by-case basis, DEC may adjust the flow that must pass through the WRRF in consideration of the recommendations contained within an approved WWOP. DEP based all subsequent required reporting, including determination of critical wet weather events, on the reduced wet weather capacity levels submitted in these critical equipment notifications.

3.2 WRRF Wet Weather Throttling

DEP continued reporting, within the required two-hour time frame, events in which the WRRF throttled but never achieved the applicable SPDES-permitted wet weather capacity at any point during the period the WRRF throttled, except in instances when the WRRF was at reduced capacity in accordance with the Wet Weather Operating Plan and with prior approval by the DEC.

The 2022 SPDES permits define a critical wet weather event:

> A "*wet weather event"* is any precipitation, snow melt, runoff or storm surge event which causes the influent flow at the WRRF to exceed normal dry weather flows. A "*critical wet weather event"* is a wet weather event which causes the influent flow at the WRRF to exceed the wet weather flow identified in the associated SPDES permit. The period of a critical wet weather event shall be defined, for

these purposes, to begin when an instantaneous influent flow rate equivalent to the SPDES wet weather flow occurs at the WRRF and end when the instantaneous influent flow rate drops below the SPDES wet weather flow limit.

Generally, the wet weather flow identified in the associated SPDES permit of the WRRF is two times the design dry weather flow (2xDDWF), but it may be less than 2xDDWF under certain operational limitations (e.g., when DEP reports critical equipment is out of service and submits a reduced capacity request to DEC).

For Coney Island, an interim wet weather flow limit of 198 MGD was approved, by consent order, to facilitate completion of the replacement of the main sewage pump system as part of the Emergency Stabilization Project. Additionally, for part of 2022, the weather capacity was further reduced due to corrective maintenance to the main sewage pumps.

For Newtown Creek, a critical equipment notification and reduced weather capacity request was submitted for corrective maintenance to the plant's secondary outfall (Whale Creek). As of September 23, 2022, only the main plant outfall (India Street) is in service. The plant's reduced wet weather capacity is dependent on the tide cycles during the emergency repair of the Whale Creek outfall structure.

For Wards Island, critical equipment notifications and reduced weather capacity requests were submitted for corrective maintenance to main sewage pumps, primary screens, and primary settling tanks, for part of 2022.

Included in Appendix 3.1 is the CY2022 Critical Wet Weather Event Summary for each plant (January to December.) The summary tables include details related to the critical wet weather events for each plant, including: the event-specific wet weather capacity, plant throttling information, and the start and end times of the critical event with its corresponding maximum and average flows.

3.3 Combined Sewage and Floatables Percent Capture at NYC WRRFs

DEP uses a calibrated InfoWorks Hydraulic Model in conjunction with WRRF rain gauge data, and plant operating and rain gauge information to calculate the annual percent wet weather capture. A detailed report on Combined Sewage and Floatables Percent Capture at DEP WRRFs is included in Appendix 3.

4 WET WEATHER OPERATING PLAN (WWOP)

Wet Weather Operating Plan (WWOP) – "The permittee shall maximize treatment during wet weather events, based on the critical equipment assessed to calibrate the peak hydraulic loadings. This shall be accomplished by having a WWOP containing procedures and operational guidance to WRRF staff for operating unit processes, including any regional CSO treatment/retention facilities listed in this permit, WRRF to treat the maximum flows, while not appreciably diminishing effluent quality or destabilizing treatment upon return to dry weather operation. The WWOP shall establish process control procedures and set points to maintain the stability and efficiency of the Biological Nitrogen Removal (BNR) process, if required, for the host WRRF. The WWOP shall be written in accordance with the NYSDEC publication, Wet Weather Operating Practices for POTWs with Combined Sewers."

> *a. " The WWOP shall also incorporate the throttling protocol and guidance developed during the 2014 CSO BMP Order Pilot Study and all subsequent updates. WRRF influent flow throttling operations shall not be initiated until the influent flow at the WRRF is at or above the wet weather flow requirement in the applicable SPDES permit (as may be adjusted in accordance with 3 above). Cessation of such flow throttling shall be initiated on or before the influent flow to the WRRF drops below the wet weather flow requirement and shall proceed at the maximum rate until complete."*

b. "The flow rate recommendations incorporated into an approved WWOP that apply when specific equipment is out of service are guidelines that should be followed by the personnel operating the WRRF. However, the recommendations contained within a WWOP do not automatically modify or reduce the requirement to maintain the minimum wet weather flow requirements in the applicable SPDES permit, nor does having a treatment unit out of service automatically modify or reduce such flow requirements."

c. "The permittee shall submit an updated WWOP to NYSDEC in accordance with the Schedule of Additional Submittals in this permit. A revised WWOP must also be submitted whenever the POTW and/or sewer collection system is substantially replaced or modified in a manner that may impact wet weather operations."

DEP updated and submitted to DEC in 2022 a WWOP for each WRRF and CSO retention faciliy. Appendix 4 summarizes the history of WWOP submittals.

DEP Engineering Analyses of WRRF influent flow throttling operations provide specific recommendations for initiation and cessation of wet weather flow throttling operations designed to maximize flow through the WRRF and include throttling protocol set points and indicators used to determine how and when throttling occurs at each WRRF. The WWOPs incorporate the throttling protocols and guidance developed in the Engineering Analyses and continue to be updated as needed based on changes to operations or equipment.

4.1 nFORM ADDITIONAL INFORMATION

BMP 5 Wet Weather Operating Plan (WWOP)

Line 176 *"Does the plant identify the maximum flows through preliminary, primary, secondary treatment, tertiary, and disinfection units?"*

DEP answer: "No." The WWOPs identify the minimum flow capacity rates through the treatment units, not the maximum flow capacity.

Line 177 "In the past year, did treatment of wet weather flows cause any effluent violations or destabilize treatment upon return to normal service?"

There have been instances when wet weather flows have caused effluent violations; however, there have been no instances when wet weather flows have destabilized treatment upon return to normal service. Specifically, in the past year, DEP has reported effluent violations for parameters such as daily maximum total suspended solids (TSS) concentration at various WRRFs. Elevated flows due to wet weather can result in solids washout from the final clarifiers which can contribute to elevated fecal coliform counts or effluent TSS concentrations. Please refer to the monthly Discharge Monitoring Report submittals for specific information.

5 PROHIBITION OF DRY WEATHER OVERFLOW

Prohibition of Dry Weather Overflow – "Dry weather overflows from the combined sewer system are prohibited. The occurrence of any dry weather overflow shall be promptly abated and reported to the NYSDEC Region 2 Office in accordance with 6 NYCRR Part 750-2.7."

Dry weather overflows from the combined sewer system are prohibited and DEP's goal is to reduce and eliminate dry weather bypasses. As a result of DEP's continuing efforts in this regard, in CY 2022, pump station and regulator bypasses continue to remain at low levels.

DEP promptly abates any dry weather overflow and reports it to DEC through the NY-Alert notification system within two hours of confirmation of the discharge. DEP also submits a written report to DEC within five (5) days of the confirmed time of occurrence.

A yearly comparison of regulators, pump stations and WRRFs' dry weather bypassing is attached in Appendix 5.

Dry weather bypasses from the NYC collection system during the reporting period totaled 41.75 MG, as listed in Appendix 5. This total includes discharges from other locations including outfalls and street locations. Bypasses from pump stations and regulators were 0.011% (41.75 MG) of the total 403 billion gallons (BG) of dry weather flow treated by NYC's 14 WRRFs in CY2022

Pump station and regulator failures that resulted in dry weather bypassing during CY 2022 were categorized by cause and grouped by cause code. Major causes were further sub-coded and identified in more detail. These bypasses were analyzed for trends at individual locations and, as a result, DEP is studying specific locations for improvements or modifications to reduce future bypassing.

5.1 PUMP STATION DRY WEATHER BYPASSING AND ANALYSIS

On January 3, 2022, DEP was notified by NYPD traffic management of flooding on the Grand Central Parkway (GCP) near 75th Avenue. DEP personnel were deployed to investigate and determined that the source was a broken force main from the Park Drive East Pump Station which crosses the GCP and conveys sewage to the Bowery Bay WRRF. The location of the force main break was on the GCP service road. The force main break resulted in sewage entering nearby catch basins which discharge to Willow Lake. The incident resulted in a bypass of approximately 240,000 gallons to Willow Lake.

On February 3, 2022, DEP was notified of a SCADA alarm for a high wet well level at the Van Brunt St. Pumping Station, which caused a discharge into Regulator RH-01. The

Pumping Station currently is running on a temporary hydraulic pump pending replacement of the main sewage pumps at this location. When DEP personnel arrived on site, they observed that the temporarily installed hydraulic pump was operating. However, because the wet well was flooded, DEP staff suspected that there was a potential clog in the system. At the time of the bypass, the pump station was using the 6” force main associated with the pump station after installation of a liner in the 6” force main the day before; the station was using that force main for testing that day. The incident discharged approximately 233,280 gallons of sewage to a catch basin and through Outfall No. RH-01, which discharges to the Upper East River.

On April 29, 2022, a raw sewage bypasse occurred at th 235 St Pump Station due to 1) an electrical controls failure on Main Sewage Pump (MSP) #1 causing a burnt fuse in the switchgear; and 2) an engine fault failure for the backup Godwin pump which prevented it from automatically starting after MSP #1 did not start. The incident discharged approximately 585,000 Gallons to the Hudson River.

On May 13, 2022, DEP responded to a telemetry system alarm at the Throgs Neck Pumping Station. The main sewage pumps were found to be out of service resulting in a raw sewage bypass. Upon investigation, DEP personnel determined the pump outage was caused by a control system failure due to a broken fuse on the electrical control system and a faulty compressor for the bubbler system, which control the main sewage pumps. The incident resulted in a bypass of approximately 1.8 MG to the East River.

On June 28, 2022, a raw sewage bypass was discovered at the Hollers Avenue Pumping Station during routine inspection. The bypass was caused by a complete blockage from debris caused by grease buildup. Approximately 37,500 gallons of untreated flow was discharged into the Hutchinson River.On September 25, 2022, DEP discovered flooding on the GCP near 75th Avenue. DEP personnel investigated and determined that the source of the flooding was a broken force main from the Park Drive East Pump Station. This force main crosses the GCP and conveys sewage to the Bowery Bay WRRF. The force main break resulted in sewage entering nearby catch basins that discharge to Willow Lake. The incident resulted in a bypass of approximately 120,000 gallons.

On October 20, 2022, DEP personnel investigating an odor complaint near the West Shore Expressway discovered a raw sewage bypass from the Victory Boulevard Pump Station. The investigation found the Pump Station to be operational; however, no flow was observed at the downstream discharge manhole from the forcemain. Using a drone along with a dye test from the Pump Station, DEP determined that there was a break in the Pump Station’s 16-inch forcemain, which conveys sewage to the Port Richmond WRRF. The forcemain break caused a sanitary sewage discharge into wetlands that flow to Arthur Kill. On October 28, 2022, a diversion pumping system was placed into operation at the Victory Blvd Pump Station which diverted the discharge directly to Arthur Kill to prevent further release to the wetlands. Due to site constraints where the forcemain runs through the wetland, significant site preparation was needed before DEP could commence any repairs and/or install a temporary bypass. DEP immediately mobilized

contractors to assess corrective actions at the site of the forcemain break. The Victory Boulevard Pump Station needed to continue operating to prevent sewer backups. In an effort to isolate the forcemain to address the break and cease the wetland discharge, and in consultation with NYSDEC, DEP evaluated options to redirect the flow from the Victory Boulevard Pump Station to directly discharge into Arthur Kill. A diversion pumping system was installed and placed into operation at the Victory Blvd Pump Station on October 28th, which diverted the discharge directly to Arthur Kill. DEC issued an Emergency Authorization (Application No. 2-6403-00324/00001-4) to DEP on November 3, 2022. Simultaneously, DEP proceeded with construction to install a temporary pipe realignment around the forcemain break. The temporary pipe realignment was placed into operation on November 18th at 2:10 AM which ceased the direct discharge to Arthur Kill, ending the bypass. The incident resulted in a bypass of approximately 37.2 MG.

On December 23, 2022, DEP discovered a raw sewage bypass at the Van Brunt Pump Station. The combination of rain and high tide caused the electrical vault to flood, resulting in a power outage at the station. The incident resulted in a bypass of approximately 98,000 gallons to Upper New York Bay.

5.2 Regulator Dry Weather Bypassing and Analysis

On April 16, 2022, DEP discovered a raw sewage bypass from Regulator TI-44 during routine monthly inspection of the regulator. The bypass was caused by a 70% blockage from buildup of asphalt and rags. The incident resulted in a bypass of approximately 38,000 gallons to Powells Cove.

On May 3, 2022, DEP discovered a raw sewage bypass at Regulator BBL-32B during a routine inspection of the regulator. The bypass was caused by a blockage from debris buildup including rags and grease. The incident resulted in a bypass of approximately 7,800 gallons to the East River. On June 19, 2022, DEP discovered a raw sewage bypass at Regulator BBL-20 during routine inspection of the regulator. The bypass was caused by an open 6-inch blow off valve, that allowed potable water to flow into the sewer line. With the additional flow, approximately 10% of the dry weather flow in the regulator discharged through the tide gate into the East River. The incident resulted in a bypass of approximately 1.038 MG.

On June 21, 2022, DEP discovered a raw sewage bypass at Regulator WIM-20 during a routine inspection of the regulator. The bypass was caused by a complete blockage from debris buildup including rags and grease. The incident resulted in a bypass of approximately 15,000 gallons to the East River.

On August 31, 2022, DEP discovered a raw sewage bypass from Regulator TI-57 during routine inspection of the regulator. The bypass was caused by a 10% blockage from grease buildup. The incident resulted in a bypass of approximately 150,000 gallons to Flushing Bay.

On September 11, 2022, DEP discovered a raw sewage bypass from Regulator BBL-32B during routine inspection of the regulator. The bypass was caused by a partial blockage from grease and rag buildup. The incident resulted in a bypass of approximately 550 gallons to the East River.

On October 13, 2022, DEP discovered a raw sewage bypass from Regulator BBL-32B during routine inspection of the regulator. The bypass was caused by a partial blockage from grease and rag buildup. The incident resulted in a bypass of approximately 1,560 gallons to the East River.

On October 28, 2022, DEP discovered a raw sewage bypass from Regulator NR-36 during routine inspection of the regulator. The bypass was caused by a blockage due to rags. The incident resulted in a bypass of approximately 1,575 gallons to Hudson River.

On November 4, 2022, DEP discovered a raw sewage bypass at the HP – Regulator No. 5. DEP personnel determined that the source of the bypass a partial blockage caused by rags and wipes in the 24-inch interceptor downstream of Regulator No. 5, resulting in untreated sewage entering Outfall HP-011 that discharges to the East River. The incident resulted in a bypass of approximately 45,000 gallons.

On November 16, 2022, DEP discovered a raw sewage bypass from Regulator TI-57 during routine inspection of the regulator. The bypass was caused by a blockage from grease buildup. The incident resulted in a bypass of approximately 42,750 gallons to Flushing Bay.

5.3 WRRF Dry Weather Bypassing and Analysis

There were no WRRF-related dry weather bypasses in 2022.

5.4 Other Locations Dry Weather Bypassing and Analysis

On June 10, 2022, DEP discovered during a routine inspection of Regulator HP-15A a raw sewage bypass from Outfall HP-024. DEP personnel had difficulty accessing the diversion chamber associated with Regulator HP-15A since a private fence was erected over the access manhole. After further investigation, DEP found that the bypass was caused by debris in an upstream diversion structure at Boston Rd and Boller Ave., causing excessive flows to divert to Regulator HP-15A. The excessive flow overwhelmed the dry weather outlet of the regulator and caused a surcharge condition in the associated diversion chamber. DEP estimates that approximately 20% of the flow to Regulator HP-15A breached the wet weather overflow weir and discharged through the outfall, HP-024. The incident resulted in a bypass of approximately 98,700 gallons to the East River.

6 INDUSTRIAL PRETREATMENT

Industrial Pretreatment – "The approved Industrial Pretreatment Program shall consider the impacts of discharges of toxic pollutants from unregulated, relocated, or new SIUs tributary to CSOs that were not identified in the report entitled, "CSO Abatement in the City of New York: Report on Meeting the Nine Minimum CSO Control Standards." The approved Industrial Pretreatment Program shall consider CSOs in the calculation of local limits for indirect discharges. Discharge of persistent toxics upstream of CSOs will be in accordance with guidance under ***NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.3.8 New Discharges to POTWs****. For industrial operations characterized by use of batch discharge, consideration shall be given to the feasibility of a schedule of discharge during conditions of no CSO. For industrial discharges characterized by continuous discharge, consideration must be given to the collection system capacity to maximize delivery of waste to the treatment plant. Non-contact cooling water should be excluded from the combined system to the maximum extent practicable. Direct discharges of cooling water must apply for a SPDES permit."*

"To the maximum extent practicable, consideration shall be given to maximize the capture of industrial waste containing toxic pollutants and this wastewater should be given priority over residential/commercial service areas for capture and treatment by the POTW. These factors shall be considered in the location and siting of new industrial users with preference to service by areas not tributary to CSOs or having sufficient capacity to deliver all industrial wastewater during all conditions to the POTW. These provisions apply to both new and existing industrial users."

This program continues as described in last year's Report. During 2022 DEP performed 544 inspections of regulated industries and issued 34 summonses.

Attached in Appendix 6, Exhibit 1 is a copy of the letter sent to industrial users (IUs) informing them that their permits had been amended, and a graph of annual trends in discharges to NYC WRRFs that contain metals. The total amount of metal being discharged by regulated IUs remains very low. In 2022, the average daily discharge containing metals by all regulated industries to the NYC WRRFs was 7.3 lb/day. This amount corresponds to a trend of declining IU discharges. If the same percentage of CSO bypass (0.05676 %) from the CSO report is applied to the 2022 data, then on average approximately 0.004 lb/day of total metal would be included in CSO overflows.

Between 1997 and 2022 the total amount of metal being discharged by regulated IUs in the City has been reduced by more than two orders of magnitude. The total metals

loadings for 1997–2009, 2012, 2017 and 2022 were calculated based on monthly metal sampling, and the remaining years were calculated based on annual priority pollutant scans. A list of regulated industries, with average daily wastewater discharge flows and average pollutant loadings is summarized in the 2022 IPP Progress Report.

6.1 Requirement for Significant Industrial Users to Hold Their Process Wastewater and Non-contact Cooling Water to the Maximum Extent Practicable During Heavy Rains

As an alternative means to reduce the likelihood of CSOs during storm events, DEP requires regulated industries to hold their process wastewater and non-contact cooling water to the maximum extent practicable during heavy rains. In 2022, DEP continued to implement this requirement for Significant Industrial Users (SIUs). Please see the CY2009 CSO BMP Annual Report for more details about this program. Additional information may be found in Appendix 6.

7 CONTROL OF FLOATABLE AND SETTLEABLE SOLIDS

Control of Floatable and Settleable Solids – "The discharge of floating solids, oil and grease, or solids of sewage origin which cause deposition in the receiving waters, is a violation of the NYS Narrative Water Quality Standards contained in Part 703. As such, the permittee shall implement the following best management practices in order to eliminate or minimize the discharge of these substances:

- ***a. Catch Basin Repair and Maintenance* – "***The permittee shall inspect each catch basin in the tributary collection system a minimum of once every 36 months. Catch basins will be cleaned as required based on these inspections and in accordance with the permittee's criteria for catch basin cleaning. The permittee shall replace missing or damaged catch basin hoods within 90 days after the date of inspection for basins known to be hooded upon completion of the catch basin hooding program. For all future basins found by inspection to require extensive repairs before a hood can be installed, the permittee shall repair and install a hood within 24 months."*
- ***b. Booming, Skimming and Netting* – "***The permittee shall operate and maintain the floatable containment boom (or floatable containment netting or open-water skimming program) as applicable for the CSO outfalls listed in this permit. The in-water containment boom shall be inspected within 48 hours of a confirmed CSO event and, if necessary, cleared of floating debris. The permittee shall visually inspect floatable containment netting on a weekly basis and shall replace damaged or full netting bags as necessary."*
- ***c. Institutional, Regulatory, and Public Education* –"***The permittee shall continue to implement the City-Wide Floatables Plan."*

"The permittee may submit an application to the department for an alternative implementation schedule for Items 7.a. and 7.b. for combined sewer areas that are tributary to a permanent land based CSO abatement and treatment facility designed for the control of floatables and permitted by the department. The permittee shall include a basic floatables control summary in the CSO BMP Annual Report under BMP #15 (checklist items at a minimum) and may defer more detailed reporting of floatables control efforts to the MS4 Annual Report."

7.1 CATCH BASIN REPAIR AND MAINTENANCE

Catch basin maintenance and repair work is a major focus of DEP's daily activities. DEP devotes significant resources to these tasks both as part of its three-year programmatic inspection cycle in compliance with the SPDES permits, and in response to complaints received from the public.

DEP tracks catch basin maintenance and repair activities through Infor Public Sector (IPS), a complaint and work order management system. DEP performed 80,572 programmatic catch basin inspections in 2022. Table 7.1-1: “CY 2022 Catch Basin Inspection & Cleaning” presents a summary of catch basin cleaning identified through the inspection program and other routine maintenance activities for each borough.

Catch basin hooding, one of EPA’s Nine Minimum Controls, is an important element of DEP’s CSO floatables control program and can significantly reduce the discharge of street litter to combined sewers, storm sewers, and receiving waters. In 2022, DEP hooded 2,728 catch basins; 1,315 of those were found to require extensive repairs before a hood could be installed and the work took on average 87 days. The rest (1,413) were installed within an average of 83 days, with 59% completed within the 90 days. Table 7.1-2: CY 2022 Catch Basin Hooding, summarizes catch basin hooding during 2022 for each WRRF drainage area. The status of these basins is monitored through DEP’s IPS system to ensure compliance within the allotted time.

7.2 BOOMING, SKIMMING AND NETTING

BWT maintains 22 permanent floatable containment facilities and 1 temporary CSO boom at the Gowanus Canal for a total of 23, corresponding to storm and combined sewer drainage areas totaling approximately 60,000 acres. Floatable containment site locations and offloading facilities are depicted in Figure 7-2. The floatable materials contained by the boom and net sites are retrieved by three, City-owned skimmer vessels. Offloading currently occurs at three DEP WRRFs. The skimmer vessels are operated by BWT marine title personnel. The personnel also provide containment site inspections, maintenance and repair. Skimmer vessel maintenance and repair services are handled either by in-house personnel or, when necessary, via a marine services contract.

Skimmer vessels are dispatched to retrieve collected floatables from booms and nets based on inspections conducted with small vessels within 24 to 48 hours of significant rain events. The small, inspection vessels are also equipped with hand netting tools for retrieval of small accumulations of floatables, so that the skimmer vessel use is more focused on containment sites with large amounts of floatables. In dry weather, boom and net inspections occur at least weekly and may occur more often for certain sites where specific tide and wind conditions may cause debris to accumulate outside of rain events.

In 2022, about 238 cubic yards of floatable material were retrieved from the 23 containment facilities and some minor open water skimming (see Table 7.2-C). Total floatable recovery per each year is provided in Figure 7.2-B and in Appendix 7.2.1, Table 7.2-A. Floatable recovery totals for 2022 per each of the boom and net sites are included in Appendix 7.2.2, Table 7.2-B.

Figure 7-4. DEP Skimmer Vessel "Shearwater"

DEP currently has two self-propelled skimmer vessels (Aquarius Systems Custom Model HSTH235 - High Speed Trash Hunter) and one old vintage skimmer vessel which must be towed. DEP relinquished 1 vessel in April 2019 and is currently procuring a new vessel.

Table 7.2-D reflects NYCDEP CSO Floatable Removal Program via Skimmer Vessels – Collection Summary (Cubic Yards).

7.3 INSTITUTIONAL, REGULATORY, AND PUBLIC EDUCATION CONTROLS

In 2022, DEP continued, in partnership with other City agencies, to implement a variety of institutional, regulatory, and public education controls. For a detailed description and history of the City's work to reduce trash and settleable debris citywide, please refer to prior CSO BMP Reports available at https://www1.nyc.gov/site/dep/water/combined-sewer-overflows.page and the NYC Stormwater Management Program (SWMP) Plan available at www.nyc.gov/dep/ms4.

7.3.1 Public Engagement - 2022 Activities

In 2022, DEP continued to educate the public and raise awareness about the New York City wastewater treatment and water supply systems and stormwater management (including floatables reduction, litter reduction, the proper disposal of grease, and water conservation). DEP developed and implemented through its Bureau of Public Affairs & Communication (BPAC), a comprehensive education and outreach program featuring in-person and virtual formats:

- School programs (grades pre-K-college graduate)
- Education programs for professional organizations
- Visitor Center at Newtown Creek programs
- Professional learning opportunities for formal and non-formal educators
- Special education programs and events
- Public exhibitions
- Volunteer Programs
- Multi-media distribution
- Publications
- Promotional items
- Website updates

The City continued its annual “Clean Streets = Clean Beaches” Campaign, which featured an informational poster with the slogan “Don’t Mess up Summer” for display at area beaches, on NYC Department of Sanitation (DSNY) fleet vehicles and on City agency social media.

Through coordination with other city agencies, including DSNY and Parks, the public engagement program not only increased the public’s awareness of the impact of littering, but also directly reduced litter through community cleanups and reduced rainfall runoff through tree planting, all of which work to reduce CSOs and their impacts on New York Harbor.

7.3.2 Development of BMPs for the Automotive Industries

DEP translated its automotive guide into Russian and Spanish (for a full description of this guide, please see the CY 2012 CSO BMP Annual Report). The BPAC Environmental Compliance Outreach (ECO) unit visited 5 automotive businesses.

7.3.3 Control of Floatables in Bluebelts

Development of New Creek, South Beach, and Oakwood Beach Bluebelts: Construction continued at New Creek BMPs NC-11, NC-12, NC-13, NC-14, and NC-16, and NC-11, NC-12, NC-13, and NC-14 were completed. In addition, the construction contractor for NC-6 and NC-15 received the notice to proceed and began work. The US Army Corps of Engineers will be constructing BMPs in the Oakwood Beach, New Creek, and South Beach areas within the next three years as part of the South Shore Staten Island Coastal Storm Risk Management program.

Contractor constructing BMPs at Lemon Creek (LC-1) received notice to proceed and began work in 2022.

Adopt-a-Bluebelt – This program is ongoing. The total number of sites adopted and maintained by local community groups, companies, or individuals is 48, covering an area of 46,500 square feet.

Volunteer Cleanups – Volunteers from St. Clare's School and Gaynor McCown School participated in Bluebelt community cleanups, contributing a total of 8 hours.

Catch Basin Outreach and Education – All existing and newly-installed catch basins that are tributary to Bluebelts are marked with the "No dumping – flows to Bluebelt" message.

Floatables Control – Dynamic detention weirs with trash capturing devices have been installed in the New Creek Bluebelt. Trash racks are maintained regularly to keep floatables out of New Creek. These weirs have eliminated the need for floating booms. A new, large weir with a trash rack was completed in New Creek.

Illegal Dumping Enforcement – The DEP Bluebelt division with assistance of a contractor removes illegal dumping and other debris found on DEP-owned Bluebelt

properties. During the reporting period, the Bluebelt program removed 741 cubic yards of trash and debris from Bluebelt sites.

7.3.4 School and Visitor Center Programs, Professional Development, Special Events and Exhibitions

DEP manages an extensive education and outreach program that targets NYC students, teachers, parents, school administrators, curriculum specialists, non-formal educators, residents, community organizations, businesses, and visitors and internet users. The program is supported through education programs at the Visitor Center at Newtown Creek and the Newtown Creek Nature Walk, education classes taught at schools and public events, digital resources and print material, multi-media public service campaigns, exhibitions, publications, promotional item distribution, and the DEP website.

BPAC's education programs and resources continued to reach thousands of young people and adults. Some specific examples of these programs are presented below.

7.3.4.1 Other Education Programs and Resources

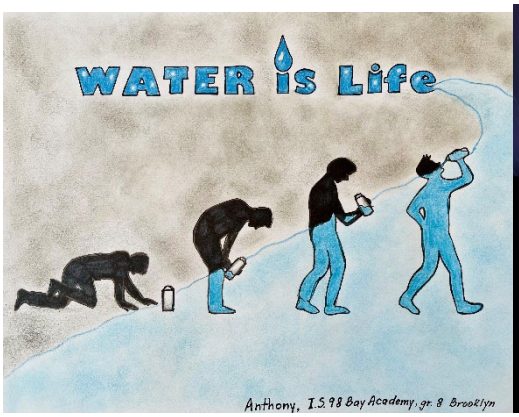


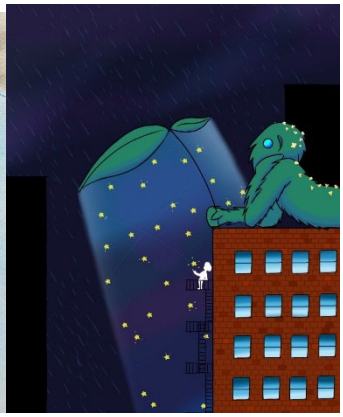
DEP conducted hundreds of educational programs with young people and adults through both in-person and virtual school visits, field trips, Visitor Center at Newtown Creek presentations, teacher professional learning opportunities, and other educational programs and events. DEP developed and distributed educational materials to thousands of recipients throughout NYC, including information about NYC's wastewater treatment and water supply systems and about harbor water quality; teacher lessons and student activities; and educational resource guides. DEP continued to enhance, distribute, and workshop our curriculum guide for K-8 classrooms, *Understanding New York City's Water Story*, which includes a compilation of successful lessons and activities. Additionally, DEP continued to distribute the Jamaica Bay Education Resource Directory and four virtual tours (using ArcGIS StoryMaps) of the NYC watershed, sewer system, wastewater treatment process, and harbor protection programs. 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 in 2022. *Drippy's Water*

Adventure is an interactive coloring book filled with activities and vocabulary highlighting NYC's extensive water and wastewater infrastructure, which will be available in print and online in Spring 2023. Detailed information about these programs and resources is available from BPAC's Education Office and on DEP's website.

The Visitor Center at Newtown Creek, located at the Newtown Creek WRRF in Greenpoint, Brooklyn, provides an important venue for students, educators, professionals working in the field, and the public to learn about NYC's wastewater and water supply systems and stewardship opportunities. Exhibitions and programs focus on the city's vital, but hidden, infrastructure; green solutions to stormwater management, including bluebelts, rain gardens, green and blue roofs, and rain barrels; the NYC sewer system, including its MS4; harbor water monitoring, including the role of NYC's fleet of vessels and scientific monitoring; and ways to become more effective stewards of the environment by disposing of litter and household waste properly and by conserving water. The Visitor Center provides the ideal setting for DEP educators to present hands-on, multi-disciplinary lessons for grades pre-K through college, aligning with New York State and City standards, and STEM and humanities initiatives. The Visitor Center and the nearby Newtown Creek Nature Walk, open year-round, are popular destinations for school field trips and teacher professional learning opportunities. In 2022, DEP enhanced the visitor experience by designing and installing three new educational exhibits on wastewater resource recovery in NYC and stewardship actions to help optimize water infrastructure and protect the harbor.

DEP conducted its 36th annual Water Resources Art & Poetry Contest to recognize student's knowledge of the city's valuable water resources through their creative expression using art and poetry. More than 1,500 NYC and watershed students from 2nd through 12th grade attending over 90 public, charter, independent, and parochial schools participated in this special program. Winning entries are featured on DEP's website. DEP hosted a virtual celebration to honor the outstanding efforts of all the participating students.





For the past 20 years, DEP has collaborated with Trout Unlimited on the Trout in the Classroom (TIC) program, an upstate/downstate watershed environmental education initiative for elementary through high school students. In October, educators from NYC and NYC's watersheds east and west of the Hudson River attended the annual TIC teacher conference, where they received trout eggs distributed by the NYS Department of Environmental Conservation (DEC) to raise in their classrooms. Throughout the eight-month program, eggs hatched in classroom tanks and trout were raised by approximately 15,000 students in more than 150 schools in NYC and its watersheds. In the spring, NYC students and teachers released their trout into watershed streams and participated in hands-on activities focused on water stewardship and the importance of forests in helping to protect water quality.

DEP also participated with DEC during the annual statewide Citizen Science "A Day in the Life of the Hudson and Harbor" program. In 2022, DEP once again met middle school students in person to make environmental observations, collect and analyze water samples, and assess water quality along the East River at Gantry Plaza State Park. School participants shared data with DEC that tracked the river's tides and currents, examined the water chemistry, and identified local aquatic species.

Throughout the year, DEP conducted professional learning opportunities (PLO) for formal and non-formal educators about harbor water quality, watershed protection, stormwater management, wastewater resource recovery, climate change, and the history of the New York City water supply. Partners included the NYC DOE Science and STEM units and Office of Sustainability, New York State Parks, New York Sea Grant, Watershed Agricultural Council, South Street Seaport Museum, Math for America, Queens Botanical Garden, and many other cultural and environmental organizations. Some 2022 highlights include the return of DEP's popular in-person Watershed Forestry Bus Tour, outdoor walking tours of the recently expanded Newtown Creek Nature Walk and the Queens Botanical Garden, harbor sails with the South Street Seaport Museum, a day-long study of the Long Island Sound with New York Sea Grant and SUNY Maritime, and a NYC Water Story Workshop Series promoting our new curriculum guide. As a Continuing Teacher and Leader Education (CTLE) sponsor, as approved by the New York State Education Department, DEP continued to support New York State teachers who participated in our PLOs by providing credit towards their required training hours.

7.4 FLOATABLES MONITORING PROGRAM PROGRESS REPORT

DEP has been tasked under its SPDES permits with implementing and maintaining a floatables control program and monitoring to assess the effectiveness of the program. These control and monitoring programs are detailed in the City-Wide Comprehensive CSO Floatables Plan Modified Facility Planning Report (Floatables Plan, July 2005) inclusive of Addendum 1 – Pilot Floatables Monitoring Program Work plan (December 2005).

The Floatables Plan contains a conceptual framework for the monitoring of floatables conditions in the waters of New York Harbor. A pilot program was conducted over the course of 2006 and 2007 to develop and test the monitoring methodology envisioned in the framework, and the full program began in 2008. A progress report, presented in conjunction with the CSO BMP Annual Report, describes the progress that DEP has made.

The floatables monitoring program is based on observations of the presence/absence of floatables at monitoring stations throughout the harbor and has developed into one of a number of methods to assess floatables control programs. These basic monitoring data have been used to prioritize and select sites for more comprehensive site-specific investigations focused on priority sites with persistent poor ratings. The site-specific investigations characterize floatables, identify sources of floatables, correlate rating trends to floatables control programs where applicable, and, in conjunction with CSO LTCP processes, provide the first steps for appropriate remediation planning where feasible.

Since 2006, the program has expanded to monitoring most of NYC's regional waters and their near shores and shorelines. NYC DEP Harbor Water Quality Survey (HWQS) and Volunteer Survey Program monitoring stations increased from 25 sites in 2006 to 58 sites in 2022. Over the long term, variations in monitoring sites and locations will likely occur as public participation volunteer interest varies, shoreline cleanup sites change, and HWQS sites change. DEP will continue to perform floatables monitoring at additional PCM sites as forthcoming LTCP element construction is completed.

As part of the Floatables Monitoring Program, site-specific investigations were conducted for the monitoring sites that had the most persistently poor floatables condition ratings based on monitoring data collected in 2021 (i.e., NC0A Newtown Creek's East Branch, NC3 Newtown Creek Nature Walk and FLC1 near the head of Flushing Creek; see Figure 6 in the Floatables Progress Report). The overarching goal of this year's site-specific investigations was to gain insight into the sources of floatables and other debris at the selected sites in order to inform planning within the framework of the City-wide CSO LTCP. The investigations were able to provide a step toward this goal.

In addition to the floatables controls listed in BMPs 7a through 7c, the City engages in a street sweeping program to reduce floatables entry into catch basins and the combined sewer system. The program is administered by DSNY and evaluated through systematic street litter monitoring, known as the "Scorecard Program," conducted by the Mayor's Office of Operations. According to the Scorecard Program, Citywide street litter levels have improved somewhat since 2003 with clear improvements in the percent acceptable and percent filthy ratings. Scorecard Program results for the past forty-seven years are summarized in Appendix 7 (DEP BWT) Figure 7-2-7.

8 COMBINED SEWER SYSTEM REPLACEMENT

Combined Sewer System Replacement – "Replacement of combined sewers shall not be designed or constructed without an approved drainage plan signed by the NYC Department of Health and Mental Hygiene. When replacement of a combined sewer is necessary it shall be replaced by separate sanitary and storm sewers to the greatest extent possible. These separate sanitary and storm sewers shall be designed and constructed simultaneously but without interconnections to maximum extent practicable. When combined sewers are replaced, the design should contain cross sections which provide sewage velocities which prevent deposition of organic solids during low flow conditions to the maximum extent practicable."

Private Drains or Private Sewers are constructed in conformance with Drainage Proposals or Amended Drainage Plans. Any sewers built by private developers are in conformance with their Drainage Proposals or Amended Drainage Plans and do not extend combined sewers beyond the combined sewer area.

9 COMBINED SEWER/EXTENSION

Combined Sewer/Extension – "Combined sewer/extension, when allowed should be accomplished using separate sewers. These sanitary and storm sewer extensions shall be designed and constructed simultaneously but without interconnections. No new source of stormwater shall be connected to any separate sanitary sewer in the collection system."

"If separate sewers are to be extended from combined sewers, the permittee shall demonstrate the ability of the sewerage system to convey, and the treatment plant to adequately treat, the increased dry-weather flows. Upon written notification by the Regional Water Engineer, the permittee shall assess the effects of the increased flow of sanitary sewage or industrial waste, on the frequency, flow and pollutant loading of CSOs, including the impacts on water quality and best usage(s) of the receiving water. This assessment should use techniques such as collection system and water quality modeling contained in the 1999 Water Environment Federation Manual of Practice FD-17 entitled, Prevention and Control of Sewer System Overflows, 2nd edition."

In 2022, five private combined sewer extensions were reviewed and approved, and five previously approved private combined sewer extensions completed construction. Sewer extensions are reviewed and approved in accordance with the City drainage plan or drainage proposal.

10 SEWER CONNECTION & EXTENSION PROHIBITIONS

Sewer Connection & Extension Prohibitions – "If there are documented, recurrent instances of sewage backing up into house(s) or discharges of raw sewage onto the ground surface from surcharging manholes, the permittee shall, upon letter notification from NYSDEC, prohibit further connections that would exacerbate the surcharging/back-up problems. Wastewater connections to the combined sewer system downstream of the last regulator or diversion chamber are prohibited."

For the calendar year 2022, DEP received no letter notification from DEC concerning chronic sewer backups or manhole overflows that would prompt DEP to prohibit additional sewer connections or sewer extensions

11 SEPTAGE AND HAULED WASTE

Septage and Hauled Waste – "The discharge or release of septage or hauled waste upstream of a CSO is prohibited."

The septage and hauled waste program has continued unchanged since the 2021 Annual BMP Report issued in 2022.

12 CONTROL OF RUNOFF

Control of Runoff – "All sewer certifications for new development shall be consistent with NYCDEP rules and regulations and shall require on-site detention or retention to not exceed the capacity of the existing sewers fronting the property. Only allowable flow will be permitted to discharge into the combined or storm sewer system."

Connecting to or repairing/relaying an existing connection to any combined, storm or sanitary sewer requires a permit from DEP. A new connection is conditioned upon the submission of a Certification of a Site Connection Proposal (SCP) or a House Connection Proposal (HCP). A NYC Licensed Master Plumber can apply for a sewer connection permit provided there is a certified HCP/SCP submitted by a NYS Licensed Professional Engineer or Registered Architect.

BWSO oversees the sewer permitting process and inspects and approves water and sewer connections performed by licensed plumbers and/or authorized contractors. This oversight and the review of certifications of SCPs and HCPs allow DEP to ascertain whether the volume of sewage entering the collection system conforms to the City's Drainage Plan and will be conveyed to WRRFs without causing sewage back-ups.

DEP administers this program pursuant to the Clean Water Act and State and local laws regulating the treatment and disposal of wastewater. The City's "Rules Governing House/Site Connections to the Sewer System" are set forth in Title 15 of the Rules of the City of New York, Chapter 31.

Connections to any City sewer require DEP (BWSO) inspection, generating a "connection card" or "Certificate of Inspection." Such certification is a prerequisite to the property owner's receiving a Certificate of Occupancy from the NYC Department of Buildings (DOB). BWSO's Borough Water & Sewer Records Office maintains records of all connections.

The maximum Stormwater Release Rates are set forth in the following table.

Sewer Type	**Maximum Stormwater Release Rate**
Storm Sewer System	1 cfs per acre or 0.046 cfs, whichever is greater
Combined Sewer System	0.1 cfs per acre or 0.046 cfs, whichever is greater

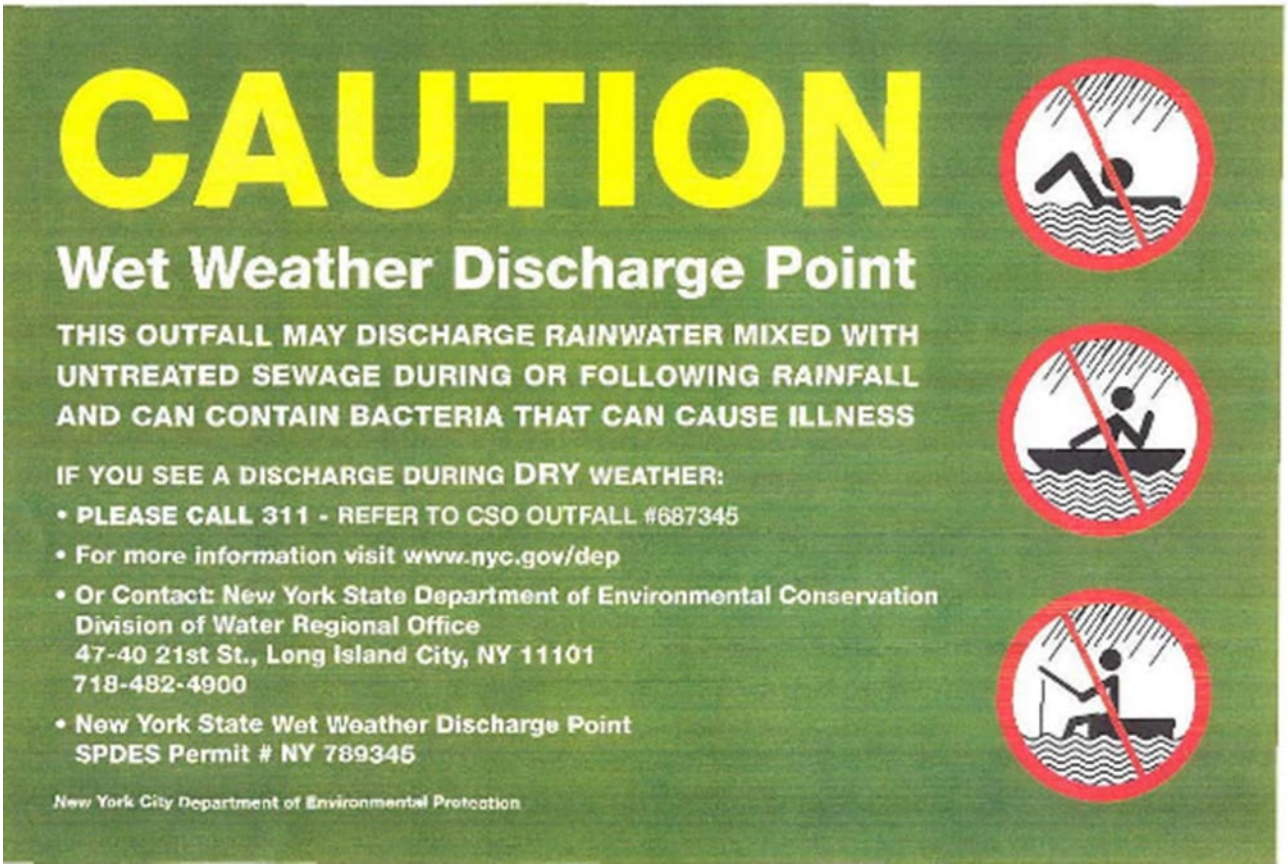
A copy of the Sewer Certification Form and Site Connection Proposal Form that must be filed for new development are attached in Appendix 12.

13 PUBLIC NOTIFICATION

Public Notification

a. *"The permittee shall maintain identification signs at all CSO outfalls owned and operated by the permittee, as listed in this permit. The permittee shall place the signs at or near the CSO outfalls and ensure that the signs are easily readable by the public. The signs shall have* ***minimum*** *dimensions and appearance as specified in the Discharge Notification Requirements page of this permit."*

DEP installed signs at all CSO outfalls in 2003 and at all WRRF outfalls in 2007. The sign panels are 24" x 36" and the plaques are 6" x 9" with white letters on a green background. Each notification sign and plaque asks the public to contact DEP with the depicted Outfall number and SPDES number if they observe dry weather discharge from the outfall.



Signs include warnings about recreational activities such as swimming, boating and fishing at the outfall locations and emphasize the word "Caution" in order to alert the public to the fact that the location is a point of release of wastewater into surface water during

wet weather. The signs also provide graphics of non-recommended activities. See Appendix 13 for the list of installed CSO sign locations.

The signs also provide contact information for reporting discharges during dry weather. The ID number can help a 311 operator or a DEP employee to recognize the location from which someone is reporting discharges and to take immediate action. DEP has received calls prompted by these signs. These calls are handled by a trained group of employees who are aware of related response actions. Calls are evaluated and forwarded to responsible staff who will take the appropriate action.

DEP's educational signs expand the knowledge of New York's citizens about their water environment. The notice depicts a typical CSO sewer regulator, explains its purpose, and alerts the public to action to be taken in the event of a release of wastewater from an outfall into surface waters during dry weather. The sign also serves a secondary purpose: it involves the citizen in community environmental actions.

"Waterwalk" Educational Signage

b. "The permittee shall report all known or suspected CSO discharge events in accordance with 6 NYCRR Part 750-2.7(b)."

The DOHMH *2022 NYC Beach Surveillance and Monitoring Report* can be accessed at the following link and a copy of the report is included in Appendix 13:

13.1 SUMMARY OF DOHMH REPORT:

13.1.1 Routine Monitoring and Surveillance Procedures

The routine beach monitoring and surveillance procedures consist of the following three major components:

- Routine beach water quality monitoring
- Compliance inspections
- Regulatory surveillance.

DOHMH monitors and samples each beach weekly, except for the Rockaway and Breezy Point beaches, which are sampled biweekly. Additional samples may be collected when necessary. The determining factors for additional sampling may include:

- Proximity to suspected pollution sources;
- Extent of pollution;
- Beach use;
- Historical water quality data; and
- Other health risk factors.

Prior to sample collection, a visual inspection is performed to identify any existing and/or potential sources of pollution that are likely to affect beach water quality. During a sampling event, three samples are collected at each beach. At larger beaches, such as Coney Island and Rockaway, additional samples are taken at multiple locations to ensure adequate representation and reliable data results. Water samples are collected at knee-depth (18 inches) in three feet of water, at the middle of a typical or most highly used area of the beach, or near a potential source of pollution. The collected samples are delivered to the DOHMH Office of Public Health Laboratories (PHL) for analysis. The analytical turnaround time for Enterococci is 24 hours.

13.1.2 Public Notification and Risk Communication

Of the eight public beaches, five had at least one swimming advisory warning notice issued during the 2022 bathing season due to a rainfall event or water quality exceedance. These advisories resulted in 76 warning days, each advisory ranging from 1 to 35 days. There was a total of 8 closure days due to shark sightings or water quality exceedances, each warning ranging from 1 to 4 days.

Of the 17 private beaches in NYC, 16 were open in 2022. Twelve (12) had at least one swimming advisory warning notice issued during the bathing season. These advisories resulted in 517 warning days, each advisory ranging from 1 to 29 days. American Turner had the largest total number of warning days with 63. Across all private beaches there were 238 closures. Douglaston Manor had the largest number of closure days with 49.

The lengths of all beach closures ranged from 1 to 22 days. Public notification details can be found in Appendix B (pages 18 to 21 of the Beach Report 2022).

13.1.3 Water Quality and Illness Reporting

Routine water quality monitoring and sample collection were performed at all 25 permitted beaches. Over 1300 samples were collected and analyzed from these beaches between April and September 2022. In 2022, DEP did not receive notice of any specific beach water quality illnesses or complaints

In 2022, DEP collected approximately 1300 samples, compared to more than 1,000 samples in a normal beach season.

13.1.4 Inspections

During the 2022 beach season, DEP successfully conducted inspections of all 24 open, public and private beaches. Two Beaches were cited for violations at the time of inspection (during a Coney Island inspection, minor disrepair of parts of the boardwalk was observed) as indicated in Appendix C of the 2022 Beach Report. Additionally, a current bathing beach permit was not provided at Gerritsen/Kiddie Beach; however Gerritsen/Kiddie representatives subsequently renewed the permit to resolve the issue.

14 CHARACTERIZATION AND MONITORING

Characterization and Monitoring – "The permittee shall characterize the combined sewer system, determine the frequency of overflows, and identify CSO impacts in accordance with Combined Sewer Overflows, Guidance for Nine Minimum Controls, EPA, 1995, Chapter 10. These are minimum requirements, more extensive characterization and monitoring efforts which may be required as part of the Long-Term Control Plan."

a. *"NYCDEP shall assess available data for the purpose of verification and further calibration of the InfoWorks and hydraulic model developed under NYCDEP's CSO LTCPs. Data from specific monitoring systems, including key regulator monitoring systems, associated with CSO LTCP recommended projects, may be used in the CSO Post Construction Compliance Monitoring Plans to compare performance of the CSO LTCP recommended projects versus the landside model projections. NYCDEP shall, within 90 days of request by NYSDEC, provide all data from regulators and other combined sewer system structures with monitoring equipment installed."*

b. *"Based on observations, lessons learned, the availability of additional information or the development of new detection devices, NYSDEC may require NYCDEP to install additional feasible and effective monitoring equipment at key regulators if the existing monitoring equipment is unable to provide an accurate indication of CSO discharges, or add to the list of key regulators and install monitoring equipment at those additional regulators if it determines either: that additional monitoring locations are necessary to verify that the system has been maximized or to calibrate the hydraulic model; or that monitoring does not exist for a significant volume of the overall CSO discharge."*

Because DEP maintains many regulator structures that have very complex geometry and are tidally influenced, it is not feasible to monitor all CSO outfalls. DEP does have a SCADA system that helps provide some information pertaining to water levels in the regulator structures and provides some indication of whether a CSO is occurring, but SCADA does not provide a direct flow measurement and is influenced by factors such as tidal elevations. DEP has also conducted some very comprehensive and intense interim flow monitoring using specialized vendors at representative locations to calibrate and validate the InfoWork sewer system models. These calibrated InfoWork models are used to estimate the annual CSO volume and frequency for all the CSO outfalls.

There are four (4) NOAA rain gauges at the area airports, and DEP maintains rain gauges at all fourteen (14) WRRFs.

For additional details, refer to the CY 2022 Potential CSO Discharges table in Appendix 14.

DEP also regularly posts additional monitoring data on its website, including waterbody advisories. Information on the City's waterbody advisory application can be found here:

https://www1.nyc.gov/html/dep/html/harborwater/nyc_waterbody_advisory.shtml

15 ANNUAL REPORT

Annual Report – "The permittee shall submit a Combined Sewer Overflows (CSO) BMP Annual Report, which summarizes the implementation of the above BMPs and the Long-Term Control Plans. The CSO BMP Annual Report shall be submitted by May 1st of each year to the Regional Water Engineer and to the Bureau of Water Compliance. A singular report, covering all 14 NYCDEP WRRFs, is satisfactory and will be codified under the Wards Island WRRF (NY0026131)."

"The CSO BMP Annual Report form is available from NYSDEC on-line at https://www.dec.ny.gov/chemical/48985.html. The complete documentation shall be stored at a central location and be made available to NYSDEC upon request."

a. "The permittee shall summarize, in the CSO BMP Annual Report, all known or suspected CSO discharges from key regulators outside the period of a critical wet weather event. The summary shall provide an itemized list of such CSO discharges, the approximate start time and end time for each discharge, the corresponding WRRF flow rate, the start time and end time of the critical wet weather event, and an engineering analysis of the cause(s) for each discharge and an analysis of options to reduce or eliminate similar future events."

This report is the 20th annual report summarizing the implementation of the BMPs performed by DEP in calendar year 2022. While this narrative report may be a single report for all 14 DEP WRRFs, the additional required reporting on the new nForm has been entered for each individual plant.

Field inspection logs, maintenance and repair schedules, summaries and analysis of performance are stored at DEP's Lefrak City office and respective crew quarters and are available to DEC upon request.

15.1 KEY REGULATOR REPORTS

CSO discharges from key regulators that occurred outside of a critical wet weather event were determined based on inference from synoptic data collected from the city telemetry system, meteorological and tidal observations, and plant operational data. Using InfoWorks CS models of the city's collection system, DEP performed analysis of mitigation strategies to reduce the occurrence of discharges outside the critical wet weather periods.

IAppendix 15.1 includes the Key Regulators Monitoring Report Summary for CY 2022. Table 15.1 summarizes the observations of Key Regulators during the period of analysis, which includes data from January 2022 through December 2022.

15.2 ENGINEERING ANALYSIS

The SPDES permit requires DEP to evaluate and report on Key Regulators and stipulates that DEP shall "submit for DEC approval an engineering analysis of the cause(s) for each discharge and an analysis of options to reduce or eliminate similar future events." It should be noted that DEP implemented an extensive Regulator Improvement Program in the 1990s, through which low-cost upgrades were made to dozens of regulators.

As discussed in previous report submittals, several strategies were identified that may alter the timing of regulator discharges so that such discharges occur less frequently. We considered the following strategies to have the greatest potential for success:

- Capital Improvements Already in Development. Capital projects in various stages of planning and development are expected to alter the timing of CSO discharges. These include not only projects directly at the regulator, but also other projects that may influence regulator performance, such as new force mains, the operation of a regional CSO facility, or downstream conveyance enhancements.
- Removal of Existing Elbow in Drop Pipe. In certain locations, vertical pipes convey flow from the regulator to the interceptor. As a result of the historical practice of installing elbows as a means of energy dissipation, vertical pipes are known to have chronic clogging that could contribute to early tipping.
- Enhanced Operations & Maintenance. Regulators can be influenced by the performance of the downstream interceptor, which may be influenced by, among other things, sedimentation or wet well operation at the WRRF.
- Flow Transference. The City sewers are divided into several mostly independent service areas. This division suggests there may be potential for diverting flow from an area of limited wet weather capacity to a nearby area with excess wet weather capacity.
- Continued Monitoring. Monitoring over a longer period is prescribed where regulator performance is not yet clearly understood, or where a regulator yields a small number of events compared to other Key Regulators. Limited sample sizes increase the risk of misinterpretation of data, and resultant ineffective mitigation strategy or inappropriate action taken at a regulator that is not actually significantly discharging early. A larger data set will allow for more accurate interpretation and better decision-making on future capital commitments.
- Citywide/Open Waters LTCP. As part of the Open Waters/Citywide LTCP all category A and B regulators discharging into the open waters were evaluated to assess alternatives to reduce hours of CSO discharges outside of the critical period. These alternatives included raising and lengthening of weir structures, opening of orifices, enlargement of branch interceptors, and in some locations expanding pump station capacities.

15.3 RESULTS

15.3.1 Key Regulators that may be influenced by planned capital improvements (projects currently in design or construction that may result in CSO reductions and additional wet weather capture)

26W-02

Regulator 26W-02 had one (1) potential discharge outside the period of a critical wet weather event; the total duration of this period was 0.75 hours. However, Regulator 26W-02 had a sensor malfunction for most of the year, resulting in no reportable data available to be assessed during most of the CY2022 monitoring period. Pursuant to the CSO Order, there was a high-level storm sewer project completed in late CY2021 that, in conjunction with the recently completed construction of a fifth primary settling tank, will help reduce CSO discharges into Fresh Creek. DEP will commence a 12-month monitoring period and will provide details in the next CSO BMP Annual Report following that 12-month monitoring period.

HP-05

Regulator HP-05 had twenty-three (23) potential discharges outside the period of a critical wet weather event; the total duration of these periods was 43.00 hours. Regulator HP-05 had a planned capital improvement, the installation of the Pugsley Parallel Interceptor upstream of this regulator under Contract CS-ER-WCP, which was completed in February 2020. There is also additional work planned at Regulator HP-09 and at Regulator HP-05 under the approved Bronx River LTCP that will impact performance; the current construction completion milestone is September 2026. Once the new facilities are in service, DEP will commence a 12-month monitoring period, and provide an engineering analysis in the applicable CSO BMP Annual Report following that 12-month monitoring period.

HP-13

Regulator HP-13 had a sensor malfunction, resulting in no reportable data available to be assessed during the CY2022 monitoring period. The Bronx River LTCP recommended regulator modifications and a parallel sewer at this regulator that is currently anticipated to be completed in 2026. Once the new facilities are in service, DEP will commence a 12-month monitoring period, and provide an engineering analysis in the applicable CSO BMP Annual Report following that 12-month monitoring period.

15.3.2 Key Regulators Averaging One Discharge or Fewer per Month[1]

26W-01

Regulator 26W-01 had six (6) potential discharges outside the period of a critical wet weather event; the total duration of these periods was 0.75 hours. Installation of a new primary settling tank under Contract 26W-20 was completed at the end of 2021. DEP commenced a 12-month monitoring period in CY2022. DEP commenced a 12-month monitoring period and found it to average one discharge or fewer per month.

BBH-02

Regulator BBH-02 had four (4) potential discharges outside the period of a critical wet weather event; the total duration of these periods 12.25 hours. DEP will continue to monitor it and report in accordance with DEP's SPDES permits. Regulator BBH-02 had previously been in Category A prior to 2019, as a regulator potentially influenced by planned capital improvements that included work at Regulator BBH-02 to raise the weir.

BBL-22

Regulator BBL-22 had eleven (11) potential discharges outside the period of a critical wet weather event; the total duration of these periods 8.50 hours. Regulator BBL-22 had previously been in Category A prior to 2019, as a regulator potentially influenced by planned capital improvements. Regulator BBL-22 was further evaluated as part of the Citywide/Open Waters LTCP, but no viable alternative was identified.

HP-10

Regulator HP-10 had a sensor malfunction, resulting in no reportable data available to be assessed during the CY2022 monitoring period. The evaluation for Regulator HP-10 was previously submitted to DEC in the Quarterly Key Regulator Monitoring Reports; it was identified as requiring further consideration as part of the LTCP process. Regulator HP-13 was further evaluated as part of the Citywide / Open Waters LTCP, but no viable alternative was identified.

JA-03

Regulator JA-03 had had a sensor malfunction, resulting in no reportable data available to be assessed during the CY2022 monitoring period. Regulator JA-03 had previously been in Category A prior to 2021, as a regulator potentially influenced by planned capital improvements. Bending weirs were installed at Regulators JA-03 & JA-14 along with a parallel interceptor to convey additional flow to the plant. As of June 2020, a new lateral Bergen Basin sewer was constructed enabling the sluice gate at Regulator JA-14 to be fully opened to maximize wet weather flow to the Jamaica WRRF.

[1] At some outfalls, where more than 1 discharge per month is indicated, the outfall has generally

NCM-47

Regulator NCM-47 had eleven (11) potential discharges outside the period of a critical wet weather event; the total duration of these was 6.25 hours. Regulator NCM-47 was further evaluated as part of the Citywide/Open Waters LTCP.

NR-23

Regulator NR-23 had eight (8) potential discharges outside the period of a critical wet weather event; the total duration of these events was 7.00 hours. Regulator NR-23 was further evaluated as part of the Citywide/Open Waters LTCP, but no viable alternative was identified.

NR-33

Regulator NR-33 had one (1) potential discharge outside the period of a critical wet weather event; the total duration of this event was 1.25 hours. However, DEP will continue to monitor it and report in accordance with DEP's SPDES permits.

OH-01

Regulator OH-01 had a sensor malfunction, resulting in no reportable data available to be assessed during the CY2022 monitoring period. The evaluation for Regulator OH-01 was previously submitted to DEC in the Quarterly Key Regulator Monitoring Reports and was further evaluated as part of the Citywide/Open Waters LTCP, but no viable alternative was identified.

OH-06

Regulator OH-06 had a sensor malfunction, resulting in no reportable data available to be assessed during the CY2022 monitoring period. The evaluation for Regulator OH-06 was previously submitted to DEC in the Quarterly Key Regulator Monitoring Reports. Regulator OH-06 was further evaluated as part of the Citywide/Open Waters LTCP.

RH-02

Regulator RH-02 did not have any potential discharges outside the period of a critical wet weather event. However, DEP will continue to monitor it and report in accordance with DEP's SPDES permits.

RH-20

Regulator RH-20 had one (1) potential discharge outside the period of a critical wet weather event; the total duration of this event was 1.25 hours. However, DEP will continue to monitor it and report in accordance with DEP's SPDES permits.

TI-10A

Regulator TI-10A did not have any potential discharges outside the period of a critical wet weather event. However, DEP will continue to monitor it and report in accordance with DEP's SPDES permits.

WIB-53

Regulator WIB-53 did not have any potential discharges outside the period of a critical wet weather event. Regulator WIB-53 had previously been in Category A prior to 2020, as a regulator potentially influenced by planned capital improvements. WIB-53 is about 1,000 feet from the Bronx Grit Chamber, where all four bar screens have been replaced. In addition, the main sewage pumps at the Wards Island WRRF were replaced with construction completion certified in August 2019. The bar screen replacement work was completed in January 2017. DEP will continue to monitor it and report in accordance with DEP's SPDES permits.

15.3.3 Key Regulators Averaging More than One Discharge per Month

BBH-06

Regulator BBH-06 had sixteen (16) potential discharges outside the period of a critical wet weather event; the total duration of these periods was 4.25 hours. Regulator BBH-06 had previously been in Category A prior to 2019, as a regulator potentially influenced by planned capital improvements. The Flushing Bay LTCP recommended construction of a CSO Storage Tunnel that would capture overflow from this regulator.

BBL-04

Regulator BBL-04 had thirty (30) potential discharges outside the period of a critical wet weather event; the total duration of these periods was 18.75 hours. Regulator BBL-04 had previously been in Category A prior to 2019, regulators potentially influenced by planned capital improvements. The Newtown Creek LTCP recommended diversion of wet weather flow to the Borden Avenue Pump station and increasing capacity of this pump station.

NCB-01

Regulator NCB-01 had twenty-four (24) potential discharges outside the period of a critical wet weather event; the total duration of these periods was 17.50 hours. The Newtown Creek LTCP recommended a CSO Storage Tunnel that would capture overflow from this regulator.

NCB-04

Regulator NCB-04 had a sensor malfunction, resulting in no reportable data available to be assessed during the CY2022 monitoring period. Regulator NCB-04 was further evaluated as part of the Citywide/Open Waters LTCP, but no viable alternative was identified.

NR-16

Regulator NR-16 had fourteen (14) potential discharges outside the period of a critical wet weather event; the total duration of these periods was 8.00 hours. Regulator NR-16 was further evaluated as part of the Citywide/Open Waters LTCP, but no viable alternative was identified.

PR-06W

Regulator PR-06W had one (1) potential discharge outside the period of a critical wet weather event; the total duration of this period was 0.50 hours. However, Regulator PR-06W had a sensor malfunction for most of the year, resulting in no reportable data available to be assessed during most of the CY2022 monitoring period. h The evaluation for Regulator PR-06W was previously submitted to DEC in the Quarterly Key Regulator Monitoring Reports; it was further evaluated as part of the Citywide/Open Waters LTCP, but no viable alternative was identified.

PR-13E

Regulator PR-13E had a sensor malfunction, resulting in no reportable data available to be assessed during the CY2022 monitoring period. The evaluation for Regulator PR-13E was previously submitted to DEC in the Quarterly Key Regulator Monitoring Reports; it was further evaluated as part of the Citywide/Open Waters LTCP, but no viable alternative was identified.

TI-09

Regulator TI-09 had twenty-two (22) potential discharges outside the period of a critical wet weather event; the total duration of these periods was 46.00 hours. The Flushing Creek LTCP recommended floatables control and disinfection at this regulator.

WIB-67

Regulator WIB-67 had seventeen (17) potential discharges outside the period of a critical wet weather event; the total duration of these periods was 25.00 hours. Regulator WIB-67 had previously been in Category A prior to 2020, as a regulator potentially influenced by planned capital improvements. WIB-67 was influenced by the Bronx Grit Chamber and by the main sewage pump work at the Wards Island WRRF. Regulator WIB-67 was further evaluated as part of the Citywide/Open Waters LTCP, and there is a proposal to daylight Tibbett's Brook that will take a significant portion of wet weather flow that is currently being discharged into the combined sewers and divert it directly to the Harlem River. This effort will result in considerably less wet weather flow going to Regulator WIB-67.

WIM-23

Regulator WIM-23 had thirteen (13) potential discharges outside the period of a critical wet weather event; the total duration of these periods was 6.50 hours. Regulator WIM-23 had previously been in Category A prior to 2020, as a regulator potentially influenced by planned capital improvements. Regulator WIM-23 was influenced by the Manhattan Grit Chamber and by the main sewage pump work at the Wards Island WRRF. Regulator WIM-23 was further evaluated as part of the Citywide/Open Waters LTCP, but no viable alternative was identified.

15.3.4 Non-Key Regulators with CSO Monitoring Equipment Identification Program Reporting

In February 2016, in accordance with Item 5.c. in Appendix B of Additional CSO BMP Special Conditions in the previous SPDES Permits, DEP submitted the report on Regulator(s) with CSO Monitoring Equipment Identification Program. Item 5.c. required DEP to commence a 12-month data gathering period and to submit a report of all known or suspected CSO discharges outside the period of a critical wet weather event from all regulators with CSO monitoring equipment. The report presented findings from the 12-month data gathering period of August 2014 through July 2015. Several regulators were reported to be in Category A at that time, which had current or future capital improvements that would potentially render the data collected unrepresentative of future conditions. As stated in the report submittal, once the new facilities were in service, DEP would commence a 12-month monitoring period, and provide an engineering analysis in the applicable CSO BMP Annual Report following that 12-month monitoring period. Below are the results of the non-key regulators in which the capital improvement work has been completed and 12 months of monitoring data under normal operations are available. The 12-month period is January 2022 – December 2022, see Appendix 15.2 for the CY2022 Non-Key Regulator Monitoring Reports.

WIM-02B

Regulator WIM-02B had a sensor malfunction resulting in no reportable data available to be assessed during the CY2022 monitoring period. Regulator WIM-02B was further evaluated as part of the Citywide/Open Waters LTCP.

WIM-07

Regulator WIM-07 had a sensor malfunction resulting in no reportable data available to be assessed during the CY2022 monitoring period. Regulator WIM-07 was further evaluated as part of the Citywide/Open Waters LTCP.

WIM-45

Regulator WIM-45 had no potential discharges outside the period of a critical wet weather event from January through October 2022. Regulator WIM-45 had a sensor malfunction

resulting in no reportable data available to be assessed during the November to December 2022 monitoring period. Regulator WIM-45 was further evaluated as part of the Citywide/Open Waters LTCP.

16 SUSTAINABILITY AND POLLUTION PREVENTION ACTIVITIES

16.1 WATER CONSERVATION

DEP values the role of water conservation and demand management in the responsible long-term management of New York City's water supply. Despite a steady increase in population since the 1980s, New York City's average daily demand has decreased over the past several decades, with daily demand below the 1960s drought-of-record (1,405 MGD) since 2009 (Figure 9.1). Several factors are responsible for this decrease, such as increased efficiency and awareness of water conservation, as well as the implementation of DEP's Water Demand Management Program. However, DEP must consider the increasing uncertainty of climate change – predictions of warmer temperatures and greater precipitation variability – in its management of the City's water supply and the demand for this resource. Further, the leaking of the Delaware Aqueduct and its planned shutdown and repair in 2023 as part of DEP's Water for the Future Program is a near-term certain event that provides an imperative not only to proactively manage, but also to explicitly reduce, existing water demand to ensure adequate water supply through this period.

16.1.1 Program Description

DEP's water conservation efforts aim to reduce water use in New York City and upstate communities by 20 million gallons per day (MGD). This goal is detailed in the 2018 Water Demand Management Plan, accessible here https://www1.nyc.gov/assets/dep/downloads/pdf/water/drinking-water/2018-water-demand-management-plan.pdf. The

The plan sets forth six major strategies DEP continues to implement to reduce water use:

- Municipal Water Efficiency Program: Involves retrofits of city-owned properties.
- Residential Water Efficiency Program: Focuses primarily on the Toilet Replacement Program for multi-family buildings.
- Non-Residential Water Efficiency Program: Collaboration with private sector organizations including restaurants, hotels, hospitals, and universities.
- Water Distribution System Optimization: Entails system repairs and upgrades, managing water pressure, and refining water meter accuracy and leak detection.

- Water Supply Shortage Management: Encompasses the review and revision of plans to prepare for a drought and other water shortages.
- Wholesale Customers Water Demand Management Program: Targets demand management planning and implementation for wholesale customers north of the City.

The following is a summary of DEP's progress in implementing the above-listed strategies.

16.1.2 Municipal Water Efficiency Program

DEP has established partnerships and completed several projects with key municipal agencies and entities to support water efficiency measures in their facilities. Partners include the New York City Department of Education (DOE), the New York City Department of Parks and Recreation (DPR), the New York City Fire Department (FDNY), the City University of New York (CUNY), New York City Health and Hospitals Corporation (HHC), New York City Department of Citywide Administrative Services (DCAS), and New York City Department of Cultural Affairs – Cultural Institutions Group (CIG).

Through ongoing partnership with DOE, to date, DEP has funded the replacement of over 40,000 new and efficient fixtures in over 500 school facilities across all five boroughs. In total, DOE retrofits are expected to save 3.86 MGD.

DEP's partnership with CUNY has included 780 fixture upgrades at City College for a demand savings of 0.04 MGD. DEP and CUNY extended their partnership and executed an interagency agreement to replace inefficient fixtures at Queens College. In total, DEP and CUNY plan on replacing over 600 fixtures across four campus buildings at Queens College for an estimated savings of 0.03 MGD. These upgrades are currently underway and are expected to be completed in 2023.

DEP continued its partnership with DPR and the Central Park Conservancy and Prospect Park Alliance. In Central Park, the North End Recirculation Project will include a pumping and filtration system to recirculate water in the Park's northern waterbodies and reduce flow to the City's combined sewer system. This project is currently in design and is anticipated to save 0.48 MGD and reduce CSOs by about 3 MGY. In Prospect Park, DEP continued coordinating with Prospect Park Alliance to replace a valve on the make-up water line for the park's lake system. In 2022, Prospect Park Alliance completed design; once completed, the project is expected to save 0.80 MGD.

In January 2023, DEP launched its sixth Water Challenge to all 14 of the City's WRRFs in the 5 boroughs. Like the previous year, all facilities are being encouraged to reduce demand by 10% over a two-year baseline average from calendar year 2021 and 2022. The WRRF Challenge has the potential total savings of approximately 0.5 MGD.

DEP is also continuing to partner with HHC to complete additional HHC retrofit projects at Jacobi Hospital, Woodhull Hospital, Elmhurst Hospital, Bellevue Hospital, and North

Central Bronx Hospital. Funding for these retrofits was transferred to HHC and vacuum pump retrofits are currently underway. These retrofits are expected to result in an overall savings of 0.17 MGD.

16.1.3 Residential Water Efficiency Program

In June 2019, DEP concluded the Toilet Replacement Program after five years of successful implementation. The program retrofitted approximately 13,300 toilets citywide for a savings of 0.63 MGD.

DEP works with Honeywell to provide building owners with complimentary household water conservation surveys to help identify opportunities for water savings and detecting leaks. Home surveys continue to be on pause since the outbreak of the COVID-19 pandemic. However, since the program started, home surveys are estimated to have saved 0.4 MGD. In total, DEP has achieved a demand savings of 1.03 MGD through these two initiatives.

16.1.4 Non-Residential Water Efficiency Program

The DEP Water Conservation and Reuse Grant Pilot Program incentivizes commercial and residential water conservation projects that achieve a minimum water savings of 2,740 gallons per day (1 million gallons per year). DEP has offered grant funding to one applicant and is currently in the process of confirming funding and legal agreement. The project includes a 400,000 gallon per day water reuse system that contributes not only to water conservation benefits, but also to CSO reductions. Overall, the pilot program is anticipated to save 0.2 MGD by 2023.

DEP has successfully completed several Water Challenges to different commercial sectors: hotels, restaurants, hospitals, and universities. Participants are encouraged to reduce their annual water consumption by at least 5% from their baseline year (measured as the 12-month period prior to the beginning of the Challenge). DEP prepares monthly reports to help participants track their consumption and their performance against the other participants. DEP also hosts quarterly workshops to help participants learn how to make their facilities more water efficient.

DEP's latest challenge, a two-year Water Challenge to Universities, was completed in August 2020.Collectively, the six participants—Fordham University: Lincoln Center Campus, The New School, Long Island University: Brooklyn Campus, Pace University, St. John's University, and Weill Cornell Medicine—reduced their monthly average water consumption by 11%, surpassing the 5% Water Challenge goal, for a total savings of 0.12 MGD.

16.1.5 Water Distribution System Optimization

Water distribution system optimization includes system repairs and upgrades, water pressure management, refining water meter accuracy, and leak detection. In 2022, DEP surveyed a total of 811 miles of water mains. As a result of leaks proactively found and repaired, DEP estimates that 5.76 MGD of water per day were saved.

Leaking and/or vandalized fire hydrants can result in significant water waste; an illegally opened fire hydrant can release more than 1,000 gallons per minute. In 2022, DEP repaired 7,435 hydrants, replaced 822, and provided other maintenance services to 10,462 additional hydrants.

DEP continually works to improve maintenance of the pressure zones within the City's water distribution system. In 2022, DEP completed 5,079 preventive maintenance inspections/calibrations on pressure regulating valves. DEP also overhauled 48 of the 504 pressure regulating valves in use citywide. In 2022, the number of breaks per 100 miles was 6.92, slightly above the City's 10-year average of 6.58, and well below the accepted industry average of 25 breaks per 100 miles annually.

DEP's efforts to achieve universal metering of all DEP water and sewer accounts is motivated by the need to reduce non-revenue water and promote conservation among water users by providing accurate consumption information. The universal metering initiative is also critical to measuring the success of many other demand management strategies. Accurate consumption data enable DEP to determine whether target consumer groups have achieved projected consumption reductions or how demand management strategies may be adapted to improve their effectiveness. In 2022, DEP replaced 1,820 large meters.

To date, approximately 472,000 customers have signed up for My DEP to view their bills, water usage, and payment history online This service also allows customers to pay their bills online and sign up for automatic billing (eBills); approximately 150,000 customers have signed up for eBills. To date, over 696,000 customers have signed up for leak alerts.

16.1.6 Water Supply Shortage Management

In May 2022, amendments to DEP's "Drought Emergency Rules" (15 RCNY Chapter 21) were formally adopted and promulgated. As amended, the rules are now titled the "Water Shortage Emergency Rules."

NYC's rulemaking process is governed by the procedure set forth in the City Administrative Procedure Act (CAPA). DEP first initiated the process of amending the Drought Emergency rules in July 2013. In January 2022, the Mayor's Office of Operations and the New York City Law Department certified DEP's final draft amendments to the "Drought Emergency Rules" ("Water Shortage Emergency Rules" as proposed by the amendments); DEP subsequently noticed them for public review and comments and held a public hearing on the draft amendments in February 2022, as required under CAPA. The amendments to the rules were deemed final and effective as of May 13, 2022. The revisions to the rules expand their scope and applicability to include water shortages caused not only by hydrological droughts, but also by other types of events such as planned and unplanned infrastructure outages.

The revisions added, removed, and changed certain water use prohibitions during the different stages of a water shortage emergency, to provide more clarity and better reflect DEP's understanding of city water use. Although the prohibitions do not apply to routine residential water use such as drinking, bathing, or dishwashing, DEP expects that public awareness of the restrictions would lead to decreased residential water use during a declared water shortage emergency.

16.1.7 Upstate Wholesale Customers Demand Management Program

The Wholesale Customer Water Demand Management Program assisted DEP's seven upstate wholesale customers (utility partners) in developing demand management plans for their systems, with a target 5% reduction in consumption. All seven utility partners developed demand management plans under this program, with a total two-year sustained water demand savings of 5.21 MGD (a 9% decrease from their 2013 baseline). Due to unforeseen circumstances brought on by the COVID-19 pandemic, much of the anticipated funding for implementation of this program was reallocated. However, in 2022, DEP executed an agreement with Yonkers that will result in an additional estimated savings of 1.3 MGD.

16.2 Drinking Water Supply and Quality Statement

In 2022, DEP continued efforts to notify the public of the availability of the 2021 Drinking Water Supply and Quality Statement. The agency sent bill inserts to 700,000 bill-paying customers notifying them of the report's availability on the DEP website; electronic notification was made to 434,000 customers, and postcards were sent to 30,000 customers. Additionally, outreach to all customers included:

- Posting information about the report on the DEP homepage beginning February 28, 2022.
- Highlighting and mentioning the report in the March 8, 2022, issue of Pipeline, the DEP newsletter which is distributed weekly to all 6,000 DEP employees and 2,000+ members of media, public, and public officials.
- Posting about the publication of the report on Twitter and Facebook nine times on each platform between March and August 2022. DEP currently has about 22,300 Twitter followers, and 13,000 "NYC Water" Facebook followers.
- Promoting the publication of the report in a Facebook ad campaign that ran from April 18 to May 5, 2022 and had over 700,000 impressions (an impression is a countable unit of measure of how many times the advertisement ran).
- Running an advertising campaign on various platforms across NYC, including:
    - Postings on 147 bus shelter sites throughout NYC from April 1-30, 2022.
    - 1,000 posters in subway cars that travelled throughout the 5 boroughs from May 16 to June 12, 2022.

  - 1,794 interior bus cards posted in 1,779 unique buses from May 16 to June 12, 2022.
  - 5,000 images posted on NYC Sanitation trucks from May 1-31, 2022.
  - Through LinkNYC, a communications network which replaced New York City pay phones with state-of-the-art kiosks, 1,837 advertisements posted on kiosks screens throughout NYC from April 1-30, 2022. The DEP advertisement had over 560,000 impressions.
  - A static image displayed on the NYC Ferry system from April 1-30, 2022.
  - An image posted on the Staten Island Ferry and in the ferry terminals from April 1 to May 8, 2022.
  - A public service announcement (PSA) on the NYC Life television channel and NYC Gov Channel from April 1 to August 31, 2022 and on Taxi TV from April 5 to August 31, 2022.
  - Audio from the PSA on radio station WNYE 91.5 FM and on 311 from April 1 to August 31, 2022.
- Contacting large housing complexes across NYC by phone and email, requesting that they spread the word about the report: NYCHA, real estate management organizations, and business groups active in housing issues, reaching 41 developments citywide representing over 52,660 residential units.
- Contacting 2 trade organizations (Plumbing Foundation and the Council of NY Cooperatives & Condominiums) committed to posting a notice in their newsletters and on their websites, representing 8,900 subscribers.
- Regular outreach to NYC libraries; at community and civic association meetings, outreach events (including trade shows, Greenmarkets, health fairs and street fairs), town halls, project tours, and tabling events. Over 2,800 copies of the Report were distributed and copies of the Report are mailed out to the public upon request.
- Distributing 1,000 copies of the report to DOE's Sustainability Coordinators who communicate with school population of over one million.

16.3 Rain Barrel Program

The Rain Barrel Giveaway program resumed, following a short hiatus due to the pandemic. For 2022, a total of 5,894 rain barrels were distributed citywide through coordinated events with elected officials, community boards, community groups and schools.

16.4 GREASE OUTREACH

16.4.1 Development of an Expanded Grease Interceptor Program

DEP continues to develop the Expanded Grease Trap Program. The following summarizes activities during calendar year 2022:

- 141 Initial inspections performed
- 387 Follow-ups/maintenance inspections performed
- 485 Commissioner's Orders issued
- 160 Summonses issued
- 414 New grease interceptor installations required.

BPAC's ECO Unit conducted 3 workshops for community boards, residents and businesses on grease disposal and backups and continues to implement the "Trash It, Don't Flush It" campaign, which includes continued outreach to residents and businesses on proper grease disposal.

See below also for specific activities regarding DEP's ongoing SE Queens (Community Boards 12 & 13) and South Brooklyn (community Boards 13 & 15) projects.

16.4.2 Environmental Compliance Outreach to Business Community

ECO continued to work with its primary partners including local business groups and trade associations and visited 750 businesses citywide. ECO participated in a citywide program called Commercial Corridor Recovery Task Force. The Mayor's Office of Operations convened meetings with Business Improvement Districts and Chambers of Commerce in all 5 boroughs at which leaders in business communities could bring attention to local problems. ECO represented DEP and fielded flooding and back-up issues.

16.4.3 Southeast Queens Outreach

ECO did extensive door-to-door residential outreach on sewer backups to 4674 households.

16.4.4 South Brooklyn Outreach

ECO continued outreach to Brooklyn Community Boards 13 & 15. ECO focused on the Coney Island Creek area, performing outreach to 3214 households.

16.4.5 Staten Island Outreach

ECO did outreach to 25 businesses on flooding and sewer backup issues.

16.5 Stormwater Regulations and Activities

16.5.1 Stormwater Rule

In 2022, DEP promulgated the Unified Stormwater Rule to update the 2012 Stormwater Rule requirements and provide alignment between the Stormwater Rule and the City's new Construction and Post-Construction Program (C/PC), which was launched in 2019. The City's C/PC Program complements the NYSDEC General Permit for Stormwater Discharges from Construction Activity (CGP) program in the NYC MS4 area by requiring DEP review and approval of stormwater pollution prevention plans (SWPPPs), and DEP inspection of construction sites both for stormwater impacts and for operation of post-construction stormwater management practices (SMPs). The final Unified Stormwater Rule was published and effective on February 15, 2022.

As part of the Unified Stormwater Rule, DEP published the NYC Stormwater Manual to assist NYC's development community and design professionals in complying with the Unified Stormwater Rule and designing post-construction SMPs.

DEP provides regular updates on the Unified Stormwater Rule as part of its Green Infrastructure Annual Reports available on its website here https://www1.nyc.gov/site/dep/water/green-infrastructure.page.

16.5.2 Green Roof Tax Abatement

In 2019, the New York State legislature renewed the Green Roof Property Tax Abatement available to property owners installing green roofs. It reauthorized the reimbursement of $5.23 per square foot of installed green roof and allowed the City to designate up to five community districts that would receive an enhanced abatement of $15 per square foot. The list of priority districts and the final rule were released in January 2021 and can be found on the NYC Department of Finance website.

16.5.3 Local Laws 92 and 94 of 2019

As part of the New York City Climate Mobilization Act passed in 2019, New York City Council passed Local Laws 92 and 94, which require new and substantially renovated or enlarged rooftops to incorporate sustainable roofing on all available roof space. Owners can choose to install solar photovoltaics or green roofs to reduce energy costs and the urban heat island effect. The City anticipates that these laws will help buildings manage up to 1 million additional gallons of stormwater per year, and help manage water quality and urban flooding.

16.5.4 Parking Lot Stormwater Pilot Program

First initiated in 2011, DEP's Parking Lot Stormwater Pilot Program generates revenue for operation and maintenance of the City's wastewater system. The program applies a

stormwater discharge fee to stand-alone parking lots that contribute runoff to the City's wastewater system but do not receive (or pay for) City water service. Effective July 1, 2022, DEP's stormwater discharge fee is currently $0.0730 per square foot. On July 1, 2022, DEP billed 472 accounts for $330,097.66 for FY 2023. Parking lot owners who implement green infrastructure practices can be exempted from the stormwater discharge fee, but, to date, no parking lot owners have taken advantage of that exemption.

16.6 PLANYC INITIATIVES

The Mayor's Office of Climate and Environmental Justice (MOCEJ) leads the City's sustainability planning efforts, leveraging and expanding upon many DEP programs. MOCEJ released the citywide sustainability plan, PlaNYC, in April 2023. The plan details 32 strategic initiatives for the City's future to address critical challenges, including protecting us from climate threats, improving our quality of life, and building the green economy. PlaNYC pledges to deliver the Long-Term Control Plans by 2045, expand the Green Infrastructure Program, and capture stormwater through the Unified Stormwater Rule. It also establishes goals to develop a strategy for further CSO reduction by 2060, to establish a citywide flood protection target for stormwater infrastructure, and to expand nature-based solutions including enhancing tree canopy and restoring wetlands.

16.7 NYC GREEN INFRASTRUCTURE PROGRAM

Released in September 2010, the NYC Green Infrastructure Plan sets forth a comprehensive strategy to use green infrastructure, together with water conservation, and cost-effective grey infrastructure, to improve the quality of the City's waterways. In March 2012, DEC and DEP modified the CSO Order to incorporate green infrastructure into the regulatory framework. The resulting Green Infrastructure Program includes a citywide goal of managing the equivalent of one inch of stormwater runoff from 10% of impervious surfaces or a corresponding estimated volume of 1.67 billion gallons of capture within combined sewer areas by 2030, as approved by DEC in the 2017 Performance Metric Report. The Program primarily implements green infrastructure in four areas – within the City's streets and sidewalks through right-of-way (ROW) retrofits, within parks, schools and housing properties through public on-site retrofits, on private property through stormwater incentives and on both public and private redeveloped properties through stormwater regulations. To date, the Program is tracking nearly 13,000 green infrastructure assets constructed, managing over 2,200 greened acres.[2]

In 2023, the Program will continue to advance design and construction of green infrastructure through all program areas. Completed and upcoming projects can be

[2] A greened acre is the equivalent of one inch of stormwater runoff over one impervious acre

viewed on the interactive Green Infrastructure Program public map available at nyc.gov/dep/gimap.

More information on these initiatives and other updates on the Green Infrastructure Program can be found in the Green Infrastructure Annual Reports published on the DEP website every year on April 30 https://www1.nyc.gov/site/dep/water/green-infrastructure.page.

16.8 Climate Change Resiliency Planning

DEP continues to study climate change and to prepare for its impacts by modeling the potential effect of various climate scenarios on the City's water supply system through the Climate Change Integrated Modeling Project; protecting wastewater treatment plants from storm surge as part of the Wastewater Resiliency Program; and reducing urban flooding through cost-effective investments in grey and green infrastructure. Nine projects from DEP's Wastewater Resiliency Plan have been initiated as part of a portfolio of strategies to flood-proof critical equipment at WRRFs. These projects will harden the infrastructure at the Bowery Bay, Hunts Point, Red Hook, Newtown Creek, Owl's Head, Port Richmond, Tallman Island, and Wards Island WRRFs as well as several pumping stations. These investments enhance resiliency against future coastal storms and include a buffer for sea level rise.

Based on the initial success of the "Cloudburst Resiliency Planning Study" in Southeast Queens, which leveraged a partnership with the City of Copenhagen, DEP has also been working with partners at DOT, DDC, and NYCHA to initiate design of two pilot projects. These "cloudburst" projects will help manage extreme rainfall events in St. Albans and the South Jamaica Houses, both in Southeast Queens, by capturing rainfall of 2.3 inches per hour – a storm with a 10 percent chance of occurring in any given year by the middle of the century. In addition to providing a proof-of-concept for using green infrastructure to mitigate the effects of cloudbursts, the pilot projects will help reduce nuisance flooding in Southeast Queens and enhance the local landscape.

In January 2023, the 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.

City of New York
Department of Environmental Protection
Bureau of Wastewater Treatment

SUMMARY OF COMBINED SEWER OVERFLOW TOTAL NITROGEN LOADING CALENDAR YEAR 2022

April 2023
NYCDEP

FINAL REPORTING RESULTS:

- **East River CSO Total Nitrogen Loading (LIS Zones 8 & 9)**
- **Jamaica Bay CSO Total Nitrogen Loading**
- **East River CSO Total Nitrogen Waste Allocations (LIS Zones 8 & 9)**

Table 1 - Summary of East River Monthly CSO Total Nitrogen Loadings by WPCP Drainage Area and Study Zone

Year	Month	Calculated CSO Total Nitrogen Load (lbs/day)						Zone Totals	
		Bowery Bay	Hunts Point	Newtown Creek	Red Hook	Tallman Island	Wards Island	Zone 8[1]	Zone 9[2]
2021	January	344	127	42	10	69	148	687	52
	February	827	180	107	39	182	246	1,435	145
	March	499	108	131	46	79	192	877	177
	April	449	107	45	6	82	163	802	51
	May	485	244	82	28	136	334	1,199	111
	June	321	181	139	52	42	170	713	191
	July	1,186	611	324	90	444	731	2,971	414
	August	947	541	834	286	407	634	2,530	1,121
	September	999	886	826	253	489	1,032	3,407	1,080
	October	647	421	373	123	298	553	1,919	496
	November	126	23	13	0	14	26	190	13
	December	135	2	6	1	13	1	151	6
2022	January	619	296	167	65	183	337	1,434	233
	February	397	73	60	31	93	134	697	92
	March	309	100	50	42	68	108	586	92
	April	492	288	169	101	175	337	1,292	271
	May	592	221	116	89	202	240	1,256	204
	June	375	329	88	42	146	265	1,114	130
	July	413	654	201	13	160	554	1,780	214
	August	202	64	44	3	53	75	394	47
	September	730	395	435	118	421	333	1,879	553
	October	681	255	184	111	344	325	1,604	296
	November	510	267	154	61	165	262	1,204	215
	December	594	317	110	68	203	446	1,561	178
							Waste Load Allocations:	**1,320**	**710**

Calculated CSO Total Nitrogen Load, 12-Month Moving Average (lbs/day)[3]

Year	Month	Bowery Bay	Hunts Point	Newtown Creek	Red Hook	Tallman Island	Wards Island	Zone 8(1) Waste Load Allocation 1,320	Zone 9(2) Waste Load Allocation 710
2022	January	603	300	254	82	197	368	1,469	336
	February	567	291	250	82	190	359	1,408	332
	March	552	290	243	82	189	352	1,383	325
	April	555	305	254	89	197	367	1,424	343
	May	564	304	257	95	202	359	1,429	351
	June	569	316	252	94	211	367	1,462	346
	July	504	319	242	87	187	352	1,363	329
	August	442	280	176	64	158	305	1,185	240
	September	420	239	144	52	152	247	1,058	196
	October	423	225	128	51	156	228	1,031	179
	November	455	245	140	56	169	248	1,116	196
	December	493	272	148	62	184	285	1,234	210

(1) Long Island Sound Study Zone 8 - Upper East River WWTP drainage areas: Bowery Bay, Hunts Point, Tallman Island, Wards Island.

(2) Long Island Sound Study Zone 9 - Lower East River WWTP drainage areas: Newtown Creek and Red Hook.

(3) 12-month rolling averages for 12-month period ending with month shown. Example: July 2022 is the average of June 2021 through July 2022.

Table 2 - Summary of Jamaica Bay Monthly CSO Total Nitrogen Loadings by WWTP Drainage Area

		Calculated CSO Total Nitrogen Load (lbs/day)				
Year	Month	26th Ward	Jamaica	Rockaway[2]	Coney Island	Total
2021	January	6	73	0	0	79
	February	15	202	0	104	321
	March	21	98	0	38	157
	April	7	79	0	0	85
	May	19	130	0	4	153
	June	2	48	0	47	96
	July	68	237	0	81	386
	August	298	294	0	412	1,004
	September	253	249	0	458	959
	October	170	202	0	193	565
	November	0	12	0	0	12
	December	0	14	0	0	14
2022	January	50	127	0	75	251
	February	1	69	0	0	70
	March	2	59	0	0	61
	April	37	121	0	119	277
	May	15	132	0	47	193
	June	26	102	0	22	149
	July	0	47	0	0	48
	August	0	5	0	0	5
	September	21	138	0	70	229
	October	65	225	0	92	382
	November	10	123	0	0	133
	December	6	133	0	1	140
	Calculated CSO Total Nitrogen Load, 12-Month Moving Average (lbs/day) [1]					
Year	Month	26th Ward	Jamaica[1]	Rockaway[2]	Coney Island[3]	Total
2022	January	75	141	0	118	334
	February	74	130	0	109	313
	March	72	127	0	106	305
	April	75	130	0	116	321
	May	75	130	0	119	324
	June	77	135	0	117	329
	July	71	119	0	110	300
	August	46	95	0	76	217
	September	27	86	0	44	156
	October	18	87	0	35	141
	November	19	97	0	35	151
	December	19	107	0	35	161

(1) 12-month rolling averages for 12-month period ending with month shown. Example: July 2022 is the average of August 2021 through July 2022.

(2) The Rockaway WWTP drainage area has undergone a major sewer separation effort and has been modeled as a separate system since CY2005.

(3) CSOs from the 26th Ward, Jamaica, and Coney Island WWTP systems, were estimated using the InfoWorks model.

Table 3. SPDES Waste Load Allocations and Estimated CSO TN Loadings for CY2022

Phase	Implementation Date	Zone 8 Upper East River TN Waste Load Allocations (lbs/day)[1]	Zone 9 Lower East River TN Waste Load Allocations (lbs/day)[2]	Combined East River CSO TN Waste Load Allocations (lbs/day)[3]
No net increase	Current	3,170	1,720	3,600
I	August 2004	2,430	1,320	2,760
II	August 2009	1,780	960	2,020
III	August 2014	1,320	710	1,498
CY2022 CSO TN Estimates (annual average) [5]		**1,234**	**210**	**1,287**

(1) Upper East River WWTPs New York State Department of Environmental Conservation State Pollutant Discharge Elimination System Discharge Permits (SPDES Permits), April 2011

(2) Lower East River WWTPs SPDES Permits, April 2011

(3) Calculated based on a Zone 8 to Zone 9 equivalency factor of 4:1.

(4) Upper and Lower East River WWTPs SPDES Permits, April 2011

(5) Per the April 2011 SPDES Permits for the Upper and Lower East River WWTPs, the annual averages for CSO TN are to be monitored and no permit limits are established for CSO TN loadings. However, annual CSO TN loadings are to be combined with the WWTP loadings from LISS Zones 8 and 9 to calculate a "Total Nitrogen LISS Zone 8 + 9 Aggregate, including CSOs." "Enforceable Effluent Limitations" for TN only exist for "Total Nitrogen (LISS Zone 8+9 Aggregate, including CSOs)" and "Total Nitrogen (LISS Zone 8+9 Aggregate WWTPs only)."

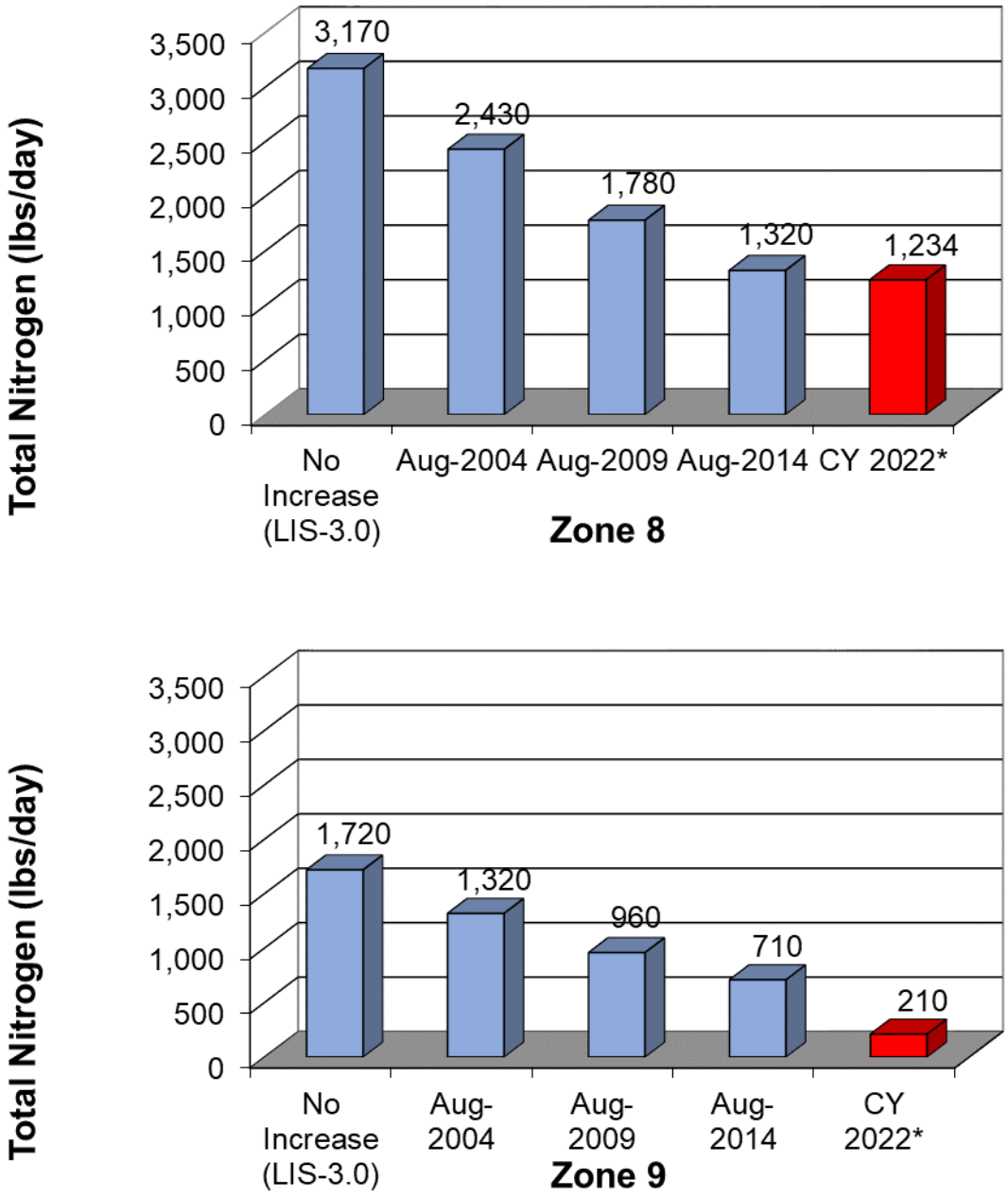


Figure 1
Comparison of Calculated CSO TN Load to SPDES Waste Load Allocations
(Each year's rainfall pattern is different, and plays a pivotal role in the load discharged)

ATTACHMENT

SUPPORTING DOCUMENTATION FOR COMBINED SEWER OVERFLOW TOTAL NITROGEN LOADING CALCULATIONS

INTRODUCTION

This documentation has been developed to summarize the technical approach used to calculate total nitrogen (TN) loadings from New York City (NYC) combined sewer overflows (CSOs) discharging to the East River and Jamaica Bay. The InfoWorks watershed modeling frameworks used for calculation of the TN loadings are summarized, followed by specific assumptions and factors used in this analysis.

InfoWorks was the primary model used to calculate CSO TN loading since 2013, and accounted for all the ten wastewater treatment plants drainage area calculations. InfoWorks is the model that has been selected for development as the Citywide modeling platform for sewershed related planning initiatives and regulatory reporting requirements.

STUDY AREAS

The CSOs subject to the calculation of TN loadings include those associated with the six wastewater treatment plants (WWTP) drainage areas tributary to the East River and the four WWTP drainage areas tributary to Jamaica Bay, shown in Table A-1.

Table A-1. East River WWTP CSO Management Zones and Jamaica Bay WWTP Drainage Areas

LISS Zone 8 – Upper East River WWTP Drainage Areas	LISS Zone 9 – Lower East River WWTP Drainage Areas	Jamaica Bay WWTP Drainage Areas
Bowery Bay	Newtown Creek	26th Ward
Hunts Point	Red Hook	Coney Island
Tallman Island		Jamaica
Wards Island		Rockaway

MODELING APPROACH FOR TN LOADING CALCULATIONS

The NYC State Pollution Discharge Elimination System (SPDES) discharge permits for the WWTPs with CSOs that discharge into the lower and upper reaches of the East River and Jamaica Bay require annual reporting of the monthly TN mass that is discharged through the CSOs. Because of the number of CSO locations, the number of storms that create overflows, and the difficulty in sampling these overflows, reporting can not be done through direct measurement of overflow volume and total nitrogen concentration. Therefore, monthly CSO TN loads are developed each year for the Zone 8, Zone 9, and Jamaica Bay WWTP drainage areas through the use of mathematical models of the sewer systems.

Other regulatory requirements and planning initiatives (i.e., SPDES, CSO Consent Order, and CSO Long Term Control Plan) also necessitate the reporting of CSO related flow volumes and mass loadings for parameters other than TN. Given the wide range of reporting needs, a uniform approach to urban watershed/sewer system modeling has been developed to calculate CSO flows and pollutant loads to support facility planning, load allocation studies, and reporting requirements for New York City.

As part of the Long Term Control Planning (LTCP) project to minimize the impacts of CSO discharges, the NYCDEP has adopted a system-wide usage of the InfoWorks model as the uniform approach to support facility planning analyses. The recently calibrated InfoWorks models from 2014 provide the most sophisticated and accurate representations of the NYC drainage areas. In CY2022, the loadings have been developed using the calibrated InfoWorks models for all the 10 drainage areas tributary to the East River and Jamaica Bay. Brief description of this model is provided below.

InfoWorks Model

The InfoWorks model, distributed by Innovyze from the U.K., has been used in DEP projects since 2001. The model engine is a FORTRAN program, linked with a front interface that contains both relational databases of the sewer network and GIS databases of the geographic attributes such as latitude, longitude, and ground elevations. Based on comparative evaluations performed in 2002-03 by the DEP and its consultants, this interface appeared to offer several advantages over other commercial models such as easy interfacing with GIS for graphical and input/output data analysis and faster computational times for annual simulations. The model uses an implicit finite difference-based numerical solution technique to provide more stable modeling of key elements of the sewer systems. The model incorporates full Saint-Venant's equations for continuity and momentum for hydraulic routing and, as such, is well suited for modeling of the

backwater effects and reverse flow, open channels, sewers, detention ponds, complex pipe connections and complex ancillary structures such as culverts, orifices and weirs.

Similar to other urban drainage models, the InfoWorks model calculates runoff volumes first using the same algorithms used in the SWMM model and routes the runoff over sub-areas (subcatchments) to generate runoff hydrographs. The hydrographs are then applied to the channel-sewer system for hydraulic routing. Dry weather flows are added at the respective manholes for routing towards the treatment plant.

A major component of the 2014 InfoWorks model update was the satellite-imagery based imperviousness estimate. This process was well documented in the 2012 recalibration report submittal to the DEC. Although this estimate represents the total impervious area in each subcatchment, the flow monitoring performed by DEP confirmed that only a fraction of this area was contributing runoff directly to the sewer system. This fraction is referred to as the directly connected impervious area (DCIA) for each subcatchment, which is one of the calibration parameters. The DCIA, in essence, is equivalent to the runoff coefficient used in traditional sewer design principles with a standard rational approach. Hydrologic parameters included in the InfoWorks model for impervious surfaces are DCIA, depression storage (initial losses), and surface roughness.

TOTAL NITROGEN LOAD DEVELOPMENT

Elements that are required in the model to develop the loads accurately that could possibly change from year to year or month to month are listed below.

- Rainfall
- WWTP wastewater flows
- Dry weather sewage TN concentrations
- Runoff/stormwater TN concentrations

As discussed in the next section of this document, these items are developed for each month to provide an accurate representation of the factors influencing the TN concentrations and loadings in the CSOs.

Step-by-step procedures for computing the monthly TN loadings are summarized as follows.

1. *Develop model inputs for rainfall, dry weather and maximum wet weather WWTP wastewater flows, dry weather sewage TN concentrations, and runoff/stormwater TN concentrations.*

2. *Set-up InfoWorks for the 26th Ward, Bowery Bay, Hunts Point, Newtown Creek, Red Hook, Rockaway, Tallman Island, and Wards Island drainage areas using the appropriate hourly rainfall data, dry weather sewage TN concentrations and stormwater TN concentrations.*
3. *Adjust the per-capita, dry-weather sewage flows for each regulator drainage area so that the total dry-weather sewage flow for each WWTP area totals the daily average dry-weather flow received at the individual WWTPs for each month of the year of interest and the year preceding the year of interest.*
4. *Set the maximum WWTP hydraulic capacity for each month based on the WWTP maximum capacity analysis.*
5. *Execute the models to calculate the hourly CSO overflow volumes, associated TN concentrations and TN mass loadings for each hour of the year for each outfall within the WWTP drainage area.*
6. *Sum the individual hourly TN mass loadings at each outfall for each month of the year.*
7. *Sum the monthly mass TN loading for all outfalls.*
8. *Divide the monthly mass for each WWTP area by the days in each month to produce an average daily mass TN loading for each month in pounds per day.*
9. *Calculate a 12-month rolling average for each month in the year of interest by averaging the TN loading value from step 8 for the month of interest with the TN loading values from step 8 for the previous 11 months.*
10. *Accumulate the 12-month rolling average daily mass loadings from step 9 for each month from the Red Hook and Newtown Creek WWTP area CSOs for Zone 9 and the Tallman Island, Bowery Bay, Wards Island and Hunts Point WWTP area CSOs for Zone 8.*
11. *The annual average CSO TN mass loading for a given calendar year will be represented by the 12-month rolling average for December of that year as calculated in step 9 for each WWTP drainage area and step 10 for each LIS management zone.*

MODEL INPUTS DEVELOPMENT

The input parameters for InfoWorks application include: (a) maximum WWTP capacity; (b) precipitation at hourly intervals; (c) dry weather flow and its diurnal pattern at each regulator; and (d) stormwater and sanitary TN concentrations. These inputs are summarized below for various WWTP service areas.

Maximum WWTP Capacity

The maximum capacity of a treatment plant varies within a year due to operation and maintenance requirements or construction related upgrades (e.g., capacity decreases when a pump is replaced or capacity increases when upgrade construction is completed). Hourly plant inflow data were used as guidance to estimate the maximum plant capacity. For InfoWorks model for the ten drainage areas, the plant capacities are expressed as a pump-rating curve showing the variation in discharges with respect to elevation changes in wet wells of the WWTP pumping station. Therefore, the actual plant inflow record for each month was reviewed to develop the elevation-discharge curves on a monthly basis for use in the InfoWorks model. See Table A-2.

Table A-2. As-Modeled[(1)] WWTP Service Area Characteristics
Calendar Year 2022

WWTP	Combined Sewage Drainage Area (acres)	Imp%	Cimp x Imp%	Average Dry Weather Flow (MGD)	Design Dry Weather Flow (MGD)	Maximum Wet Weather Flow[(2)] (MGD)	Permitted Wet Weather Flow (MGD)
26	4,472	86.8	0.43	44	85	177	170
BB	12,157	87.1	0.54	89	150	320	300
CI	7,090	83.0	0.54	76	110	213	220
HP	11,738	80.8	0.55	119	200	395	400
JA	5,645	79.6	0.40	72	100	184	200
NC	13,452	86.5	0.65	196	350	728	700
RH	2,991	90.2	0.63	28	60	128	120
TI	11,475	66.0	0.35	57	80	166	160
WI	12,853	84.1	0.58	186	275	570	550[(6)]
Separate Areas							
RO[(4)]	NA	NA	NA	18	45	49	90

(1) All drainage areas modeled with InfoWorks.
(2) Maximum of calibrated monthly values used as InfoWorks input.
(3) These plants are operating at a reduced capacity due to ongoing construction in accordance with their approved WWOP.
(4) Certain statistics excluded for Rockaway (RO) WWTP because this area is separately sewered.
(5) Requirement per Second Modified Judgment on Consent, Index No. 196/88 (Newtown Creek) (Sup. Ct Kings County) (Spodek, J.).
(6) Requirement per First Amended Nitrogen Consent Judgment, Index No. 04-402174 (Sup. Ct. New York Court, P. Feinman) dated April 27, 2011.

Precipitation

For the CY2022 analysis, rainfall dataset from NOAA/NSSL called Quantitative Precipitation Estimates (QPE) was used instead of DEP or NOAA rain gauges, similar to CY2021 analysis. This decision was made for several reasons. First, the NOAA rain gauges in CPK, JFK, LGA, and EWR are often very far from the WRRFs model areas to which they are applied. Second, the DEP WRRF rain gauges frequently suffer from outages and other reporting issues, leading to incomplete or inaccurate datasets. Therefore, the new NOAA/NSSL QPE data was used, which is described below:

- The new NOAA/NSSL product provides spatially distributed, hourly estimates of precipitation is based on multiple radars, satellite and numerical weather prediction models, surface and upper air observations, lightning detection systems and rain gauges. In addition to hourly, QPE is available in other time increments (such as 3 hr, 6 hr, 12 hr, daily, 48 hr and 72 hr) and in spatial resolution of roughly 1 km x 1 km.
- Most common application of radar QPE data is to simulate or predict flash flood events using rainfall-runoff models [Willie, D. et al. 2017; Zhang et al. 2016; Rafieeinasab et al. 2015; Chen and Chandrasekar 2015].
- Validation of the high resolution radar QPE data was made against the ground-based precipitation data obtained from the NOAA stations rain gauge data: Central Park (CPK), Newark Airport (EWR), JFK Airport (JFK) and LaGuardia Airport (LGA).
- The high resolution and broad spatial coverage of the radar QPE data provides more realistic forcing at the time scales relevant to the CY2021 wet-weather capture modeling analysis.

Monthly distribution of the rainfall at various WWTP service areas, along with the 2008 precipitation data observed at the JFK Airport, which is considered as “typical” precipitation pattern in NYC, are shown in Table A-3. The raw rainfall data were used in the InfoWorks model (which does explicitly account for travel time).

Table A-3, Comparison of Annual and Monthly Distribution of Precipitation (inches)

Rain	Year	Annual Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
26W	2022	41.87	4.34	3.27	2.64	4.20	4.59	3.07	1.66	1.06	3.72	5.74	3.24	4.34
BB	2022	44.74	4.41	3.23	2.38	3.63	4.70	3.10	3.09	2.00	5.29	5.26	3.11	4.54
CI	2022	41.25	4.64	3.21	2.78	4.42	4.88	3.37	1.34	1.00	2.65	5.67	3.08	4.21
HP	2022	46.29	4.20	3.13	2.37	3.91	4.41	3.98	5.37	1.64	4.21	4.50	3.35	5.22
JA	2022	40.33	4.32	3.33	2.46	3.64	4.29	3.16	1.95	0.87	3.50	5.67	2.97	4.17
NC	2022	43.22	4.34	3.23	2.58	4.14	4.82	2.64	2.31	1.47	4.58	5.27	3.00	4.84
RH	2022	44.15	4.52	3.24	2.96	4.56	5.27	2.44	1.62	1.40	4.62	5.77	2.84	4.91
TI	2022	46.51	4.24	3.27	2.35	3.49	4.55	3.27	3.43	1.81	6.22	5.63	3.41	4.84
WI	2022	45.44	4.25	3.00	2.37	4.16	4.30	3.43	4.96	1.84	3.74	4.70	3.19	5.50
JFK Airport	2008	46.25	2.33	4.70	3.60	2.74	3.25	3.55	3.30	3.21	6.74	3.52	3.34	5.97

Dry-Weather Flow

The dry-weather flows assigned for model input at each regulator were developed from various sources of information. At each WWTP, DEP records hourly flows and analyzes the data to determine the hourly diurnal variation of dry weather flow as well as the overall average flow for each month. The dry-weather flow distribution among the different regulators in the WWTP service area was herein developed based on the flow information at the WWTP, together with other available information such as the regulator drainage area population, Regulator Improvement Program reports, field inspections, and the existing hydraulic model. The diurnal pattern at the WWTP was assigned to all regulators within a service area.

Dry-Weather Sewage TN Concentrations

The dry-weather sewage TN concentration data at all ten WWTPs within the Zone 8, Zone 9, and Jamaica Bay drainage areas need to be developed and used together with model-calculated flows to calculate TN CSO loads. DEP samples each WWTP for various forms of influent nitrogen on a daily basis and maintains a database of these concentrations. Since the TN concentrations during wet periods are typically lower due to dilution with stormwater runoff, the hourly precipitation data were used in conjunction with the hourly plant flows to identify "dry days," and the corresponding dry-weather influent TN concentrations represent the sanitary-sewage TN concentrations at each WWTP. The product of these sanitary-sewage TN concentrations and the corresponding sanitary-sewage component of the CSO volume discharged from each WWTP drainage area (as generated by the sewer-system model) were then calculated to yield the TN load associated with the sanitary-sewage component of the CSO discharges.

Runoff/Stormwater TN Concentrations

Stormwater concentrations of TN are not regularly measured and information about stormwater TN concentrations is very limited. To characterize typical stormwater TN concentrations in NYC, several studies were reviewed, including 2002 DEP measurements compiled as part of the municipal separate stormwater sewer system (MS4) permit process for separately sewered areas. Based on this information, a stormwater TN concentration of 2.28 mg/L was selected as a representative constant for stormwater generated from all the drainage areas discharging into the Zone 8, Zone 9 and Jamaica Bay zones.

Model-Specific Inputs

In addition to the above common inputs, the InfoWorks models require specific inputs that are summarized below.

CSO storage/treatment facilities in the interceptor/combined sewers (InfoWorks) were used to store and/or treat excess flow from the collection system during wet weather, thus reducing the CSO volume and/or pollutant discharge to the receiving water. Due to explicit characterization of backwater and surcharging effects, the InfoWorks model accounts for in-line storage automatically. Storage/treatment facilities and their operation in terms of capture and dewatering of wet weather flows are explicitly included in the InfoWorks models. All the four storage/treatment facilities (Paerdegat, Spring Creek, Flushing Creek and Alley Creek) are included in the respective models.

Percent imperviousness calculations (InfoWorks), for each subcatchment were performed in the recalibrated InfoWorks models using satellite imagery data from Columbia University. Although this data provided total impervious areas, the effective impervious area (fraction that directly contributes runoff to sewers) was a calibration parameter in the recalibration effort.

Tide data (InfoWorks) were developed from the three permanent tide gages maintained by the NOAA near New York City – namely, Kings Point, The Battery, and Sandy Hook. NOAA also publishes tidal correction factors in terms of differences in time and amplitude at several locations in the New York-New Jersey Harbor. The correction factors were tabulated for the locations of the waterbody near each or a set of outfalls, and then the data from the nearest NOAA station were used to develop the tidal boundary conditions for each or a set of outfalls within a drainage area.

OTHER FACTS/ ASSUMPTIONS USED IN THE TN LOADING CALCULATIONS

Beginning in CY2005, the Rockaway WWTP drainage area has operated as a separately sewered system influenced by rainfall-induced inflow and infiltration. As such, there is no CSO TN load from this area.

Calculation of the 12-month moving averages required use of the monthly loads calculated for CY2021 (as reported in the previous year's version of this report) as well as the monthly loads calculated for CY2022 as described herein. For example, the 12-month moving average load for July 2022 represents the average of the monthly loads from August 2021 through July 2022.